

China Offshore Oil Northern seeks expansion to global markets

WITH CHINA'S ANTICIPATED entry into the **World Trade Organization**, **China Offshore Oil Northern Drilling Co** is wasting no time in expanding into international markets. The 8-rig company, based in Tanggu in the northern Chinese province Tianjin, is working hard to adopt international standards and is working with IADC to understand the nuances and requirements of international drilling operations. The firm was certified to the ISO 9002 standard in 1997.

"We look forward to cooperating with IADC in the future and also to closely cooperating with international oil companies," said CONDC President/General Manager **Liu Fu**.

The company boasts a massive infrastructure of 1,058 employees, 291 of them managers and technical engineers. Another 700 are offshore crew workers. CONDC also has \$145 million net worth of fixed assets in its 8 rigs and other equipment. 4 of the jackups are cantilever-equipped and 6 have top drives. The units can drill to 6,000 m in water depths of 5-90 m, the company says.

In addition to dayrate operations, CONDC also offers turnkey contracts and labor contracts. Besides drilling, the company's capabilities include casing running, bottomhole troubleshooting, and other services.

CONDC is already cutting its teeth on operations within China for non-Chinese operators. For example, The company's flagship unit is the jackup Bohai 4, working for **Phillips** on an exploration program in south central Bohai Bay. The rig recently underwent significant upgrades, notably a conversion to a 30-ft cantilever. Cantilever capability was required for later work on production platforms for **Bohai Oil Co**, as well as for subsequent international operations. Other modifications included installation of a new crane, new SCR, 3 one-year-old shale shakers, new centrifuge, modifications to the jacking system to adjust the loading to facilitate the cantilever and a third 1,600-hp mud pump. Parts for 2 of the 3 pumps were manufactured in the US and assembled in China, said Rig Superintendent **Zhou Bing Wen**. The new third pump was manufactured by **National-Oilwell**. It took just 4 months to conduct the upgrade.

(The Bohai 4 is not the only CONDC jackup to enjoy upgrades. The jackup Bohai 12, which just wrapped up 3 wells for **Chevron**, is in the Dalian shipyards, where a **Varco** IDS-1 top drive is being installed. It will then go to work for BOC and perhaps for Chevron later in the year. Another modification to the Bohai 12 was to switch the BOP control system from electric to hydraulic to eliminate the chance of a short circuit, the company said.)



CONDC's Bohai 4: The Bohai 4 recently underwent a major upgrade, including a conversion to a 30-ft cantilever. Inset shows CONDC President Liu Fu and DC Editor and Publisher Mike Killalea.

The Bohai 4's first well for Phillips reached a total depth of some 1,750 m. Drilling was suspended after about 50 days before reaching the original objective because the early hydrocarbon shows were so promising, according to Phillips. This included time to run cores. The operation was conducted in water depths of 28 m, close to the Bohai Bay maximum of 34 m. Phillips planned to move the Bohai 4 about 2.5 km south and drill a second well.

CONDC is also focused in safety. For example, a 15-minute safety meeting is held prior to each shift going on duty.

Bohai Oil Co has its own ambitious agenda for the mature Bohai Bay, discovered in 1964. In order to help boost BOC's over-

all production from the current 2.5 MM tons/year to 10 MM tons/year by 2003, this subsidiary of **China National Offshore Oil Corp** plans to drill and complete 500 production wells over the next 3 years using 5 CONDC rigs. BOC and CONDC are planning 4 days per well. To put this in perspective, consider that only 500 wells have been drilled in Bohai Bay in the 32 years from its 1964 discovery through 1996. BOC plans to use another 3 CONDC rigs on exploration work, less any rigs mobilized to the international market.

CONDC believes it is ready for the challenge, and their data demonstrates that the company has vastly improved efficiency. In 1997, for example, CONDC drilled 121,421 ft of hole in 2,512 days. Last year, the company drilled 146,683 ft—a 21% increase—in just 2,294 days or 8.7% fewer days. For 1999, the company says it will drill 150 development wells and complete 77. CONDC will also drill 11 exploration wells, 4 for BOC, 2 for Phillips, 3 for Chevron, and 1 each for Esso, Kerr-McGhee and one for Apache.

BOC's production wells will also be deviated, explained BOC Director-Senior Engineer **Wang Jia Xiang**, and anticipated to reach about 2,500 m measured depth and a total depth of some 1,500 m, Mr Wang said. Only the exploration wells will be vertical, he added.

The company is also in the process of installing the largest platform to date in the Bohai Bay, the 4x6-slot SZ 36-1.

RIG SHORTAGE IN CHINA?

BOC's ambitious program, combined with CONDC's international push, will produce a shortfall of rigs in the Bohai Bay for non-Chinese operators—and there are plenty. In addition to Phillips, Bohai leaseholders include **Chevron**, **Esso**, **Kerr-McGhee**, **Occidental**, **Japan National Oil Co**, **Texaco**, **Arco** and **Agip**. One of the challenges in bringing in rigs in the year 2000 from the international fleet is the mobilization cost, sources said, the nearest rig center being Singapore. Another pinch is that the harsh winters limit the drilling season on exploration wells to March through October. One solution might be for producers to share in the cost of mobilization and drilling through a joint venture or rig sharing, according to producers with an interest in the area. ■