

# EnForce™ VERTICAL GUIDANCE TOOL

**A lower cost alternative to full-service directional drilling operations and rotary steerables rig crew.** EnForce™ Vertical Guidance System consists of a uniquely stabilized High Performance PDM with Tilt Module, Ensign's MWD Lite™ System and software, which, after initial system setup by a qualified Ensign technician, enables steering operation of the Directional BHA by the drilling foreman and rig crew.

## EASE IN MONITORING

Ensign personnel can monitor well bore position through remote EDR (Electronic Data Recorder) access. Support to rig site personnel is provided by Ensign's on-call Directional Drilling Coordinators.

## CUSTOMIZED

EnForce™ engineered stabilized performance directional drilling assemblies are configured according to hole size, geographic location, geology, bit selection, well objectives, and well design.

- Deviation control
- Collision avoidance
- Vertical drills to KOP stay within hard boundaries
- Minimize well bore tortuosity
- Remote or site supervised

## BENEFITS

- Eliminates fanning often required to stay vertical, thus increasing ROP
- Decrease in Torque and Drag
- Reduction in daily DIRECTIONAL/MWD supervision and associated costs
- System is compatible with any standard PDC or TRI-CONE drill bit
- Significant cost savings compared to high end rotary vertical systems
- Gamma Ray logging available independently, or as a system add-on
- MWD (Inc, Az, TF) System can be configured to be fully retrievable
- Additional Motor and String Stabilization can be provided
- Torque and Drag and BHA Modeling Engineering services available
- Final Borehole Survey computation provided

