Old Oil Field Hikes Price Tag for Long Beach Port Upgrades

10/19/2013

By Greg Aragon

As the Port of Long Beach, Calif., moves forward with its 10-year, $4-billion modernization program, two of its largest components are seeing sharp cost increases. The $1-billion Gerald Desmond Bridge project faces a 15% budget increase, while the price tag on the $1.2-billion Middle Harbor project has now risen by $29.5 million.

Photo Courtesy of Port of Long Beach

Crews use a novel surface casing removal process to remove old oil wells.

Related Links:

Long Beach's Long-term View

Long Beach, Calif., Approves $1-billion Bridge Replacement Project

Much of these increases occurred because the port was built on an oil field, with dozens of abandoned wells and other obstructions left behind when drilling ceased decades ago. As a result, prep work is six months behind schedule, says port spokesperson John Pope. However, crews will make up the time and the bridge will open on time in mid-2016, he adds.

Kevin Tougas, oil operations manager for Long Beach Gas & Oil, says the biggest hurdle is removing casings as deep as 200 ft below ground without disturbing the surrounding soil.

"This started as a challenging task because removing so much footage of casing so deep had never been done before in the oil industry," Tougas says. Taking into account the site's unique specifications, engineers employed a method called surface casing removal (SCR). Drill crews bore a pipe placed at the well's center and then remove the casing. Next they backfill the hole with controlled low-strength material "specially designed for this application," Tougas adds.

Of the 43 wells at the site, 23 impeded bridge foundation work and required SCR. Some of the wells had a total measured depth in excess of 6,000 ft.

"The task has demanded a lot of resources, with oscillators, rotators, cranes, drilling rigs and crews who have been working around the clock for the biggest part of the project," Tougas says. "One unit uses one of the few Bauer BG-40 rotary drilling rigs to be found in North America. On one occasion, we even had to use the services of commercial divers to do work 60 ft deep inside the 2-meter-plus-dia pipe."

SFI Joint Venture is leading the 1.2-mile-long design-build bridge project. Design is nearly complete and crews will begin driving cast-in-place piles around the first of the year, says project manager Bob Schroeder.

Abandoned wells also pose a challenge on the 250-acre Middle Harbor project, pushing material and labor costs higher than expected in order to meet an accelerated schedule, says Tom Baldwin, Port of Long Beach program manager. Set for a 2019 completion, the project will upgrade wharfs, water access and storage areas and add an expanded on-dock railyard.

Baldwin says when the project was bid in 2011, "in order to find qualified welders to perform this work we had to pay a premium to get the labor on the project."

Keywords: Long Beach;California;Port;Gerald Desmond;Bridge;Middle Harbor;SFI;Oil;Well;Remediation