FACT SHEET

# MAGVAR™ OMNI TECHNOLOGY

## Achieve Unmatched Accuracy

MagVAR™ Omni technology elevates standard surveying practices by delivering more precise wellbore trajectory and shape. By integrating our survey correction services with continuous inclination measurements, it helps ensure exceptional accuracy in both lateral and vertical positioning. This enhanced mapping provides valuable insights into the trajectory and configuration of your well to help you reach your intended geological target with confidence.

- A comprehensive understanding of the wellbore trajectory and shape can:
  - Facilitate strong agreement between geologic & drilling teams
  - Minimize positional errors
  - Identify tortuosity
  - Improve wellbore quality
  - Improve Geology-Drilling data
  - Reduce costly re-drills
  - Improve pump placement & sucker rod placement
  - Help solve casing problems

## From Data to Decisions:
## MagVAR™ Omni Technology Transforms Wellbore Insights

Traditional surveying methods rely on stationary surveys conducted every 95 to 100 feet, utilizing a series of arcs (minimum curvature). In contrast, MagVAR Omni technology advances this approach by delivering enhanced precision through high-resolution corrections and enabling more frequent data collection. It employs continuous inclination measurements, stationary surveys, sag analysis, and micro-dogleg analysis to provide a **comprehensive view of wellbore dynamics.**

One of the standout features of MagVAR Omni technology is its Rate of Change capability, which offers valuable insights into wellbore trajectory and shape. This allows for the accurate identification of tortuosity and overall wellbore quality, helping ensure **drilling operations are optimized for success.**

MagVAR Omni technology effectively resolves discrepancies in vertical placement between geology and drilling teams. This capability not only saves significant time by minimizing unnecessary investigations, but also **reduces the frequency of disruptive inquiries to the geology team.**

| What We Provide | What You Achieve |
|---|---|
| More accurate trajectory and shape of the wellbore | Enhanced well positioning to remain in the target zone |
| In-depth knowledge and support from a team of engineers in the H&P Remote Operations Center (ROC) | Ensures more accuracy, fewer manual data errors, and discards erroneous data |
| Ability to export trajectories at any incremental depth value | Improved wellbore tortuosity and quality |
| | Seamless integration between drilling and geology data for optimal TVD |

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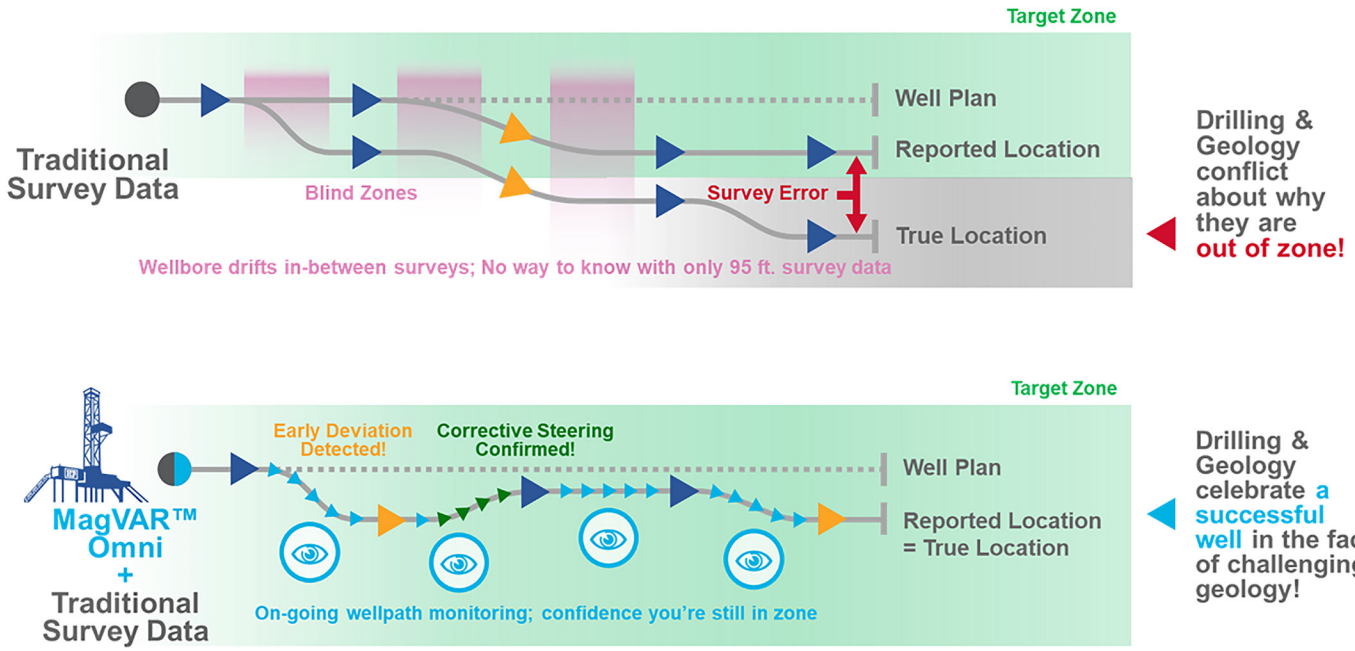
Multiple correction techniques include:

- **Multi-Station Analysis (MSA):** Removes systematic errors from every standard stationary survey
- **SAG:** Addresses errors caused by sensor misalignments in the bottomhole assembly (BHA)
- **Analysis of Micro-Doglegs:** Accounts for small changes in inclination that can accumulate throughout the well
- **ROC Oversight:** Team of engineers closely examines each survey point to help ensure accuracy, eliminate gross errors and discard erroneous data

## Critical Insights for Optimal Well Placement

- Well path shape is crucial, as it captures details of doglegs and accumulated vertical depth uncertainty, which aids in the precise placement of downhole equipment, from casing to sucker rods.

- Traditional mud motor steering often results in discrepancies of over 10 feet between the depth estimates of geology and drilling teams. By analyzing slide/rotate patterns and rotary tendencies, these discrepancies can be significantly reduced.




For more information on how Helmerich & Payne can help you achieve better drilling outcomes, contact an H&P sales representative today or contact us through our website at **helmerichpayne.com/contact.**

**It's time to follow through on your drilling performance potential.**