TAPLIN
341 Timber Drive
Coldspring, TX 77331
taplincorp@eastex.net
936.653.4243

Taplin Seeks Partners

for

Oil and Gas Opportunities

in

Arkansas

Taplin Corp. Seeks Partners for Exploiting

Oil and Gas Opportunities in Arkansas

Taplin Corp., an exploration company that generates oil and gas prospects has completed a two year study of approximately 900 sq. mi. in southern Arkansas (the "**Area of Study**"). This area has a history of major oil and gas production (>400 million bbls) dating from the 1920's; however, there is currently very little exploration activity.

Based on its interpretation of a 2D seismic grid covering the Area of Study, Taplin has been able to identify numerous prospective fairways and many (>200) potential individual sites that exhibit porosity indications. Further, this study has revealed a new (for Arkansas) potentially productive formation that has never been drilled.

In addition to the new formation, there are many unexplored areas in the Smackover, the limestone layer that has produced the bulk of Arkansas' oil and gas. Above the Smackover lie the Jones Sands, the Cotton Valley sands, and a number of shallower productive formations. These are all elusive targets because they are typically lens-shaped and are not usually associated with structural features. Finding such targets requires 3D seismic, which has been available since the early 1990's, but has seen only limited used in this area (<5% of the area).

All of the prospects identified in Taplin's study were found using a 2D seismic data grid having an approximate grid dimension of 6 by 4 miles. This is a sparse grid and cannot be used to reliably position prospects for drilling. The solution is 3D seismic.

Need for Updated Seismic technology

The vast majority of the production to date from the Area of Study was found without the benefit of modern seismic technology, such as 3D surveys, stratigraphic interpretation, and wavelet control in processing. The use of 3D seismic alone has proved able to facilitate the discovery of about 15% more hydrocarbons in the areas where production already exists. This suggests that there are still on the order of 60 million barrels of oil yet to be found in the Area of Study.

In addition to the use of the latest seismic technology, there are two major innovations in Taplin's approach to Arkansas exploration that could dramatically increase the potential for discovery.

Taplin's Sub-Smackover Geologic Model

The first innovation is a major change in our understanding of the geology of southern Arkansas. The Norphlet, a formation lying below the Smackover and above the Louan Salt, has been discounted as a viable producing formation in southern Arkansas due to the absence of this formation in a handful of early "test" wells. Contrary to this view, Taplin has found evidence for Norphlet dunes, many in excess of 500 ft, covering much of the area of Study. This evidence is seen both in the 2D seismic covering the Area of Study and in a number of logs from deeper wells, also in the same area. The Norphlet is a well-known producing formation in Mississippi, Alabama, and East Texas, but has never been explored in Arkansas

Penetrations of the Norphlet in Arkansas have been few (~ 20), and these have been in unfruitful locations as viewed from Taplin's geologic model. What has changed?

The most interesting observation on the 2D seismic grid, sparse as it is, is a system of large build-ups in the Norphlet, ***which underlie all the major Smackover fields in the Area of Study and are responsible for the structure (the roll-over and closure) that gives rise to these fields***. Smackover deposits are draped over these Norphlet dunes rather than truncating against them – a fact with some significance. In order for the subsequent Smackover limestone layering to drape over these dunes rather than truncate against them, the Norphlet has to contain a significant amount of crushable material. Otherwise, limestone deposits would tend to fill the low edges of the build-ups faster than the top and the result would be a series of layers that successively truncate against the underlying build-up rather than drape over it as observed. A common crushable material is shale, and the observation of drape rather than truncation of Smackover against Norphlet indicates that the Norphlet contains significant amounts of shale, a common source rock for hydrocarbon generation.

Only a handful of well-logs are available that penetrate the Norphlet. Taplin has located a few of these logs and they suggest a sand-shale composition for the Norphlet. Moreover, the seismic behavior suggests that many of the Norphlet build-ups have interior porosity. Porosity development in a rock layer lowers its acoustic velocity. Thus, where the salt reflection below the Norphlet exhibits excess travel time, it follows that the Norphlet in that area is to some extent porous. These observations strongly suggest the Norphlet as a new play for Arkansas.

Stratigraphic Exploration of the Smackover

A second change in geologic understanding comes from the observation of the 2D seismic behavior of porosity in the Smackover at the top. Smackover production is almost exclusively from the top where oolite layering is found and, then, only where a structural closure exists.

The 2D seismic data suggests many "stratigraphic" traps where the oolitic porosity at the top of the Smackover terminates up-dip by simply pinching out. When this up-dip termination line crosses up-dip depth contours, a trap is formed. These traps are referred to as "stratigraphic" traps. The Smackover has never been explored for purely stratigraphic traps, since such exploration requires 3D seismic data to safely describe such closures. Taplin's 2D data shows numerous interruptions of top of Smackover porosity. Because the grid is so large, correlating the porosity pinch-outs across the map does not yield a unique interpretation. Taplin has multiple interpretations of the same set of porosity terminations, deliberately made to be different, yet consistent with the seismic data. In each case, traps were found suitable for positioning a field of 4 – 7 wells. Once a 3D data set is acquired, an exact map of the actual porosity picture and its trapping locations can be made.

The Use of 3D Seismic to Identify Lenses of Porosity in Shallower Formations

Finally, as has already been pointed out, the use of 3D seismic surveys opens up other significant possibilities. Shallower formations have produced significant quantities of hydrocarbons in our Area of Study. The Cotton Valley interval is one of them. This is an

interval that contains sands that are not ubiquitous, like a blanket, but lense-like in form with each pod having a limited geographic area. Historically, the Cotton Valley sands have been found by drilling for deeper targets and encountering a Cotton Valley pay zone on the way. When the deeper target was found to be dry or had played out, completion was made in the shallower Cotton Valley zone, and step out drilling rounded out the exploitation effort. The literature often talks about the impossibility of correlating these sands even from well to well. Thus, given the limited capabilities of seismic technology available at the time, the Cotton Valley could not be played as a prime target, but only secondarily. However, with 3D seismic available, the Cotton Valley system can be explored as primary targets.

Taplin Corp's study has delineated the general locations of each of these features over a 900+ square mile area. Positioning 3D surveys for pin pointing these targets can be accurately and reliably guided from this 2D information.

Taplin Corp. is interested in partnering with investors, independents, or other AMI groups to exploit these possibilities. Return on investment should exceed 10:1. Any inquiries should be directed to us at 936-653-4243 or an email to pat.taplin@gmail.com.