



photo courtesy of Pemex

Deep impact

With P10 reserves estimated at approximately 50 billion barrels in the Gulf of Mexico, deepwater exploration and construction is the next chapter in the evolution of Mexico's energy industry. Efforts to date have been modest, mainly due to the challenges and high specifications associated with deepwater operations, with only 16 exploratory wells drilled since 2004. Nevertheless, Pemex's first

deepwater exploration and production contracts are due to be tendered as early as 2012.

Deepwater exploration activity begins with seismic imaging, which requires small fleets of streamer ships and support vessels working with parallel arrays of 6-kilometre imaging cables, GPS and powerful computer systems. Pre-salt formations increase the complexity of data acquisition. Seismic work in the Gulf of Mexico is currently being undertaken by CGGVeritas.

For exploratory drilling, drill ships are typically employed due to their higher independence and mobility. However, for the development of potential reserves, semi-submersible rigs are usually towed into place using heavy lift ships, which are partially submerged to onload and offload their cargo. These rigs have deck platforms above wave level, which leads to a higher degree of stability.

Deepwater production requires cementing as well as the installation of wellheads and blowout preventers by means of remote control submersibles. The depth of water makes repair difficult, so subsea flow assurance is critical. In order to reduce the energy required to lift the fluid column to the surface, water is typically separated and re-injected at the wellhead. Because most deepwater production sites are located hundreds of miles offshore, pipelines are impractical and crude oil is instead often pumped onto floating production storage and offloading (FPSO) vessels. Pemex is making good use of internationally supplied FPSOs in the Bay of Campeche, and is expected to take on several more as deepwater plans are rolled out. ■



INDUSTRIAL PERFORADORA
DE CAMPECHE, s.a. de c.v.

Deep commitments

Industrial Perforadora de Campeche is the leading onshore and offshore drilling contractor in PEMEX and the only company that owns and operates ultra-deepwater drilling rigs in Mexico. Currently, working on the iconic Bicentenario platform, a six generation semisubmersible drilling rig, we are committed to realising Mexico's ambitions for deepwater production and supporting PEMEX's broader plans for the future of the local energy sector.

Grupo R Corporativo
Melchor Ocampo No. 193
Torre A Piso 11
Col. Verónica Anzures
C.P. 11300, D.F., México
Tel. +52 (55) 5262 8100

IPC, a Grupo R company

GRUPO R