

## **Kelley and Snake Bite Fields – Horizontal Ellenburger Play, Edwards County, TX**

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This talk will include a discussion of the process behind the discovery of each field, and will describe some of the geology and techniques that made it possible to find this oil and gas.

Kelley (Ellenburger) and Snakebite Fields both produce from karsted Ellenburger within the top 300 feet of the upper dolomite unit that occurs in the north-central part of Edwards County, Texas. Kelley Field was discovered first and was originally mapped using 2-D swath seismic lines. The discovery well was a vertical test, and it led to additional 2-D data acquisition, then subsequent 3-D data. The main field development was done using horizontal wells because the cave collapse material and cave sediment, that characterize the upper Ellenburger, make a very heterogeneous reservoir.

Snakebite Field is a sharp, normally faulted structure. Exploiting it with horizontal wells was tricky, even with 3-D data, because of apparent reversal of structural movement that controlled some of the fault blocks.

The 3-D data was very important in the development of both fields because the eroded surface of the Ellenburger often does not conform to true structure.