

## **Landing Point Optimization Ahead of the Bit**

**Cody Knepper**

Nutech Energy

### **Abstract**

Current horizontal drilling and steering technologies have made it possible to land and maintain horizontal wells in very specific “sweet spots”. It is common for the landing point of any given horizontal play to evolve over time as these fields expand and develop. What data and tools are available to Geologists & Engineers to optimize landing point targets ahead of the bit? How can new completion and production data be incorporated to further refine landing point selection?

Historical vertical well control holds the key. Once again, “the past tells us where to go in the future.” There are thousands of available conventional wireline logs over organic shales, tight sands, and fractured carbonates. Through a focused combination of geology, petrophysical analysis, and hydraulic fracture modeling, landing point sweet spots can be readily identified before any horizontals are put in the ground.

Workflow from initial data selection through completion modeling will be discussed. Several examples of landing point optimization in various horizontal plays will be shown to highlight where this process has been utilized before drilling horizontals, and further refined after initial horizontal wells are brought online.