



N₂ & Fluid Pumping Services

www.TitaniumEnergyServices.com

MISSION STATEMENT & COMPANY VISION

“Continuous Improvement In All We Do”

Titanium’s Mission is dedicated to **Continuous Improvement** in all that we do with a commitment to provide **Quality Service** with a priority on our **Safety Culture**.





Nitrogen & Fluid PUMPING SERVICES

Titanium Pumping Service focuses on drilling and well servicing operations in the Western Canadian Sedimentary Basin. Titanium's fleet of Fluid pumping equipment is located at our strategically based centers throughout Western Canada.

Titanium Energy Services offers Nitrogen Purging and Fluid Pumping Solutions for Well Intervention, Pipeline Integrity Testing, Facility Shut-Down and maintenance operations.





PUMPING SERVICES

Fluid pumping units are commonly used for several tasks. injecting fluids into wells to enhance production, fracturing reservoir rock to release hydrocarbons (*fracking*), and cementing wells to ensure structural integrity.

Nitrogen lifting is a common technique used to initiate production on a well following workover or overbalanced completion.

A coiled tubing string is generally used to apply the treatment, which involves running to depth while pumping high-pressure nitrogen gas.

Nitrogen purging is an industry standard technique for the replacement of a hazardous or undesirable atmosphere with an inert dry atmosphere.

The two most common methods of purging are displacement and dilution. The geometry of the process system determines which method is used.



Nitrogen & Fluid Pumping Fleet

- Body Style Flameless N2 Pumpers
- 1900scm Super High Rate N2 Pumps
- 400scm High-Rate Pumper capable of
- Bulk Nitrogen Trailers
- Stable Foam Pumping Units
- Stand Alone Air Compressor Units
- 600HP High Rate Fluid Pumpers
- 3x5 Pressure Trucks
- 40m³ Contained Open Top Tanks
- Chemical Injection Units and Trailers

EQUIPMENT SPECIFICATIONS

NITROGEN – BODY LOAD

- Maximum Flow Rate: $85m^3/min$
- Maximum Discharge Pressure: 150 - 70,000kpa
- Heat Source: Hydraulic Water Brake
- Supply Temperature: -20 to +60 °C (controlled)
- Storage Capacity: $7,500m^3$



FLUID PUMPING UNIT

- Up to $1.8m^3/min$
- 70 MPA Max Pressure
- Dual $1.5m^3$ mixing tanks
- True Twin 600HP Triplex, 1200HP Total
- Ability to pump fluids and chemicals
- Operator Cabin c/w full data acquisition
- 2 x Chem add pumps
- 2" Treating iron

FOAMING/CHEMICAL UNIT

- 4 Changeable tote capacity
- 2x Chemical Pumps ($0.25L/min-30L/min$)
- 2x Chemical Pumps ($0.25L/min-41L/min$)
- Ability to pump well servicing fluids & chemicals
- Operator Cabin c/w full data acquisition
- Raised totes for spill containment
- Heated cab for winter operations



CHEMICAL INJECTION TRAILER

- 8 X Changeable totes
- 3 X Chemical pumps ($0.25L/min - 30L/min$)
- 2 X Chemical pumps ($0.25L/min - 41L/min$)
- 1 High rate chemical pump ($5L/min - 135L/min$)
- Ability to pump well servicing fluids and inject chemicals.
- Operator Cabin c/w full data acquisition

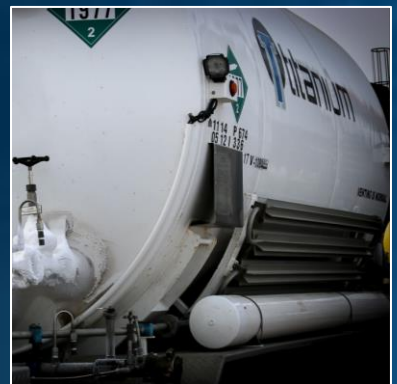




PUMPING SERVICES NITROGEN & FLUID

Pumping Support for:

- **Drilling Operations**
- **Nitrogen Logistics**
- **Frac Holdbacks**
- **Foaming**
- **Well Servicing Operations**
 - Cleanouts
(fluid-based, energized fluid-based & foam-based)
 - Confirmation Runs
 - Reverse Circulation
 - Well Killing
 - Pressure Testing
 - Stimulation – *Acid Spotting*
 - Cup Frac Movement
 - Purging
 - Differentially Stuck Tubing
- **Pipeline Operations and Facilities**
 - Process & Pipeline Applications
 - Nitrogen Process Purging & Atmospheric Inerting
 - Accelerated Cool-Down
 - Process Drying
 - Hydrostatic Pressure Testing
 - Pneumatic Pressure Testing
 - Pipeline Drying
 - High Velocity Flushing
 - Nitrogen Pipeline Purging & Displacement
 - Leak Detection





PUMPING FLEET SPECIFICATIONS



4000gal/9500m3 Triplex N2 Pumper

- Horsepower** 500
- Pump Rate** 5-80 SCM/Min
- Tank Capacity** 4000 gal / 9500m3

Triplex Quint N2 Super Pumpers

- Horsepower** 5000
- Pump Rate** 1900 SCM/min
- Tank Capacity** 4000 gal / 9500m3

Triplex N2 High Rate Pumpers

- Horsepower** 500
- Pump Rate** 400 SCM/min
- Tank Capacity** 4000 gal / 9500m3



FLUID PUMPING SPECIFICATIONS

1000L/min Triplex Fluid Pumper Units

- Pump Rate** 0-1800L/min 1.8m³/min
- Max Pressure** 68.9MPa / 10K PSI
- Tank Capacity** Dual 1.5m3

1000L/min Triplex Fluid Pumper Units

- Pump Rate** 0-1100L/min
- Max Pressure** 68.9MPa / 10K PSI
- Tank Capacity** 6.5m3

400L/min Triplex Fluid Pressure Pumper Units

- Pump Rate** 0-400L/min
- Max Pressure** 34.5MPa / 5K PSI
- Tank Capacity** 10m3

400L/min Triplex Pressure Trucks

- Pump Rate** 0-400L/min
- Max Pressure** 34.5MPa / 5K PSI
- Tank Capacity** 6.5m3



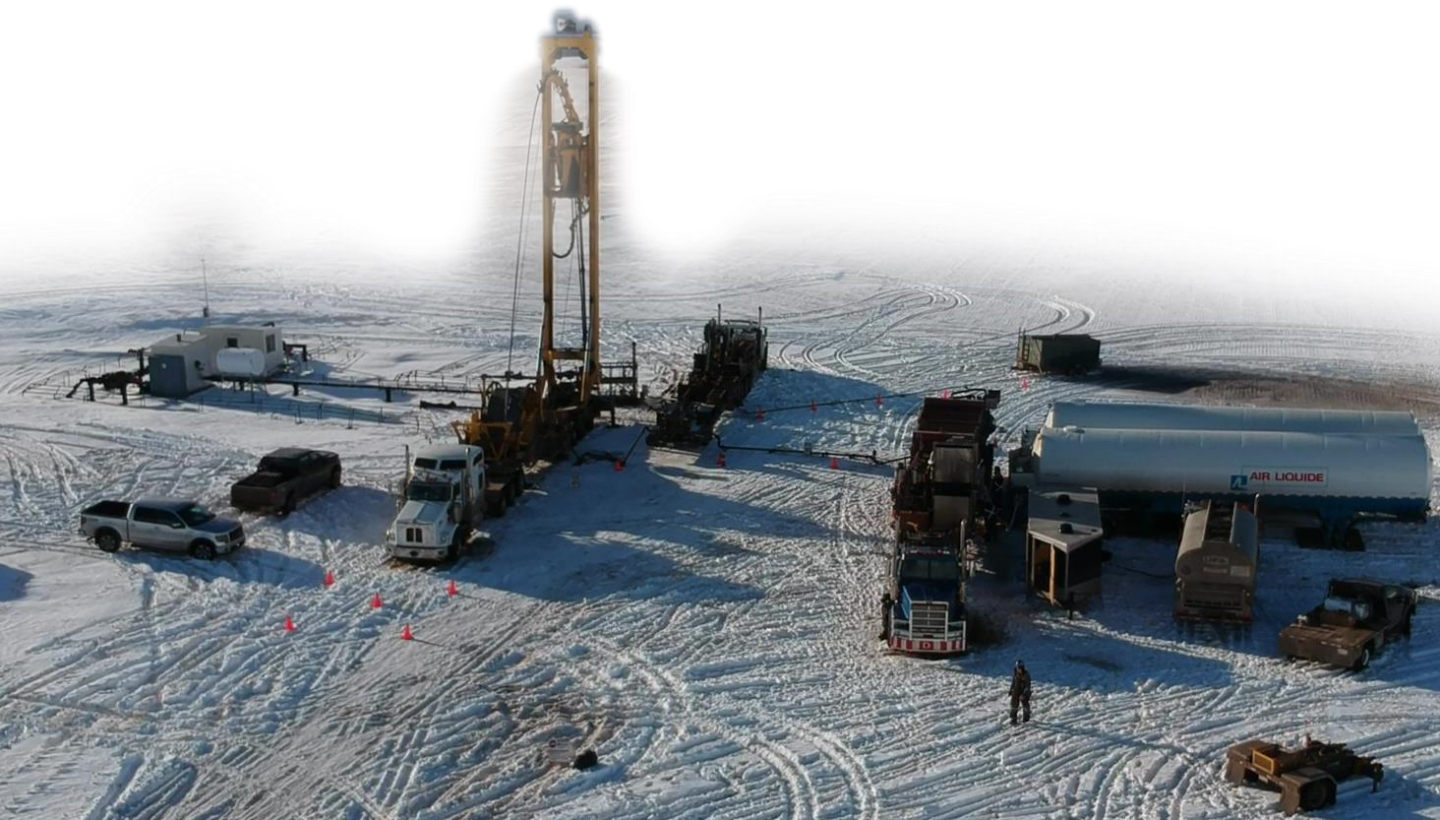


cbm fracturing

Coalbed Methane (CBM) is typically a sweet gas trapped within coal seams. CBM is considered a clean source of natural gas, but to be productive, many formations require a stimulation process to extract the resource.

CBM Fracturing utilizes a dry nitrogen gas to crack the formation allowing the coal to act as a natural proppant maximizing production.

With Titanium's specialized pumping and coiled tubing equipment, CBM stimulations are now more productive than it has ever been. Titanium smaller footprint can now perform the same operation that would once require many pieces of equipment and a much larger labor force.





cbm fracturing

EQUIPMENT SPECIFICATIONS

Just one of Titanium Super Pumps can replace about five conventional high rate trailer units reducing the operational footprint and logistical requirements.

“The less people and equipment on location means, increased production, efficiency and safety, reducing the risk of incident, injuries and downtime.”

Pat Potter
Chief Executive Officer

Super Pumper

Pumps	ACD Quintiplex x3
Max Rate	2,000SCM/Min
Max Pressure	10,000psi pump/15,000psi iron
Heat Exchangers	3 Flamed Units
Horsepower	5,000HP
Control	PLC with Remote Support

Coiled Tubing Mast Unit

Make	EnerFlo Mast
Capacity	1,200 Meters 2 7/8”
Mast Height	10.5 Meters below injector
Pressure Rating	10,000psi / 70mpa*
Injector	S&S 80s with Pipe Straightener
Data Acquisition	Orion & PiDaq

Auxiliary Equipment

- Support Unit with Picker
 - 1 Ton Crew Truck
 - 8,000 Liter Bulk Fuel Truck
 - Iron Trailer
 - Mobile Tank Farm (As Required)
- *Pipe dependent*





www.TitaniumEnergyServices.com

CALL NOW
1-844-875-1395