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by

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The Drill Down

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The Drill Down

by

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Report

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Dedication

For my aunt, Alison.

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The Drill Down

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The University of Texas at Austin 2012

SUPERVISOR: Tracy Dahlby

The town of Millerton, Pa., has always been a small, rural farming community. Settled atop of the famed Marcellus Shale in the foothills of the Appalachians, there have always been rumors of natural gas in the hills around town. In 2008, natural gas companies arrived and began drilling. For a select few lucky enough to have property around the gas wells, their arrival means big money.

But not all residents will get so lucky. For many folks in Millerton, the arrival of the gas companies means more traffic, more pollution, more crime and more inconvenience without a monthly royalty check to buffer the pain.

The sheer amount of natural gas scientists predict is in the Marcellus Shale will forever change how the U.S. and the rest of the world use energy. Politicians tout it as liberation from foreign oil. Scientists see it as an alternative to “dirty” coal. For this small town, natural gas means change. The money the natural gas companies are pumping into this local economy will change the lives of the townsfolk- and the town itself- forever.

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The Drill Down

Route 328, the two-lane road that cuts through Millerton, Pa. was never intended to carry such heavy loads. But, for the past five years or so, that's what it has done. Sleek trucks, large and bumbling, roll through the small town with names like "Halliburton Co." emblazoned on the side. They drive past the Wesleyan and Methodist churches, past the antiques store and the restaurant that has been shuttered for almost a decade. They drive past Draper's Hardware Store, the (also shuttered) Millerton Elementary School and a mechanic who charges just \$11 an hour for his time.

At the corner of Route 328 and the Alder Run Road, the trucks make a right and start their journey into the hills. They drive past farms with clapboard houses and fields scattered with bales of hay and cows and rusting farm equipment. Further up are dilapidated trailers and old barns with the roofs caved in, the result of a lack of money or caring, or both. A mile or two after turning, the trucks will reach their destination: natural gas wells.

The gas, largely methane, sits under ground, the result of 450 million years of decay. As it pressed and shook with the earth over time, it came to be collected under the Appalachian Mountains in the Marcellus Shale, the largest natural gas reserve in North America. It festered through ice ages and under the stomping feet of dinosaurs. The land above morphed from a hunting ground to a battleground to a homestead, its residents unaware of the riches underneath. While the mountains

were stripped of pine, hacked at for coal and even panned for gold, still, the gas remained.

Today, the “gas men” are here, mostly young, mostly white. They sit atop hulking hydraulic fracturing (known as “fracking”) machines. The gas rigs stand erect, mini- skyscrapers in a sea of pine trees. In their center is a coring device tasked with drilling down into the earth, pushing through the soil and the drinking aquifers. The machines drill past the clay, the sandstone and a second aquifer until finally, almost two miles below the surface of the earth, they hit the Marcellus Shale.

As the men press and pull, the machines bring up round, cored chunks of earth about the width of a coffee mug. The Marcellus core is dark, almost black, a mixture of clay and oil from the Trenton Black River. Once the drilling is complete, it’s time to lay the pipeline and begin the process of extracting the gas from its deposit. Millions of gallons of water, sand and heavily guarded chemical combination are flushed into the cored earth, pushing the gas out from its shale tomb and into the pipeline. The process lasts as long as the well produces, sometimes days, sometimes years. After being pumped out of the wellhead, the gas is transported to a large processing plant where things are removed and added and it is made ready for market consumption.

“This is a game changer,” says Eric Potter, Program Director for Energy Research at the Jackson School of Geosciences at the University of Texas at Austin. Potter has spent nearly his entire adult life in energy boomtowns, starting with Casper, Wyo. in the 1970’s. Until UT poached him, Potter worked in the private

sector, logging 25 years with Marathon Oil. Now, he leads a team of scientists as they study natural gas in every single type of shale in the United States. The group is set to travel to the Northeast in a few months to study firsthand what the Marcellus Shale means for U.S. energy independence and the future of our economy. The arrival of the Marcellus Shale on the international market marks a search gaseous gold, an invisible oil rush, an energy source that means real change on state, national and global levels. Information Handling Services (IHS), an economic and business research firm, estimates that the natural gas industry will contribute \$332 billion dollars to the U.S. economy over the next 25 years. Politicians equate it with energy independence, with liberation from foreign oil and “dirty” coal.

For the 2,000 or so residents of Millerton, the arrival of these trucks doesn't matter that this marks the beginning of some international energy shift. Instead, it means money. Big money. Life-changing money. Since it was established in the late 18th century, Millerton has always been a blue-collar, white, Protestant town. Those who don't farm work in Elmira, perhaps at the prison or the hospital. Others work at Corning Glass, about a 40-minute drive away. But now, with the natural gas industry pumping an estimated \$11.2 billion dollars annually into the Pennsylvania economy *alone*, life in Millerton is changing fast. Those with property on top of the shale are receiving monthly royalty checks in the amount of six-months wages. Trips will be taken, cars purchased and mortgages finally paid off. It's the stuff dreams are made of. It's why people buy lottery tickets and bet their paychecks at a craps table. It's

what happens when you spend your life working hard to make ends meet and one day a man hands you a check and all those ends are tied into a beautiful, big bow.

But not everyone will get lucky.

The Treasure Map

The town of Millerton is divided into two parts. The first part is the town that lies in a valley between two small mountains. It's made up of five blocks and is home to just a few hundred people. There is no downtown per se, just a Post Office, a walking track with some picnic tables and a jungle gym out behind the old elementary school. There is an old cemetery with headstones as old as the country itself, a meeting center and what used to be Gayle's Pizza, a take-out restaurant that specialized in Friday Night Fish Fries. It closed rather abruptly and Gayle landed a steady job somewhere else.

The rest of Millerton's population resides in the hills surrounding the town, including one of the lucky ones, a woman named Jackie Root. She and her husband Clifford own a 400-acre crop and livestock farm that sits atop the Marcellus Shale, prime drilling real estate. Greeting visitors is a "Clifford & Jackie Root" sign at the foot of the short driveway. Set back into the pastures, past the old farmhouse is a garage, a barn and a collection of little sheds that dot the landscape.

Standing in the kitchen of her hundred year old farmhouse, Jackie Root is fixing lasagna on a bitterly cold day in January. Though it's barely 9 a.m., Root has been up for hours, a habit she developed in the two decades she spent running the

farm alongside Clifford. The family dog, Marcy, perks up as her mistress begins tossing ground chuck into a hot skillet. She bounds over to the stove and begins begging for a bite of the meat. “No, Marcellus!” Root scolds, calling the dog by her full name.

Barely clearing five feet, Root exudes an air of toughness. Today, she wears a black turtleneck tucked into black pants and looks more like a suburban soccer mom than a farmer. Her kitchen, with granite countertops and large Viking range, seems oddly out of place on a dairy farm. The kitchen is littered with files. Piles of documents have spilled off the desk and onto the counter tops. Paper is everywhere. Later, after the meat is browned and the lasagna is in the oven, she stands in her kitchen frustrated and unable to find a cartographers map that outlines her property, along with her neighbors. It reads like a treasure map, a list of the “who’s who” of Millerton. “People (have become) a lot more guarded,” Root explains. Coinciding with each name is a number- the number of acres that each family owns. Multiply that acreage by the market price of natural gas and you’ll get a rough estimate of who is raking in what from the gas companies. It’s a coveted piece of information, something both fellow neighbors and other gas companies wouldn’t mind getting a look at. When Jackie does find the map, it’s tucked in between pans in a rack above her kitchen island. She brings it down and unrolls it over the marble countertops. The names of the families on the map are the same: Root, Curran, Wheeler, Draper. The same families that have streets named after them, the same families that have been here forever.

There has always been talk of gas in the hills. Since the 1960's mineral companies have occasionally turned up on the steps of the farmhouses, slick salesman with briefcases that people in Millerton refer to as the "land men." The land men would try and get landowners to sign over their mineral rights for a few bucks a month in rent. Few people signed on and those who did were usually desperate for cash. Then, in the mid-2000's, the land men returned with a big offer.

Unbeknownst to most people in Millerton, a major breakthrough in drilling technology had been made in the late 1990's. Though natural gas companies have been fracking the Barnett and Haynesville Shales in the southern United States for years, the depth and extent of the gas in the Marcellus Shale made it largely untouchable. "The technology just didn't exist or it (didn't) make economic sense," says Potter. "(But companies knew) there would come a time when people would come back for it." In the late 1990's George Mitchell, a Houston-based entrepreneur who had made millions in oil, decided to privately research how to begin fracking the Marcellus Shale. A few years and hundreds of millions of his own dollars later, he had figured it out. The Marcellus was open for business.

When the land men showed up again in 2000, after Mitchell and his millions, the Roots were understandably suspicious. "He showed up and said he was doing seismic work," explains Jackie. He told them that there was a chance their farm was sitting on top of natural gas. They offered them a lease of \$2 per acre, an embarrassingly low offer. The Roots declined. By 2005, the land men would be back and this time they be offering the Roots a much larger lease.

“The contracts were so foreign and ugly,” says Root. “We just hadn’t been involved.” But sensing that this time her family should consider the offer, Root set about educating herself. So, she began Googling. Within a few months, Root was an amateur expert on all things regarding the Marcellus Shale. Armed with that knowledge, Jackie and Clifford went directly to East Resources, the gas and mineral company who had sent their land men over to investigate. The result was a leased plot of land christened ROOT 1, named after the first family to sign up. Now, in order to begin the drilling process (and collecting royalty checks), Root had to convince her neighbors around her to sign leases as well. Though she had lived next to most of them for the better part of three decades, this would prove a more difficult task than even she was prepared for. Though there are some who declined (Root refused to name who) she eventually gathered a group. Together, armed with Root’s newfound expertise, the families of ROOT 1 would present a united front.

Before the land men, before the Viking range and maps, Jackie Root was a farmer. She grew up in Pine City, a neighboring town just a mile or two from Millerton. As a girl, she always loved horses and it was that love that motivated her to go to veterinary school. She met Clifford and, when they married in 1981, Root moved to her husband’s farm on the Alder Run Road where she has remained for over three decades. Throughout their marriage, they farmed their 400 acres while holding down other jobs. When the land men returned in 2005, it wasn’t just money that they would bring. They would also open up for Root a whole new career, one that, coupled with her family’s royalty checks, would make her a wealthy woman.

Since the checks have come in, Root and her husband have been able to pay off their farm, make home improvements and begin construction on a new horse stable and indoor riding ring, a life long dream of Jackie's since she specialized in equine health in veterinary school at SUNY Delhi. There are new vehicles in the driveway and nice, new John Deere equipment around the fields.

"These things go up and down," Root explains. Sensing the vulnerable nature of the industry, Root began to teach herself the complicated tax structure behind the leases. She then turned this knowledge into her own company, R&R Energy Consulting, where folks hire her to navigate the often frustrating and usually tricky negotiation between the landowner and the gas company. Root has taught herself so much about the gas game that she is even the Pennsylvania President of the National Association of Royalty Owners, an organization that provides education and lobbies for mineral owners rights. Both in Millerton and throughout the state, Root has become the face of the Marcellus Shale.

A New Deal

"It was Jackie's leadership that kept the group together," says Wayne Early, a neighbor of the Roots' and a founding partner in the ROOT I well. "We wanted to get power in numbers so we could get a better deal and Jackie worked out that deal with East Resources." Early is sitting in a trailer turned office just a few yards from the gate to Southport Correctional Facility, about a seven-minute drive from Millerton. He has property in both Pennsylvania and New York but grew up in

Millerton. Like the Roots, Early had an idea that there was natural gas in the hills. After all, years before it the Marcellus Shale made national news, the water faucets in Millerton could catch on fire from the methane in the water. In the 1960's, when he was just out of high school, Early was hired by a rather eccentric local pilot to be a gas scout. As the pilot flew circled the hills around Tioga County, Early would look out the window of the small plane, looking for any sign of natural gas. When he spotted a place, he made a note and the pilot would then see if that land was available for purchase.

But, this time, what the companies were offering was much different. Instead of mineral rights, they were offering actual leases for gas wells to be drilled on the land in and around Millerton. "They (had) been here before. But this time you could sense this was a new deal," says Early. "I said, 'this is crazy! This is going to be bigger than Corning Glass!'"

While it has yet to stand the test of time versus the local empire that is Corning Glass, it has brought unprecedented money to the area. The natural gas industry has pumped millions of dollars into the local economy. Between 2000 and 2010, the median incomes in Millerton and Tioga County almost doubled, going from a little more than \$33,000 a year to \$56,000. "Millerton was in rough shape for many people for many years. The pace with which it changed and the velocity was just incredible," says Early. "I don't know one person who isn't benefitting. Waitresses have started getting bigger tips. The car dealerships are selling more cars. The owner of the quarry! Even he's making money," Wayne says, laughing.

For some people though, a bigger tip isn't much of a windfall, especially when their neighbors are cashing monthly royalty checks worth thousands. "People complain. I don't feel sorry for them," says Early. "They could've made a deal. They just grabbed what was offered. People badmouth because they didn't make more money. The companies want to make the best deal they can." As the land men started showing up, some of the people in Millerton took whatever was offered. For some people, that was a lease of just a dollar or two an acre. It's easy to understand why some would take it, though. The land men had come and gone for years. There had always been whispers of gas in the hills. Now here was an actual contract. It wasn't much, but it was something. These lousy contracts weren't discovered until people like Root started learning the game. Once they did, it quickly became clear who was on the losing end.

There was a sense in 2008, when the gas rush started, that, at some point, everyone's number was going to be called. As a result, some folks started spending money that never came. "There is a couple (I know) who borrowed money thinking that they were going to get a contract," says Early. "They're not going to get it. People overspend, over commit. That's human nature." And so people watched as their neighbors got money or didn't. People began whispering over coffee, in the parking lot after church, during visits between neighbors. "Who is getting what?" became the question on everyone's mind.

A Legacy

“Envy and greed, those are the two words surrounding the whole thing,” explains Phyllis Curran. Phyllis and Mickey Curran are practically Millerton royalty with a street named after them (impressive when there are only a handful of roads) and businesses bearing the family name across the area. The Currans are in their late-60s. They are both retired from jobs with the city; Mickey worked construction for the township before moving to head of roadway construction while Phyllis was a teller at a bank. The land they are living on has been in Mickey’s family for generations - land that previously had been farmed in order to support the family. Mickey’s father was the last Curran to till the land. When he died, the farm was split in two with Mickey receiving one half and his brother, LaRue (their mother was French) taking the other.

Like the Roots, the Currans live in an old, meticulously maintained farmhouse outside of town. The view from their porch is nothing but hills and pastures. Inside, their large, open concept living room and kitchen is styled in a kind of comfy country. In her kitchen, Phyllis displays her ceramic pig collection. Over in their living room, a screensaver flashes photos from their latest vacation: an Alaskan cruise. With their royalty checks, the couple has traveled. Since 2008, Mickey and Phyllis cruised around the Caribbean, taken trips to Europe and South America. Occasionally, they spend a weekend traveling to different East Coast casinos with their friends.

In town, people try and guess just how much money the Currans are getting. Neighbors, people they have known all their lives, are a little distant, a little wary of

the change that has brought such wealth to their town. Some of the more generous estimates place the Currans income at the height of the natural gas price boom in 2010, when gas prices were more than \$12 dollars per thousand cubic feet, at about \$30,000 dollars a month. That's more than half of what the average family in Millerton makes in an entire year..

As gas prices fall and demand rises, so to will the Curran's royalty checks. Today, gas prices are at an all time low, having dropped from a high in 2010 of about \$13 per thousand cubic feet to an average of about \$2.50. Obviously, the Currans have felt the effects of such a dramatic reduction in monthly income. Luckily, they still have two pensions providing a fixed income as the volatile and unpredictable natural gas market continues to fluctuate.

The Currans are known for both their traveling and their generosity. Both are active members in the Millerton Methodist church, where Phyllis organizes the food pantry and is the head of Bible School for the children. They donate their time and money to Meals on Wheels, an especially important charity in a rural town where it difficult for the elderly and disabled to access wholesome meals, especially in the winter. They have come to represent what is best about the new money. Always pillars of their community, Phyllis and Mickey have continued the Curran legacy in Millerton as they've gotten more and more money from their royalty checks.

Perhaps what makes Millerton so different is how the anger and the tensions are handled. Unlike other boomtowns both current and former, the Millerton townsfolk have remained rather stoic. There are some who have become, as Early

explains, “the antis” which are those opposed to the fracking. “Fracking opened up... this whole Chicken Little Syndrome. People have signs that say “Not In My Backyard” but they need your gas.” In common conversation, animosity is merely alluded to and even then quickly backed away from. While people will talk about the tensions, they prefer not to go on the record and risk alienating their friends and, in many cases, their family. Instead it festers and seethes. It is easy for anyone to imagine the jealousy that would accompany watching a lifelong neighbor suddenly strike it rich while you continue to struggle. And yet, tensions remained buried and unspoken. In a Protestant town like Millerton, austerity is prized. But in order understand *why* Millertonites act they way they do, one must understand where they came from.

A House Divided

There has always been a cultural divide among the people in Millerton. There are those who live in town in clapboard houses with nice yards and pretty flowers and still others left in disrepair. Outside of town they live in the hills, either in farmhouses or homes that have fallen victim to time and circumstance. Those in town worked in Elmira or Corning, usually in a bank or department store or perhaps in a management position for Corning Glass. Those who lived in the hills were farmers, tillers of the land for generation after generation. That was until the last decades of the 20th century when Millerton slipped into a depression and everyone, from the valley to hills, began to suffer.

Millerton's economic viability, like many towns in the Appalachians, depends on society's need for the natural resources that surround it. The town was established in late 1700's as a part of George Washington's Federal Land Grant. According to a 1933 newspaper article, "During George Washington's second term, government land agents were sent out to interest men with large families in settling the unpopulated areas of the country." Garrett Miller, father to ten and Millerton's namesake "was offered 200 acres of land free, plus whatever else his sons might care to buy at 10 shillings an acre, on the condition that he move his family to the present site of Millerton, then too heavily wooded with pine to attract the less hardy settler."

About a hundred years later, those same pine trees would attract the logging industry and, with it, the Sayre Railroad which ran just north of town. Sayre, an extension of the Lehigh Valley Railroad, connected Millerton with Allentown, Bethlehem and the rest Pennsylvania's manufacturing towns, opening a new world of economic possibility. By the turn of the 20th century, Millerton was small but thriving. Its main source of income was from the railroad, which shuttled able young men back and forth between jobs in Bethlehem and Pittsburgh. With boarding houses, restaurants and general stores, Millerton offered a reprieve from travel, a place to get a hot meal and a few supplies. Mid-century would continue to be a boon, as nearby Elmira continued to prosper as a glass and steel manufacturing town. Then, in 1972, Hurricane Agnes would hurl its way up the coast and churn inland, causing such massive flooding that the city would never fully recover. As

Elmira shuttered businesses, so did the towns around it. Slowly, any attraction in Millerton- the Lighthouse Restaurant, the boarding house on Route 328, Millerton Elementary School- all closed.

Many current Millerton residents can trace their lineage back to the original Miller family. Descendants of Miller's daughter Patience, who married into the Wilson family, can go back even further, tracing the Wilson ancestors all the way to the pilgrims who landed on Plymouth Rock. Folks here have a common thread: white, Protestant and hardworking. Sensible, American-made cars sit in driveways. Kids go to Penn State, if they go to college at all. Hunting season is a county-mandated holiday off from both work and school. Its conservative values have seen Tioga County turn red in nearly every single election over the past three decades, even as the counties around it start turning purple, even blue.

As the 20th century came to a close, Millerton seemed destined to fall away, to be another ghost town, a victim of circumstance and the steel industry. The boomers, now grown, left and those who remained found their town disintegrating around them. Then, in the end of the last decade, a new round of hardy settler showed up. This time, it would be young men from the South and West, coming to seek their fortune.

The Good, the Bad and the DUI

It's the Saturday night after Thanksgiving and Wheeler's is packed. People who have returned home for the holiday have run into old classmates and

neighbors. A few Millertonites are drinking Bud Lights and swapping stories. Wheeler's Family Restaurant sits about a mile outside of Millerton practically astride the state line dividing Pennsylvania and New York. During the day it is a buffet style restaurant with paneled walls and vinyl chairs. Older men hold court throughout the afternoon, eating homemade pie and drinking coffee. At night, Wheeler's turns into a bar where on Saturdays, with the selection of a certain Bon Jovi song on the jukebox, the bartenders will jump on the bar and dance. A few years ago it was a place for people to come on weekends, to sit with friends and watch the Steelers (never the Eagles) play on one of the big screen televisions. But lately, a new crowd has taken over.

Sitting at the bar are three young men in their early twenties. Wearing Dickies jackets over large t-shirts, pressed jeans and work boots, they stare intently at the college football game on the screen. They say little, not even to each other. Occasionally one of them leans forward over the bar and whispers something to the bartender to make her laugh. When they speak, their accents give them away instantly: they're not from around here.

"I wanted to go home (for Thanksgiving) but I can't leave the state," explains one of the men. He is from Oklahoma brought up to work on the gas drilling. He and his companions all live in a double-wide trailer in Millerton, temporary housing put up at the end of lots by people eager to make a rental income; this will be their home for as long as the job lasts. The young man explains that after his third DUI in a year, the state of Pennsylvania revoked his license and barred him from leaving the state

until his case goes to trial (which is interesting considering that though he is probably only ten feet over the state line he is sitting, technically, in New York.) His case is one of hundreds. In a March 2012 article in the Pittsburgh *Post-Gazette*, Tioga County District Attorney George W. Wheeler noted the county's dramatic uptick in crime, especially DUI. Wheeler is quoted as saying, "There's definitely going to be a need for more resources."

In 2008, when drilling in Tioga County really started to explode, there were few people with the skills to work on the wells and, later on, the pipeline. Gas companies like Talisman Energy, Shell and Chesapeake brought laborers from other areas namely Texas, Louisiana and Oklahoma. Contractors brought managers in from Wyoming. "The portable and the adventurous, they'll follow the jobs," explains Potter, "If you're a good electrician or a good welder, you can jump right in." Often those portable and adventurous people are young men with (some) expendable income. They work hard- often ten or fourteen days straight without a break. As the U.S. Bureau of Labor Statistics notes, many of the jobs don't require a high school education. A physical fitness and drug test are all most companies require. Add to that the fact that most of these men are thousands of miles from home and you have a potentially explosive situation.

"That's the mark of a boom town," explains Potter. The strain on resources and the sudden upticks in crime like DUI are notorious in gas and oil rich areas. In an insular place like Millerton, any cultural shift can be dramatic. After all, this was a town that fought to keep anyone non-white or Catholic out for years. For those who

aren't fortunate enough to be sitting atop a wellhead the change is felt a little sharper without royalty checks to dull the pain.

It isn't just the workers that bring inconvenience; it's their machines as well. Driving along Route 328 on your way from one end of town to the other takes less than three minutes. In that three minutes, you cross three little bridges that go over Hammond Creek, a tiny stream that feeds, eventually, into the Susquehanna River. (Hammond Creek was also the sight of a murder-suicide in the 1980's that, until the gas companies came along, was the single most important thing to have happened in this town.)

If you're heading south, the last bridge before you leave town became a bone of contention for many Millerton residents. In 2010, the large gas trucks using Route 328 to go through Millerton were having trouble passing over one of the little bridges. And so, they expanded it, shutting down the road for almost two months. What would be a minor inconvenience in a city chokes the life out of a rural town. Residents were forced to drive over the Switchback, a road that runs parallel to Route 328 but requires drivers to go about twenty minutes out their way. Add rising fuel costs and the fact it was winter to the mix and people were doing a lot more than whispering in the post office. They were mad.

Winning Friends and Influencing People

Gas companies realize the impact that their presence has on these small, rural towns. And so, in order to garner goodwill, they create what Potter calls "a

social license to operate.” In Millerton, this means paying for infrastructure and street improvements, monetary donations to the food pantry as well as hosting open forums where folks can go meet with employees. The hope is that those who are not receiving royalty checks will see themselves reaping some benefits from the natural gas industry.

One of the most extensive publicity campaigns comes in the form of newspaper advertising supplements. Designed to mimic the typeface and design of the actual paper, they are tucked into the folds alongside the Local and Sports sections. The supplements have reporters, stories and breaking news. They are linked via the newspaper’s website and appear in weekly or monthly editions. Johnny Williams is a 22-year-old reporter for the *Northeast Driller*, an advertising supplement that runs in the paper of every single county in Northeast Pennsylvania - including Tioga. According to Williams, “We put a positive spin on the drilling,” says Williams. Funding for the supplement is provided by the Marcellus Shale Coalition, a sort of super PAC for the gas industry, with a board of directors consisting mostly of executives from companies like Talisman Energy and Chesapeake.

Before the 2000’s and the caravans and the gas rigs, the newspapers in and around Tioga County were struggling like so many others throughout the country. Over the past few years, Williams has watched as both his community – and his profession- began to benefit from the drilling. “Radio stations had the best year ever (in 2011). They’ve never had a bigger year,” says Williams, musing over the far-

reaching effects of Marcellus money. "I'm a living example," he laughs. "I wouldn't have this job, I wouldn't be talking to you!"

In his professional capacity, Williams covers everything from charitable donations on behalf of the gas companies to improvements in roads. When asked, he says he sees no real downside to fracking. Instead he believes the criticisms of its environmental impact are based in jealousy or a failure to understand the economic impact. "The effect on local economy has outdone anything that could have effected it (environmentally)," says Johnny. "People cannot get hired fast enough. Students are interviewed in school and hired on the spot." Williams' paints a rosy picture though an August 2011 article in the *Wall Street Journal* found that nearly half of the jobs that were projected to come into Pennsylvania via the natural gas industry have failed to do so. The article takes aim at a study conducted at Penn State University that claimed the natural gas industry brought 140,000 new jobs to Pennsylvania in 2010. The *Journal* said the figure is closer to 72,000.

In 2011, just months before the university would find itself embroiled in the Jerry Sandusky sexual abuse scandal, Penn State would find itself under another kind of scrutiny. It began with an investigation lead by WBEZ and Public Radio International's *This American Life*. The producers found that in 2009, the Marcellus Shale Coalition (the same organization that sponsors *the Northeast Driller*) donated \$146,000 to Penn State. That money was earmarked for the Marcellus Center for Outreach and Research at the commonwealth's flagship University. With that funding, researchers released three studies, all of which fell favorably on the side of

natural gas drilling and failed to mention that the Marcellus Shale Coalition funded the studies. They were published under the PSU logo and with full support of some faculty members. After the investigative journalists at *This American Life* aired their findings, officials at the school were quick to go on the offensive, claiming that the studies were improperly stamped as having been “official” Penn State work. Instead, University officials claimed, they were the merely the opinions of the individual researcher. Despite this disclaimer, Penn State watched their reputation as one of the nations leading academic research university tarnish.

Penn State did eventually stop research on the Marcellus Shale in the fall of 2011 after an advocacy group filed a formal complaint with the Middle States Commission on Higher Education. As a result of that complaint, PSU was placed on probation by the Commission but by then the studies had been out for nearly two years, referenced in countless newspaper articles and academic journals- not to mention used in support of new legislation in the state house in Harrisburg and on Capitol Hill. The Penn State scandal forced many universities, including the University of Texas at Austin and the University of Wyoming, to re-evaluate their own natural gas studies and, in some cases, to find themselves under investigation for similar offenses.

The natural gas industry also aggressively courts the public sector. A staple on Capitol Hill, lobbyists for the industry have spent over \$100 million dollars this year alone in attempts to sway Congressional opinion in favor of natural gas-friendly legislation, according to OpenSecrets.org. They are one of the five highest

spending industries in Washington and, as a result, little federal regulation has been passed. Instead, Congress has left it up to the states.

In Pennsylvania, the 2012 election saw gas companies not giving to the big name campaigns but, instead, focusing smaller amounts on smaller races. According to *NPR*, Range Resources, Chesapeake Energy and Chief E&D holdings all gave between \$1,000 and \$3,000 to candidates running for offices like state treasurer or attorney general.

In many ways, the natural gas industry entered Pennsylvania at the perfect time. On the brink of a worldwide recession in 2008, the trucks started rolling in and buffered a lot of the damage that would have been felt in these rural areas. They offered the promise of jobs and money at time where almost everyone was worried about making it to their next paycheck. But, while they have delivered on some of their promises of jobs and royalties, there is one, big elephant in the room: the environmental impact.

The Dangers of Drilling

Millerton, despite being a farming community, doesn't seem overly concerned with the environmental impacts of fracking. Most homes have waters wells in their backyards that they periodically dig and fill as needed. Though that drinking water sometimes comes out of the faucet laced with methane, most people shrug it off. And, though the Environmental Protection Agency has charged ROOT 1,

the well that both Jackie and Clifford Root and Wayne Early have contracts on, with three violations, two of which were for environmental reasons, no one really noticed.

ROOT 1's environmental violations came in January 2011, at the height of the well's initial production. The first was "Failure to adopt pollution prevention measures required or prescribed by DEP by handling materials that create a danger of pollution" and the second was "Failure to properly store, transport, process or dispose of a residual waste." According to *NPR's* ongoing investigative project, "State Impact: Pennsylvania," out of Tioga County's nearly 1200 active wells, over a third have had some sort of violation ranging from failure to post the proper signage to severe breaches in environmental safety.

Matt Genchur is a Source Water Protection Manager and Specialist with the Pennsylvania Rural Water Association. The PRWA is tasked with creating action plans to protect water sources. If an accident occurs, it's up to PRWA to delegate the action plan that will (hopefully) minimize the damage. They are also often asked to serve as a resource for companies looking to drill. They explain where drinking water wells are and map out the best plans to protect them. According to Genchur, the risks involved in drilling for natural gas are not the ones that tend to get publicity. "The challenge, we feel, is that the biggest threat is not from hydrofracking, which gets the most publicity, it's from the initial vertical drilling," claims Genchur. "When they're drilling, they have the potential to hit aquifers. They

need to not disturb those layers.” If disturbed, those aquifers have the potential to become major public health hazards.

In 2009, the town of Dimock, Pa., about 90 miles east of Millerton, made international headlines when they sued Cabot Oil & Gas Corp for potentially contaminating their drinking water by failing to carefully drill through those aquifers. Residents were alerted to this when they noticed that the water coming out of their faucets had so much methane, it could be lit it on fire.

While it certainly draws headlines, it isn’t just drilling that raises environmental concerns. “ In Pennsylvania the biggest threat we see is transportation. Highways, roads and pipelines are lumped into that category,” says Genchur. The natural gas industry is bringing thousands of new trucks and vehicles on the Pennsylvania highways, some of which are carrying wastewater or chemicals. If they spill into streams or rivers, it has the potential to create an environmental threat that could cripple water systems.

Another threat Genchur points out is the actual maintenance of the wastewater containers. That water, sand and chemical mixture that is pumped into the pipes to extract the gas is then flushed out and stored in large bins. If improperly secured, these bins could tip over during a storm or accidentally bumped by a vehicle and their contents could seep into the soil. Unsecured waste containers were exactly what ROOT I was cited for in one of their environmental violations.

Cycles

“There are a lot more millionaires here than there ever been,” says Wayne Early. “People went from being land poor to land rich. It’s a dream that you couldn’t even fathom happening.” But, Early says, not every resident is living a dream. “There are going to be problems. It’s big business and it’s not going to be perfect,” he says. “The people who are getting the money, they are a lot less likely to complain,” says Phyllis Curran when asked about the inconveniences, both environmental and otherwise brought on by the drilling. And that seems to be true. The folks with the anti-fracking signs in the yard, going door to door with petitions and penning the Op-Ed articles demanding the drilling stop are just probably not the people getting the royalty checks. If money talks, it also shuts people up pretty quickly, too.

Who can say what is next for Millerton. Natural gas prices have declined dramatically since their height in 2010. As drilling begins to taper off, there will be fewer people striking it rich, though those currently receiving royalty checks will continue to do so for as long as their wells produce. And, if Eric Potter is correct, companies will even leave a lot of gas for a later date, to be extracted when technology is even further advanced.

As for the town, Millerton may continue to stay as it – a rural, blue-collar village- or become a graveyard to the mass urbanization of the millennial generation. Fewer and fewer kids are born in Millerton and those that are rarely stick around long enough to raise a family of their own. Like so many of her fellow townsfolk, Phyllis has a rather austere view of the future, never letting herself get

too far ahead. "It's progress the way I look at it," Phyllis explains. "This is just another cycle. You look at the cycles differently when you grow up in the country."

Whether it is gone in a decade or a century, Millerton will always represent something special. Root and Curran and their fellow townsfolk are the stuff legends are made of. Generations from now, over campfires, around hearths- either fire-producing or electronic- people will tell the story about a group of farmers who had fortune knock on their front door in the form of a land man.

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Vita

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Before returning to graduate school, Katie lived and worked in New York City. In 2011 she was awarded a journalism fellowship from the Carnegie-Knight Foundation/ News21 program.

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