

# Coiled Tubing Services

- Patriot's Coiled Tubing Units are efficient, versatile, and capable of performing virtually any coiled tubing operation from shallow depths to extended reach applications
- Each self-contained unit can be rigged-up quickly, thereby reducing time on location
- Replaceable work reels and custom reel trailers provide the ability to utilize multiple tubing sizes and lengths in minimal time and permit travel during road restrictions.
- All units are equipped with real-time data acquisition and tubing fatigue analysis software, enabling clients to observe actual rates, pressures and remaining tubing life on location and remotely
- High performing Chemical Services and extensive supply chain including fluid FR, metal to metal FR, Gels and other chemicals
- Coiled Tubing operations are supported by Patriot's 80T, 110T and 245T Crane fleet and HHP Pumping Units
- Coiled tubing with *single conductor electric line* is available for camera runs, logging and perforating

## Applications

- Clean-up and removal of fracturing and produced sand, scale and wax
- Milling and under-reaming operations
- Cement and stimulation fluid placement
- Velocity string installation
- Production plugs, packers and retainers
- Casing and tubing scrapers, junk baskets and gauge rings
- Logging and perforating with CT E-line

## Chemical Services

- Optimized fluids systems
- Purpose built chemical vans

## Nitrogen Services

- Specialized N2 Pumps
- Combination N2-Fluid Pumping Units
- Onsite tank storage & N2 transports

## Pumping Services

- 2500HP pumps
- 600HP/800HP/1000HP twin pumps
- Backside pressure pumps

## Crane Services

- 80 Ton Terex Crossover 8000
- 110 Ton Link-Belt
- 245 Ton Demag AC220-5
- 250 Ton Tadano ATF 220G-5



## Equipment

### Control Cabin

- Real-time data acquisition and tubing fatigue analysis
- Real-time satellite transmission capabilities

### BOP System

- Up to 15,000 psi wellhead working pressure
- Nitrogen-pressured accumulator for hydraulic back-up
- Remote BOP control system

### Tubing Work Reels

- Wide variety of depths and tubing sizes 2 $\frac{3}{8}$ ", 2", 1 $\frac{1}{2}$ ", 1 $\frac{1}{4}$ " and 2" e-line services capable of servicing up to 26000ft for 2-3/8" coil
- Quick Change System for reel removal and exchange

### Tubing Injectors

- Up to 120,000 lbf. pulling capability
- Quick Block System for injector removal and exchange
- Hydraulic Injector Tilt safety feature
- Infinite depth rate control
- NACE spec stripper assembly with up to 15,000 psi WP

### CT Support Pump Units

- 2500 HP Trailer-Mounted Frac Pumping Unit
- Quintuplex High Pressure Service Pump
- On board boost pump
- Maximum working pressure / rate: 15,000 psi / 17 bpm
- 1000 HP Twin Pumps