Bryant Godfrey Two extension days used

Professor Beck

8 March 2013

5 pages/ 11 total

Black Boom

Rusty pipe, unused machinery, and decrepit houses are what now make up a sizable portion of Bartlesville, Oklahoma. In 1907, the town had 4,215 residents. Governor Charles Haskell proclaimed Bartlesville “a city of the First Class” (Wile). A city with so much potential is now much like the metal strewn about it; rusting away into nothing.

Bartlesville has experienced what many call an “energy bust”. The city experienced a period of tremendous growth due to the oil industry, but when the “boom” finished the town could not sustain itself and fell into a dilapidated condition. It would seem Bartlesville is on the exact opposite end of the process that is currently infecting Williston North Dakota. However, will the result be the same?

Williston is currently in the middle of a sort of black gold rush, one very similar to the one that long ago affected Bartlesville so profoundly. The boom began in 2009 and, as of right now, the positive implications of the boom are easily visible. Where else can you receive a $300 bonus to work at McDonald’s, or make $14 an hour working the night shift at a gas station (Schultz)? There is money to be made in North Dakota and Williston is the place. With so much potential for opportunity, the city has been flooded by those looking to make a fresh start. The current population is anyone’s guess, but one official estimated the countywide figure at 32,000, up from 20,000 five years ago (Schultz). With such an influx in population the city is changing dramtically and has reached it’s tipping point. What caused the city to achieve it’s tipping point so quickly and rapidly? It seems there is much more at play than simply oil coming out of wells. *Due to an increased need for fossil fuels in the U.S., new oil-drilling techniques, and large amounts of oil being produced from current wells, the population in Williston is booming and the city is changing dramatically*.

In 2009 the United States consumed 18,690,000 barrels of oil per day. In 2010 that number had jumped to 19,150,000 barrels (Mundi). This rise may not seem greatly significant however, it is important to see that oil consumption did rise and will continue to do so. The U.S. Department of Energy projects that by the year 2025 world oil demand will jump by 50% (Katzman). If there is any hope of keeping up with such demand, change needs to happen quickly and efficiently. While the U.S. is doing many things to reduce consumption, including stricter government policy, more efficient automobiles, and more focus on technology, consumption continues to rise. It is likely the understanding of this consumption that has led developers to pioneer new ways to produce oil domestically in order to keep up with increasing consumption needs. It is critical to understand that oil production in the United States does not just affect our country, but the entirety of those with whom the U.S. has trade. One in five barrels of U.S. oil come from countries that the State Department considers to be “dangerous or unstable”. And the cost of this oil will rise as global demand increases (Susan Lyon). In order to reduce reliance on foreign oil sources and overall risk in general, it is necessary to make the changes here at home, and that is just what Dan Themig is given credit for doing.

Dan Themig is the CEO of Packers Plus, a privately held, Calgary-based oil services firm. Born in Minnesota, he grew up around the industry. His dad was a pipeline operator, whose handiness with tools rubbed off on the kid. After taking a degree in mechanical engineering, Themig moved on to a career in oilfield services, and toured the globe with the biggest names in the business (Sanford). The idea was simple, find a way to get more oil out of existing wells; the question was how to do so. The story of how such a question was resolved goes as follows:

“When Themig took a call early in this decade from a petroleum industry consultant working for a Texas oil company, things began to change. The petro consultant wanted to know if Themig had any ideas about a drilling challenge the client faced. A meeting with the vice-president of engineering of the client company was arranged. Originally slated for 20 minutes, the meeting went on for two hours, and another one was scheduled with the rest of the engineering group in Texas. On the way down to that second meeting, Themig scribbled seven ideas onto an airline napkin. When he got there and they ran through his ideas, the executives told Themig they liked No. 4. And that was that. With a commitment in hand, Themig headed back to Calgary, disappeared into this machine shop for two months and fast-tracked the construction of a prototype.” (Sanford)

The prototype was the beginning of multi-stage fracing. Those familiar with regular fracing know that it goes back to the earliest days of the industry, and coupled with horizontal drilling, can boost the exposure of a well by several thousand percent. Basically, explosives or other materials are dumped into the well and detonated which causes the unreachable oil to begin to flow. Themig’s process takes this to another level.

Before the literally ground-breaking idea of MSF, each frac had to be performed individually. A round trip down and up the hole had to be made for each frac, which can take 12 to 14 hours. That means it can take a month to frac an average kilometer-long well (Sanford). Themig’s process is much more cost effective and efficient. It allows an entire horizontal well to be fraced in, basically, a day. “We’ve changed the economics of the industry,” he says. “We’ve allowed a whole new generation of reservoirs to be produced” (Sanford).

Due to this quick and dramatic change in the oil-drilling industry, Williston has been allowed to boom. Wells that were bringing up oil with an 85% water cut are now delivering 70% oil due to MSF. Without this critical change in the industry, Williston would have remained the same as before the boom; quiet and insignificant.

In January 2010, North Dakota had 4,384 wells producing oil, with 1,668 barrels being produced by each well (Comission). While this may seem substantial it is important to recognize that it is not a boom. North Dakota has always been an oil-rich state, and from the very beginning of oil-drilling has had a large amount of wells. What has changed is the amount of oil those same wells are producing. Due to horizontal drilling and especially MSF, as of December 2012 the number of wells is 7,993, each producing 2,982 barrels. In the space of two years the amount of oilwells and the oil being produced has nearly doubled. This increase has been quick, dramatic, and has caused Williston to “boom” in every sense of the word.

Fire flares now dot the landscape, the result of oil companies burning off gases released from new wells. Pick-ups, dump trucks and 18-wheelers clog the roads. Dirt is everywhere (Schultz). Williston now hardly resembles it’s once clean, relatively quiet, self. There are up to 3,000 job openings across all industries, businesses cannot hire workers fast enough, and the unemployment rate is the lowest in the country, 3.7 per cent (Konigsberg). With all of the positive outcomes of the boom however, there are negative consequences as well. Local workers start fetching lunch at 10:30 a.m. to beat the traffic, and it can take more than a month for a vehicle oil change (Schultz). The city is experiencing the growth that generally occurs over a period of 50+ years in less than ten. Due to this tremendous growth, Williston simply cannot keep up with just about anything. Last year, the number of criminal incidents reported to the Williston Police Department nearly tripled to 16,495. With a population of 16,006 in 2011, that is more reported crimes than residents in the community!

Whether or not Williston, North Dakota is quickly changing is not a point to be argued; it is. If the positive effects of such change outweigh their inevitable counter-parts, however is a point of personal opinions. It is clear that rising fuel consumption, better drilling technology, and increased oil production have changed this small town forever. If history is any indicator, Williston will eventually end up just like Bartlesville, Oklahoma. The boom will stop, machinery will stop, and the town will once again have difficulty managing a rapid change. Only this time, the change will be in the other direction; backwards.

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