

# MIDWAY CREEK PROSPECT

*Cass County, Texas*

## **Location**

The Midway Creek Prospect is located approximately 4 miles Southwest of Atlanta, Texas. The prospect acreage is located in rural Cass County, Texas, and is accessible by nearby farm roads.

## **Objectives**

The Midway Creek Prospect is designed to test a series of Upper Travis Peak/ Pettet transitional sands that were not adequately evaluated in previous drilling tests. The earlier drilling tests were done in an attempt to find Smackover production on the salt related anticline feature present beneath the prospect acreage. The salt feature is identified by seismic surveys and subsurface mapping.

Analogous fields nearby include Pittsburg (1,991,000 BO) 38 miles west, and Lake Texarkana (102,000 BO) located 13 miles North. Both these fields are productive of oil in Upper Travis Peak transition sands and have similar trapping mechanisms (convex folding of fluvial sands over an anticline). In comparison to Midway Creek; Pittsburg Field, discovered in 1940, represents a field of larger aerial extent with lower porosity. Lake Texarkana (1987) represents a smaller field that produces from more porous rock. The test well in this prospect will be drilled to 7500' to adequately evaluate the two Travis Peak oil sands. There is also a lower Rodessa sand in the prospect acreage that calculates (based on well logs) to be oil productive in the acreage. It was never cored or tested in the control wells. Several upper Rodessa sands were perforated in the Santa Fe; 1 Creamer and the drilling report describes burning a flare of 8 to 10 feet long during completion attempts in several zones perforated together. There is a deep oil prospect, which can be drilled at a later date on the prospect acreage. The Cotton Valley Sands, Cotton Valley Lime and Smackover Lime formations all produce on nearby anticlines and it is believed that they are potentially productive on this acreage because the pre-deposition anticline would increase the likelihood of oolitic porosity bars. We will not be drilling deep enough to evaluate deeper formations with the first well.



# Geology



## **Regional Geology**

Regionally this prospect is situated in the East Texas Basin west of the Sabine Uplift. The prospect is near several other salt related structures that produce oil and gas from primarily the Smackover formation; although shallower formations such as the Travis Peak and Rodessa are productive on several structures regionally.

## **Prospect Geology**

The Midway Creek Prospect will test a low relief structural closure located in a remote part of Cass County, Texas. The structure itself has been explored by the drilling of five different wells. Two of these provide significant evidence of oil productive Travis Peak sands being present on the structure. These two wells are the Santa Fe; 1 Creamer (D&A 1984), and the Sunray Mid Cont; 1 Mays (D&A 1962). Both these wells were drilled to the Smackover Formation to test a large structure that was identified on seismic. Both failed to adequately test Upper Travis Peak sands that yielded mud log and side-wall core shows indicative of productive sands. While drilling the Sunray; 1 Mays well, a mud log show was recorded with golden florescence in a 7' thick A sand zone that is correlative with a 14' thick sand with similar shows in the Sante Fe; 1 Creamer. During the drilling of the Santa Fe ; 1 Creamer, the same sand was cored in the 1984 test, and it indicated oil productive in the core lab for the "A sand".

## **Santa Fe; 1 Creamer Evaluation Methods**

The completion methods used in completing the Santa Fe; 1 Creamer were unconventional. The company perforated several deeper sands (Cotton Valley and Smackover). After these attempts failed, Santa Fe attempted completion in several Upper Travis Peak sands. Our evaluation is that the lower sand perforated was wet, the other two were oil productive.

We base this on 3 things; side wall cores, mud log shows and well logs. Santa Fe did not isolate these zones, as they should have. The sand at 7362'-79' was clearly salt water sand, and should not have been perforated. However, the zone at 7235' was very thick 14' + with good porosity (17 percent),oil shows by SWC and mud log in both the Creamer well and the Sunray; 1 Mays.

This sand, which we call the "A sand" is the primary objective of the prospect, and should be productive higher on this large structure. The "B sand" should also be productive, because it is also present (untested) in the Hardin well to the South and the Creamer well, and appears to be oil productive in both.



## Geological Data

### Sidewall Cores

Sidewall cores taken in the Santa Fe well are primary to the prospect; they indicate porous and permeable rock with high oil bulks, and golden fluorescence. Porosity averages are 17%, perm is 100 MD.

### Mud log shows

The key mud log show in the prospect is in the Sunray; 1 Mays. Mud log shows in the Creamer well, only confirm the sidewall core analysis. The Sunray mud log from a well drilled in 1962, is indicative of sand near or in an oil reservoir. The golden fluorescence and slight gas show in the "A" sand are key items for the prospect when considering that the Creamer well has similar shows in the correlative "A" sand and cores, and also shows in a "B" sand that appear oil productive.

## Economics

### Reserve Estimates

The field reserve estimates are based on 10 feet of average pay in the "A" sand and 800 acres yielding 1,557,511 BO. The "B" sand reserves are estimated at 7 feet of average pay and 300 acres yielding 456,000 BO. Gas reserves for both Travis Peak sands are estimated to be 2.2 BCF field wide. The middle Pette sand at around 7190 feet appears productive in the Southern Union: 1 Hardin well and could add another 6 feet of pay yielding .6 BCF in wells drilled near the Hardin well. The Rodessa is also a target for the prospect. Cotton Valley formation wells in the area produce around 60,000 BO.

Smackover wells in nearby Bowman Creek two miles southwest will ultimately produce 750,000 BO each. We estimate that there are about 7 deep locations on the Midway Creek structure.

Projected Return On Investment First Well					
Cost \$/Point	Estimated Intangible Tax Deduction @ 30% Tax Bracket	Actual Cost \$/Point	Total Well Monthly Revenue @ 90 BOPD, .75 NRI, \$70/bbl	Monthly Revenue 1% Participation	Payout in Months
\$19,500	\$2,453	\$17,047	\$138,206	\$1,382	12

Projected Return On Investment Future Wells					
Cost \$/Point	Estimated Intangible Tax Deduction @ 30% Tax Bracket	Actual Cost \$/Point	Total Well Monthly Revenue @ 90 BOPD, .75 NRI, \$70/bbl	Monthly Revenue 1% Participation	Payout in Months
\$15,500	\$2,453	\$13,047	\$138,206	\$1,382	9

## Projected Revenue For Formations If Encountered In Test Well

	A sand	B sand	Rodessa	Total Potential Revenue
1% Working Interest Participation	\$44,924	\$35,153	\$29,889	\$109,966
3% Working Interest Participation	\$134,771	\$105,459	\$89,668	\$329,897

## Lease Block

Laramie Oil and Gas, LLC is acquiring approximately **1000 gross acres** of oil and gas mineral leases in the area around the key wells and is anticipating that it has enough acreage under lease to drill approximately 20 oil wells on the prospect acreage. After the initial test well, an evaluation will be made to establish a developmental drilling program which will include a 12500' test to evaluate the deeper formations.