

# Nitrogen Services

- Patriot’s mobile Nitrogen Units offer low, intermediate and high rate pumping capabilities for use in a wide variety of applications
- Patriot’s flameless nitrogen units are used for live well applications
- The Combination Nitrogen & Fluid Pumping unit reduces footprint on location, increases job efficiency and cost savings without sacrificing operational capability and performance



## Applications

- Wellbore cleanouts
- Nitrified acid stimulation
- Wellbore fracturing and stimulation
- Coiled tubing support
- Underbalanced milling and drilling
- Foam cementing
- Live well applications (flameless units)
- Pipeline purging and pressure testing
- Pigging applications
- Bulk nitrogen supply

## Pumping Services

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

## Crane Services

- 55 Ton National NBT55
- 60 Ton Extended Reach NBT60L
- 80 Ton Terex Crossover 8000
- 110 Ton Link-Belt
- 245 Ton Demag AC220-5
- 250 Ton Tadano ATF 220G-5

## Equipment

### Nitrogen Pumps

- Specialized nitrogen pumps
- Combination N<sub>2</sub> & Fluid Pumping Units
- Onsite N<sub>2</sub> tank storage and replenishment

### Nitrogen Transports

- Pumps carry up to 150,000 scf on board
- Standalone transports up to 450,000 scf
- Nitrogen Queen up to 1.5MM scf

### Low Rate N<sub>2</sub> Pumping Units

- Discharge Rates: 175 – 3000 scf/min
- Vaporizer Type: Flameless Converter
- Discharge Pressures: 0 – 10,000 psi
- Discharge Temperatures: -40°F to +104°F

### Intermediate Rate N<sub>2</sub> Pumping Units

- Discharge Rates: 350 – 6,000 scf/min
- Vaporizer Type: Diesel Fired Heat Exchanger
- Discharge Pressures: 0 – 10,000 psi
- Discharge Temperatures: -40° F to +302° F

### High Rate N<sub>2</sub> Pumping Units

- Discharge Rates: 350 – 11,000 scf/min
- Vaporizer Type: Diesel Fired Heat Exchanger
- Discharge Pressures: 0 – 10,000 psi
- Discharge Temperatures: -40° F to +302° F