



# Customized Drilling Technologies

Capabilities | 2022





# What you'll learn today

- Who we are, what we do
- Our technical capabilities
- How we can improve your business





# Who we are



**M****OBILE****E****QUIPMENT****D****ESIGN &****A****UTOMATION****T****ECHNOLOGY**

MEDATech has been designing and building custom-engineered mobile equipment and systems for customers across the globe since 2003.



*Engineering services: from consulting to software development to engineer/design/build*



*Advanced drilling equipment*



*All-electric powertrains*



Customized Drilling Technologies

# Custom Drilling

Borterra develops solutions for unconventional or unique drilling requirements. We are an integrator and OEM that designs, builds and commissions drill rigs for any size hole, any depth, in any ground condition.

***Drill faster. Drill straighter. Drill cheaper.***

Key equipment criteria:

- Increase accuracy & efficiency
- Reduce waste & environmental impact

# Our Team

**We are 35 people strong.**

**Our management team:**

- Years of experience in all aspects of drilling
- Engineers, technicians, operators and mechanics



**Robert Rennie**

President & Owner



**Mark Seeber**

Senior Technical Advisor



**John Arnold**

General Manager

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**Darren Mueller**

Sales & Marketing Director



**Andrew Severs**

Engineering Services Director



**Paul Cholewa**

Chief Technology Officer



**Scott Dalrymple**

Senior Design Engineer  
& Product Manager for Borterra

# Our Clients



Customized Drilling Technologies



# Our Partners



## **DTH water hammer drilling technology**

LKAB Wassara AB (Sweden) develops high performance down-the-hole (DTH) water-powered drilling systems for surface and underground drilling operations.



## **Sonic drilling technology**

The Sonic Drill Corporation is an award-winning designer, manufacturer and supplier of innovative sonic drill heads, rigs and tooling.



## **Charging solutions & robotics**

ABB Charging Solutions and ABB Robotics supply ABB Robotics is a pioneer in robotics, machine automation and the full range of fast and ultra-fast EV charging solutions.



## **Taiga robotics**

Taiga Robotics enables robots and other machinery to operate in unpredictable and unstructured environments by letting a person handle the last-mile decision making in real-time.





# Technical Capabilities



# Our Technology



## REQUEST

OEM/end user requests a modified or completely new machine design/build

## ENGINEER

Complete ground-up engineering work:  
Mechanical,  
Hydraulic, Electrical &  
Software engineering

## BUILD

Complete ground-up prototype build

## TEST

Perform testing & commissioning

## DRAWINGS

Provide as-built drawings, documentation and models

## SUPPORT

Provide ongoing engineering support

# Multi-tech drill rigs

**By combining two or more drilling technologies, our customers improve safety and increase production.**

- Conventional drilling
- Sonic drilling
- Down-the-hole water hammer drilling
- Down-the-hole air drilling
- Percussion drilling
- Diamond-core drilling
- Directional drilling



# Multi-tech drill rigs

## Hybrid DTH water hammer/ sonic drill rig (Southern Company)

- World first: DTH + sonic technologies
- Robotic rod handling
- Real-time drill data collection
- Up to 7-inch diameter holes
- Up to 600 feet deep

*Southern Co. expects this rig to halve program time, from 6 years to 3 years.*



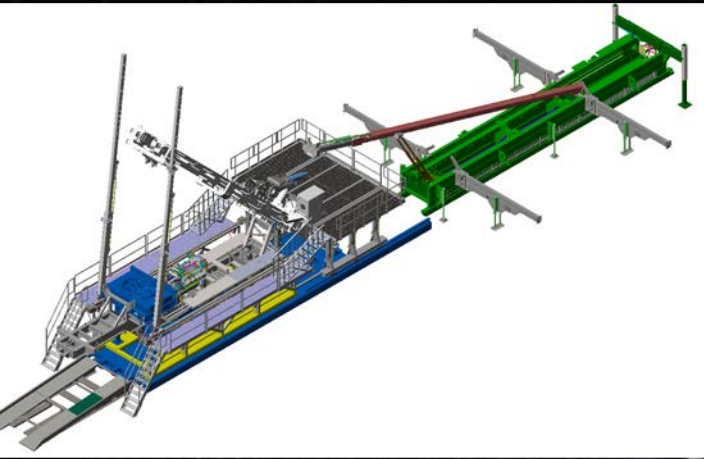


# Specialty drill rigs

## Auger foundation drill

- Up to 12-foot diameter holes
- Truck-mounted, for transmission line expansion
- Designed and delivered in 18 months





# Specialty drill rigs

## Oil & gas slant drill

- World first: oil & gas drill rig for angled holes using a Schramm TXD 130
- Borterra-designed sub, drilling floor, mast support & pipe-handling systems



# Robotic rod handling

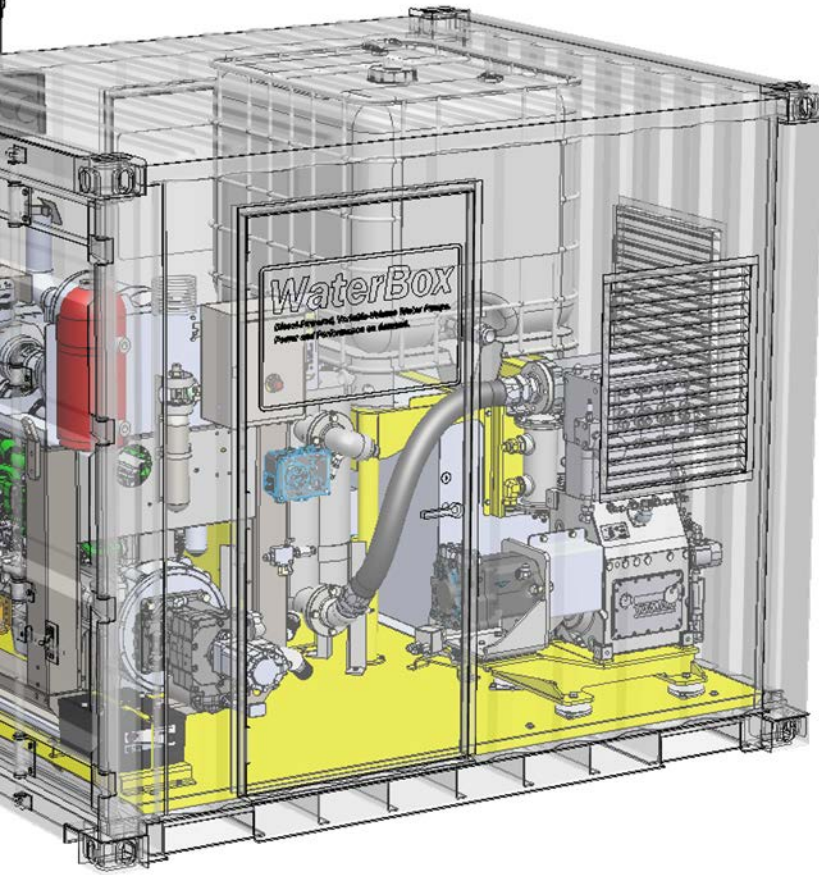
## Borterra RodBot™

- Eliminates Manual Rod Handling
- Keeps workers safe from injury
- Handles drill rods & casing sections
- Set the drill rod position once, then hit 'repeat'
- Standalone or truck-mounted





# High-pressure pumps



## Borterra WaterBox™

- High-pressure water pump
- Self-contained 'container' unit
- Designed specifically for drilling
- Diesel- or electric- powered
- For DTH water hammer drilling

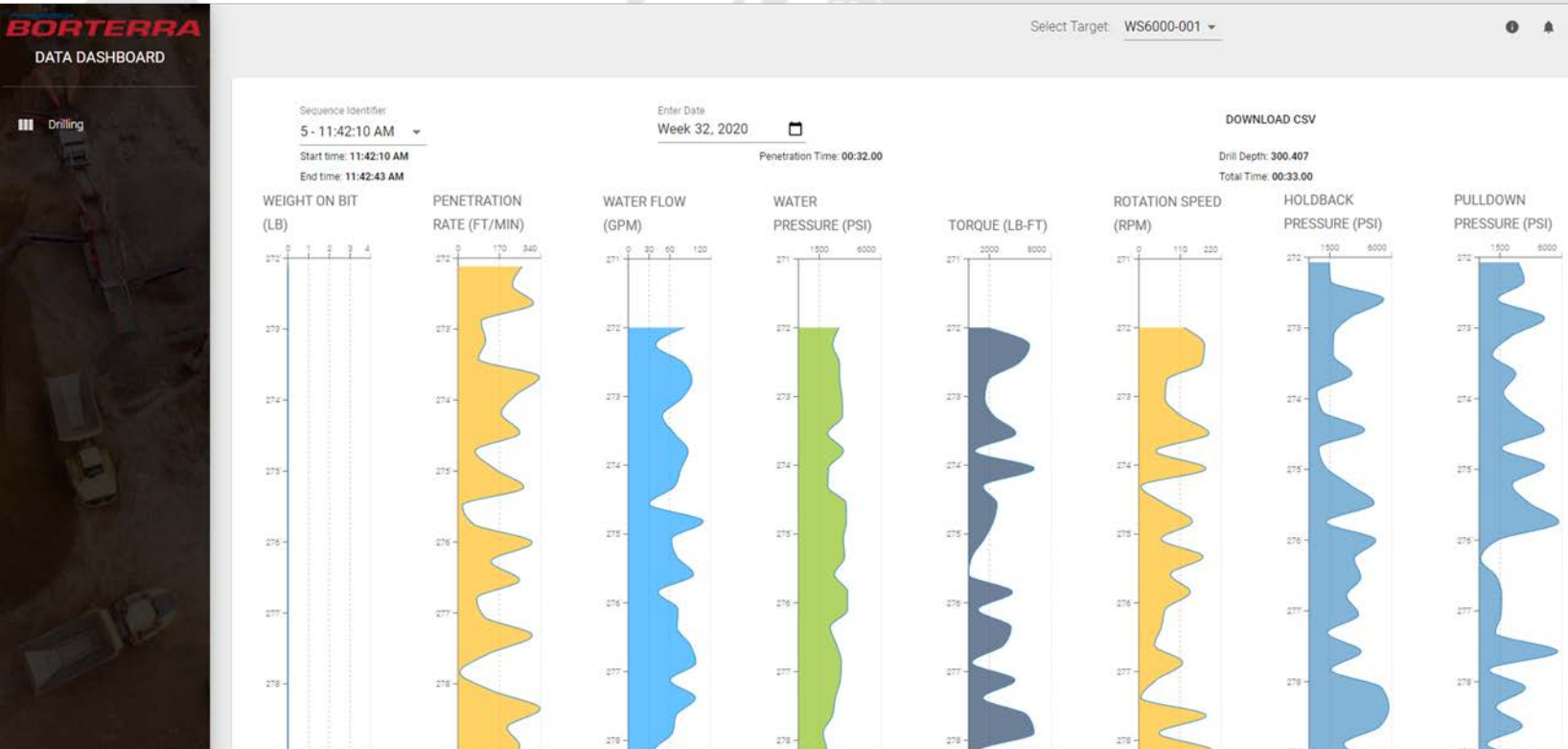
# Water filtration systems

**With water hammer drilling, water filtration and recycling reduces the need for clean water and diminishes environmental impacts.**

- Scalable, from 100 LPM to 1000 LPM
- Particle size and silt density meet or exceed water hammer OEM specifications
- Modular, custom-designed systems



# Real-time drill data



**Drill data is valuable.  
Collect and record the drill  
data you need to do the job  
better and cheaper.**

- Drill & rig operational data collection
- Web-based interface: access anywhere
- Store and download data for analysis

# Customization, upgrade & repair

**Modify, upgrade or  
repair your existing  
equipment.**

- Hole size change
- Voltage change
- Rod-handling add-ons
- Controls upgrades
- General repairs





# How can we help you?

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