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lowering downhole temperatures,  
protecting equipment – p38

## Surge Energy uses Latshaw Rig 10 to drill 18,325-ft lateral in Permian in 12.5 days

Four years ago, Surge Energy worked with Latshaw Drilling and Pro Directional to drill what it said was the longest known lateral in the Permian Basin at the time, at 17,935 ft. Now, the companies have exceeded that lateral distance in another Permian well. In Q4 2023, the companies drilled the Succubus-Rougarou 24-37 7AH well in the Wolfcamp A play in Borden County, Texas, with a total horizontal displacement of 18,325 ft.

The well, which was drilled by Latshaw Drilling's Rig 10, was executed in 12.5 days from surface to its total measured depth of 24,879 ft. This marked a six-day reduction in drilling time from the 2019 well, where the total measured depth of 24,592 ft was reached in 18 days.

This drop in time was primarily enabled by the elimination of a planned trip, said Jeremy Christopherson, Drilling Manager at Surge Energy. The 2019 well featured a planned trip at 15,000-ft vertical section because the operator was unsure if the bottomhole assembly (BHA) could last beyond that distance. The 18,325-ft lateral in the 2023 well was drilled in one conventional directional BHA run – this marked a company record for Pro Directional for the longest lateral drilled in a single run with motor and MWD.

"These rigs can only rack back so much pipe in the derrick, and with the well in 2019, we felt that a 15,000-ft run in the lateral was probably all the motor could take, and we should trip and have a planned trip to change out the bit and the motor," Mr Christopherson said. "We ended up tripping back in, and it takes a long time to round-trip from that depth. With the well we just drilled, we just decided to keep drilling with the BHA."

Drilling of the most recent well utilized conventional mud motor and measurement-while-drilling (MWD) technology, and it was drilled 100% in zone. Surge Energy also reported no lost time due to downhole dysfunctions.

Surge Energy holds more than 100,000 net acres in the Midland Basin, with its core acreage located in Borden and Howard counties. The acreage presents major drilling challenges because the reservoirs are located in shallow depths, Mr



Compared with a previous well with a 17,935-ft lateral that was drilled in 18 days, a new well with an 18,325-ft lateral has been drilled by Latshaw Rig 10 in just 12.5 days. This time reduction was primarily enabled by eliminating a planned trip at 15,000 ft.

Christopherson said. The total vertical depths (TVD) for wells drilled in the company's Midland acreage since entering the region in 2016 have ranged between 5,500 and 8,100 ft. The 2023 well had a total vertical depth 6,794 ft.

"When we started drilling out there, we were drilling a lot of 1.5-mile, 2-mile laterals, and we slowly stepped out to drill longer and longer laterals. But it's an area with very shallow TVDs. One of the things that makes these longer laterals more challenging is that, when you're looking at around 6,000 ft of total vertical depth, we might not have enough weight to push 18,000 ft of pipe to TD the well," Mr Christopherson said. To address this, the operator used standard friction reduction tools and rocked the drill pipe clockwise

and counterclockwise to get weight on bit during sliding operations to work slack-off weight down to the bit.

The operator is currently running three rigs in its Midland Basin acreage – in addition to Latshaw Rig 10, it's also operating Latshaw Rigs 18 and 20 in Howard County.

"I find Latshaw very easy to work with," he said. "They have a rig type that's very suitable for our style of drilling, particularly being able to go back on existing pads. The rigs move quickly, and the company has really good hands. They're the old-school farm boys who can fix everything with a wrench. You don't have to get a computer tech to fix a lot of stuff, and that works really well for us."

The well is expected to be completed and brought online in the first half of 2024. **DC**