

Challenges in maximising production

Oil and Gas Technology caught up with Vincent Vieugue, vice president sales & marketing at Roxar Flow Measurement, a division of Emerson Process Management, to discuss the technology challenges facing the oil and gas industry

Oil & Gas Technology: What are the general challenges facing the oil and gas industry globally?

Vincent Vieugue: With oil and gas demand outstripping supply and new discoveries lagging behind production rates, operators are facing increased challenges in maximising production while reducing costs – at a time of increasingly geologically complex fields in often challenging operating conditions.

OGT: How important is maximising returns on assets?

VV: It is integral to everything operators do. With more than 70 per cent of oil and gas production coming from fields over 30 years old (World Energy Organization), operators must make marginal fields more viable and improve productivity in their larger fields. And when discussing assets, we don't just mean reservoirs but also the people who play such a crucial role in driving technology, productivity and asset returns.

OGT: In achieving this, how important is reservoir management and production optimisation?



Roxar Multiphase meter 2600

WV: It means everything. The success of maximising asset returns depends largely on operators' ability to characterise and understand reservoirs and generate accurate production information to guide decision-making. How are my wells performing? Are there any conditions that affect my assets and the production flow? How do I keep my assets working for the full life of the field with the same efficiency? Emerson tries to answer all these questions.

OGT: How can software solutions be utilised to manage reservoirs?

WV: Reservoir software models provide the information operators need when developing their assets. They provide models for scenario generation, a spatially accurate analysis of the field, tools to explore reservoir management possibilities and a repository to store and interrogate information. In this way, reservoir models generate vital information on oil in place and how oil can be produced.

OGT: Is there a greater emphasis on effective flow control nowadays?



Roxar subsea Wetgas meter

WV: Yes. The need to maximise flow assurance and production, as well as the growth of smaller fields tied into existing infrastructure, has led to a growth in reservoir monitoring and operators requiring more targeted and detailed knowledge on flow rates.

OGT: What are the challenges of downhole monitoring?

WV: The ability to generate continuous and accurate information in high pressure and high temperature conditions. That's why Emerson's Roxar intelligent measurement devices and sensors are highly robust, and are utilised not only to monitor temperature, pressure and water cut, but also gas fraction, sand rate and flow velocity.

OGT: Can you tell me about an interesting recent project that Emerson has undertaken or been involved with?

WV: The Roxar subsea wet gas meters are to be installed by Chevron Australia in the Greater Gorgon fields, one of the world's largest untapped natural gas fields. The meters will provide real-time, accurate measurements of hydrocarbon flow rates and water production, as well as the online detection of formation water breakthrough. We are proud to be providing flow assurance and production optimisation to such an important and high profile LNG field.

OGT: What new technologies do you expect to see in the coming years?

WV: As we continue to focus on R&D, expect a number of new announcements. For example, we will be launching a subsea version of our third generation multiphase meter, the Roxar MPFM 2600, providing even more detailed knowledge of flow rates.

OGT: Can you tell me about one of your innovative products and how it will benefit the oil and gas industry?

WV: We recently launched the Roxar subsea ROV Retrieval System. The new system is the first industry-wide solution, which enables the remote retrieval and replacement of sensors mounted on subsea production equipment. The system will literally save customers millions of dollars by reducing the cost and time required to maintain subsea assets. ■

