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Powell Barnett Shale Newsletter

A few short years ago, it was believed that the United States would need to import natural gas in order to meet demand. Almost five dozen Liquefied Natural Gas (LNG) terminals were proposed in North America to import foreign natural gas but only seven have come online so far.¹ According to the Energy Information Administration (EIA) of the U.S. Department of Energy, the volume of LNG imports has fallen to less than 1 billion cubic feet of gas per day and is likely to set a new 5-year low in 2008.² Now the talk is about those terminals being used to export rather than import natural gas.

So what has changed in only the last five years or so to get us to the point where the United States could join Russia and other nations among the biggest exporters of natural gas?³ Truly, something remarkable is going on.

The answer is the development and robust production of natural gas from domestic onshore natural gas fields once thought too difficult or expensive to develop. According to a study released this past summer by Navigant Consulting for the American Clean Skies Foundation, production from these so-called unconventional sources - especially shale - increased about 65%, from about 5 trillion cubic feet (TCF) in 1998 to almost 9 TCF in 2007. The same study found that production from unconventional sources increased to 46% - almost half - of total domestic natural gas production while it represented just 28% of U.S. production in 1998.⁴ The study reached the conclusion that the United States now has over 2,200 TCF of reserves, with about 850 TCF of that coming just from shale and enough to last the country, which consumes about 22 TCF per year, for 118 years. Considering widespread production has yet to begin in more recently discovered plays such as the Marcellus and Haynesville shales, these numbers have the potential to increase significantly still.

While this natural gas production from shale is benefitting our nation, it also benefits the communities fortunate enough to have one of these economic bonanzas located under their soil. Since the Marcellus Shale is relatively new, to provide some perspective I will report on what has occurred in North Texas from the Barnett Shale, which has been in widespread development for several years.

¹ *Powell Barnett Shale Newsletter*, November 3, 2008

² *Powell Barnett Shale Newsletter*, November 3, 2008

³ <http://www.eia.doe.gov/emeu/international/gastrade.html>

⁴ <http://www.cleanskies.org/upload/MediaFiles/Files/Downloads2/finalIncippt2.pdf>

My hometown of Fort Worth, a city of more than 700,000 residents, and the surrounding area are reaping the benefits and receiving an economic stimulus while the rest of the country remains mired in a recession. Let me provide some of the highlights of the economic windfall, mostly from the results of the second study on the Barnett Shale's economic impact commissioned by the Fort Worth Chamber of Commerce and performed by economist Ray Perryman and his company, The Perryman Group.⁵

- In 2007, the Barnett Shale created 83,823 permanent jobs and pumped more than \$8.2 billion into the local economy. Both of these figures represented increases of more than 50 percent over the previous year.
- According to the U.S. Census Bureau, the Dallas/Fort Worth area is growing faster than any other metropolitan area and Fort Worth is the nation's fastest growing city with a population of 500,000 or more.
- The local real estate market is benefitting in terms of office space with vacancy rates in Fort Worth's central business district having fallen to 9.4 percent as of June 30 and average rents having risen 20 percent over a year earlier.⁶
- Perryman estimates housing demand in the Barnett Shale area has increased by more than 38,000 units since the beginning of major drilling activity.
- Revenue to local governments (excluding royalty and lease payments) amounted to about \$379 million in 2007, a significant increase from \$228 million in 2006.
- The City of Fort Worth expects to earn more than \$1 billion over 20 years from leasing city-owned property for natural gas drilling in the Barnett Shale.
- The Barnett Shale's impact statewide amounted to \$10.1 billion in annual output and the creation of 99,726 jobs in 2007, according to Perryman's study.
- The State of Texas received an estimated \$212 million in severance taxes (wellhead production) from the Barnett Shale and an overall total of \$715.5 million from all taxes and fees associated with Barnett Shale activity in 2007.
- While the nation's unemployment rate is currently 6.1 percent, the rate in Fort Worth-Arlington (Tarrant County – the "core" of the Barnett Shale) is a whole percentage point lower at 5.1 percent. While jobs were lost statewide, Fort Worth-Arlington gained 3,200 jobs in September.⁷ Despite a slowdown in Barnett Shale activity mostly due to lower natural gas prices, a Barnett Shale job fair was held November 15, with plenty of companies looking to hire.
- Energy companies operating in the Barnett Shale have become good corporate citizens and have become a major source of philanthropy in the communities where they operate by giving millions of dollars in donations and their employees' time to non-profit organizations. Perryman reported charitable giving among energy companies more than tripled in 2007.
- Barnett Shale production has grown to more than 1 TCF of gas in 2007 and cumulatively about 4.5 TCF of gas through July 2008 from about 10,800 producing wells drilled in the play since the

⁵ <http://www.barnettshaleexpo.com/impactstudy.php>

⁶ http://www.dallasnews.com/sharedcontent/dws/bus/stories/DN-gasoffice_22bus.ART.State.Edition1.3de0597.html

⁷ <http://www.fwbusinesspress.com/display.php?id=8662>

first test well was drilled back in 1981. Daily production has grown to about 4.5 billion cubic feet (BCF) of gas.

- According to a June 2008 EIA report, the Barnett Shale accounts for about 6% U.S. natural gas production excluding Alaska.
- The Barnett Shale is expected to produce for at least 20 years and more likely will produce for 30 to 50 years, with some wells producing even longer.

There are other countless examples of benefits from people without high school diplomas and veterans of the wars in Iraq and Afghanistan being able to get jobs paying starting salaries of \$40,000 per year, to truck dealers who have seen brisk business selling pickups to gas field workers. Several community colleges have started programs to train people for work in the shale and businesses benefit from the increased income being received by the area's mineral owners.

The Barnett Shale has been described by several observers as being like a "flu shot" for the area's economy. While falling natural gas prices, the credit crisis, and the national economic malaise have taken their toll, I believe economists will tell you that the Barnett Shale has been a prime reason the North Texas economy has caught only a cold, but not the flu. Furthermore, experts are saying when the nation's economy does start to improve, the Fort Worth area will be lead by the Barnett Shale out of the doldrums faster than most of the rest of the country.

In short, I hope I have provided a perspective of how the Barnett Shale is transforming the city and region I call home. Here in the Commonwealth of Pennsylvania, you have the same opportunity with the Marcellus Shale, a geographically larger play which may prove to be even more prolific than the Barnett.

While the first commercial oil well was drilled in Pennsylvania in the 19th century, the presence of the Marcellus Shale under much of the state could translate into the Commonwealth joining Texas, Oklahoma, Louisiana, and others as one of the leading petroleum-producing states in the country.

Let's return to the big picture. Right now our country imports almost 70%⁸ of its oil from foreign countries, many of which don't seem to like us much and may use some of those petro-dollars to fund terrorism. Much of that foreign oil is paid for with money borrowed from foreign creditors and extracted by foreign workers. Obviously this represents a national security issue and subjects our economy to overseas issues beyond our control. For example, the fact that more people in China and India are driving cars has the potential to have an enormous impact on our economy.

Domestically produced natural gas represents a way to reduce our nation's dependence on foreign oil and can serve as a "bridge fuel" to give us time to develop renewable energy technologies. We have an abundant source of fuel which burns significantly cleaner than gasoline or diesel which can be produced right here at home by American workers and providing economic vitality to communities.

⁸ <http://www.pickensplan.com/didyouknow/>

Let's stop outsourcing our nation's energy needs and developing the Marcellus Shale right here under our feet is an important step toward putting our country on the road to the long sought-after energy independence.

I'll now turn back to the Barnett Shale to make a point and close my argument.

In the Barnett Shale, the industry, with sensible and reasonable levels of regulation by state and local authorities, is demonstrating how mineral owners can have their natural gas successfully developed safely and with only a minimum of disruption. No, it's not perfect, but the results speak for themselves.

To sum it all up, I'll end with a quote by economist Ray Perryman, whose study results on the Barnett Shale I presented earlier.

When asked by a reporter about whether the Barnett Shale had been a good thing for North Texas, Perryman responded, "Ask the leaders of any region or country if they would like to have this resource, and you will get an overwhelmingly positive response."⁹

⁹ http://www.cleburnetimesreview.com/archivesearch/local_story_301180011.html