

tacrom



tacrom
services s.r.l.

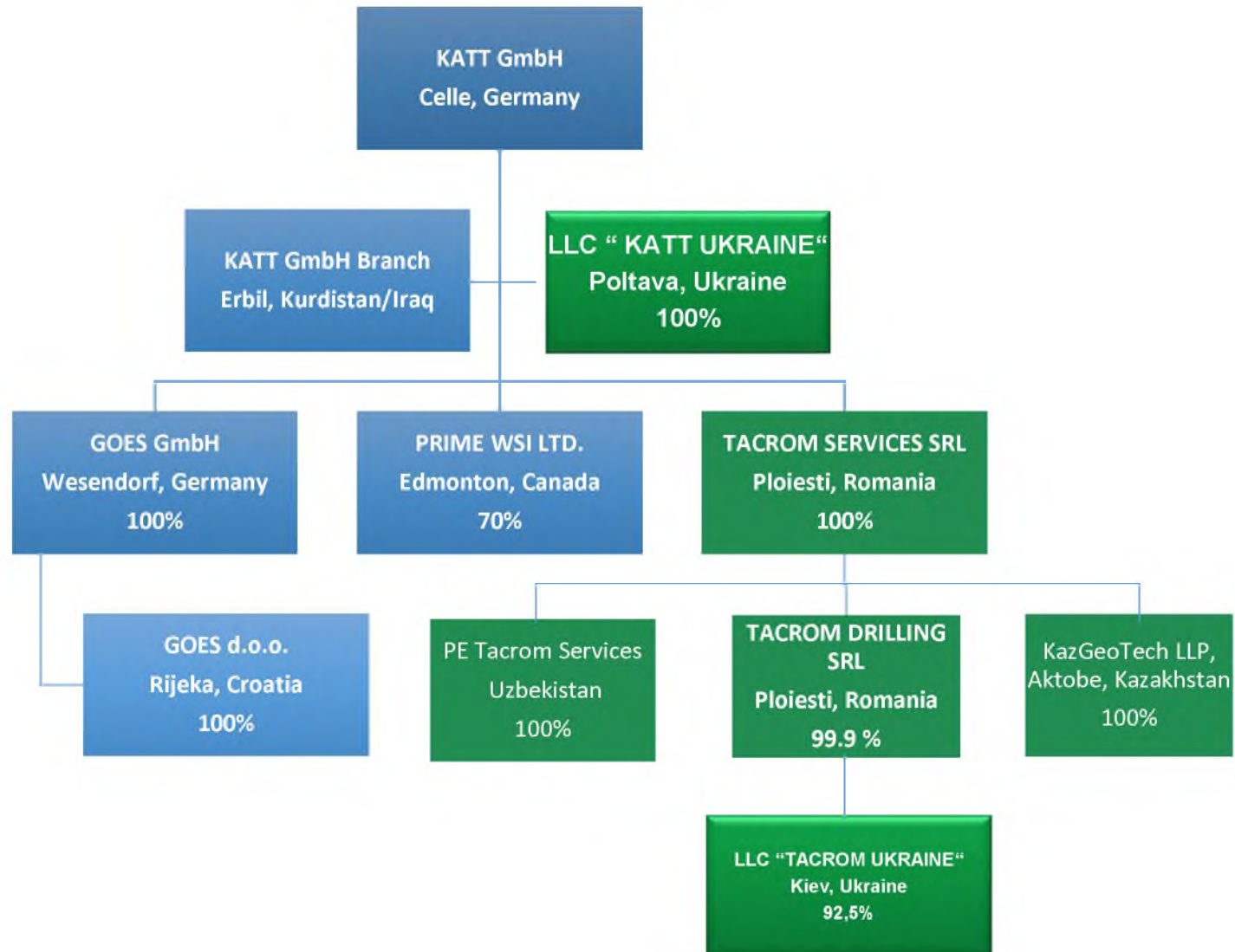
tacrom
UKRAINE

tacrom
drilling s.r.l.



COMPANY PRESENTATION

tacrom



Tacrom Services: 100% subsidiary of KATT GmbH (est. 1998).
Located in Romania. Established in 2006.

Tacrom Drilling: Located in Romania. Established in 2008

Tacrom Ukraine: Located in Ukraine. Established in 2017

Company Development

- Oct 2006 – Established as a fracturing service company
Currently in Ukraine, Romania, Uzbekistan, Kazakhstan.
Past projects in Azerbaijan, Bulgaria, Turkey, Albania, Turkmenistan, Georgia)
- March 2008 - Coil tubing and nitrogen service
(Romania, Turkey, Albania and Ukraine)
- June 2008 - Gravel-pack service
(Romania)
- June 2011 - Matrix Acid service
(Romania, Ukraine)
- May 2011 - Hot Oil services
(Romania, Ukraine)
- Jan 2017 – Frac and CT operations in Ukraine
(180 Fracs and 300 CT jobs performed to 31.12.2018)
- June 2019 – Began frac operations in Uzbekistan



Strong Well Service Customer Base

- Performed:
 - Fracs – more than 500 on-shore and off-shore
 - Oil, Gas and Coal Bed Methane frac stimulation experience
 - Coil tubing and nitrogen service – in excess of 700 jobs in Romania and Ukraine
 - More than 800 Gravel Packs
 - More than 500 Matrix acidizing jobs
 - More than 2.000 Hot Oiling Jobs
 - Over 450 wells drilled.
 - Several Heavy Workovers performed



Customers

In Romania

- OMV Petrom
- Stratum
- Algoritm
- Amromco
- Transatlantic
- Aurelian Oil
- Expert Petroleum
- Petrofac
- PetroSantander
- Fora
- Romgaz
- NIS/Gazprom
- Winstar
- Norwest

In India

- Oil India

In Ukraine

- UkrGasVydobuvania
- Burisma
- GeoAlliance
- DTEK

In Uzbekistan

- Epsilon Development

In Serbia

- NIS

In Poland

- ConocoPhillips
- PGNiG
- BNK Petroleum

In Austria

- OMV

In Azerbaijan

- Karasu
- Absheron



In Bulgaria

- Direct Petroleum

In Turkey

- Hema Energy

In Albania

- Bankers, Stream Oil&Gas

In Turkmenistan

- CIS, Burren (ENI)

In Georgia

- Norio, Iskander, Frontera

Tacrom provides mobile and versatile oilfield services for onshore and offshore operations

The following Services are provided:

- Hydraulic Fracturing
 Proppant & Acid Fracs / Frac-Packs
- Coiled Tubing & Nitrogen Service
- Plunger Lift
- Capillary String
- Packers and MS tools
- Stimulation and production chemicals
- Acidizing
- Gravel-Packs (Sand Control)
- Dewaxing Treatments
- Drilling
- Workover



TACROM Equipment

- 3 x Blenders- up to 8 m³/minute
- 11 Frac Pumps 2500 HHP
- 1 x Frac Pump 2000HHP
- 2 x Hydration Units
- 3 x Manifold Trucks
- 1 x Chemical Unit
- 3 x Data Vans
- 3 x Sandtrucks
- 1 x Slurry Guar Unit
- 1 x 120t Sand King
- 4 x Heating and filtering units
- 6 x Coiled tubing unit
- 6 x Nitrogen units
- 7 Multipurpose pumping units
- 2 x Gravel pack and Frac pack pumping units
- 1 x 550 HHP Triplex pump Skid
- 1 x Unibelt Sand Belt
- Cranes and Transport Units
- 4 Vacuum trucks. 15 m³ each
- 2 x water transporters 25 m³ each
- 16 x 70 m³ frac tanks
- 8 x 33 m³ frac tanks
- 7 x 27 m³ acid tanks
- Plunger lift equipment and service
- Capillary String/Slickline unit



Frac Blender

- Truck mounted hydraulically driven mixing and blending unit
- Mixing and pumping rates from 0.3 to 8 m³/minute
- Fully computerized, on the fly, mixing capabilities for 3 liquid chemicals, 2 dry chemicals and 2 sand augers
- Over 50 parameters are recorded and displayed in real time



Hydration Unit

- Truck mounted hydraulically driven mixing and blending unit
- Mixing and pumping rates up to 8 m³/minute
- Fully computerized on the fly mixing capabilities for 3 liquid & 1 dry chemical
- All mixing, pumping and chemical rates are recorded and displayed in real time



Chemical Unit

- Trailer mounted, with 5 x electrically driven metering pumps
- 5 x 900 liter stainless steel tanks
- Mixing paddles for slurries
- Process controlled for on the fly mixing
- All mixing, pumping and chemical rates are recorded and displayed in real time



60 tonne Sand Truck

- Hydraulically operated dumper
- Fully enclosed, two compartment design
- Stabilizer legs for safe operation
- 35 m³ storage capacity (60 tonnes maximum)
- Tractor with 14 tonnes crane for proppant loading



125 tonne Sand King

- Fully enclosed, four compartment design
- 85 m³ storage capacity (130 tonnes maximum)



Sand Conveyor

- Allows placement of any number of field sand storage trucks, silos and/or sand kings near the blender
- Delivers up to 13 mt / minute to the blender



2500 HHP Pump Unit

- Fleet of 11 units available
- Trailer-mounted remote controlled pump units
- SPM Quintuplex Pump, 4", 4,5" & 5" Fluid Ends
- Allison and ZF Transmission
- 2500 HHP MTU Diesel Engine
- Rate: 500 – 3800 l/min up to 840 bars



Data Aquisition Van

- Air Conditioning
- 11 kW Generator
- Installed PPE shower
- Remote Control Frac Equipment
- Monitoring and Data Recording
- Real time data transfer to customer



Data Acquisition Van

- GOES DMS
- Remote Control Frac Equipment
- State of the Art Meyer's Software
 - MFrac – Treatment Design
 - MinFrac - Minifrac Analyses
 - MFrac & MView – Treatment Control
- Field laboratory



Manifold Truck

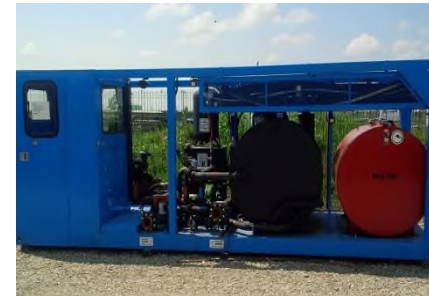
- Truck mounted crane and iron racks
- All low pressure tank connections and hoses
- All high pressure connections for 4 frac pumps
- Treating iron is all integral , or NPS, supplied by Weir / SPM
- Treating iron is inspected, thickness tested and pressure tested at regular intervals



Frac, Coiled tubing and Acid Handling

- Filtration units available for 1 – 5 micron fluid cleaning
- Heating units available from 3.5 to 7 million BTU
- Field storage tanks available from 30 to 83 m³.
- Water pillows available (200 m³ each) for temporary water storage

High Rate Heating Unit



Combination Heating/Filtering Unit



Filtering Unit

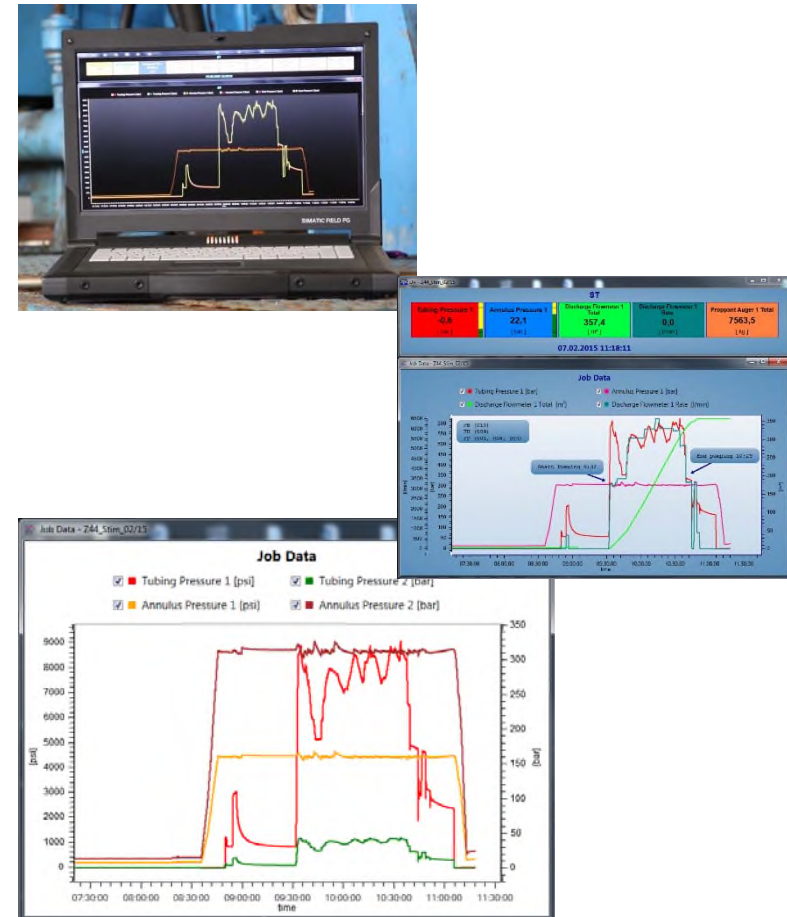


Field Storage tanks



GOES Data Management System(DMS)

- Process control providing accurate proppant and chemical rates
- Delivery tables - Automatic auger selection or user controlled priority
 - Smooth control ensures stability of suction rate
 - Failure prevention and quick reactions
 - Proppant & Chemical rates can be based on suction (clean) rate or on discharge (slurry) rate
- Customer support located in our facility for immediate 24/7 support and remote access when needed



500 HHP Multi Purpose Pumping Units (MPPU)

- Truck mounted, single operator control
- 12 parameters recorded and displayed in real time
- SPM Triplex Pump, 3"-3.5" Fluid End
- Rate: 20 – 600 l/min
- Fluid mixing capacities with centrifugal, diaphragm and Roper pumps
- Filtration system installed
- 3.5 million BTU (1025 kW/hr) heater unit
- Suitable to mix and squeeze acid systems, gravel-packs, consolidation, dewaxing and tensioactive treatments



500 HHP Gravel Pack Pumping Units (GPPU)

- Truck mounted, single operator control
- 12 parameters recorded and displayed in real time
- SPM Triplex Pump, 3.5" Fluid End
- Rate: 40 – 800 l/min
- Fluid mixing capacities with centrifugal, diaphragm and roper pumps
- Sand Auger, hopper and mixing tub installed
- Filtration system installed
- Suitable to mix and squeeze acid systems, gravel-packs, consolidation, dewaxing and tensioactive treatments



Skid Mounted 500 HHP Pump

- Compact skid design
- Transport on trailer or flatbed truck
- Caterpillar / Allison power
- SPM TWS 600 triplex pump
- 3 inch fluid end. 30 to 500 lpm
- Rated to 15,000 psi. (1030 bars)
- Includes 4x5x11 Mission pump
- Certified for offshore use



Truck mounted 3200 m CTU

- 3200 meters of 1 ¼ tubing on the reel
- Compact, efficient design. Crane included on unit.
- All variables recorded during the operation
- Full job report given to customer. Graphical and/or tabular data offered
- Double or triple pressure control offered
- Optional nitrogen service for inert gas requirements
- Extremely fast rig up and rig down
- 10 k Combi BOP (3.06")
- 10 k Side door stripper
- 20 ft x 10 k Lubricator



Trailer Mounted 4500 m CTU

- 4500 meters of 1 ½ inch tubing on the reel
- All components rated to 700 bars
- Compact, efficient design. Crane supplied
- Prejob modelling available
- All variables recorded during the operation
- Full job report given to customer. Graphical and/or tabular data offered
- Double or triple pressure control offered
- Optional nitrogen service for inert gas requirements
- Extremely fast rig up and rig down
- 10 k Combi BOP (3.06")
- 10 k Side door stripper
- 20 ft x 10 k Lubricator



Truck Mounted 6000 m CTU

- 6000 meters of 1 ½ inch tubing on the reel
- 8x8 chassis. Built for soft, muddy, & icy road conditions.
- All components rated to 700 bars
- Compact, efficient design. Crane supplied
- Prejob modelling available
- All variables recorded during the operation
- Full job report given to customer. Graphical and/or tabular data offered
- Double or triple pressure control offered
- Optional nitrogen service for inert gas requirements
- Extremely fast rig up and rig down
- 10 k Quad BOP (3.06")
- 10 k Side door stripper (double stripper possible)
- 20 ft x 10 k Lubricator



Flameless Nitrogen Pumper

- 5-85 scm/minute pump rates
- 700 bar pressure limitation
- Highly accurate Electromagnetic flowmeter
- Flameless heating of nitrogen for safe operation
- Full recording of all pumping variables. All data can be included in the customer report
- 7,600 or 11,400 liter on board storage tank. Most jobs will not require additional product



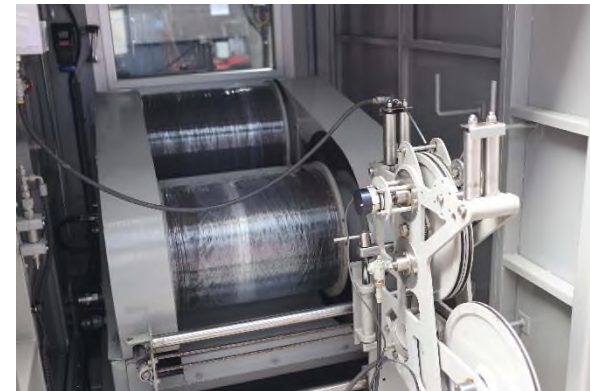
SKID Mounted Capillary String / Slickline Unit

Slickline

- 7800 meters of 0.125 inch S/L on the reel
- Compact Heavy-Duty Skid design
- All components rated to 700 bars
- Standard S/L tool package

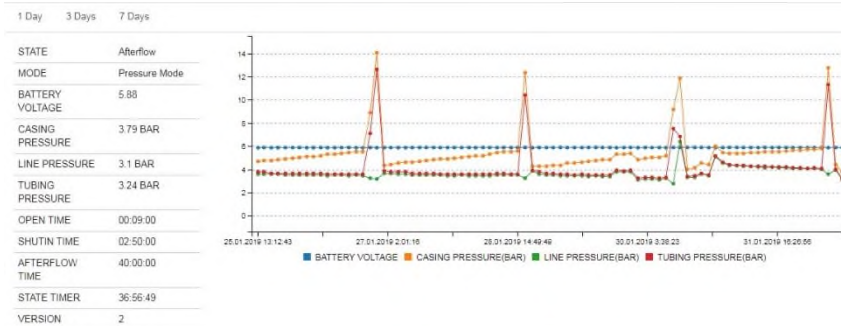
Capillary String

- 6000 lb. Injector
- BOP/Lubricators rated for 700 bars
- Drop in Drum for $\frac{1}{4}$ - $\frac{1}{2}$ inch SS Duplex pipe
- Pipe length up to 6000 m
- Surface pumps powered by solar or gas
- Programable surface pumps to inject foamer, inhibitors, solvents at bottom hole



Plunger Lift Supply and Service

- P/L is the simplest and cheapest way to remove produced water from the production string
- Full package includes supply, installation & service
- Programed on site, or through remote access (modem)
- All well data is transferred to cloud based data storage and accessed by secure login
- Number of plunger trips per day is programmed into the unit based on well perfomance and this in turn optimizes production



1-HSP238-014 Plunger, HSP, 238, #6 Choke

1-BRP238-001 Plunger, Brush

1-SCP238-003 Plunger, 238, Sand Conventional, 15", Hollow

1-PAD238-026 Plunger, Pad, 238, Dual, CP, 17-4 Pads

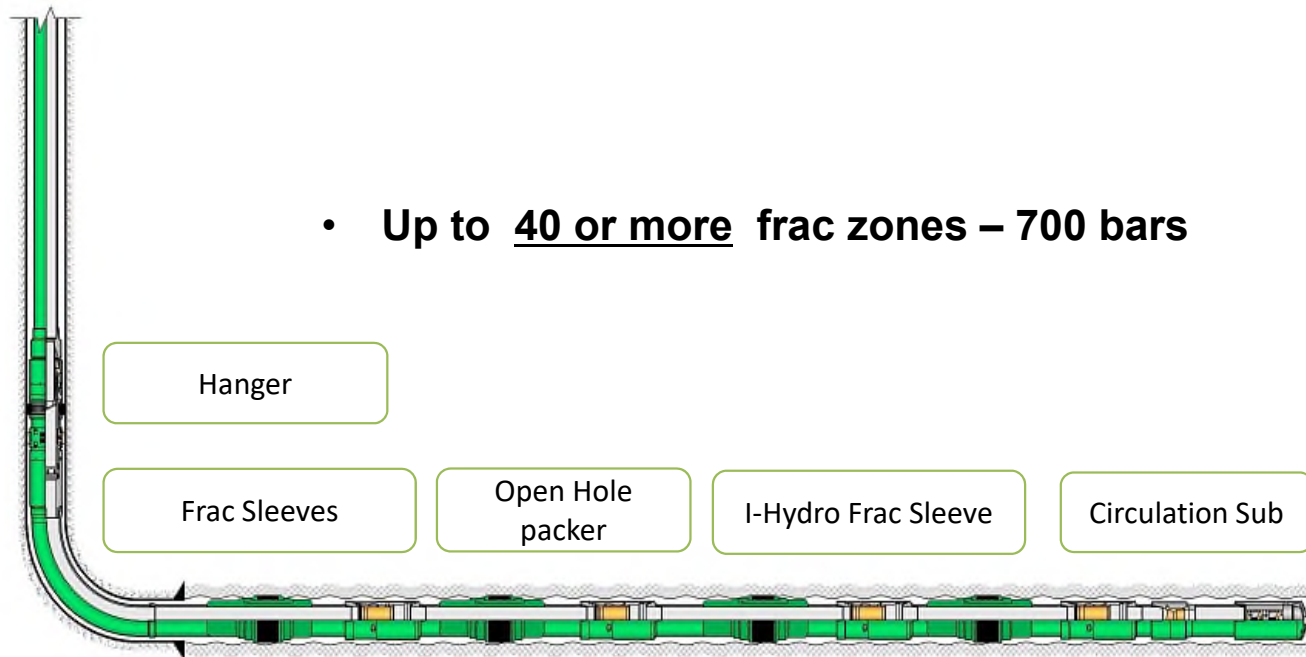
Packer services

- Supply and service of stimulation and production packers
- Most common sizes in stock
- Supply of packers can be on a sales or rental basis
- Packer services can include trained technicians to assist in running, and setting the tools



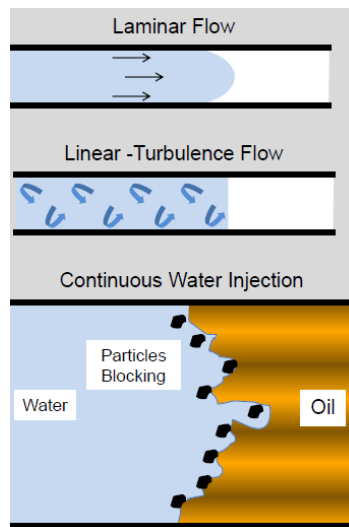
Multi-stage Stimulation Services

- Supply and service of multistage stimulation tool
- Able to supply cemented liner, inflatable or swellable external casing packers

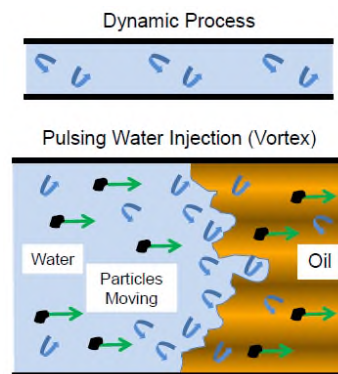


ODYSSEY Tool

- Run using Coiled tubing
- Creates fluid pulses at 1200 psi differential pressure
- Forces deep penetration of fluids into the zone of interest
- Far better stimulation of the entire interval
- Used with acids and solvents



No Dynamics

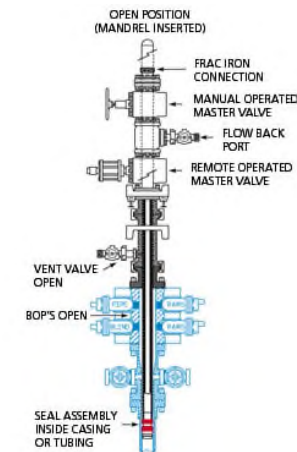


Adding Dynamic Energy/Momentum



Wellhead Isolation Tool

- Isolates the wellhead from frac pumping pressure
- Allows pumping through a wellhead with much lower maximum rated pressure than the frac pressure
- Eliminates the need to change the production WH to a frac WH and back again
- No need to kill the well to change the WH before or after the frac
- Protects WH gate valves from acid and proppant erosion



Fluid Systems & Chemicals

FRAC FLUIDS

- Water Base
- Oil Base
- Foam Base
- Acid Base
- Slickwater
- Hybrids

PROPPANTS

- Quartz Sand
- Sintered Bauxite
- Ceramics
- Resin Coated
- Ultra light weight proppants

ADDITIVES

- Biocides
- Buffers
- Polymers
- Crosslinkers
- Temperature Stabilizers
- Breakers
- Friction Reducers
- Surfactants
- Clay Stabilizer
- Fluid Loss Additives
- Diverters
- Paraffin Removal
- Scale Removal
- Surface tension reducers

Laboratory & Field Procedures

All stimulation and cleaning fluids are tested in Tacrom Service's laboratory in terms of fluid and formation compatibilities, breaking and separation time, sieve analysis etc..

Mixing procedures and equipment capabilities for field are made to maximize safety and also for an easy and fast preparation.



Tacrom is ready to do more for you

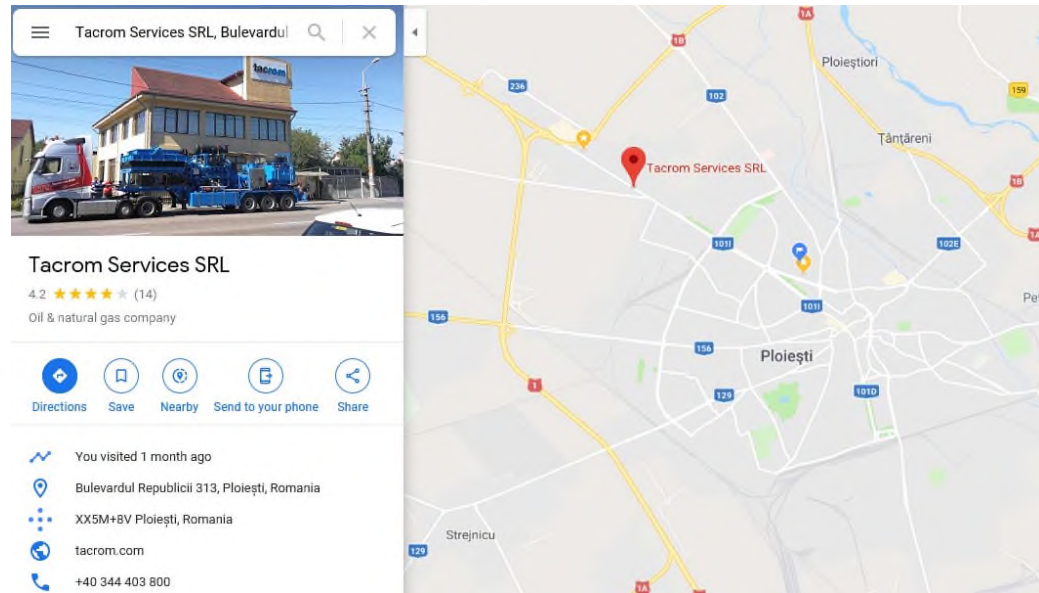
- Assist in well selection
- Assist in well preparation
- Arrange subcontractors for logging, downhole equipment and surface pressure equipment.
- Supply engineering for design
- Supply tanks, equipment and chemicals for stimulation treatments
- Perform well stimulation treatments with acid or proppant and gravel-packs operations
- Perform matrix acid treatments with or without nitrogen, using conventional tubing or coil tubing
- Post frac underbalanced cleanout using coil tubing

Contact

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