

From Real Measurements to Target and Completion Optimization

October 12th, 2017

Midland, TX

Schlumberger

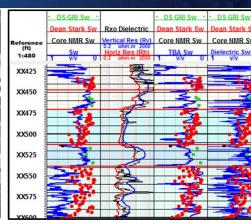
Schlumberger Reservoir Laboratories | Core – Log Integration Packages











- Tailored core-log integration packages with reduced turnaround times
 - One Chain-of-Custody: Downhole → Lab → Integrated Interpretation
 - Unique expertise across disciplines and data acquisition methods
 - Optimized for XL-Rock 1.5-in rotary sidewall cores
- Schlumberger Reservoir Laboratories Houston grand opening November 9th
 - Massive facilities upgrade—reservoir rocks and fluids and engineering fluids under one roof
 - Leader in pioneering techniques specific to shale cores
 - Leader in core geomechanics

Schlumberger

nberger-Private

Vertical Appraisal / Pilot Well Considerations

ACTIVITY OF	4	The state of the s	The state of the s				A
	Reservoir Quality	 Where is the best reservoir? Where are the hydrocarbons? What type? How much and how much is producible? 	Mineralogy & Porosity	TOC Type & Maturity	Reservoir Producibility Index (RPI)	Total Gas in Place (TGIP)	Permeability
	Completion Quality	 How to maximize contact with the producible reservoir? Where are the fracture fairways and barriers? What is the best lateral landing strategy? 	Anisotropic Mechanical Properties	Stress Orientation & Magnitude	Mechanical Layering	3D Stimulation Modeling	Calibration
	Drilling Difficulty	 How to safely and efficiently drill the lateral? What is the safest landing point? What is the optimum curve trajectory? 	Stress Analysis	Anisotropic Mechanical Earth Model	Trajectory Analysis	Calibration	
	Geologic Complexity	 Do tectonic features exert a controlling influence? Are target facies expected to be laterally continuous? 	Near-well structural model	Natural fracture orientation	Depositional Architecture		
	Advanced 3D Hydrofracture Simulation of Landing Options						









RSWC Geomechanics Package

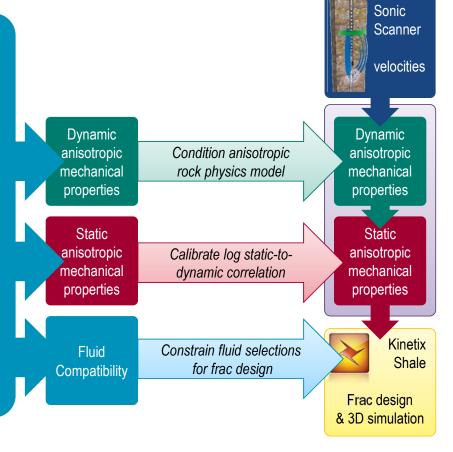




- Multi-stress compression testing
- Vertical & horizontal samples
- Capillary suction time tests for 5 fluids

Sample requirement: 1 XL-Rock RSWC (dedicated)

Turnaround Time: 8 Weeks



Schlumberger