Developments in the Marine Seismic Business

Earlier this year a merger was announced between TGS-Nopec and Spectrum, both companies which specialise in the acquisition, processing and interpretation of multi-client marine seismic data. Kristian Johansen, CEO of TGS and now of the merged company, talks to us about trends in the marine seismic business and the thinking behind this merger.

What are the important current trends in the marine seismic field?
The obvious one is the separation of marine seismic companies into those concentrating on multi-client and those more focused on acquisition, along with general consolidation in the industry on both sides. Another notable feature is the technological development that is taking place on the processing side of the business, driven by clients' needs to get the data sooner.

Will the trend away from seismic companies owning vessels continue?
Well, someone has to own the vessels, so we will end up with some companies concentrating on the seismic acquisition, and others which are specialists in the shipping aspects of the business, including production efficiency and HSE. I'm very happy that companies like Shearwater and Polarcus have a very clear strategy in that regard.

Do you expect further consolidation in the marine seismic business and would that be a positive move for the E&P industry?
A lot has already been done, so there aren't so many obvious transactions or consolidation opportunities out there. I think that the whole industry is going to benefit from this, because the way it's been over the last few years has not really been very sustainable, with a number of companies going through Chapter 11 or refinancing. This hasn't been ideal for either the seismic industry or the oil companies, so I don't think that consolidation is necessarily a negative thing for our clients. It is important that we keep a healthy seismic industry.

What do you see as the major commercial challenges to the marine seismic business in the next decade?
The biggest challenge is that seismic spending has been cut hugely: from around $9.2 billion in 2014 to $3.7 billion in 2017. It's now up slightly to about $4 billion, but that's still a big change from $9.2 billion. Oil companies have become very disciplined and efficient, especially in their procurement business, and there has also been

considerable consolidation, so there are fewer companies out there. For example, I think there were 82 companies bidding in the US Gulf of Mexico licensing round in 2009; in recent times there are maybe between ten and 20 companies active in that region, which is a significant change. We have pretty much the same number of seismic companies as a decade ago, but we are chasing far fewer clients. That is probably the greatest challenge we anticipate looking ahead; we need to see more oil companies emerge or we will see further consolidation in the seismic industry.

How will the new merged company address this challenge?
Firstly, the merger means that we are a bigger company, particularly in the areas where we are seeing growth in the

Kristian Johansen has experience from executive positions in the construction, banking and oil business. He joined TGS as Chief Financial Officer in 2010 and became Chief Operating Officer in March 2016, before being appointed as Chief Executive Officer in 2016.

E&P business, like the South Atlantic, where we now have a much bigger footprint on both sides. There are also some cost benefits from the synergies, which will obviously make us more competitive. The two data libraries are extremely complementary; they have data where we haven't and vice versa; it is a very balanced transaction in that respect. In addition, it has given us access to a lot of good people.

The second thing is that the two companies have a very similar culture. The integration process, although it has only just started, is going really well because we are actually quite similar in our mindsets, so that's really helpful, because sometimes these things can be very complicated.

What changes are you seeing in the commercial side of the seismic business?
I don't see any really significant changes. The really hot topic in the industry is, of course, all about the use of the cloud for high performance computing and for data storage. It is now much easier to access data and download it from anywhere, and from any seismic company, which is making a huge difference. All the investment at the moment is going into compute power, data lakes and ease of access. This might mean that we'll see some changes in business methods, such as moving from direct sales to subscription models.

Do you envisage innovative business models in the seismic world?
I think a lot has been developed and will continue to develop around machine learning and AI. We've already seen companies like Google, Amazon and Microsoft moving into oil and gas, and that's because it's an extremely data-rich market. These sorts of companies are really good at developing machine learning algorithms, but they need a lot of data in order to train them, and that's why they have so much interest in the oil industry, including in seismic. So I think that there will be some changes and opportunities for our industry around that. Rather than just providing data, we will be able to use machine learning algorithms to get extra information out of that data, and adding value in that way will provide different business models in the future.

We will never reach the point where seismic companies tell oil companies where to drill, but by providing information as well as data we are getting nearer the decision-making process. The key to that will be using artificial intelligence and machine learning that we have developed ourselves based on the massive amount of data we have. As an example of this, TGS have just acquired a company called Lassar, which provides historical and monthly oil and gas data. It's a small company, but it has a lot of production data in the Permian, and by combining that with the completion and well log data that we already have, we will be able to predict production, which is obviously a very hot topic. This is a small acquisition, but a very important strategic one. To be a seismic company that can provide analysis and prediction – that's a very big step for us and a very positive one. We want to be seen not just as a seismic company, but more as a data and information company. ∎