

# A PRODUCTION TESTING & FLOWBACK SOLUTION

## SCALABLE SAND MANAGEMENT SOLUTION ENABLES EFFICIENT ADAPTATION FROM PEAK TO NORMALIZED FLOW

Switching from Full-To Half-Pack Setups During Multi-Well Flowback Operation with TETRA SandStorm Advanced Cyclone Technology Units Accommodated the Different

### HIGH-EFFICIENCY SAND REMOVAL FROM HIGH FLOWRATE GAS WELLS

A major operator needed an efficient, small-footprint sand management solution for a single pad-site with six natural gas wells. The solution needed to be adaptable to the significant difference between initial peak flowrate (immediately after stimulation) and the lower normalized flowrate (which itself was nonetheless quite high). The wells were unique in the area not only for their unusually high output levels but also for their exceptionally long laterals of 19,000 feet (5,791 meters), whereas most laterals in the region extend no more than 10,000 feet (3,048 meters). Longer laterals mean more opportunities for sand production

### A SCALABLE SOLUTION FOR CHANGING FLOWRATES

The solution entailed a lot of detailed planning due to the limited space on the pad site. TETRA engineers proposed use of the TETRA SandStorm advanced cyclone technology and began with a small, basic design, methodically scaling it up to accommodate the flowback requirements.

With the output from five of the six wells split into dual lines due to their very high flowrates, the basic design for each line entailed a plug-catcher followed by a SandStorm hydrocyclone unit, which then flowed into the sales line. To accommodate the super-high flowrates immediately following stimulation of the wells, the operator augmented its production facilities with manifolds and 4-phase separators.

### 99% SAND REMOVAL ON AREA'S HIGHEST FLOWRATE WELLS

The overall solution entailed over 7,000 feet of pressured iron and manifolds, which was installed in just 12 days with zero HSEQ incidents. The results were remarkable: 99% efficiency in sand removal with a peak flowrate of natural gas at 255 million CFD from the six wells, surpassing all other well pads in the area.

With the TETRA SandStorm units in place, we significantly reduced risks associated with sand in the flowstream, thereby safeguarding equipment while enabling a very high rate of production volume.

Contact us to learn more at: [www.onetetra.com](http://www.onetetra.com)



### CHALLENGE

- ▶ Very high flowrate surpassing other multi-well pads in the region
- ▶ Adaptable solution for varied flowrates from initial peak to normalization
- ▶ Very tight space to accommodate the flowback equipment footprint

### SOLUTION

- ▶ Extensive planning and a scalable design
- ▶ Full-pack setup with slug-catcher, manifold, SandStorm hydrocyclone, and 4-phase separator for initial peak flowrate
- ▶ Half-pack setup with slug-catcher and SandStorm hydrocyclone for normative, long-term flowrate.

### RESULTS

- ▶ Peak flowrate of 255 million CFD in natural gas, surpassing all other well pads in the area
- ▶ Output of 1,500–1,600 barrels of fluid per day
- ▶ Over 7,000 feet of iron installed in 12 days
- ▶ 99% efficiency in sand removal
- ▶ Zero HSEQ incidents during job

