

Weekly Update Edition

Current Jackson County activity represents significant step-out from previous production

West Bay Exploration, group of industry partners continue successful Trenton-Black River exploration, development work in Calhoun, Jackson counties

by Scott Bellinger
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NAPOLEON, Mich. — Traverse City, Mich.-based West Bay Exploration Co. and its industry partners are continuing to build upon the success of an Ordovician Trenton-Black River exploration and development program in proximity to historic Albion-Scipio Trend production in Calhoun County by developing a new play more than 30 miles to the east-southeast in Jackson County's Napoleon and Norvell townships.

West Bay's core group of partners includes Rockford, Mich.-based Trendwell Energy Corp., Polaris Energy, Inc. of Jackson, Mich., and Jordan Development, Co., LLC, Innova Exploration, Inc., Rock Oil Co., LLC, and Energy Quest, Inc., all headquartered in Traverse City, Mich.

Together, the companies have been exploring for Trenton oil production "for a long time," West Bay southern Michigan operations manager Tim Baker noted recently, drilling numerous dry holes before the breakout success of the West Bay-operated Foote 1-12 (SL: NE SW NE, Sec 12-T2S-R5W, Marengo Twp., Calhoun Co.) in mid-2006.

That well is generally credited with reviving industry hope for new Trenton-Black River oil finds in areas of established production from the now half-century old Albion-Pulaski-Scipio Trend, which extends from northeastern Calhoun County through the southwestern corner of Jackson County and into the heart of north central Hillsdale County. More than 700 producing wells drilled in that long, narrow reservoir have made in excess of 120 million barrels oil.



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POLARIS ENERGY's John Fowler (left) and Steve Schaefer (center), and West Bay's Matt Johnston have each made significant contributions to the revival of Trenton-Black River oil production in Calhoun County and a new play in Jackson County. They're shown on the location of West Bay's Warolin 1-30, drilled in Jackson County's Napoleon Township last month.

West Bay's Baker, the company's geophysicist Matt Johnston, and Polaris Energy principals, geologist John Fowler and geophysicist Steve Schaefer, shared some insights into both the science and teamwork behind the play while gathered on location last month during drilling of the Warolin 1-30 (SL: SW NW NE, Sec 30-T3S-R2E, Napoleon Twp., Jackson Co.), the fifth and most recent development test drilled by the group following up on the November 2008 Lantis et al 1-29 (SL: SE NE SE, Sec 30-T3S-R2E, Napoleon Twp., Jackson Co.) oil discovery.

Opening a reservoir preliminarily classified by the Michigan Department of Environmental Quality's Office of

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Geological Survey as Napoleon 3 South, the Lantis et al 1-29 discovery was completed for initial production rates of 200 barrels oil, 100 Mcf gas and 3 barrels water daily, and is as significant for its remoteness from existing production as the Foote 1-12 well was for its proximity to previous producing wells.

The West Bay group has drilled a total of 27 confirmed oil producers to date — with typical initial production rates in the 150 barrel per day to 200 barrel per day range — in Calhoun County's Marengo (T2S-R5W), Lee (T1S-R5W), Sheridan (T2S-R4W), and Albion (T3S-R4W)

townships, with many of them relatively close to the main body of Albion-Scipio's famed "Golden Gulch."

The Lantis et al 1-29 and the more recently drilled Lantis et al 1-30, Hauser 1-32, Jennings 1-32 HD1, Richardson et al 1-30, and Warolin 1-30, however, are all more than 17 miles east-northeast of the nearest significant Trenton or Black River production, found in the Stoney Point Field, opened in the early 1980s, and are approximately 32 miles from the more recent Calhoun County activity. Fowler characterized the current play as a "major step-out" from previous production.

Just over four miles to the southeast of the Lantis et al 1-29 discovery, the West Bay group this year also successfully completed two wells in Section 16 of Jackson County's Norvell Township (T4S-R2E), the Hilden-Rovsek et al 1-16 and Hilden-Rovsek et al 2-16. It's not known yet if the two reservoirs are connected, Baker said.

Initial production rates for the Jackson wells completed to date have been similar to the successful Calhoun wells.

The representatives of West Bay and its partners made it clear that certain aspects of their exploration work remains

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Rig Locations

(Rigs capable of and/or drilling deep tests in bold type, rigs drilling planned horizontal wells in *italic*)

ADVANCED ENERGY SERVICES

- Rig 2 — dr SE 12-5S-4E, Clinton, Lenawee (Schmude Oil Inc.)
- Rig 4 — sd
- Rig 8 — sd
- Rig 10 — to mi SW 14-30N-7W, Kearney, Antrim (Atlas Gas & Oil Co.)
- Rig 12 — sd
- Rig 27 — sd

ARROW DRILLING

- Rig 1001 — ru NW 33-19N-6W, Redding, Clare (Presidium Energy LC)

- Rig 1002 — sd
- Rig 1003 — sd

BIGARD & HUGGARD DRILLING

- Rig 1 — dr NW 20-28N-5W, Blue Lake, Kalkaska (Merit Energy Co.)
- Rig 2 — dr NE 34-1S-5W, Lee, Calhoun (West Bay Expl.)
- Rig 3 — sd
- Rig 4 — sd

BRANSEN DRILLING

- Rig 1 — sd
- Rig 4 — sd

- Rig 6 — sd

CONSOLIDATED DRILLING

- Rig 1 — sd
- Rig 2 — dr NE 36-6S-2W, Adams, Hillsdale (Continental Resources, Inc.)

POLLISTER DRILLING

- Rig 2 — dr SE 3-24N-7W, Pioneer, Missaukee (Petoskey Exploration, LLC)

RAMM DRILLING

- Rig 1 — sd

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proprietary, specifically their methods of interpreting the 2D and 3D seismic data acquired and processed in their prospect generation work.

Johnston may have offered a glimpse into some of his thought processes, however, when less than four months before the drilling of the Foote 1-12 well, he presented a paper entitled “Shallow Seismic Raypath Anomalies and Effects on Niagaran and Trenton Seismic Reflection Character” at the March 23, 2006 Petroleum Technology Transfer Council / Northern Michigan Section, Society of Petroleum Engineers Michigan Field Experiences workshop in Mt. Pleasant, Mich.

In general, the exploration team’s work begins with 2D seismic evaluation — typically starting with existing data and often adding new data — before any 3D data is acquired. West Bay’s in-house geophysical crew, headed by Jim Bowser, handles all acquisition of new 2D and 3D data. “The work that they do pays great dividends,” Schaefer commented.

Collaboration is a theme that seems to run throughout the group’s work of exploring for Trenton-Black River oil. “Steve (Schaefer) and I bounce ideas off of each other all the time,” Johnston said, adding that “Steve and John’s (Fowler) knowledge of the Trenton play has been crucial.” Baker also recognized the participation of West Bay geologist Murray Matson, Innova Exploration president and geologist Ron Budros, and Polaris Energy geologist Bill Van Sickle. “Our work together has been a hell of a lot of fun,” Fowler said.

Fowler stressed that while seismic may be the most critical tool in the group’s toolbox; no stone is left unturned in evaluating the potential of either a development prospect or a rank wildcat area. “We’ve made use of gravity and magnetics



GATHERED for a group photo at the Napoleon discovery well, the Lantis et al 1-29, in November 2008 were (from left to right): John Fowler, Bill Van Sickle, Matt Johnston, Rick Slater, Allen Bright, Tim Baker, drilling consultant Bertie Barnett Jr., Ron Budros, and Steve Schaefer.

Photo courtesy of Innova Exploration

surveys, and subsurface mapping,” Fowler said, “about the only thing we haven’t used is geochem, and that may be viable too, as oil seeps were reported in the Albion area in the 1840s.”

Having an open-minded approach to exploring for Trenton-Black River oil in southern Michigan is not a new idea. The Albion-Scipio discovery well’s location is said to have been chosen on the basis of a medium’s vision, with no solid geological evidence to support it at the time.

When all of the preliminary evaluation, land, and permitting work are done, Baker and his team make use of a growing knowledge base in terms of the best drilling and completion methods to employ.

“One of the unique things about our partnership is that we can make changes on the fly on how to drill and complete a well,” Baker said. “We look for good fluorescence and gas shows,” he said, adding that “we think we can see both the gas/oil and oil/water contacts when drilling.”

Completion methods have varied from well to well, Baker said. “We tend to get a

better completion by completing in the open hole when we’re not concerned about the oil/water contact. We have a pretty good handle on the oil column in development situations. We’ll typically set casing 20 feet beyond the gas oil/contact, then drill out 30 to 40 feet with a power swivel. If we’re drilling a wildcat, open hole completions are out of the question.”

When asked how large the current development in Jackson County might ultimately become, Baker said “we’re hoping to end up with something like Stoney Point.”

“We really do have a great group of people working with us,” Baker said. In addition to the geologists and geophysicists that choose the drilling locations, Baker also acknowledged the important roles played by independent consultants such as operations consultant Rick Slater, mudlogger Allen Bright of Basin Logging, Inc., drilling contractors Advanced Energy Services and Bigard & Huggard Drilling, and well servicing contractor McConnell & Scully.