



**Scientific Drilling's BlackShark Active Ranging System is designed to deliver first-attempt relief well intersection, eliminating the need for costly and time consuming side-tracks.**

Deployed via wireline, the BlackShark tool identifies the exact distance and direction from the relief well to the target well, delivering ranging data up to 200 feet from the target well. When speed and accuracy matter most, the BlackShark Active Ranging System is the ultimate relief well and plug and abandon solution.

For more information on improving your drilling efficiency [while staying on target] contact your Scientific Drilling sales representative or visit: <http://scientificdrilling.com/magnetic-ranging>

### APPLICATIONS

- + Relief Well
- + Plug & Abandonment
- + Collision Avoidance
- + Complex Completions
- + Ghost Well Detection

### BENEFITS

- + Designed to deliver first-attempt intersection using precise ranging data and long-range detection of up to 200 ft from the target well
- + Industry-leading sensitivity and range greatly reduces the cost and time associated with relief well operations
- + Determines the exact distance and direction between wells, ensuring the most accurate relief well placement
- + Highly accurate system ensures the relief well achieves a precise position for milling or perforating the target well
- + Industry-first ranging system capable of providing accurate target coordinates at vertical by utilizing integrated SDI Keeper Gyro to determine True North orientation of the system
- + Considered the most accurate long-range tool on the market

### FEATURES

- + Utilizes the most sensitive magnetometers in the industry, which detect and measure the target magnetic field at relevant spatial points
- + Streaming high-speed data allows for the calculation of the ranging result in real time
- + Slim, drillpipe compatible, size available

## GENERAL SPECIFICATIONS

|                                  |   |                     |   |                      |
|----------------------------------|---|---------------------|---|----------------------|
| MAX OD                           | 2.125 in. (54.0 mm)   | 2.325 in. (59.0 mm) | 4.500 in. (114.5 mm)  | 4.950 in. (126.0 mm) |
| MAX TEMPERATURE                  | 212° F (100° C)   | 302° F (150° C)     | 212° F (100° C)   | 302° F (150° C)      |
| MAX PRESSURE                     | 9,000 psi   | 20,000 psi          | 9,000 psi   | 20,000 psi           |
| LENGTH                           | 116.0 in (294.5cm)<br>257.5 in (654 cm) with integrated<br>Keeper Gyro assembly |                     | 120.5 in (306.0cm)<br>262.0 in (665.5 cm) with integrated<br>Keeper Gyro assembly |                      |
| MAX RANGE<br>(GRADIENT DISTANCE) | 10 ft (3 m)   |                     | 30 ft (9 m)   |                      |
| GRADIENT DISTANCE<br>ACCURACY    | 5% at 0-10 ft   |                     | 5% at 0-10 ft<br>10% at 10-30 ft  |                      |
| MAX RANGE<br>(MODELLED DISTANCE) |   |                     | 200 ft (60 m)   |                      |
| MAX RANGE<br>(DIRECTION)         |   |                     | 200 ft (60 m)   |                      |
| DIRECTION ACCURACY               |   |                     | 3°  |                      |
| WIRELINE                         |   |                     | 7 - Conductor   |                      |
| CONNECTION                       | Compatible with all industry standard wireline                                  |                     |   |                      |
| SOFTWARE                         | Proprietary real-time data collection, processing and visualization software    |                     |   |                      |

\*Specifications are subject to change without notice

