

## Consistently steer high-quality wells to target depth accurately and efficiently

### i-Trak automated directional drilling service

The i-Trak™ automated directional drilling service builds upon the advances of the AutoTrak™ rotary steerable system (RSS) and Lucida™ advanced RSS by adding a surface-based, automated algorithmic controller that mimics the actions of a human driller. The controller continuously analyzes the drill bit's position relative to your geometrical well plan. If the bit begins to drift off the planned path, the service automatically generates a set of steering commands to get your well back on track to improve both well placement and overall drilling speeds.

#### ENJOY GREATER FLEXIBILITY IN DRILLING CONTROL

**Advisory mode:** When deployed in advisory mode, the service's automated controller sends its updated steering proposal to your directional driller, who reviews it with the drilling contractor's team. Once the proposed plan is approved, the driller sends commands via downlink to the RSS downhole to make a change to the steering parameters.

**Active control mode:** In active control (i.e. fully automated) mode, the controller automatically sends

commands directly to the downhole RSS to change the steering parameters and provides updates on its actions to the drilling team.

#### LEVERAGE AN AUTOMATION TECHNOLOGY WITH A PROVEN TRACK RECORD

The i-Trak automated directional drilling service helped an offshore operator improve drilling performance in a field-wide development campaign. Prior to implementing the automated drilling service, the 12¼-in. sections of six wells were drilled with an average ROP of 35 m/hr (115 ft/hr). By implementing automated directional drilling in the i-Trak drilling automation services portfolio, the 12-1/4-in. sections of the next six wells were placed precisely on the desired path with an ROP of 45 m/hr (148 ft/hr).

Contact your Baker Hughes representative to learn how the i-Trak automated directional drilling services can bring greater efficiency and consistency to your drilling operations.

#### APPLICATIONS

- Drilling operations with complex wellpaths
- Long laterals requiring high-quality wellbore

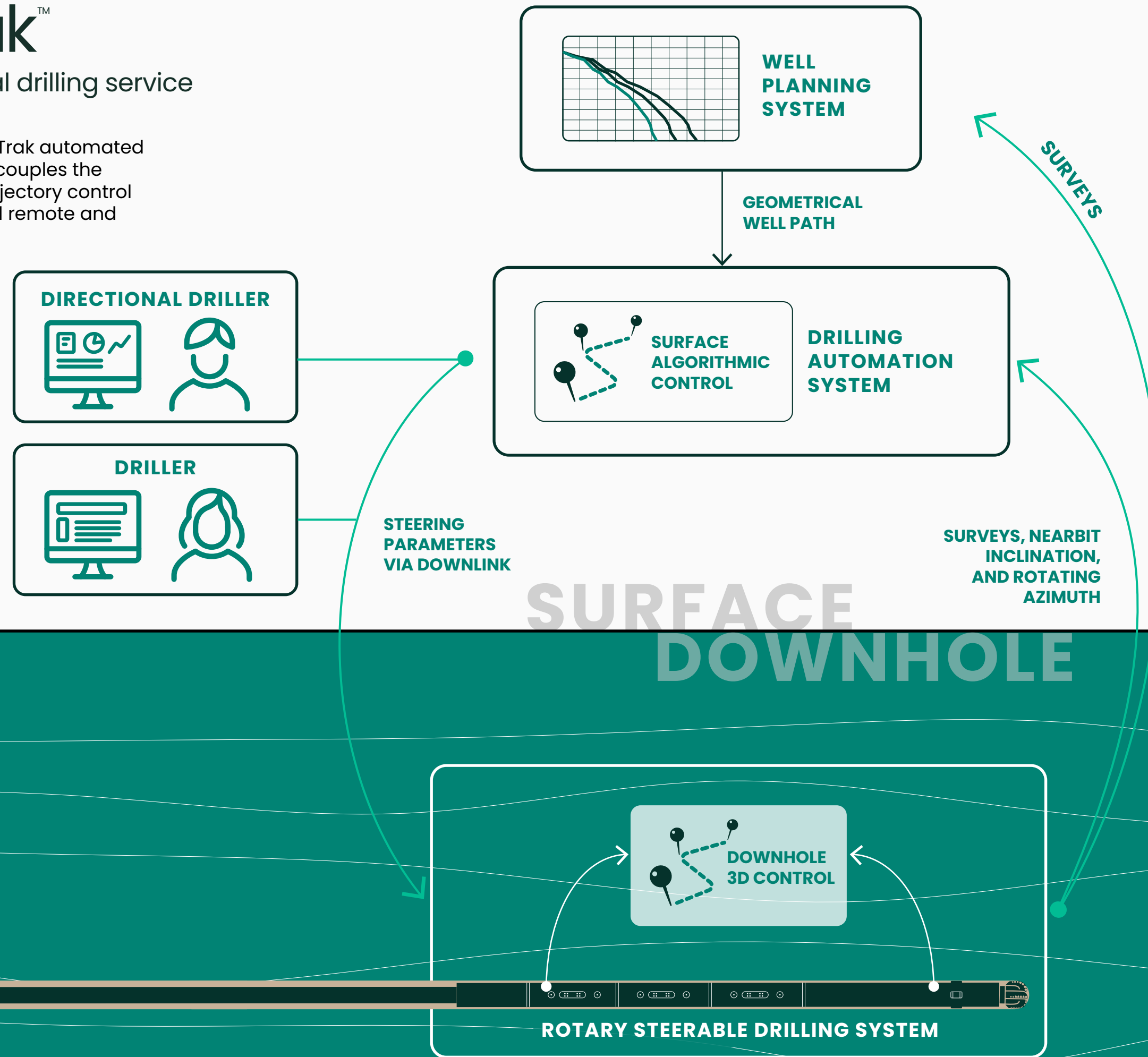
#### BENEFITS

- Consistent and repeatable wellbore placement
- Increased rates of penetration (ROP)
- Simplified casing and completion installations
- Reliable, effective remote operations

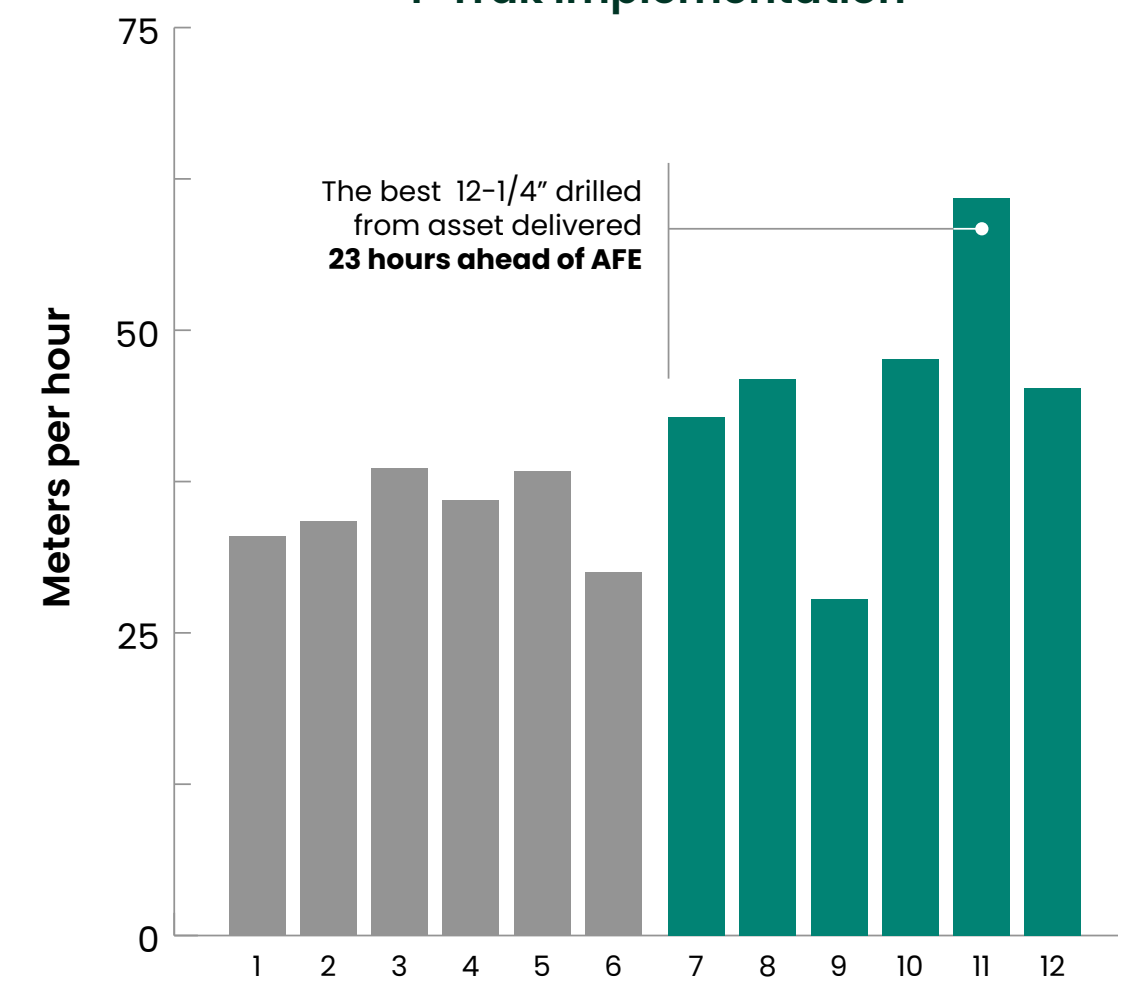
# i-Trak™

Automated directional drilling service

In active control mode, the i-Trak automated directional drilling service decouples the directional driller from the trajectory control process—enabling integrated remote and autonomous operations.



On-bottom ROP before and after i-Trak implementation



In addition to increasing the average well's ROP by 10 m/hr, one i-Trak application achieved drilling speeds of 60.9 m/hr (200 ft/hr)—establishing a new field record that helped deliver the well 23 hours ahead of AFE.