Scientific Drilling’s Lodestone active ranging system is an innovative long distance at bit ranging solution that is ideal for precision wellbore placement and intentional wellbore intersections. This industry leading magnetic ranging tool can operate with any directional drilling configuration and operates independently from the MWD system in the bottom hole assembly.

**DELIVERING THE ULTIMATE VALUE**

- Provides relative ranging measurements at the bit, so steering decisions can be made with greater confidence sooner
- Proven to generate accurate and consistent ranging results in both cased and open hole wells, eliminating the need to compromise completions with non-magnetic or fiberglass casing joints
- Ranging data allows for the deviation of the drilling well in order to intersect (or avoid collision with) a cased well
- Compact bit sub design (16") reduces wear and tear on mud motor/rotary steerable drive shafts and minimizes negative build up rate effects
- Proven to provide the greatest detection range on the market at 420’/128m

**TARGET APPLICATIONS**

- Steam Assisted Gravity Drainage (SAGD) wellbore twinning
- Observation well avoidance and relative placement
- Horizontal well to vertical well intersection/vertical well to horizontal well intersection
- Lateral to lateral horizontal well placement
- Collision avoidance

**PRODUCT SPECS**

- **Nominal Sensor OD**: 3 1/2" / 89mm
- **Drilling Well Hole Size**: 3 7/8" and Up
- **Minimum Tubing ID**: 4"/102mm
- **Sensor Length**: 138"/3.5m
- **Sensor Weight**: 100.5lbs/45.6kg
- **Wireline Connection**: 1 3/16" - 12 GO-Head
- **Bit Sub Length**: 16"/40.6cm
- **BHA Connection**: 2 3/8" Reg and Up
- **Maximum Operating Temperature**: 185°F/85°C
- **Maximum Operating Pressure**: 9,000 PSI/62.05 MPa
- **Accuracy 0-25M**: 3%
- **Accuracy from 25-60M**: 5%
- **Max Operating Range**: 420’/128m

**UPDATED FEBRUARY 2018**