OE’s Audrey Leon spoke with Dr. Bruno de Ribet, a geophysicist and technology global director at Paradigm, about the opening of Mexico’s oil and gas industry and what effects it will have on both the country’s seismic scene.

Please explain why the opening of the Mexican market is important to Paradigm, and the offshore oil and gas industry at large?

Mexico has recently opened its oil and gas market to companies other than Pemex, which will expand opportunities for industry technology providers such as Paradigm. We are in an observation stage at this time as we look into this market, because we expect and will follow new regulations. Our technology can play a key role in Mexico in 2015, especially in an anticipated difficult financial environment. We see 2015 as a transition year before a changes in regulations in the Mexican market. Oil and gas companies face a difficult choice – not bidding and missing out on a potentially promising future, or bidding on highly complex and mature fields that are not representative of the offshore and onshore potential in Mexico.

What does the seismic scene look like in Mexico currently? What have you observed, and what do you think the industry will look like in the years to come?

Until today, Pemex has been the only company dealing with seismic contractors. The new regulations will certainly change this panorama in the next few years. Because of the current economic environment and the uncertainty around the success of the last round of bidding, we should expect more work to be done on existing seismic data, rather than sudden growth in seismic acquisition. Reinterpretation may be the first challenge of the oil and gas companies entering this market, particularly if seismic data is quite old and not adapted to the challenges of current reservoir development. After an initial investigation period, companies will select their next potential areas of development by supporting new seismic acquisition.

It was recently announced that COMESA selected Paradigm as a partner for its new seismic data processing center in Villahermosa. Can you discuss the particulars of how this relationship came to be?

COMESA is a seismic processing services company based on a joint venture between the Mexican government and private interests. For COMESA, the Mexican market is just a step towards expanding its activity in Latin America. Technology will play a key role in this expansion. COMESA has been determining the most appropriate technology to solve the challenges oil and gas will face in Latin America, like exploration in deepwater areas in the Gulf of Mexico. The company has identified Paradigm as the company that can provide the best-in-class technology for its objectives and has established a long-term partnership with us. COMESA will have the ability to propose high-value services in the processing/interpretation and characterization domains.

What other kinds of projects are Paradigm currently involved in, or looking to get involved in? Are you working with a partner down in Mexico?

Paradigm has developed strong relationships with local services providers like COMESA and Geoprocesados, which are both using...
our technology. In addition, we have our own experienced team and are proposing to support Pemex with our key products in some of its highest priority challenges, such as reversing the decline in production in its major fields. We have just completed the realization of a global velocity model integrating the different reservoirs in the complex Cantarell area by integrating data from the entire field. We are also providing technology assessment for our customers to ensure the effective use of our technology and management of our products.

**How long has Paradigm’s Villahermosa office been open?**

We have had a local presence in the Mexican market since 2011. Since then, we have quickly grown and now have a highly experienced team of 32 technical resources, including geophysicists, geologists and reservoir engineers, supported by a complete administrative structure.

**What are some of the solutions (technologies) Paradigm can provide and deploy in this sector?**

Paradigm technology is being used across the spectrum between field data and simulation. We do not support simulation, and have chosen instead other areas where we are highly specialized. One of our key products is SKUA, designed to be the next generation of geologic modeling software serving all types of geologic assets. This technology provides 3D modeling, not 2D approximations. SKUA offers everything, from regional seismic scale geologic models to reservoir models. We also offer the innovative EarthStudy 360 full-azimuth angle domain seismic imaging technology and Geolog formation evaluation software, which is a suite of applications for dealing with well log analysis, geologic modeling of well data and petrophysical applications. Geolog helps oil companies better understand and characterize a reservoir. Finally, we have Stratimagic, used to mine seismic data and look for patterns related to specific geologic features or formations where there is oil.

**What are some of the challenges Paradigm sees in Mexico in terms of workforce, available materials and equipment? What will it take to solve them?**

Our main objective is to grow with the development of the Mexican market over a long period as a stable technology and specialized services provider. We are always seeking highly experienced technical experts. Experience is the key, as oil and gas companies continue to seek solutions that will ensure success and profitability.

**Finally, after the reforms, what is the long-term outlook for Mexico’s oil and gas industry from your perspective?**

Because of Mexico’s highly diverse geologic environments and the new plans to develop its unconventional assets, the Mexico oil and gas industry has significant potential. New industry players will bring new ideas for making Mexico one of the most profitable oil and gas markets. The current situation is unique in our industry, as Mexico is the latest country to have made the decision to open competition for oil and gas development. This will certainly boost associated activities and possibilities.

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Dr. Bruno de Ribet is geophysicist and technology global director at Paradigm. As a key subject matter expert with more than 25 years of experience, de Ribet is responsible for development of workflow-based application of interpretation and reservoir characterization technologies, to ensure delivery of high end solutions to the oil and gas industry. Prior to joining Paradigm in 2001, he worked at CGG in the area of geosciences solutions. He holds a PhD in geophysics from the Institute du Physique du Globe, Paris University. He is an active member of the Society of Exploration Geophysicists (SEG) and the European Association of Geoscientists and Engineers (EAGE).