

## Spear Point Orientation Tool (S.P.O.T.)

Accurate has developed a Surface Recording Gyro (SRG) Spear Point Orientation Tool (S.P.O.T.). In cases where magnetic interference is present (beside or inside casing, side tracking via whip stocks, etc.) this tool will allow Accurate to orient motors while sitting on top of retrievable MWD Systems. This will save rig time by eliminating Gyro and MWD tool trips. The tool has proven to reduce orientation time by more than 50%.

How it works: The MWD is placed in the BHA with our Spear Point Orientation Tool (S.P.O.T.) on top. The tool is oriented to match up with the MWD tool face. When KOP is reached, the SRG is tripped in the hole via a 5/16" electric line and sits on top (Piggyback) of the MWD. As the well is kicked off, the MWD is pulsing data as normal and the Gyro is giving direction and tool face while drilling (Gyro Steering). When the MWD verifies a good tool face orientation, the SRG is tripped out of the hole and drilling continues. This eliminates the time tripping Gyro and MWD in and out of the hole to verify good tool face reading by the MWD. It also eliminates the possibility of trash falling in the mule-shoe and not being able to seat the MWD. In situations where trash plugs the mule-shoe, the drill string must be tripped to remove the obstruction.

