

POSTER ABSTRACTS

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The "Lit" Zone: Discovery of a Potential New Pay Zone, in a Century Old Oil Field

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Discovered in the early 20th century, the Somerset Oil Field has been producing for over a century. The total number of wells drilled is upwards of three thousand. All of the wells produce a barrel or less a day. There are three known oil producing formations within the Somerset Oil Field - Escondido, Olmos, and the Anacacho formations. The depths to the three producing formations are approximately 600 feet for the Escondido, 900 feet for the Olmos, and 1200 feet for the Anacacho. These formations deepen to the southeast. The Escondido has two pay zones, the upper and lower Escondido. The Olmos contains the O-1 and the D-3 sands.

There is one formation that stands out with the rest. It lies between the Lower Escondido and the Olmos 1 sand. Known as the "Lit" Zone, it stands out as a regional marker bed. In gamma ray logs the "Lit" is shown to contain a very hot, thin bedded shale interval. This thin bed is sandwiched between two clean beds of unknown lithology. The resistivity log indicates invasion, with possible moved hydrocarbons, within the thin shale. Sonic logs indicate a very high porosity zone within the thin shale.

Core analysis shows that the "Lit" zone is a limestone, that totals 10 feet. The center is composed of a highly porous, highly permeable shell bed. This shell bed has a heavy oil stain, and light clay cementation. The shell bed is two feet thick.

Overlooked by operators, the "Lit" zone has the potential to prolong production in declining wells within the Somerset Oil Field.

