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## 2.5" VIPER FLEXIBLE HOSE SERPENT SERIES CASE STUDY

Evolution Well Services (EWS) a leading North American electric frac service provider, in conjunction with their customer CNX Resources Corporation (CNX), wanted to drive increased operational efficiency and site safety through elimination of the majority of the traditional high pressure treating iron across all of EWS's frac fleets. EWS partnered with Forum Energy Technologies (FET) to provide its new Serpent Series™ flexible hose to connect EWS's frac pumps directly to their large bore manifold skids.

### Iron Assets Eliminated



Eliminated approx. 1,200 high pressure treating iron assets, per fleet.

### Hammer Unions & Leak Points Eliminated



Eliminated over 2,500 hammer union joints and leak points, per fleet.

### Optimized Rig Up/Down Time



Reduced rig up and rig down time by approx. 11 hours, compared to legacy high-pressure iron configuration.

### Significant Savings



Reduced iron replacement and recertification costs by greater than 75% per fleet, annually.

## ► WHAT OUR CUSTOMERS ARE SAYING

*"After looking at the market and evaluating the frac hose industry for over two years, while conducting a trial and talking to multiple vendors, the Evolution team decided to standardize its fleets on the FET hoses. FET's internal liner outperformed other hoses during our trials and when you couple that with their modular end design feature, this hose allows Evolution to maximize the life of the asset. In addition, we've been able to drive down operating costs while improving reliability and safety, which were our primary goals when we started implementing the hoses into our pressure pumping operations. We are proud to be partnered with FET and look forward to adding more of their products as we continue to grow."*

**Mike Bateman**

**Vice President of Operations  
Evolution Well Services**

*"We have incorporated flex hoses into the program for several reasons. Less connections, less physical lifts by personnel, less time spent rigging up, less time leak testing, less intervention work because of failures, and less disruption of operations."*

*"Inspections are extremely efficient during any phase of the job and the down time spent addressing on-the-job iron failures are down 90%. This has all equated to more time for productive work!"*

**Chris Church**

**Vice President of Completions  
CNX Resources Corporation**

# 2.5" VIPER Flexible Hose CASE STUDY



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## ► FLEXIBLE HOSE SOLUTIONS MADE FOR REAL-WORLD OPERATIONS

The FET Serpent Series flexible hose solution allows operators to improve operations while reducing the risks involved in traditional iron rigups.

In addition to reducing failure points and improving safety, FET's Serpent Series flexible hose solutions are uniquely designed with our patent-pending modular end connection replacement capabilities that enable the best total cost of ownership in the market. Within any hose assembly, the metal end connections are susceptible to damage due to corrosion, erosion, cracking, or mishandling. When one of these events occurs, our modular ends allow the customer to repair and maintain the asset for a fraction of the cost of completely replacing the asset.



## ► ENGINEERED TO IMPROVE YOUR OPERATIONS

FET Serpent Series hoses are 100% sourced & manufactured in the U.S.A. , available in multiple lengths from 2.5" to 6" internal diameter (ID), and pressures up to 15,000 psi. Engineered to improve your operations, the Serpent Series provides a single line to the well, simple pad layouts, and provides dampened vibrations to protect pumps and manifolds. Constructed with a multi-colored liner for visual wear indication, the Serpent Series flex hose offers simple wear-inspection usage and condition of the hose.

The **FET Serpent Series** delivers a superior solution when upgrading your operations from traditional treating iron.