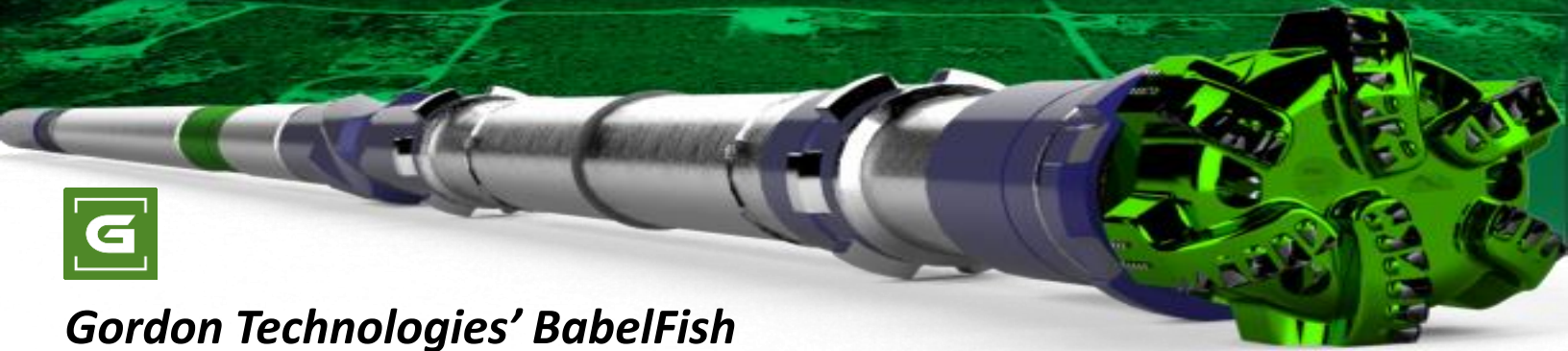


# GT-TRACKER™

## GORDON TECHNOLOGIES' RSS MWD



### Gordon Technologies' BabelFish Integration Provides Increased Wellbore Quality and Data Density.

Problem	Description	Solution
Efficient Data Transfer from Orbit RSS to MWD	The proximity of the RSS transmitter to the MWD tool receiver significantly impairs data transfer efficiency. The MWD receiver typically requires extra hardware and pushes competitive systems to use a top mount pulser so that the MWD receiver can be positioned closer to the RSS transmitter.	Gordon's proprietary tool configuration incorporates the receiver in a minimal way that allows for the continued use of Gordon's patented, proven and industry-leading bottom mount pulser design.
Efficient Data Transfer from Orbit RSS to MWD	Data transfer is negatively impacted and can be interrupted by shock and vibration (S+V). Competitors experience communication intermittency due to the low signal-to-noise ratio caused by typical drilling vibrations.	Gordon's Shock Miser™ mitigates S+V resulting in a high signal-to-noise ratio and sustained communication/data transfer from RSS to MWD.
Limited MWD Bandwidth (Data Speeds) from Downhole Operators at Surface	Competitive systems utilize a top mount pulser design which limits data transmission speeds.	Gordon's bottom mount pulser is more reliable and robust and isn't limited by the data telemetry speed restrictions of a top mount pulser design.  Gordon's proprietary data compression algorithms increase the effective MWD data rates. The increase in bandwidth allows for full RSS variable transmission without sacrificing gamma density.

Well Results
<ul style="list-style-type: none"> <li>• <b>Data Transfer:</b> GT-MWD's first downhole run yielded 100% communication between RSS and MWD</li> <li>• <b>Average Signal to Noise Ratio:</b> 20+db</li> <li>• <b>Location:</b> Permian Basin</li> <li>• <b>Section:</b> Lateral</li> <li>• <b>Depths:</b> MD 7,955 – MD 17,665</li> <li>• <b>Duration:</b> 92.6 circulating hours</li> <li>• <b>ROP:</b> 105 ft/hr</li> </ul>

Provider	Typical Pulse Width	Bits/Sec	Time Req'd for RSS Variables, S&V, Gamma, Live Inc. & Azm (sec)
Competitor	0.8	0.625	605
Gordon	0.5	1.000	378
Gordon + Data Compression	0.5	1.400	270
% Improvement Vs. Competitor			
Gordon	60%		
Gordon + Data Compression	124%		