

Exploring the Southern Extent of the Alpine High

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ABSTRACT

On September 7th, 2016, Apache Corporation (“Apache”) made an announcement regarding a new play it discovered in the Southern Delaware basin, “The Alpine High”. This has been one of the most popular topics in the industry as most wait patiently for Apache to prove the play with results. “The company estimates hydrocarbons in place on its acreage position are 75 trillion cubic feet (Tcf) of rich gas (more than 1,300 British Thermal Units) and 3 billion barrels of oil in the Barnett and Woodford formations alone.” (Apache, 2016). With an area of interest over 300 square miles, Trey Resources, Inc. is currently working with Throne Petroleum Reata Properties Ltd. (“Reata”) on exploring the southeast of the Delaware Basin. Equipped with current well and production data, digital logs, sample and mud logs, a Bone Spring and Wolfcamp core, multiple 2D lines and a 3D seismic survey, a reservoir characterization study is developing. Jerry Lucia in 1971, while describing outcrop on the western side of the Diablo Platform, wrote “In summary, the time span from Lower Ordovician to Silurian in the western Diablo Platform area was characterized by shallow water carbonate sedimentation, relatively stable tectonics, and several major periods of subaerial exposure. The general area of the Diablo Platform was probably a positive area of low relief during this time.” The paleogeographic high during the time of deposition of the Woodford formation would have most likely kept the world class source rock in a slightly more oil-generating window during the subsidence and diagenesis of the basin. The deeper sediment of the Woodford, distal from the positive feature would be subject to more pressure and heat putting it in a more gas generating window.

The paleo high Mr. Lucia described could be the extent of what Apache has coined, “The Alpine High” play. With recent activity from both Apache and Devon Energy around this area as well as a producing Wolfcamp horizontal that Reata drilled in 2014, the correlations and reservoir target identifications from this presentation will help characterize the southern end of the new play.