09/24/2014; 1:25PM

Advanced Reservoir Characterization and Proof-of-Concept Drilling in Unconventional Resource Plays

Kevin Schepel
ZaZa Energy Corp.

ZaZa Energy focuses on drilling proof of concept wells armed with conventional core, some of the most advanced logging suites available, and custom petrophysics designed through detailed integration of the physical rock and fluid data. In a new prospect area, the initial well(s) are designed to extract producible hydrocarbons but more importantly to obtain the technical information we need to properly assess producibility and commerciality. The first wells are important to prove up the play and drive future expansion and development. Well data, physical rock properties, geochem, maturity, reserves, productivity, scale, timing, impact, drilling costs, competition, entry strategy, and partnerships are all keys to success.

Using the information gathered from our proof of concept drilling and applying state-of-the-art technologies allows us to build an evaluation process to quickly and routinely integrate geological, petrophysical, and engineering based data to aid in evaluating the depositional framework, and the rock and fluid characteristics for the play. Focused on a detailed integration of the physical rock properties, fluid composition, and rock mechanics, these wells provide the information needed for evaluating the key geologic ricks, organic content, mineral composition, “Fracability”, and the optimal completion design for the target intervals.

Integration of core and log image data provides a high resolution, multi-dimensional view of the borehole and reservoir. Using both micro-resistivity and acoustic technologies, these detailed images reveal textural features never before observed in the subsurface. During our completions we monitor micro-seismic

energy within the reservoir giving us an insight into a fracture treatment as it happens. These techniques allow the operator to make more informed decisions about future stimulation programs to optimize field production and recovery.

The proof-of-concept process and methodology is one that we have been very successful with, and we will continue to implement new technology and best practices as we pursue additional unconventional resource opportunities. It is the curiosity towards exploiting these challenging reservoirs coupled with the implementation of new technology that drives our Industry to pursue new unconventional resource plays.