

## AccessESP

### Two Practical Technologies; One Unique Solution

Although its name might imply it's only a provider of ESP pumps, AccessESP provides a much different service, said Todd Wray, vice president of Marketing and Sales.

"We have integrated two practical technologies into a unique solution that radically simplifies the conveyance of ESPs without the use of a rig," Wray said. "Our clients maximize the value of ESP wells with significantly lower intervention costs, minimal lost production and full bore access to the reservoir."

"Traditionally, ESPs are deployed with the tubing, with the electrical cable mounted on the outside," Wray said. "If there are any challenges, if you need to resize the pump, if there's an issue downhole with the motor or anything else, or if you just need to get below the pump, it's very difficult, because it's attached to the tubing. So you have to pull the entire tubing string, and that can be cost prohibitive in certain areas."

AccessESP provides a through-tubing ESP deployment and intervention solution, Wray said.

"We are not an ESP company," Wray said. "We don't market pumps, intakes, variable speed drives etc. and we don't provide cable installation and penetrator services. We provide our clients with the ability to install and retrieve their ESP through slickline, wireline or coiled tubing. Ultimately, our objective was to be able to deploy with the smallest operational footprint possible -- which is slickline — because the vast amount of rigs and locations around the world have slickline readily available. We wanted a deployment solution that allowed our clients to use the existing equipment that's available everywhere. Standard slickline, standard lubricators and a crane are all you need.

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acquire and mobilize a rig to pull the tubing, as well as the costs associated with it," Wray said. "Now we're able to install and retrieve an ESP very quickly with a light operational footprint. We're minimizing or eliminating the amount of time that your well is down because of a nonproducing ESP. In offshore or remote locations, that could be 60, 90, to 120 days of no production, because if the ESP's not working, you're not producing, and it could take that long to get a rig."

Other costs are associated with mobilizing, setting up and performing the operation itself, Wray said. "By focusing on minimizing downtime and decreasing the intervention costs, our through-tubing system is going to make wells that are on ESPs more economically practical. In the future, it makes an ESP more practical for clients who believe that interventions and the use of ESPs could be cost prohibitive."

Its now possible to deploy an ESP through 4 1/2-in tubing and produce up to 6,000 bbl/d, Wray said.

"We use conventional pumps, protectors, intakes that most ESP industry providers have, so we don't require anything special," Wray said. "We incorporated industry accepted, tried-and-true technologies into our solution.

"The system is a combination of two elements. The first is our permanent completion which incorporates the side pocket wet connect. The wet connect is very similar in the basis of design to a gas lift mandrel, except that it's an electrical connector. The permanent completion is integrated into the tubing string and the power cable is installed in a similar fashion to traditional ESP installations. The second is the retrievable assembly which consists of our female connector that mates to the side pocket connector downhole, completing the electrical circuit, providing power to the permanent magnet motor. Permanent magnet motors have a much higher power density than induction motors today."

"Today, if you needed 130 horsepower to drive the pump on an ESP and you wanted to do it with a 3.75 OD —

which means it can be deployed through tubing — that 130 horsepower pump's going to be about 50 feet long," Wray said. "For us, that pump is 9 feet long. Additionally, you've gone from 1,900 pounds down to 250 pounds. Our permanent magnet motor makes it practical to deploy through a lubricator, which allows us to perform live well ESP deployments with a slickline unit.

The permanent magnet motor and the side pocket wet connect are the two practical technologies that make the system work, Wray said.

"Unique to our design is that when the retrievable assembly is not in the hole, the ESP is not in the hole," Wray said. "You have full-bore access to the reservoir. You can run squeeze tools, coiled tubing, PLTs, do wireline perforations or whatever you want below the assembly. The convenience and cost savings is being able to do a multitude of intervention operations with full-bore access. It's exciting and we have had proven success with this technology and expect to see this solution gain wide spread application in the future." ■