

# Independent looks east for the Eagle Ford

A small company has big ideas when it comes to chasing the Eagle Ford shale into Louisiana.

Rhonda Duey, Senior Editor

When industry people hear the term “Eagle Ford shale,” they are not likely to think of Louisiana.

This hot play has South Texas on fire as companies rush to exploit its gas and oil riches. But tiny Indigo II Minerals LLC is convinced that the geology does not change much at the Texas/Louisiana border.

Bill Pritchard is the chairman and CEO of Indigo. His ambition is to be successful enough in Louisiana to singlehandedly rename the play from the Tuscaloosa Marine shale (TMS) to the Louisiana Eagle Ford shale.

The company got its start by putting together a mineral position, a deal made possible by the exchange of Roy O. Martin Lumber Co.’s mineral rights for an equity position in the company. Yorktown Partners, Indigo’s financial partner, matched the valuation of the minerals in cash.

“We started with about 475,000 mineral acres in the state of Louisiana because Roy Martin was the largest private landowner in the state,” Pritchard said. The company went on to sell 90,000 Haynesville shale acres to Encana Corp. Currently, it has about 450,000 lease and mineral acres split between the Austin chalk and Louisiana Eagle Ford.

The company developed an interest in the latter’s hydrocarbon potential in 2008 based on an old well that had good shows in the lower Eagle Ford shale interval between the Austin Chalk and the Edwards limestone, in the same location relative to the Edwards shelf margin as in South Texas. Pritchard said the name of the well, the Martin Timber #1, caught his company’s attention.

“When they drilled that well, the mud was cut 2 pounds, which was pretty substantial,” he said. “They swabbed in oil, cored, and found fractured shale with lime interbeds. And they had to do some control drilling to mud up and get through that interval. These were good signs to us.”

Continued study revealed that many of the wells in that area, most drilled in the 1970s and 1980s, had encountered similar drilling issues with that interval, he added.



Bill Pritchard, chairman and CEO of Indigo. (Image courtesy of Indigo II Minerals LLC)

Based on this information, Indigo began leasing additional acreage in mid-2010; between its mineral fee and the leases it acquired, the company

had put together some 255,000 net acres by mid-2011. It spent about US \$5 million to drill, core, and test a vertical well at the end of 2010.

“We’re the first company to actually have drilled and conducted modern testing through the interval,” Pritchard said. More recently the company has drilled a horizontal well that it planned to frac and test in November.

## Mirror images

While different companies have different names for the shale on the east side of the Texas/Louisiana border, Pritchard said the shale he has been drilling and coring is almost a mirror image of the South Texas Eagle Ford. On the Texas side of the border, the Harris delta slides down west of the Sabine uplift, depositing clay and silt between there and the San Marcos arch. To the west of that is the rich organic shale of the Eagle Ford.

On the Louisiana side, similar sediments are trapped between the Sabine uplift to the west and the La Salle arch to the east.

Many geologists argue that the shale of interest in Indigo’s acreage is actually the TMS, but Indigo’s geological interpretation shows the Lower Tuscaloosa sands that underlay the TMS pinching out as the play heads west onto the Sabine uplift. In Indigo’s area, the high resistivity streak at the base of the Eagle Ford lies directly on top of the Edwards lime.

“I think the two plays are fundamentally different,” he said. “The rock we’re drilling is more calcitic and

has less clay content. It's more similar in depositional environment to what you see in South Texas. "As you move further east, it transitions, and by the time you cross the (Mississippi) river, you're in a different depositional setting."

Drilling also is easier to the west. Pritchard said companies chasing the TMS have encountered drilling problems, while both Indigo's vertical test well and its horizontal well were drilled on time and budget with no difficulties. Meanwhile, Indigo engineers had concerns about the Lower Tuscaloosa deltas, largely water-bearing sands beneath the TMS that could present the potential to frac into water below the zone of interest.

So far the company is encouraged by the testing it has done on the vertical well. The production test shows 45° to 50° API oil with 1,450 Btu and 10 gal/Mcf of natural gas liquids. Regional geological work indicates that the shale is more brittle in the western area, coincident with Indigo's acreage.

To say the play is underexplored is an understatement – Indigo's two wells are the only new wells to have been drilled in the area in the last 30 years. And that uncertainty does cause Pritchard some concern.

"We worry about the number of frac stages, the proper fluids, drilling costs, all the same things you

worry about in most of these plays," he said. "These are pretty capital-intensive deals. We're very well capitalized, but these plays really need big balance sheets.

"The history of just about every one of these plays is that it takes \$100 or \$200 million to figure out what works and what doesn't work. At some point we're going to need more dollars to help us figure this thing out.

"Our concern is, did we trade good rock mechanics for per acre recoverable hydrocarbons? We're going to find out when we complete our horizontal well."

### A little help

Toward that end, Indigo is actively seeking a joint venture (JV) partner, either a company that would operate future development or a pure financial partner to help develop its entire 255,000-acre position, where only 11 leases cover 200,000 acres in the play. Pritchard said the benefits to a potential partner include a large acreage position and confirmed Louisiana Eagle Ford potential, including:

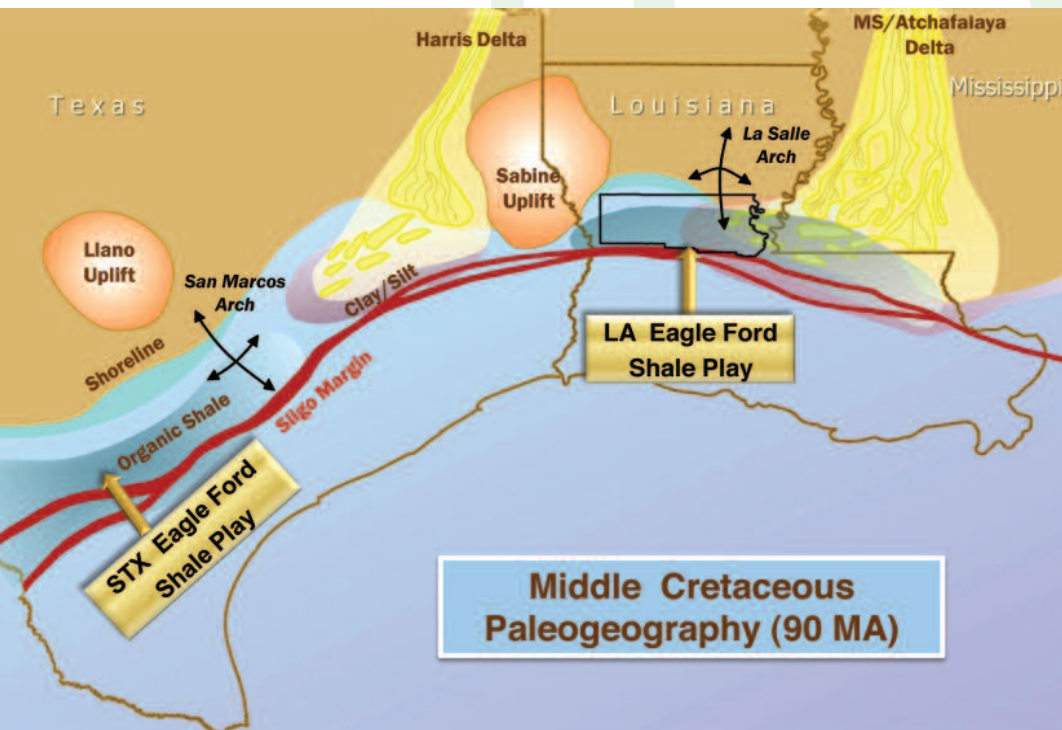
- A favorable geologic setting,
- Good reservoir attributes,
- Drillable and fracable rock,
- High-quality hydrocarbons,
- Repeatable; and predictable drilling inventory.

There is potential for costs to decrease while estimated ultimate recoveries and 30-day production numbers increase, Pritchard said.

Indigo has friendly landowners, often not the easiest thing to find in a shale play. Two landowners account for 165,000 of its acres, and one of them sits on the company's board of directors.

While Pritchard feels confident that Indigo's acreage is in the sweet spot of the play, there is no jealousy toward other players who also are intrigued by the possibilities. "The rising tide floats all boats, right?" Pritchard said.

"We're really rooting for Devon and others in the eastern part of the play. If Devon drills a 500,000-bbl EUR well, we'll rebrand everything as the Tuscaloosa Marine shale, effective immediately." **ESP**



Deposition during the Middle Cretaceous period left organic shale deposits in Louisiana as well as Texas. (Map courtesy of Indigo II Minerals LLC)