

Your monthly guide to the newest developments in Tobin's products and services


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P2 Energy Solutions Shale Play Decisions

P2 Energy Solutions' Tobin Trend Maps

The Barnett Shale in the Fort Worth Basin, Bakken Shale in North Dakota and Marcellus Shale in New York, Pennsylvania and West Virginia have one thing in common - huge natural gas reserves. Add to this mix the Haynesville and Bossier Shale in East Texas and North Louisiana and you have not only another shale play but the potential for what could be the largest natural gas resource in the country.

This situation has every oil and gas exploration company scrambling to lease land in North Louisiana and East Texas where the upper Jurassic Haynesville Shale is known to be deposited and in East Texas where the Bossier Shale occurs. Chesapeake Energy, Plains Exploration and Production Company, GMX Resources and now Cabot Oil are just a few companies that are increasing exploration activities in the region.

Geologic Overview

- The Haynesville and Bossier Shale deposits lie just beneath the Cotton Valley Sands starting around 10,000 feet below surface.
- The Smackover formation lies below the Haynesville and Bossier Shale formation at around 12,000 feet below surface and in other areas much deeper.
- Logs show a large gas-in-place volume of 200-350 net feet of Haynesville Shale along certain trends from North Louisiana to East Texas.

Drilling in the Haynesville and Bossier Shale

In the not-too-distant past, the ability to drill and extract natural gas from Shale was cost prohibitive. Straight well bores were not producing the necessary output to justify the drilling costs. In today's environment, high commodity prices for natural gas and new methods in horizontal drilling learned and developed from operators in the Barnett Shale have changed the situation.

Plains Exploration and Production Company and Goodrich Petroleum Corporation recently issued press releases on their web sites announcing that they have entered into Joint Ventures with Chesapeake Energy, the leading Haynesville / Bossier shale play operator. Plains Exploration reported that along with Chesapeake, it plans to develop approximately 550,000 net Haynesville leasehold acreage that could support the drilling of up to 6875 horizontal wells. Goodrich Petroleum announced on its web site that it plans to develop the Haynesville Shale with Chesapeake in Caddo and DeSoto Parishes, Louisiana. The company also reports approximately 60,500 net acres of Haynesville Shale exposure in Northwest Louisiana and East Texas.

With Chesapeake, Plains, Goodrich, and others in the area, there is now a frenzy of leasing activity and who best to capture and record that leasing activity than Tobin!

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Now more than ever, you need a Tobin!

With all of this activity going on, the need for current and accurate information is absolutely essential. That's where P2 Energy Solutions and Tobin come into play. With its suite of Superbase digital map products such as the Digital Lease Ownership data and Well Completion / Permit data, trend maps can be custom generated to show a myriad of data layers including all competitor leasehold and/or wells drilled or locations permitted on a shale play.

These trend maps can be generated by companies that have a license to the Tobin data, or Tobin can create the maps for them through its Custom GIS Services Department.

Tobin collects operator competitor lease information monthly and maps the lease polygons on its 1:24,000 Superbase survey layer and ownership layer. The lease polygons mapped feature various attribute tables that show information such as lessor, lessee, deed acres, effective date of lease, term date, expiration date, bonus amount, rental amount, royalty percent (when available) and many more field attributes.

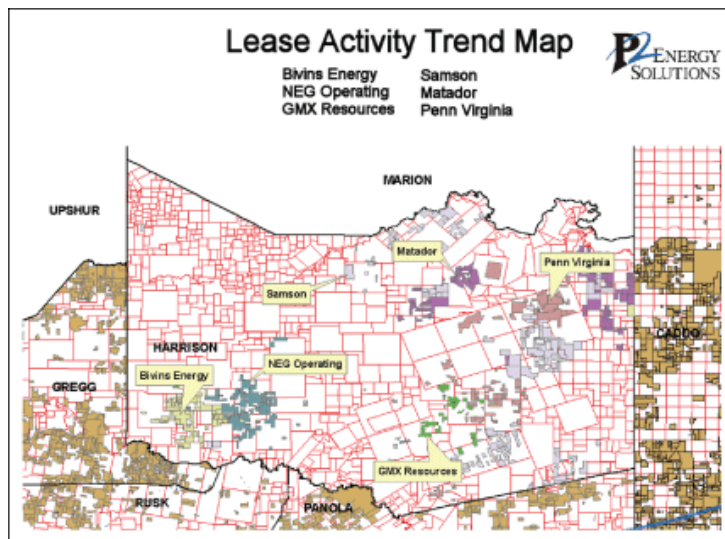
Maps generated can be simple or complex depending on the database query and the needs of the client. As an example, a client can request a Trend Map that shows all leases taken by Chesapeake Energy and include all wells drilled 10,000 feet and deeper within Caddo, Bossier and DeSoto Parish, Louisiana.

One such request was for a trend map that shows six companies that are actively taking leases in Harrison Co., Texas - a major area for the Bossier Shale Play (Fig. 1). The trend map was generated to show leases taken by GMX Resources, Bivins Energy, NEG Operating and three other companies. The leases were then labeled with the lessee name taken from the field attribute table. It's interesting to note that GMX Resources, as shown on the map, recently reported on its web site that it will begin its Haynesville and Bossier drilling program in the 3rd quarter of 2008 and will spud four rigs that will drill horizontal wells in its 100% owned acreage. They also reported that they have added 7,300 net acres in Harrison, Marion, and Cass Co. Texas and are planning to drill 4 - 6 wells in its 27,500 net Haynesville acreage.

Discounts

→ Maps by county, duplicate maps, volume discount (lease summary maps only)

Figure 1.

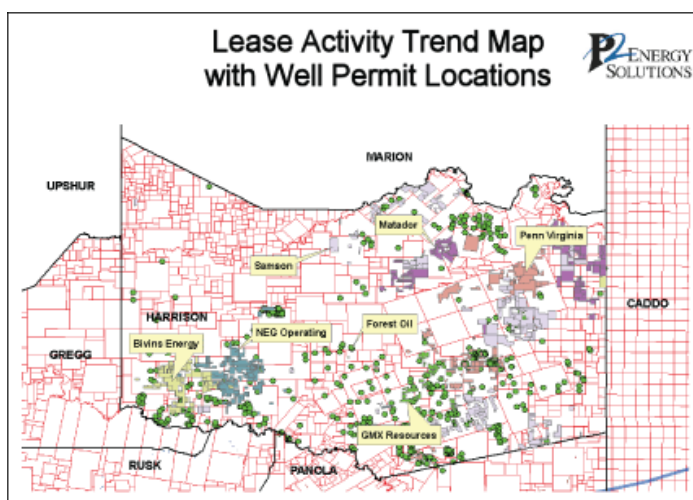


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In the second trend map (Fig. 2), we added the Superbase Tobin well permit locations to illustrate the relationship of lease location to permit location. The trend proves itself in that locations are staked in areas where leases are being taken. However, it may be interesting to note that it's the permit locations that fall outside of the trend area that warrant further investigation by exploration companies who are either active or wishing to enter the area.

Figure 2.



For the final map, we were asked to generate a trend map that shows all competitor company leasehold over Caddo, Bossier, Desoto Parish, Louisiana and Harrison, Panola, Gregg and Rusk County, Texas.

Tobin data support specialist Cliff Walden performed a data query using our newly developed Tobin Data Tools software and created the competitor lease data trend map (Fig. 3) based on the lessee attribute table (Fig. 4) of our lease database.

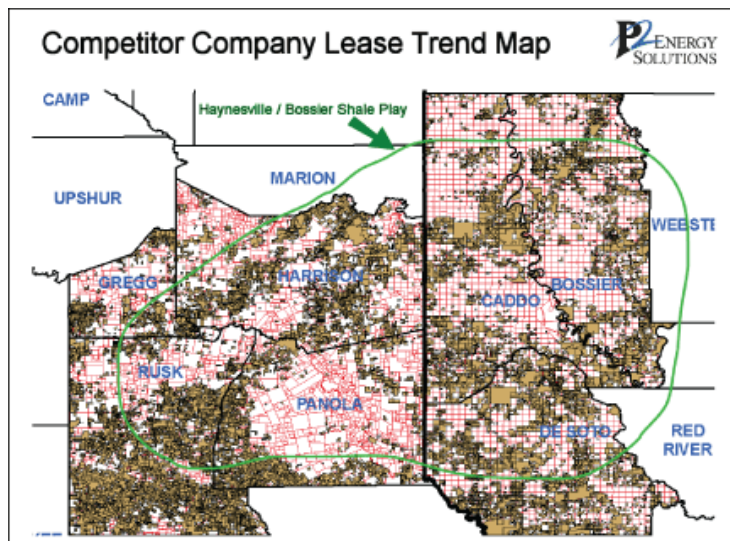


Figure 3.

Lessee/Assignee/Depth Table

Field Name	Current Field Type	Current Field Size	Defaults	Field Description
LTC	Character	11		Lease Control Number
LTCN	Character	3		Lease Tract Control Number
LESSEE_NAME	Character	40		Lessee name on the lease document
ADDRESS_ID	Character	8		Address identification number
GROUP_ID	Integer	6		Group identification for multiple Lessees/Assignees
DATE_OPEN	Integer	8	0	Recording date (Filing Date)
DATE_CLOSE	Integer	8	0	Date ownership transferred
UNIT_DEPTH	Character	1	F	Units of measurement describing the depth
FROM_DEPTH	Integer	8		Starting depth of the tract
FROM_FORM	Character	8		Starting formation of the tract
FROM_FORM_NAME	Character	35		Starting formation name of the tract
INDICATOR_FROM	Character	1		Where in the starting depth
TO_DEPTH	Integer	8		Ending depth of the tract
TO_FORM	Character	8		Ending formation of the tract
TO_FORM_NAME	Character	35		Ending formation name of the tract
INDICATOR_TO	Character	1		Where in the ending depth
RESTRICT_DEPTH	Character	40		Restriction of the depth
ASSIGNEE_NAME	Character	40		Assignee name
ASSIGN_TYPE	Character	2		Assignee type record/working interest
WORK_INT	Numeric	10		Working interest percentage
ORR_INT	Numeric	10		Over-riding royalty percentage
NET_ACRES	Numeric	10		Net acres for the assignee
NRI_ASSIGN	Numeric	10		Net revenue interest per assignee

Figure 4.

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Once the map is generated, it can be plotted at any scale and labeled with any attribute from the lease data attribute tables. A map of this type provides a competitive edge to any company that is seeking to enter the Haynesville and Bossier shale play- or any other exploration play for that matter- by giving them an advanced look at the leasing activity within a county or region.

For more information contact Al at atovar@p2es.com

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This newsletter provides a technical analysis of the key issues faced by the E&P community regarding the use of spatial data, data formats, data models, application issues and best practices.