RECON "The New STANDARD In Well Logging"

STANDARD and HDD™ Open Hole Logging Features and Benefits

Fall 2011

STANDARD High Resolution Data *Every Time*

"Only RECON" delivers as a STANDARD, High Resolution Open Hole log data at 10 samples/ft (33 samples/m) as a minimum sample rate = 250% superior data every time, at the same speeds as the competition's main pass sampling

High Definition Data (HDD™)

"Only RECON" delivers Open Hole log data at a 40 samples/ft (132 samples/m) **HDD™, High Definition Data** Resolution – 16 times more data than typical main pass, 4 times more than typical high resolution pass, the most precise and accurate data resolution in the industry

Benefits of RECON's Superior STANDARD and HDD™, Open Hole Data

- More accurate reserve calculations
- More accurate bed boundary definition
- Thin Bed Identification – Identify beds as thin as 1 ½" (38 mm)
- Superior laminated zone identification
- Resolves interpolation between data points
- More precise porosity values - log data porosity accurately matching core data
- Identifies previously bypassed (invisible to others) "missed" pay and thin beds
- Superior data resolution allows for improved completion programs and frac efficiency
- STANDARD high resolution data without the additional cost and rig time
- More data with faster speed and efficiency

Additional Benefits of RECON's Open Hole Logging Systems

- New technology design means less electronics down hole – increased reliability
- Short rigid tool configuration allows for successful high angle conventional well bore logging – up to 69 degrees (gravity descent), the highest in the industry
- Over-body vs. Inline centralizers – maintains short string profile regardless of configuration
- No de-centralizer, bent sub or knuckle joint requirements – no conflicting tool jewelry to add bridging risk potential
- Pad Type Neutron – no bore-hole corrections required, minimal mud effects

- Real Pad Type Micro Log – Micro data is not a computer generated data set derived from an induction tool, the Industry's most accurate permeability indicator
- **HDD™** Micro Log delivers the Industry's most accurate thin bed resolution
- Down Hole SP – reduces surface environmental influences on SP
- Full Wave Form Sonic Capture – expands post processing options, e.g.- Simultaneous Intermediate/Surface casing bond logs with Open Hole runs (CBL/VDL)
- X/Y Dual Litho-Density capability for elliptic or rugose holes
- Laterlog in Induction tool allows for shallow measurements of "actual" near wellbore resistivity for thin bed identification and permeability indicators. RECON's shallow reading is not a computer modeled derived data set
- Integrated environmental sub for continuous wellbore temperature and R_m fluid resistivity recording
- Independent, incorporated X/Y calipers
- 100% redundant backup tool string on each unit (2 sets per unit)
- Well Site Satellite direct to encrypted internet data transmission capability
- Web link real-time encrypted log data web-based viewing portal (Secure Well Log Portal)
- Tiff, LAS, PDF conversation, transmission and presentation capability
- **RECON8R** User Friendly Log Viewer program – free download
- Complete suite of Petrophysical Interpretation and Modeling services