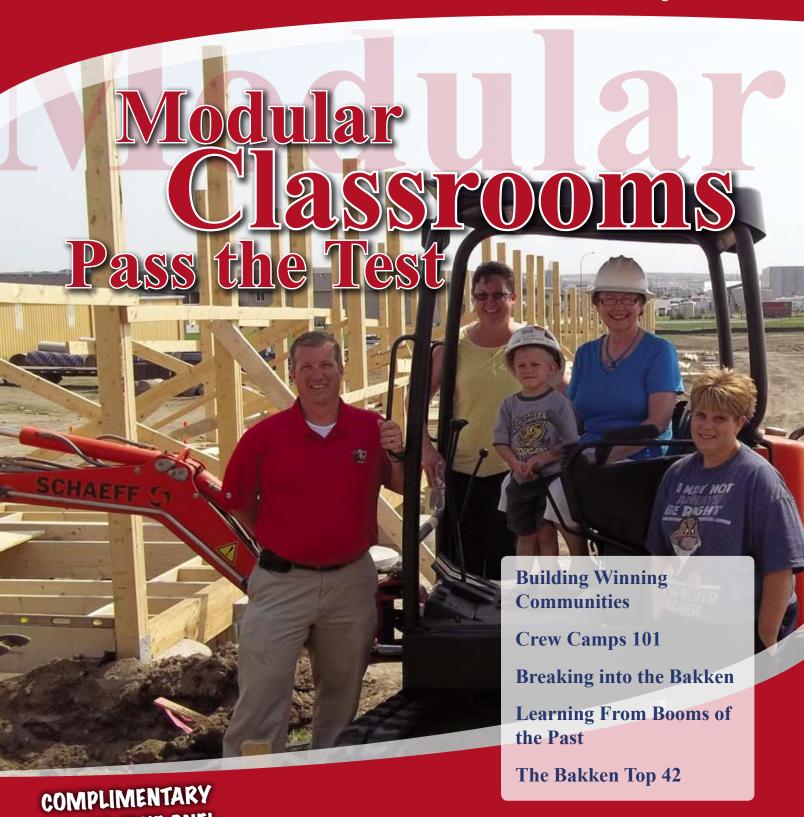
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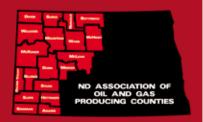
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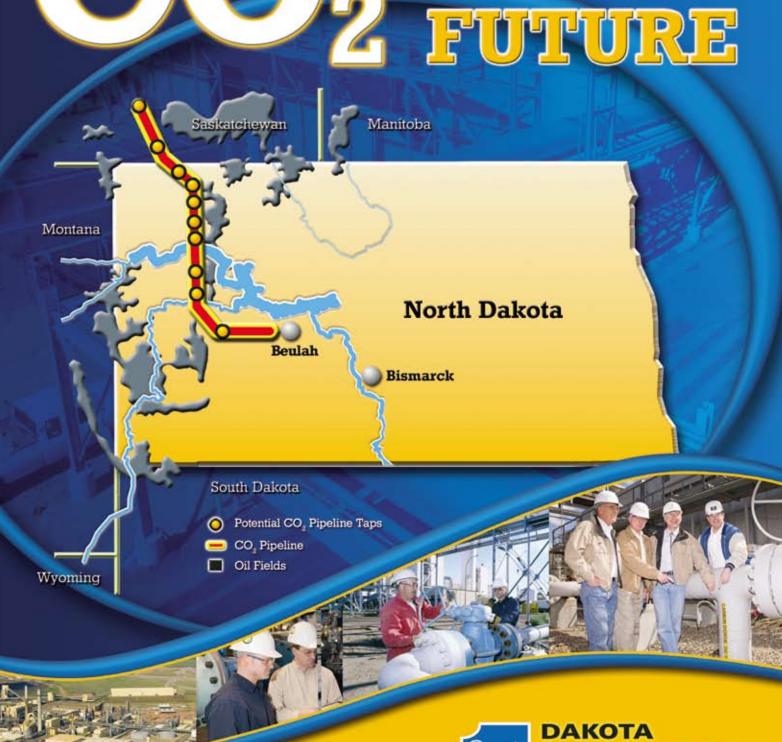
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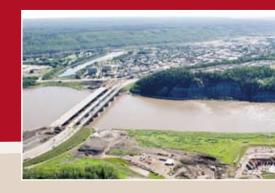
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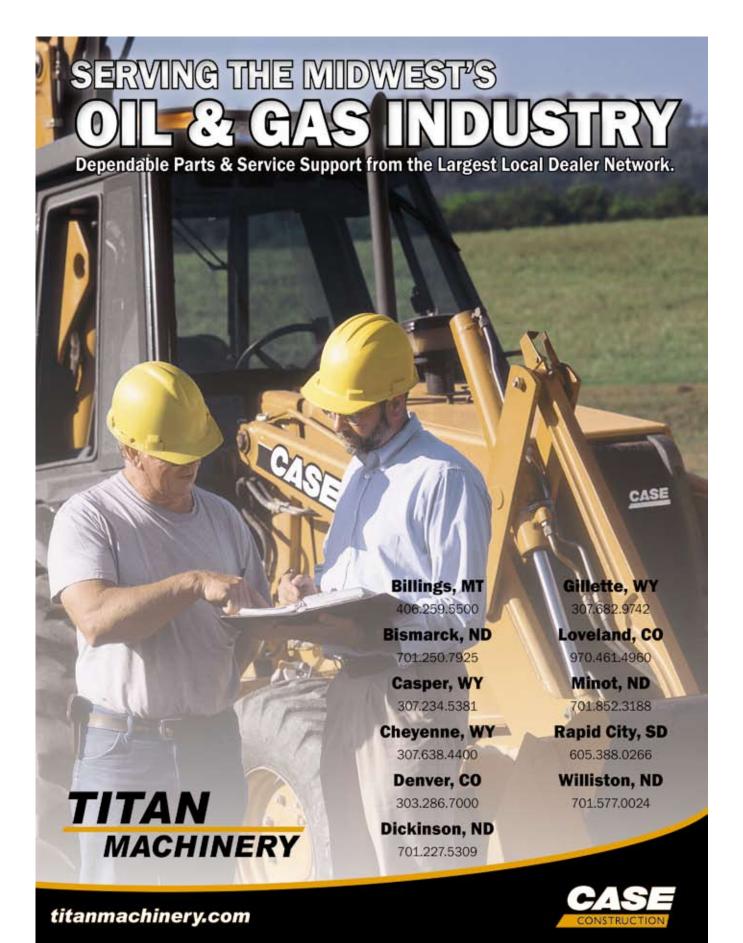
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From the Desk of the North Dakota Association of Oil & Gas Producing Counties' President



Dan Brosz President North Dakota Association of Oil & Gas Producing Counties

reetings! As chair of the North Dakota Association of Oil & Gas Producing Counties (NDAOGPC) Executive Committee, I am fortunate to see all the possibilities for North Dakota as we forge ahead during this incredible growth.

The Executive Committee represents counties, cities and school districts across the western third of North Dakota. In a relatively short time, our great state has risen from ninth oil producer in the United States to second with the discovery of the unconventional Bakken and Three Forks oil plays. Instead of being mocked for our cold winters (and they are!), we are the center of attention in international oil discussions.

This \$24B industry spends money every minute in our state and we are experiencing both prosperity and shortages at the same time. To deal with this rapid growth, the Executive Committee has allocated over \$75,000 to gather data so that we might plan for the future. The NDAOGPC operates a uniform county truck permit system. This generates some revenues, which are used to hire experts in planning and statistics.

Last legislative session, the NDAOGPC paid \$135,000 for a comprehensive transportation study and model to estimate both paved and gravel county road costs. This plan, from the Upper Great Plains Transportation Institute in Fargo, ND, became the blueprint for the ND Department of Transportation funding during the session. The counties met in the north and south units to distribute among themselves \$142M. Other funds were allocated for state highways, making our western highways safer for the volume of industry trucks we see today. An oil truck creates the level of impact of 27,000 car vehicle trips, so it's been a challenge to keep up with the road work.

In a relatively short time, our great state has risen from ninth oil producer in the United States to second with the discovery of the unconventional Bakken and Three Forks oil plays.

For this coming legislative session, the Executive Committee has hired Nancy Hodur, North Dakota State University, to study five pilot schools to estimate coming enrollments. The five schools are Williston, Dickinson, Ray, Stanley and Watford City. The study should be completed by November 1, 2012. Rapidly growing school districts received a \$5M allocation in impact aid. The governor is recommending an additional \$20M be added to that allocation inside the \$135M impact fund.

For cities, the NDAOGPC has also paid for data collection. They supported increasing the number of cities participating in the infrastructure study by the Vision West ND federal and state grant. The original number of cities selected was 20. The association is paying for three additional cities: South Heart, Killdeer and Dunn Center. The state's contribution for this data collection is \$300,000 and the association's contribution is \$35,000 additional dollars, along with donations from AE,S.

In late July, the NDAOGPC Executive Committee met with Governor Dalrymple and his staff in Ray, ND for a timely discussion on the 5 per cent oil and gas gross production tax. The Executive Committee members offered some ideas on how the tax can be changed so that both small and large oil producing counties can manage the rapid change of today and maintenance issues for the future.

We live here. We know the impacts. But it's critical to get solid data for those who don't live it, so they can understand it. And it's critical that we keep communicating with state leaders. The needs are great and the decisions are difficult but as chair of this Executive Committee, I can tell you we are committed to successfully getting the work done that needs to be done.

ABOUT THE NORTH DAKOTA ASSOCIATION OF OIL & GAS PRODUCING COUNTIES

The North Dakota Association of Oil & Gas Producing Counties (NDAOGPC) is the trusted and unified voice for the betterment of the citizens of North Dakota and the membership of the North Dakota Association of Oil & Gas Producing Counties.

For more information about our association, please go to www.ndenergy.org or use the information below to contact us.

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ENERGY ON THE MOVE

From the Desk of the North Dakota Association of Oil & Gas Producing Counties' Executive Director

The energy industry grew at such

impressive numbers this past

number one and watching.

summer . . . Texas is currently



Vicky Steiner
Executive Director
North Dakota Association of
Oil & Gas Producing Counties
North Dakota House Representative
for District 37, Dickinson, ND

Chicago, IL. The United States, with Canada's help, might be able to shake off the handcuffs of foreign oil dictators. And, as technologies are discovered and improved, we may unlock

more than the current 5 per cent recoverable

oil of the Bakken. That's probably the biggest

untold story.

The top strategies emerging from Vision West ND planning in the 19 western counties are not surprising. Vision West ND is a local and regional planning effort that covers western ND counties and the Mandan, Hidatsa and Arikara Nation affected by oil and gas production. Most communities want to improve their quality of life and become more attractive to incoming young families. Child care caught the attention of developers this past summer as 4,000 additional spots were needed across the west.

Other top items on their "To Do" list are infrastructure development, attracting government funding, business retention and expansion, pass-through visitor services, entrepreneurial development, downtown development, local regional tourism, energy development and business recruitment. If you have investment dollars to assist these communities, roll up your sleeves and work with them to help solve our mutual issues.

Of the 19 county and MHA Nation tribe plans, about half were completed in early August. Several planning sessions were set up for August and September. The information is available at www.VisionWestND.com. This association, along with the ND Department of Commerce, has paid for a special service called "MindMixer" to attract online comments for planning ideas. This should create

more opportunity for diverse discussions, so get yourself signed up. It's easy to add your two cents, as we often say in our state, at http://ideas.visionwestnd.com.

The energy industry grew at such impressive numbers this past summer. In July, ND had almost 7,000 wells, which put the state in second place in oil production nationally. Texas is currently number one and watching. New census figures estimate there may be as many as 24,000 people living in crew camps in this state. Cities and counties can use these crew camps to house temporary workers while additional housing is built for the sustainable populations.

The state's unrestricted surplus jumped 43 per cent in three months, according to Pam Sharp with the ND Office of Management and Budget. She told the Government Services interim legislative committee that the state has about \$848.9M in unrestricted surplus, even though the media has reported a much higher number. She explained that there are "buckets" that have to fill up by formula and several of those funds, such as the Legacy Fund, cannot be tapped because of their constitutional protection. The 2011 legislature put in motion a "bucket" to capture over \$300M in incoming funds for property tax relief state-wide that will distributed in the 2013 session.

The NDAOGPC's Executive Committee voted in late July to oppose a constitutional measure for the November ballot that diverts 5 per cent of oil taxes to the control of a nine-member appointed committee on wildlife conservation projects. This is a massive amount of money, almost \$300M by 2017, which will not have the oversight of

just love fall in North Dakota. I've been watching this year's hatch of Canadian geese fly their "V" formations over Lake Sakakawea. The other day, just at sunset, a small group of geese formed a "K" formation, much to the dismay of the parents. After much squawking, an organized "V" pattern emerged except for two young stragglers. Perhaps the stragglers didn't want summer to end. Neither do I, but the fall season is a good transition from summer.

Western North Dakota has had a busy summer, to say the least. As of August 1, 2012, there were still 22,000 oil-related jobs unfilled. My hometown, Dickinson, may have as many as 22,000 permanent and temporary residents, so that seems like a lot of jobs to me. Even though people continue to arrive here looking for work, the prediction is that the oil rig count will stabilize at 200 or so, perhaps falling to 150 for a time or two, depending on the oil price. Hotel rooms are also going to become available as the oil industry releases their long-term blocks and workers find apartments sometime at the end of 2013, at least by industry prediction.

The boom pace may level off as leases are secured and oil operators began talking in August about cost containment. That means they want to bid projects and end the price escalation they've experienced in the past.

North Dakota's Bakken and Three Forks discovery is a game-changer in the world of oil sales. We may have more strength as a nation because of it. That's what former Governor Ed Schafer told a group of 135 investors at a Bakken Investment meeting July 18 in

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elected officials. Their administrative budget is 3 per cent of the total, which sounds small but really isn't. The forecasted distribution of money for this group if the conservation measure passes is as follows:

- 2013-2015 Biennium \$210.9M (750,000/BPD @ \$72/barrel);
- 2015-2017 Biennium \$239.0M (850,000/BPD @ \$72/barrel); and
- 2017-2019 Biennium \$281.1M (1,000,000/BPD @ \$72/barrel).

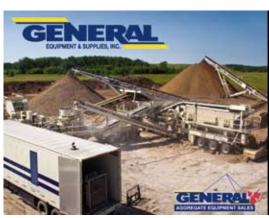
*The above numbers are based on projected oil production and oil at \$72/barrel (\$72 per barrel is the same number used by ND OMB).

Conservation is important. I love birds, too; most people do. But is the issue more important than our state's children, the elderly, our state's road infrastructure, schools, water supplies, flood aid, or emerging state projects in the coming 20 years? This will sharply cut the pie of available funds and impact other state projects that are just as needed.

The entire two-year state budget, including federal aid is \$9.9B. The general fund is slightly more than \$4B, with education and human services taking the biggest slices of the pie. These programs rely on revenue from energy, income and sales taxes. I would predict that the legislature will take a look at reducing taxes where possible but the need for infrastructure improvements, not only in the west but across the state, will be a tremendous challenge.

Speaking of challenges, I would encourage our ND newcomers to get prepared for the coming winter. We had a soft winter in 2012 but that was really outside the norm. Just like the juvenile geese that need to strengthen their wings for harsh headwinds, you'll need to find warm shelter for the -30 cold snaps. As sure as the geese fly, we'll have wild winter storms.

But for now, I'll enjoy the last of the summer-like fall days. I'll hear the call of the geese overhead and continue watching to see if the young ones have their winter wings.





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A Message from the North Dakota Department of Mineral Resources



Lynn HelmsDirector
North Dakota Department
of Mineral Resources

Booms of the past have planned for growth but haven't fully recognized the intricate details in order to plan effectively.

pportunities in the oil and gas industry have opened North Dakota's doors for business. The industry is making the most of the success rate of drilling in the Bakken and, in turn, providing jobs to thousands of down-on-their-luck Americans who have come to North Dakota for a fresh start. At the end of 2011, the state had created about 35,000 jobs to support this growing sector and expects to create another 10,000 jobs this year.

Booms of the past have planned for growth but haven't fully recognized the intricate details in order to plan effectively. This time around, things are different. The success rate of the Bakken, coupled with our knowledge of the past, tells us we should put together forecasts to better help communities plan for the future.

The North Dakota Department of Mineral Resources (DMR) has been an advising agency for a number of different studies focusing on everything from housing and roads to jobs and schools, all of which come back to the same question. How many workers will this industry need?

The answer starts with geology. The Geological Survey's 2008 Bakken and 2010 Three Forks assessments detail the amount of recoverable reserves by county. It's from that county by county assessment that we can estimate the number of wells needed to fully develop the resource and from there determine the estimated number of rigs it will take to drill the wells using current technology.

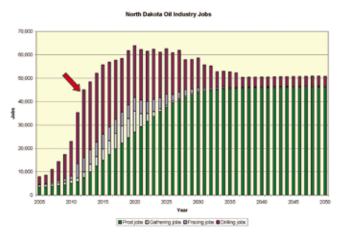


Figure 1. Projections for North Dakota.

There are four basic job categories that are essential when planning for job growth in the oil and gas industry: drilling, gathering, fracturing and production. Some jobs are temporary, some jobs are permanent. For example, there are 120 direct and indirect oil industry jobs involved in operating a drilling rig, most of which are considered temporary. Once the drilling phases have been completed, one can expect the people who fill the needs of those jobs to move out of the state, along with the rigs. Fracturing jobs and gathering jobs are also considered temporary. The initial demand to fill those roles will be high but will then taper off as oil and gas operators move into the production phase of this oil play.

An additional complication is that resource plays like the Bakken and Three Forks are drilled in two phases. North Dakota is currently in phase one of drilling. Operators are drilling one well per spacing unit. Phase two will consist of operators coming back



Figure 2. Projections for Mountrail County.



Figure 3. Projections for McKenzie County.

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to the well and adding more wells. They'll drill many more wells but do it with less rigs.

Production jobs are more permanent. These are the folks who will continue to provide services throughout the life of the well, and will therefore remain full-time North Dakotans for decades.

The DMR also assessed past trends in job growth, as well as where we are today. By confirming the accuracy of those numbers, we can be more confident in our projections moving forward.

If we look at the graph for the entire state (Figure 1), we can see the total demand for workers will peak in 2020 with approximately 65,000 available jobs. These jobs will break down into an estimated 22,000 jobs needed for drilling and another 26,000 needed for production. The additional 17,000 jobs are divided among fracturing and gathering.

Let's compare and contrast the jobs projections for two of the bigger oil producing counties. According to models, Mountrail County has hit its peak in terms of jobs needed for drilling but continues to increase jobs in the areas of gathering, fracturing and production. The number of jobs in Mountrail County will plateau from 2015 through 2027 as the focus transitions to more permanent jobs for production (Figure 2). By contrast, drilling in McKenzie County is just beginning to hit its stride (Figure 3).

Because cities and towns also need to plan for the growth associated with oil and gas activity, a section of the jobs model was created to allocate percentages of activity in multiple counties to a community. For example, a separate graph was created for the city of Williston since it presents a unique set of circumstances. As the epicenter of activity, Williston has jobs that serve not only Williams County but Divide and McKenzie counties and Eastern Montana as well. Those factors were taken into consideration when creating the model (Figure 4).

In addition to the graphs shown, the DMR has created models for all oil and gas producing counties, Eastern Montana, and estimated jobs to develop the Tyler play in Southwest North Dakota. We've provided those graphs to Vision West ND in an effort to assist them in their planning initiative.

These models, of course, don't account for workers who bring their families or the secondary jobs that are needed, such as teachers and retail employees. But by taking the numbers the DMR has created in terms of jobs, it allows for places like the North Dakota State Agribusiness and Applied Economic Department to model these additional job numbers and make population growth estimates.

It's hoped that these models will serve as a guide for community leaders and planners to use as a tool to manage the challenges imposed by oil and gas development, turning them into tremendous benefits for their communities.



Figure 4. Projections for the City of Williston.





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Meet the Board of Directors for the North Dakota Coal Conversion Counties Association

The North Dakota Association of Oil & Gas Producing Counties (NDAOGPC) and The North Dakota Coal Conversion Counties Association (NDCCCA) are working together for the betterment of the citizens of North Dakota. The NDCCCA is a three-county member organization led by Chairman John Phillips. Members must have a power plant in their county that converts lignite coal to electricity.

CHAIRMAN JOHN PHILLIPS BEULAH-MERCER COUNTY CITY REPRESENTATIVE



Working in the field of economic development and chairing the Beulah Jobs Development Authority and Mercer County Economic Development boards, as well as being State President of Economic Development North Dakota, has made me aware of the importance of retaining industry-

supported jobs.

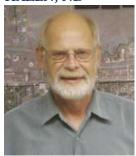
Having struggled for years without migration and now having quality sustainable jobs supported by coal mining, coal gasification and the power generation industry, it's critical we not only sustain but continue the ongoing research to achieve greater levels of development and prosperity.

But what looms on the horizon? My involvement with the NDCCCA for over a 20-year span and my role as chairman for the past four years has made me aware of the strong environmental stewardship the coal industry has exhibited for water, air and land.

It's also made me aware of the unprecedented amount of new regulations being pushed by President Obama's Environmental Protection Agency. This administration is conducting a "war on coal." The industry is being handcuffed to provide long-term, affordable and reliable power. With the escalation of the oil industry, we must not let "extraordinary regulations" stifle that growth and must not allow the state and country to realize the potential of that discovery. We need to support the use of fossil fuels and recognize the opportunities it provides for energy independence.

I look forward to the future challenges occurring with the rapid growth of the oil industry, coal mining and power generation, as well as the opportunity to enjoy the quality of life provided in the rural communities of North Dakota.

SECRETARY-TREASURER STEVE FROVARP HAZEN, ND



I have served as Secretary/Treasurer of the NDCCCA from 1981-82 and from 1988 to the present. I'm Hazen's city planner and first moved to Hazen in 1981, when Mercer County was experiencing the coal boom, the construction of the Dakota Gasification Plant and the Antelope Valley and Coyote electrical generation units.

Becoming involved with the association was natural. In the early '80s, there were numerous state legislative bills that impacted the coal in-

dustry and the coal tax revenue that was distributed to the various political entities. Today, the concern is the continued viability of coal because of federal rules and/or federal legislation.

Mercer County is seeing the impacts of oil development. The lack of housing in the western portion of the state is forcing people to look east. Annabelle Homes is proposing the construction of 34 townhouses, 25 single family homes and a retail building and hotel in Hazen, ND.

MAYOR SANDY OLIN CENTER-OLIVER COUNTY CITY REPRESENTATIVE



I'm the new representative from Center, ND, where I've recently been elected mayor. I've lived in Center for the last nine years. Prior to that, I lived in Regina, Saskatchewan and have the unique blessing of being a dual citizen of Canada and the United States thanks to my parents, who were both North Dakotans.

I'm currently employed with the Oliver County State's Attorney's Office as the office manager and work as the Oliver County Emer-

gency Manager. I'm involved in the Housing Authority of Center, the Community Club, Thrivent Financial for Lutherans, Center Stage, the Gaming Commission and St. Paul Lutheran Church here in Center.

I believe Center is on the brink of being involved in major change and am excited to be part of the process and see the progress that will be taking place.

COMMISSIONER GARY MURRAY BEULAH-MERCER COUNTY REPRESENTATIVE



I'm a Mercer County Commissioner who resides in Beulah, ND. I was born and raised in Beulah but was out of the community for about 13 years while I attended Dickinson State

University and worked for the United States Fish and Wildlife Service as a predator control officer.

In 1967, I was offered a position with Farmer's Union Insurance as an agent in Beulah. For the next 43 years, I served in that capacity while making my home and raising five sons in Beulah. I have served on the Beulah City Council, Beulah School Board, Zion Lutheran Church Council and worked with many other civic organizations. I've also held several offices with the Farmer's Union Insurance Agent Association.

In 1998, I was approached about running for a position on the Mercer County Commission and decided this position could act as a means for me to give back to the community. I served on the commission for eight years and was on the board of the NDCCCA, which gave me an opportunity to help the energy industry work smoothly with the area communities to ensure any growth and changes were done in an organized and orderly fashion.

I'm now fulfilling an unexpired term on the commission and am again serving on the board of the NDCCCA. We continue to work with area energy companies and the coal mines. Coyote Station will be providing hot and cold water to the oilfield, which will increase truck traffic, so we'll be watching this to ensure it won't impact our communities negatively.

SUPERINTENDENT MIKE NESS HAZEN-MERCER COUNTY SCHOOL REPRESENTATIVE



ľm the Superintendent of the Hazen Public School and this is my 40^{th} year in education in North Dakota. I've been the NDCCCA board for over 20

years and served as chairman from 1993-95. I was also a member of the NDAOGPC and on the executive board in Bottineau, ND.

The NDCCCA has been an important part of what I've worked on as an administrator in Coal Country. There have been many changes in legislation and the NDCCCA has worked hard with the legislature to build an equitable formula that treats schools, cities and counties fairly. It now looks as though much of our concern is going to be about federal legislation.

When I moved to Stanton, ND in 1980, it was boom time in Mercer County and our area was filled with construction workers and their families. It was a fast-paced area and until the early '90s, our schools and communities grew at a fast pace. It was an interesting time in Mercer County and, at times, very difficult to deal with the impact.

I see the same type of impact now taking place in the oil patch on a much larger scale. The connection between the coal and oil entities is a good way for all of us to work together on dealing with impact from the energy industry.

SUPERINTENDENT CURT PIERCE CENTER-OLIVER COUNTY SCHOOL REPRESENTATIVE



I'm in my third year as Superintendent at Center-Stanton, ND and have been a school administrator for the past 15 years. My family and I are all lifetime residents of south-western North Dakota; born, raised and educated in small town settings.

Growing up in the coal community of Scranton, I witnessed the benefits of coal production and the impacts of the industry leaving the community. The financial impact and decline of student population was challenging on the region and school district and I don't want to see these same implications occur in other North Dakota areas. Center-Stanton School District relies heavily on the financial benefits received from coal severance and conversion.

Being the only school within Oliver County, I became a board member of the NDCCCA; it's been a very rewarding experience and I've enjoyed the chance to work with other county representatives experiencing similar coal implications. I've had the chance to stay informed on the activities of our coal industry, both at the state and national levels.

AUDITOR DARWIN SAARI TURTLE LAKE-MCLEAN COUNTY CITY REPRESENTATIVE



I represent the McLean County cities on the NDC-CCA. I've been the City Auditor/Assessor for the City of Turtle Lake since 1980. I'm also a certified water

and wastewater operator.

Currently, I serve on several boards and commissions, including, McLean Sheridan Rural Water Board, McLean County Planning and Zoning Commission, Lewis and Clark Regional Development Council, and Turtle Lake Area Development Corp. I also serve as secretary of the Turtle Lake Park District.

I became involved in the NDCCCA because of how important the lignite industry is to the cities of McLean County and North Dakota. The lignite industry has been an economic engine for McLean County, providing hundreds of good paying jobs to energize local economies and providing tax revenues to our state, county, cities and school districts, while providing reliable low-cost electrical power to our state and region.

The lignite industry has an excellent record of reclaiming mined lands and protecting the environment, but proposed rules and regulations from Environmental Protection Agency are threatening the future development of new coal-based power plants by restricting carbon dioxide emissions.

With the oil development in western North Dakota, we're experiencing a shortage of housing, which is somewhat reminiscent during the '70s-'80s. Hopefully, we can address these housing issues to provide a better economic future for our communities.

SUPERINTENDENT STEVE BRANNAN GARRISON-MCLEAN COUNTY SCHOOL REPRESENTATIVE

No photo or message available at this time.

COMMISSIONER LEE HUSFLOEN CENTER-OLIVER COUNTY REPRESENTATIVE

No photo or message available at this time.

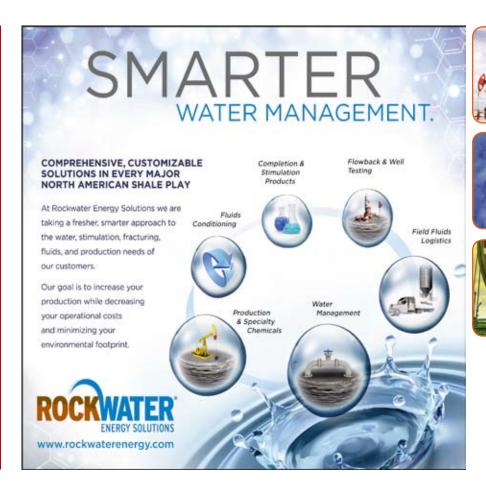


NORTH DAKOTA COAL MINERS SALARY INFORMATION

- The average salary for coal miners is \$48,489. If you were to work as a coal miner, you could expect a starting salary of \$39,932 and could make a salary of around \$57,045 after some time.
- The average coal miner's age in North' Dakota is 42 years old.
- In North Dakota, 95 per cent of coal miners are male and 5 per cent are female.

 Source: www.coalminerssalary.com/ND/1/salary/coal-miners-salary.

Learn more about coal mining and the North Dakota Coal Conversion Counties Association on page 25.



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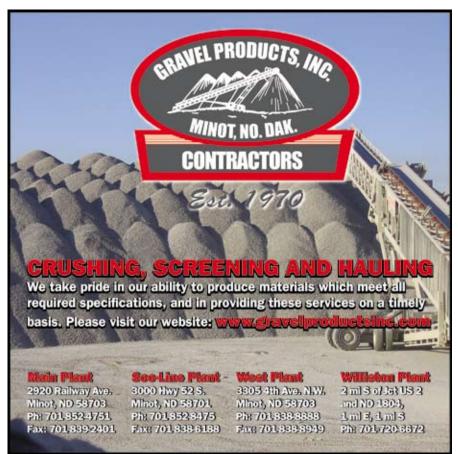
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Associate memberships are available to oil industry companies. The associate chair is Loren Hoffman, Advanced Engineering and Environmental Services.

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Advanced Engineering and Environmental Services, Inc. (AE₂S) is a specialized civil/ environmental consulting engineering firm that provides professional services and our unique brand of extreme water/wastewater engineering service to municipal, rural and industrial clients in the Upper Midwest. AE,S' corporate office, located in Grand Forks, ND, was established in 1991 by lead principals President Charles S. Vein, PE and CEO Steve L. Burian, PE. Besides its corporate office in Grand Forks, AE,S has additional office locations in Williston, Minot, Dickinson, Watford City, Bismarck and Fargo, ND; Great Falls and Kalispell, MT; and Eagan, Maple Grove and Moorhead, MN.

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In 2010, AE₂S launched AE₂S Nexus, a division developed to assist public and private clients with issues beyond our traditional services. AE2S Nexus provides utility rate analysis, funding/project development, asset management and economic development services. Financial services provided include: cost of service analysis, rate design, revenue adequacy analysis, rate modeling, benchmarking, water and wastewater service agreement support, funding development, funding administration and asset management. The AE₂S financial/ asset management group has become a critical component of AE₂S' water, wastewater, rural water and stormwater services.

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Aquatech offers over 30 years of technology-based experience packaged into a "Reliable, Sustainable, Adaptable" full envelope service offering in global and local markets.

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HOW YOU CAN BECOME AN ASSOCIATE MEMBER

Becoming an Associate Member of the North Dakota Association of Oil & Gas Producing Counties is as easy as one, two, three! All you have to do is go to www.ndenergy.org/ AssociateMember.aspx, fill out the form and hit submit!

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Membership to the North Dakota Association of Oil & Gas Producing Counties (NDAOGPC) has a variety of benefits! To learn more about what the NDAOGPC does, the benefits you can take advantage of by becoming a member or to find out how you can join, go to www. ndenergy.org, call (701) 751-3597 or drop by the office at 400 East Broadway, Suite 304 in Bismarck, ND!

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Headquartered in Omaha, NE, HDR has over 8,000 employees in more than 185 locations and has completed projects in 60 countries. They are number one in *Modern Healthcare's* 2012 Annual Construction & Design Survey of Healthcare Architects and are number eleven in *Engineering News-Record's* 2012 Top 500 Design Firms.

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Today, KL&J is an employee-owned company. It remains loyal to the company's founding principles: dedication to nurturing and building long-term client relationships and providing quality service. This dedication has allowed us to consistently grow and expand. Today, they operate in 15 offices across a five-state region and have offices in Billings, Bismarck, Brainerd, Devils Lake, Dickinson, Fargo, Gillette, Grafton, Grand Forks, Helena, Minot, Moorhead, Rapid City, Valley City and Williston.

They do projects for various markets, including airports, energy, environmental, municipal, oilfield services, right-of-way, survey, telecommunications and transportation.

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www.mandmpump.com

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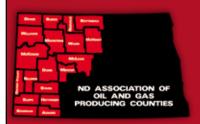
Northern Dewatering, Inc. is a dewatering and bypass pumping contractor located in Rogers, MN. They specialize in well-point and drilled well dewatering, sewer and water bypass pumping, emergency or planned pumping and pumping equipment sales, rentals and repair.

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REGISTER FOR THE NDAOGPC'S 2012 ANNUAL MEETING

The NDAOGPC's annual meeting will take place October 18, 2012 at the Holiday Inn Riverside in Minot, ND. Breakfast will take place from 7:00 a.m. - 8:00 a.m. CDT, with the meeting running from 8:00 a.m. - 4:30 p.m.



Registration is \$55 for member and associate members, and \$85 for non-members. Registration after October 11, 2012 is \$100.

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SRF is headquartered in Minneapolis, MN, with regional offices in Fargo and Bismarck, ND; Madison, WI; and St. Louis, MO.

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They currently operate 40 company trucks with a fleet of over 130 trucks and five disposal locations spread throughout northwestern North Dakota. The company offers 24-hour field supervision and has excellent office staff supporting operations.

Their mission is to provide timely and reliable oilfield water transportation services during the development and production of the Bakken and Three Forks Sanish formations by oil exploration companies throughout western North Dakota and eastern Montana. They pride themselves in being one of the premier transportation companies operating in the Williston Basin and strive to provide the safest and most efficient oilfield transportation and disposal services in the region.

They seek to maintain a position of long-term growth by monitoring alternative transportation opportunities in the oilfield and trucking industry. They believe their employees are their greatest asset and seek to provide a rewarding place of employment.

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The Williams Company (TWC) is a full service organization capable of building roads, locations, trucking all of the needed equipment and material, work-over, completing wells and laying and tying pipelines. The Laurel, MS-based firm was founded in 1997 and in just under 15 years has grown into one of the most respected shipping companies in the south. TWC started with just one truck and Williams' determination to make his company a success.

Today, TWC operates a fleet of hundreds of vehicles and Williams has even had to create additional divisions to handle the services his company provides clients across the United States. These divisions include Williams Transport LLC, Williams Southern Company LLC, Williams Drilling and Completion Fluids and Stringer Construction Company LLC.

Williams Transport division is licensed in all 48 of the contiguous states and provides customers in the oil, gas, chemical and mining industries short and long-haul trucking support. The company is licensed to carry hazardous materials, and offers clients access to a 24/7 emergency transport service. The company is poised to respond to emergencies, disaster recovery and is capable of providing environmental remediation, which are all handled by qualified senior staff quickly, safely and professionally.

The company's Williams Drilling and Completion Fluids Division helps customers in the oil and gas industries with drilling fluids and drilling waste management. The company utilizes a variety of specialty completion fluids including sea-water and sodium-potassium water. The division's employees are respected throughout the industry for their quick response time and ability to mix any completion fluids necessary to complete a project.

TWC currently has jobs in North Dakota with its trucks, work-over rigs and pipeline division and is also working in Texas, hauling both water and sand for Frac-Jobs. The professionalism and adherence to the company motto, 'If you need it, we will get it...and get it we do.' shown by Williams' highly-trained crew has attracted some high-profile clients over the years. The company counts industry heavy-weights, Halliburton Corp., Schlumberger and Valero as a few of its loyal clients.

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Ulteig helps companies and organizations build and sustain the systems that support vital communities. They have the combination of capacity and experience to deliver a wide range of services needed for your projects. Founded in 1944, Ulteig currently employs more than 350 engineers, surveyors and support staff with offices in Fargo, Bismarck and Williston, ND; Detroit Lakes and Minneapolis, MN; Cedar Rapids, IA; Sioux Falls, SD; and Denver, CO.

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WennSoft provides innovative business management software solutions for organizations focused on project management, field service and equipment/fleet management in the oil and gas industry. WennSoft solutions complement and enhance existing processes—resulting in expedited reporting, increased operational efficiency and reduced overall costs.

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unparalleled consultation, engineering and construction management expertise.

The company's current upstream projects include field/well and gathering systems support for site assessments, spill and drilling waste management, water sourcing, pre-drill sampling and remediation. Midstream support includes pipeline or terminal site development, assessment, permitting (all) and construction oversight. Downstream refinery projects include RCRA permitting and compliance, air testing and permitting (including Green House Gas), waste unit closure and remediation.

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GARTOON-GORNER



There might be a little dust on the throttle. "

Cartoonist Kevin Holten, holten24@gmail.com

Classino Cla

Dealing with the population spike and creating a productive educational environment for students in North Dakota.

By Kirsten Mangin

illiston's McVay Elementary School will no longer be mothballed! The school is re-opening for the 2012-2013 school year, after it closed its doors back in the late '90s when enrollment decreased after North Dakota's initial oil boom went south. Thanks to the current booming oil patch, enrollment numbers are ever increasing and with no funding to build a new school and very limited time, the Williston Public School District decided to make do with the resources available. McVay Elementary is getting an overhaul in order to open its doors this fall. Old carpet is being removed, new flooring is going in and hallways are getting fresh coats of paint.

However, just reopening the school isn't enough to accommodate the influx of students created by the oil boom. Additional modular classrooms, 24 to be exact, are now being installed in order to serve all of the new students that will be attending McVay Elementary in the fall. Modular classrooms are prebuilt buildings typically constructed off-site and then transported to the location in need of the additional space. They have various names, including temporary classrooms, relocatable classrooms and portable classrooms. These portables are often used by schools in need of extra space to accommodate an influx of students.





Dr. Viola LaFontaine, Williston Public School District Superintendent.

SPEEDY SOLUTIONS WITH A QUICK TURNAROUND

Use of modular classrooms is a quick solution to opening a new structure within a tight timeframe and due to their sturdy construction, they also offer the flexibility of easily being relocated if needed. Exterior finishes can be applied in order to match the existing building and are typically indistinguishable from the permanent classrooms. Most importantly, the addition of portable classrooms creates an effective learning environment, promptly and affordably, for all students attending the school.

McVay Elementary, located in the Williston School District, isn't the only school in the district experiencing an increase in enrollment; the district's Middle School will be receiving eight portable classrooms as well. The Williston district has been steadily growing largely due to the fact that families moving to the area are predominantly young in age. Williston Public School District Superintendent Dr. Viola La-Fontaine confirms that the schools in the district experiencing higher enrollment numbers are definitely the elementary schools, which include 70 per cent of new enrollment. She also explains that the increased enrollment numbers are likely strictly due to the oil boom. "The oil boom is the main reason, others may be coming to work other jobs, but initial growth is certainly due to the oil productivity."

PREDICTING FUTURE NUMBERS

LaFontaine says that although the increase in student numbers is rapidly rising, it's still hard to predict what final enrollment numbers will be this fall. As she explained to Oil Patch Dispatch back in March, she bases her fall enrollment estimates on the number of housing units and RV spaces that are expected to become available by the fall. Based on the national average, there are 1.5 children for every new house, one child for every four new apartments and one child for every five new RV spaces. Assuming the housing units are available and within the families' means,

her estimates should be fairly accurate. "It's a guessing game but I anticipate the district will grow 800-1,200 students with the current housing market. We're up 128 students in the elementary and 79 students between the middle and high schools."

After the first day of school on August 22, enrollment numbers may continue to rise. "People could come out of the woodwork in the days before school starts, we've had lines for enrollment in the past." says LaFontaine.

However, LaFontaine does say that the 32 modular classrooms being installed will be put to very good use. In a district that now has about 2,790 students, gaining approximately 550 students in the past two years, and seeing a continued increase in student population, the need for mobilizing portable classrooms is definitely not being questioned in this district.

FUNDING MODULAR CLASSROOMS

The district received a \$3M grant from the state Board of University and School Lands to fund the portable classrooms that are currently being installed. Without this grant, the additional space wouldn't have been attainable for

the district. "No assistance equals no lease for modulars," explains LaFontaine. "We had no financial ability to do so on our own but this land and trust fund allows us the lease of modulars for next school year."

When it comes to classroom sizes, LaFontaine explains that the average size depends on grade levels, but that they do try to stay at 20 students for Kindergarten classes and 25 students for all other grades. Thanks to these modular classes, maintaining these sizes will be made possible and students won't have to spill into other areas of the schools, such as libraries, hallways or cafeterias for lessons.

To date, construction of the modular classrooms at McVay Elementary and the modulars being added to the Middle School are well underway and according to LaFontaine there is hardly a difference in the portable classroom versus their regular school classroom. "Inside, the classrooms look like any other classroom; they aren't any different. We try to match color to the current school and they're connected to the school by corridor or entryway."

LaFontaine also explains that connections for interactive whiteboards are possible and that necessities such as storage, air conditioning, lockers and close access to washrooms are typical

OFFSETTING THE IMPACT

The construction and addition of modular classrooms in numerous North Dakota school districts, such as the Williston School District, was made possible with dollars from the oil and gas impact grant fund. This funding was created to offset the impact realized from oil and gas production in North Dakota. Only political subdivisions, such as cities, townships, schools and counties are eligible for these grants which need to meet a certain criteria. When it came to modular classrooms, the criterion to meet for grant eligibility was an emergency need for the portables. To be awarded, a 20 per cent local match for the cost was required. The grant funds Kindergarten to Grade 8 temporary classrooms, installed and ready for use in the 2012-2013 school year. Since predominantly young families are a part of the oil workforce, these grade levels have seen the most significant increases in enrollment. The total amount provided for each portable was \$150,000.

According to Gerry Fisher, the assistant director of the Energy Infrastructure & Impact Office at the North Dakota Department of Trust Lands, the Williston School District met the requirements for this grant by accomplishing the match portion, by anticipating a rapidly increasing enrollment and by being directly impacted by oil production activity. To apply for the grant, there was an application to be completed and submitted by April 2012. Fisher explains that meetings were then held by the Board of University and School Lands (Land Board), the applications were reviewed and awards were made.

"Williston, however, was awarded funding in March—the grant was presented early due to the urgent nature of their high enrollment," says Fisher.

The grant money Williston received, which is strictly used for modular classrooms, was from an Oil and Gas Impact Grant Fund that was set up by legislature. The grant could be used towards a one year modular classroom lease or to purchase an equipped unit. It could also be used towards dirt work, electricity, sewer, water and design costs. Basic equipment, such as furniture and fixtures, were also allowable expenses.

"Initially, \$100M was allocated by the legislature into the Oil and Gas Impact Grant Fund," explains Fisher. "A special legislative session last November added an additional \$30M; the Land Board was given the authority to grant the funds."

Grant funds are provided once a reimbursement form is submitted with supporting documentation and once a major milestone or the entire project is completed. Although there is a limit of \$150,000 per modular classroom, multiple classrooms could be applied for. The Williston School District received \$3M for the 32 portables that are currently being installed.

BASIN BITS | Fall 2012

features in these modulars . Another positive aspect that comes along with the addition of these portable classrooms is the fact that new teaching positions are created within the district. "There are new teaching positions, especially at McVay. We've hired five Kindergarten teachers and one teacher for every other grade from Grade 1 through Grade 5," shares LaFontaine.

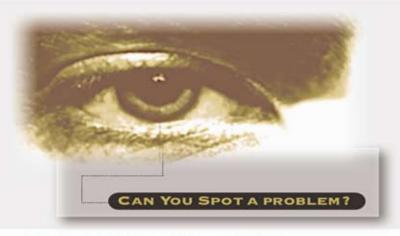
A POSITIVE RECEPTION

In general, the portable classrooms have been received positively in the community and reactions have been nothing but encouraging. "People are grateful we are getting them. It's really the only option when you have to move this fast for additional space," says Lafontaine. "The classrooms are nice, they aren't run down and they make the school as nice as possible."

However, even with the positive reactions, this won't be the permanent solution for the district. LaFontaine foresees a long-term population increase that could warrant the construction of addition schools in the district in the future. "McVay is a temporary solution; we would want to build another elementary building and another entire elementary school. This way, our high school could expand into the connected, and eventually vacant, elementary section."

Another factor in building a more permanent solution down the line is the fact

that McVay Elementary is on the south end of town and the new children enrolling in the district are, for the most part, on the northwest side of town. Every day, parents have to drive across town to get their kids to and from school since there is no school bus transportation option. A plan for a new school in the northwest would definitely alleviate stress on working families. For the 2012-2013 school year, the Williston School District will move forward with modular classrooms and study further construction as permanent need arises.



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MODULAR TO THE RESCUE?

The Modular Building Institute (MBI) believes modular classrooms are the answer to over crowding in schools, noting in their 2011 Annual Report: "From single classrooms to complete campuses, modular construction offers public, private, and charter schools what other construction methods cannot: accelerated project timelines, more economical pricing and less disruption. Permanent modular schools are indistinguishable from other schools and can be constructed to any architectural and customer specifications. MBI members design and build schools of all types and sizes using traditional building materials such as wood, steel, and concrete. Virtually any size permanent school can be built, installed, and ready for occupancy in as little as 90 days.'

According to MBI, modular manufacturers are located throughout North America, with larger "clusters" of manufacturers in Pennsylvania, Georgia, Texas, Indiana, California, and Alberta, Canada. Most manufacturers in North America are single location operations and can competitively transport units within a 500-mile radius of their plant. Peak employee size varied significantly obviously impacted by market and geography as well as the physical size of the plant. While not necessarily an indication of actual activity, the average manufacturer is approved to build in 20 states.

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The upcoming legislative session will bring important issues to the table and the House and Senate are ready to face them head-on.

for North Dakotans



Leader Rich Wardner.

By Paul Adair

n January, Bismarck, ND will be welcoming back its lawmakers for North Dakota's 63rd bi-annual legislative session. Eighty consecutive days of fracas and policy-making will ensue, with the ultimate goal of bettering the lives and livelihood for all North Dakotans.

Senate Majority Leader Rich Wardner and House Majority Leader Al Carlson each entered politics roughly about the same time, two decades ago. However, both men entered under different circumstances and for different reasons.

Prior to public office, Wardner was an educator and a coach at Dickinson High School, without aspirations of being in the government. "I really wasn't looking to get into politics," he says. "I was asked if I would run and, after consideration, I decided to do it. And that was the start of my political career. In fact, at the time, my wife was more politically inclined than I was. But when you're a teacher and coach, you serve people. It's the same as in the Legislature. There are really a lot of things that are similar between the two positions."

Carlson is a builder by trade and, like Wardner, is a former teacher with an interest in political science. In 1980, he went into business for himself and started his own construction firm, Carlson Construction Inc. It was this that set him on his political journey, wanting politicians to be more representative of their constituency. "I just felt the need to have more business-minded people involved in the process," says Carlson. "Because there are too many people that don't understand the risks and regulations that people go through to do business in this country and in this state."

Carlson believes that it's his business background that aids him in the performance of his duties. "It helps because you need to understand what it's like on both sides of the fence. From being regulated to where I am now the regulator, I pass the laws that affect business."

It's this ability to help instill political direction to the state of North Dakota that helps to motivate Carlson. "One of the best things about doing this job is the opportunity to institute change and watch it take place," he says. "I truly enjoy it and the day that I don't is the day I'll quit running."

Wardner echoes the sentiment. "What a great feeling it is when you solve an issue that helps the state. It's like winning a game in football when you're coaching—it's the same thing with the legislature. It's when you finally break through on an issue that you've been working on and you find the answer—and the answer is good for the state of North Dakota."

However, both men agree that being in the public eye and facing critical scrutiny isn't always easy. Carlson puts it into perspective with a laugh, "There's always going to be people that don't like you or the things you're doing. But, as long as more than half of them like what you're doing, then you're going to remain part of the system."

MANAGING THE BOOM

One of the big issues of the last legislative session was in how to manage the Bakken boom and the stresses it was putting on the state and political subdivisions: the counties, cities, and school districts.

"We spent an awful amount of time trying to deal with the infrastructure issues they had out in the Bakken," says Carlson. "We used our Bank of North Dakota to try to establish loan programs. We invested over \$1B in roads, schools and improving infrastructure. There were a lot of things done. Was it enough? No. Is it an ongoing process? Yes. Infrastructure is a huge issue and we'll continue to address it but I think we put our dollars in the right place—we cut taxes to our citizens, we put a lot of money into our infrastructure and I think we got a good start for the future."

Wardner agrees that working on the

distribution of oil revenues for infrastructure projects benefited the people of North Dakota. "In the way the oil revenue is distributed, the funds go to help a lot of people," he says. "Some goes into a savings account called a Legacy account, while some of it goes to the subdivisions in lieu of property taxes. Some goes into water development—and that is huge in our state—making sure we have enough water here for all the new housing development and all the people coming into our communities. And some of the oil money is put away for property tax relief that just helps everyone in the state."

BUMPS ALONG THE WAY

This is not to say that there aren't some things that, in hindsight, could have gone smoother when the House and Senate met last session. Wardner hoped to have more of the Bakken revenue diverted into the counties affected by the rapid development

"There is a little formula on the 5 per cent Gross Production Tax that sends money back to the political subdivisions in lieu of property tax," says Wardner. "And that formula needs to open up a bit more so that more money gets back to those political subs. These subs can't charge property taxes to the oil companies, so we take care of it in lieu of tax. I just think we could have sent a little more money back out there. We work very closely with the subdivisions, and even though we haven't sent more money back, we're listening to them. We're going to see that it gets done."

Carlson is pragmatic when asked whether or not he wishes the government could have done more in the previous legislative session. "That's why we come back and do it again. There are hardly ever any new ideas—just the recycled ones. The good news is we have Republicans controlling both chambers and the majority party controls the governor's office as well. We're all focused on getting the right things done," he says.

"We're taking a look at the distribution formula to make sure the right amount of money is going back to these counties and that we continue to provide impact dollars to those areas affected. We're all on the same page on that."

However, having the Republican Party controlling both the House and the Senate doesn't mean that there isn't heated discussion over the issues. "There is plenty of debate and there are differences of opinion all the time," says Wardner. "But we work them out. Sometimes the Senate has

to give a little and sometimes the House has to give a little but it's a real healthy relationship between the two bodies."

The Senator also acknowledges the contributions by the opposition parties in the House and Senate to the political process. "Sometimes, the loyal opposition feels they don't get listened to—and sometimes they don't—but we really do listen to them on a lot of issues." Wardner continues with a chuckle, "The only thing is that they might not get credit for it."

Wardner attributes this ease of collaboration to the character of the state and of the people who call North Dakota their home. "In North Dakota, I just don't think we're as partisan as other places in the country. As one of my Senate colleagues likes to tell me, 'Bismarck isn't Washington.'"

THE UPCOMING SESSION

The upcoming legislative session promises to have a number of challenges in line for the policy makers of North Dakota. Much of the discussion will be carry-over from the previous session in how it deals with the expansion and prosperity of the Bakken oil boom.

"I expect the next session will be busy. We just need to be constantly making changes to keep up with the rapid pace of development and we'll keep doing that," says Carlson. "I expect there will be a lot of demands on the money. It's much easier to govern when you're broke than when you have money. We'll take key issues head-on and we'll get them resolved. The most important part is to make sure you have an open door and listen to the people you work for—and that's the citizenry."

"We had a measure on the last ballot to lower property taxes in the state and it failed," says Wardner. "We still need to address that. We're going to have to look at ways of keeping property taxes down in the state of North Dakota. We'll have to look at health care reform. The United States Supreme court ruled that Obama health care was okay and we're going to have to deal with that. I'm not sure how we're going to do that yet but it's something we're going to be struggling with."

The play in the Bakken will loom large on the minds of the House and Senate. They're well aware that without careful planning the benefits of the boom will be over-shadowed by the potential negative affects to the people affected by the devel-

"Yes, we have some challenging issues facing us but we can solve them. And as





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you look down the road, North Dakota is going to be a better state because of the Bakken," says Wardner. "The state is picking up a lot of revenue from this activity and we have to make sure it gets to the areas it comes from. The quality of life for those people isn't the same and they sacrifice a lot. But when we get through this, things are going to get a lot better—it will just take time. It's like going through the eye of the storm," he adds. "I believe that in five or six years, it's going to be a different place out here.

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- A 50 percent reduction in the average school district tax levy, which would save the owner of a \$180,000 home nearly \$1,100 in property taxes.
- The reduction of individual income taxes by \$100 million and corporate income taxes by \$25 million in the two-year budget covering fiscal 2013 through 2015.

Of course, Gov. Dalrymple's opponent in the November election, Democratic state Sen. Ryan Taylor, said the governor is late to the discussion. Taylor noted that his plan, which would cut property taxes and give renters a break, was released more than two months ago.

To read more about North Dakota's political landscape, go to page 44.



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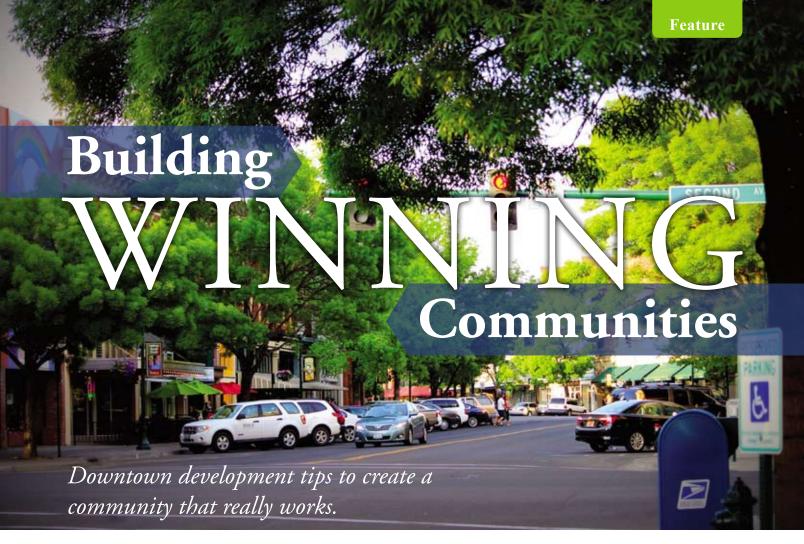
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By Joel Mangin

he oil boom has produced unprecedented economic and population growth. The increase in density has brought with it many demands on counties, cities and towns. Successful city centers don't appear overnight or by accident and are a crucial step to building communities that truly work to meet the needs of such a dramatic population spike.

"One of the keys to urban planning during economic boom periods is to try capture as much of the economic growth in existing infrastructure," says Timothy Bishop, the current Tourism Director for Baker County. Bishop has worked over 20 years as a professional downtown revitalization manager. "Focus should be in revitalization and reinvesting in downtown rather than leveling off buildings or establishing new shopping districts on the edge of town."

Bishop explains that in most downtowns there are underutilized spaces such as second floors of buildings. Zoning can be adjusted for mixed use, which combines residential and commercial development. This can create more rental properties, which reflects the needs of the area.

When it comes to developing a winning downtown, Bishop explains that the two most important elements are not necessarily the most costly.

"The biggest initial step is to focus on strong visual impact and to think of the long-term development of downtown," says Bishop. "A façade grant program could encourage businesses to fix torn awnings or repaint their storefront. These smaller projects can have a huge impact on the area because it's difficult to have a successful business that doesn't look appealing."

Secondly, municipalities must work diligently at shifting the perception of downtown in consumers' minds. If the belief is that downtown is only a collection of banks and that there's very little to do, then consumers won't make downtown a destination.

Bishop suggests creating a downtown directory to aid economic restructuring and create specialized districts. "Don't talk about what you don't have in your downtown but rather what you do have," says Bishop. "People are more likely to use services if they're aware of their location. This enables

ABOVE: North Dakota can take cues on building a winning community from Downtown Walla Walla, WA. Photos provided by Jennifer Northam, Downtown Walla Walla Foundation.

the recruitment of businesses within a cluster to fill gaps. If you happen to have a baker, a tuxedo rental store and a dress maker within a city block, it may be wise to recruit a photography studio and unify as a wedding service district."

SUSTAINABILITY

With rapid economic growth come challenges with regards to sustainability. Local and independent business owners are a driving force behind downtown growth and they ensure sustainability for years to come.

According to Brian Cole, president of Building Communities, an organization that helps communities with strategic planning, a healthy downtown will be comprised of business owners and residents that are highly vested in the community. "Intangible factors like a real sense of community are a key to economic vitality."

The question of sustainability is undoubtedly a concern in areas affected by the oil and





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Revitalizing and reinvesting in downtown can breathe new life into old infrastructure. Above: The revamped Max Baumeister building in Walla Walla, WA.

gas boom. Those ready to jump into downtown development want a long-term investment. Sustained development can be achieved by developing a structure that ties all pieces of a downtown together. From an organizational standpoint, there are many benefits to having a governing body that takes care of marketing, recruitment and adjusting business plans to keep up with the changing economy.

Cole also favors diversity in downtown development and says you need to take a look at the composition of the businesses. "If businesses are only serving the oil industry, you're setting yourself up for downtown decline. If businesses serve the entire economy of the region, they'll be more insulated from economic downturn."

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DEVELOPMENT TOOLS

Comprehensive economic development tools such as the Main Street Four-Point Approach have been created to assist development. A successful downtown doesn't merely focus on business recruitment but also on design, creating a user-friendly downtown, proper signage and parking. According to the National Trust for Historic Preservation, "...the Main Street Four-Point Approach is the foundation for local initiatives to revitalize their districts by leveraging local assets—from cultural or architectural heritage to local enterprises and community pride."

Cole encourages using this planning tool since downtown development has been deemed the top priority in seven of his 11 most recent meetings with North Dakota cities and counties.

Downtown development also has secondary benefits outside the economy. City centers that have mixed-use infrastructure find themselves with less empty space. "A vacant and uninviting

Those ready to jump into downtown development want a long-term investment. Sustained development can be achieved by developing a structure that ties all pieces of a downtown together.

downtown will attract seedy activity and a perception of being unsafe," says Bishop. A downtown that attracts people with restaurants, businesses and residential space will help create the perception a safe downtown, thus having an overall positive impact on the area.

Determining what makes one downtown better than another can be difficult to assess. Each one has its own character that isn't easily comparable. "Emulating another city will not ensure a successful downtown. What makes a great downtown is its unique surroundings that identify that downtown as some place that's one-of-a-kind. This will help make it a destination for locals and tourists," Bishop explains.

THE CHALLENGES

Getting started with downtown development can be challenging and responsibility for growth cannot be pinned exclusively on the public or private sector. "The most successful model for development has been communities that have a balanced and diversified funding mechanism for revitalization," says Bishop.

Municipalities sometimes need to lead the charge and be financially invested in the development. However this doesn't necessarily mean funding the development. Prioritizing and shifting investments can help stimulate growth. New constructions combined with infrastructure that's already present and paid for can lead to greater private investment. In other words, if you build it, they will come.

Municipalities can also facilitate growth by offering incentives. An example of a successful strategy has been Washington State's Main Street Tax Credit Program. After approval from the Department of Revenue, businesses that contribute to a downtown revitalization project can receive a tax credit worth 75 per cent of their contribution. Also, in Ellensburg, WA, a portion of the sales tax raised from a new commercial

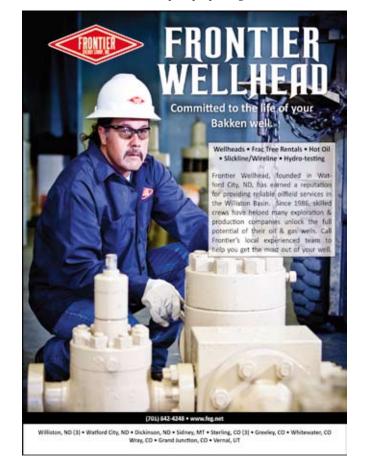
development went towards funding downtown revitalization. As larger developments often have negative effects on downtown consumption, this strategy benefits both commercial developers and downtown merchants.

Building on what you already have may be the key to developing a successful and beautiful downtown outside of boom periods. Road Rally, Rand McNally and USA Today's program seeking the best small towns in America confirm that revitalizing is the key. Danville, KY, Jim Thorpe, PA and Baker City, OR are examples of 2012 Road Rally finalists that showcase the beauty of downtown revitalization.

"Communities that are identifiable as unique, aided by countryside but generally well-preserved and restored historic architecture are gaining a reputation as places worth visiting," says Bishop.

Although the first instinct when faced with rapid economic growth is to build more infrastructure, municipalities can assess what they have before moving forward. Once the boom transitions, municipalities may find themselves struggling to support new infrastructure. More often than not, cities already have what they need in place; they just need some polishing, leadership and organization. They wouldn't want to be one of the towns that Joni Mitchell sang about that paved paradise to put up a parking lot.





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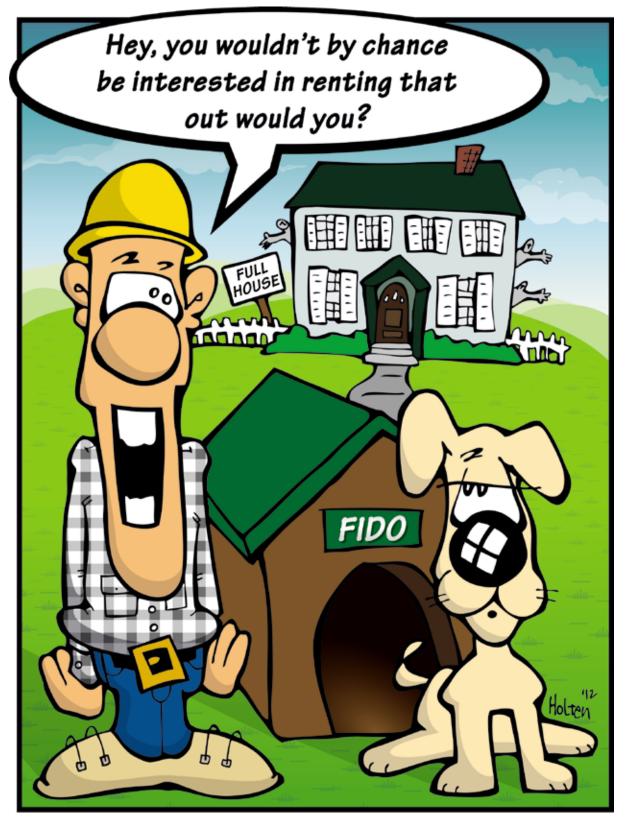






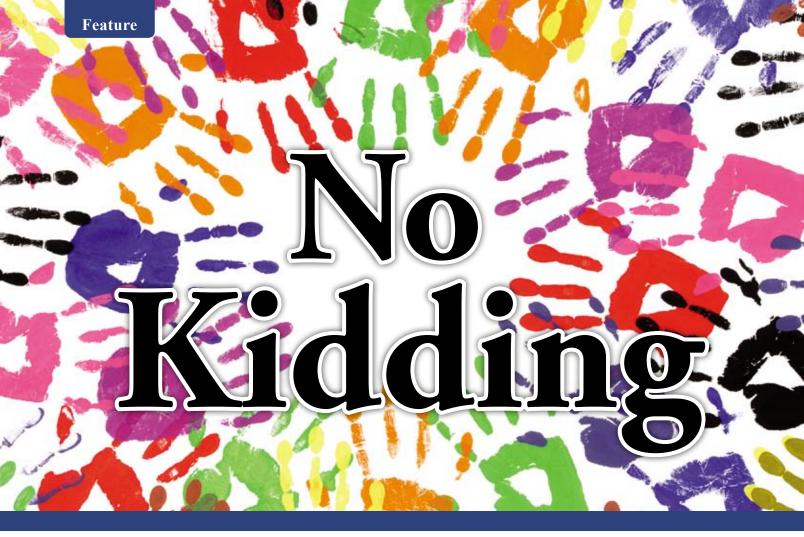


GARTOON-GORNER



Housing crunch hits North Dakota hard.

Cartoonist Kevin Holten, holten24@gmail.com



Increased population, housing shortages and soaring prices for commercial space in western ND have all contributed to a daycare shortage.

By Andrea Danelak

"Sorry, we're full."

It's a statement that some North Dakotans are all too familiar with hearing when searching for child care services. Daycares in several communities continue to turn countless people away or place them on already-full waiting lists, with some facilities seeing nary an open space for over a year. Indeed, significant population growth, housing shortages and high prices for commercial space have all contributed to the shortfall of child care facilities in the state's oil-producing counties, creating an unprecedented need for daycares.

As the economy and workforce continue to grow, communities are struggling to fill the demand for child care facilities, with rising property values making it even more difficult for potential daycare owners to establish those facilities. Unable to find daycares for their children, some North Dakotans have resorted to quitting their jobs and staying home with their children—or enrolling them in an unlicensed center—making licensed childcare a hot commodity.

And while there are daycare shortages across the state, the most significant are found in western North Dakota counties that are experiencing an influx of growth as a result of oil and energy development. According to North Dakota Child Care Resource and Referral, the child care supply in the Dunn, McKenzie, Mercer, Mountrail, Stark, Ward and Williams counties, for instance, averages 22 per cent of demand—industry standards recommend the child care supply meet 50 per cent of demand. To reach the recommended 50 per cent, the seven counties must collectively add 4,667 spaces over the next three years.

PILOT PROJECT PROPOSAL

The chairman of the North Dakota Board of University and School Lands, Governor Jack Dalrymple, recently proposed a pilot project to provide grants to energy development-impacted communities to help them increase the number of available child care facilities. Successful applicants receive a dollar-for-dollar match of up to \$125,000 per community; the community can then use the grants to expand or build publiclyowned early childhood facilities, or establish a new community-owned modular child care facility, designed to accommodate up to 18 children. The communities could use their own money or use other private or charitable funds to cover the local share of the cost.

Some North Dakotan companies have taken other unique approaches to help ease the oil patch daycare crunch. Neset Consulting Service Inc. recently broke ground on a new office building in Tioga, ND. What makes the building unique is the fact that it incorporates a daycare for Neset Consulting employees. "It's really about worker retention—that's the driving force behind this. There just isn't daycare available," says Kathy Neset, one of the founders of the company. "I have a lot of very talented and exceptional workers, including a lot of young families, and I would like to keep them working."

With an anticipated completion date of spring 2013, the daycare will provide child care services primarily to Neset's employees but Neset is not opposed to opening the facility to other families in the community in the future. She estimates that the daycare will take care of 12 to 14 children, which will offer some relief to families desperately seeking child care services. "Moms and dads can have their children nearby and can travel with them to work, and they don't have to worry about finding quality daycare," says Neset.

STAFFING PROBLEMS

And the roots of the daycare shortage go far beyond issues related to availability and space. Staffing remains a major issue for many daycares, with some North Dakota facilities having trouble finding qualified staff. Neset anticipates that staff recruitment may pose challenges but she is confident that she will be able to find quality employees for the daycare. "It's a concern of mine but I've already had some inquiries about positions at the daycare," she says.

Incorporating features like natural play areas into the space, Neset has taken a handson approach to ensure that the daycare will meet the needs of the families it Unable to find daycares for their children, some North Dakotans have resorted to quitting their jobs and staying home with their children—or enrolling them in an unlicensed center—making licensed childcare a hot commodity.

serves. "I've been working with experts in daycare and experts in construction to design this daycare properly," she says. And despite the occasional challenge, she's optimistic that the new facility will help families coping with the scarcity of daycares in the area.

"It's going to be a significant cost to build and run it but I know it's going to benefit my workers—I think the benefits far outweigh the challenges," she adds. "As of now, there is zero possibility of new, young families finding daycare in Tioga—this will be a wonderful thing for young families."

LONGER HOURS

Generations Daycare in Dickinson has also seen the results of the daycare shortage first-hand. "The hardest part is telling people 'no' and having to put them on a wait list," says Rita Dvorak, one of two daycare managers at Generations.

But Generations has found a way to provide child care services to more children in the Dickinson area. Open from 5:00 a.m. to 10:30 p.m., the facility offers longer hours for parents with schedules that stray from a typical 9-to-5 workday,

ensuring people like nurses and shift workers have their child

care needs met. "We're also open on weekends from 5:00 a.m. to 10:30 p.m.—something that's very rare in the community," says Dvorak. "It's tough for people to find child care on the weekends. They're very excited and happy when they find out our hours because they can work late and they know we're here for them."

Located in a house adjacent to St. Benedict's Health Center, Generations was first established for the staff of the center, a health care organization specializing in long-term care. "It really is a benefit for the employees who work the 1:00 p.m. to 9:00 p.m. shift or from 2:00 p.m. to 10:00 p.m. It's very difficult to find a daycare that is open so late," says Dvorak, adding that St. Benedict's employees also receive a reduced rate for daycare services.

FILLING A NEED

The 12-employee facility is also open to children in the surrounding community, who make up about three-quarters of the 56 children currently enrolled at the daycare. "The majority of the children we care for are infants and children up to five years old, with a few older children in the evenings," says Dvorak. "Because they require more care, it's particularly hard for people in the area to find care for their infants, so we're really filling a need."

Echoing Neset's concerns, Dvorak has also seen issues with finding suitable, qualified staff to work in the daycare. "There are a lot of people competing for jobs and it's hard to recruit good staff," she says. "The job requires a lot of hours and it doesn't pay as well as jobs in the oil sector, so it's hard to compete. We're hoping to get more people working in the field it's a very, very rewarding career."

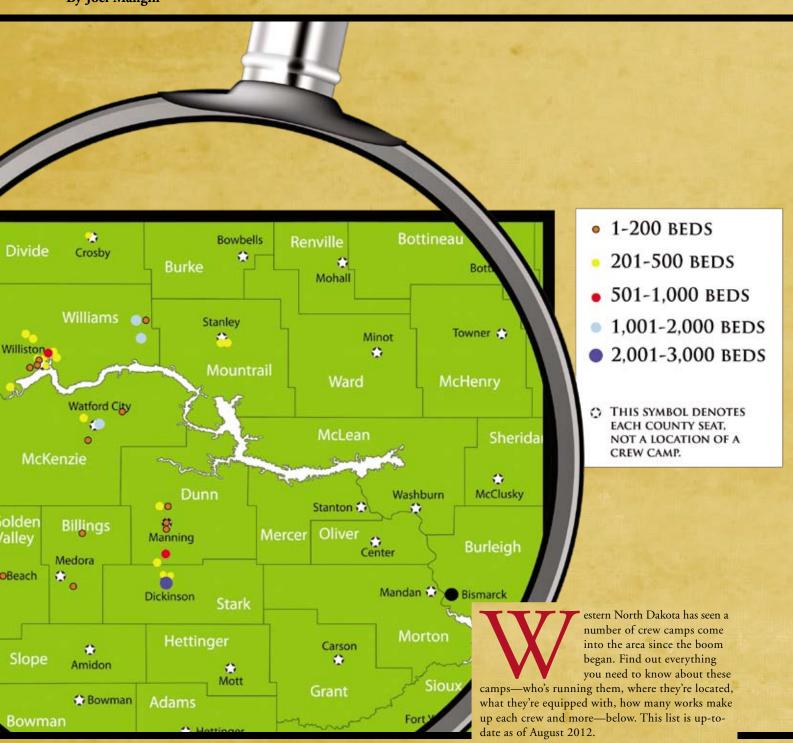
Dvorak would love to see more companies create daycares to help fill the void for child care services. "I wish more businesses would step up and do something like this—it's such a great idea," she says. She stresses that similar daycares provide benefits not only to the parents, who need not worry about finding a licensed child care facility, but also to the children themselves, who benefit from having a stable, caring daycare environment. "Early childhood marks some of the most important years in a person's life," she says. "And when an employee has better child care, they're a better employee."



Crew Camps 101: Everything You Need to Know

A county-by-county breakdown of crew camps in the state.

By Joel Mangin



HIT THE HARDEST

The cities and towns that are seeing the most action from the play are Ray, Williston, Dickinson and Tioga, ND. The following is an overview of crew camps and other available crew housing in each area.

TOWN OF RAY, ND

According to Kimberly Steffan, auditor for Ray, the town has 24 RVs, two skid shacks and seven homes for crew housing. It also has an extended stay hotel for 1,400 workers and two mobile home parks have been approved, each with 100 mobile homes mostly for oil-field workers.

CITY OF WILLISTON, ND

Total number of main crew camps in the city of Williston: 5.

1. Burke Lodge

Tel: (877) 616-2613

Run by: Burke Construction Group, Division Manager Roger Thompson Location: 2.5 miles north of the Williston, ND airport (Hwy 2 and 56th St. NW)

Number of beds: 224

Regulations: No smoking; written code of conduct; quiet hours at 10: p.m.; no overnight guests.

Equipped with: Shared bathrooms, TV, internet, free laundry, conference room, housekeeping, continental breakfast, fire sprinklers, central fire alarm and emergency beacons.

2. Williston North Lodge

Tel: (855) 582-7438

Run by: Target Logistics

Location: Williston, ND

Number of beds: 415

Regulations: For a list of camp regulations, please call (855) 582-7438, and a directory will connect you to your selected camp.

Equipped with: 24-hour dining, game/ rec-room, fitness center, internet café & free Wi-Fi, free self-serve laundry, housekeeping services and a cell tower installed by Target Logistics for increased mobile phone coverage for guests.

3. Williston Cabins

Tel: (855) 582-7438

Run by: Target Logistics

Location: Williston, ND

Number of beds: 124

Regulations: For a list of camp regulations, please call (855) 582-7438, and a directory will connect you to your selected camp.

Equipped with: Self-contained units with two bedrooms and a common living area, and access to amenities at Williston North Lodge.

4. Muddy River Lodge

Tel: (855) 582-7438

Run by: Target Logistics

Location: Williston, ND

Number of beds: 158

Regulations: For a list of camp regulations, please call (855) 582-7438, and a directory will connect you to your selected camp.

Equipped with: 24-hour dining, games/rec-room, fitness center, internet café/free Wi-Fi, free self-serve laundry and conference rooms. This is the same complex that was used in Whistler, BC for the 2010 Winter Olympic Games, dismantled, moved and rebuilt in 75 days.

5. Go-Motel

Tel: (985) 537-5151

Run by: Ricky Comardelle, Go-Motel LLC

Location: Williston, ND

Number of beds: 450

Regulations: No list available at this time. Equipped with: Private bathrooms, satellite TV, refrigerator, microwave, three meals per day, 11,000 sq. foot entertainment hall, business center, game room, fitness center, theater, 24-hour security, Wi-Fi and free laundry.

TOWN OF DICKINSON, ND

A large crew camp has recently been approved but isn't yet operational. It will be located near the water and waste treatment plant.

Temporary dwellings will be constructed off-site and put together on-site to resemble an apartment building. It will be built by Accommodate International of Austin, TX.

In addition, a 3,000-unit lodging facility will be built on Energy Drive and East Villard Street (45-acres of land on the East side of Dickinson). Construction will begin in October with 1,000 units and hopes of attaining 3,000 beds by October 2013. Employees will be bussed to work and Accommodate will take care of snow removal. The facility will be run by Steve Crawford, American Campus Communities.

TOWN OF TIOGA, ND

There is currently a crew camp moratorium in Tioga. The moratorium will expire in six months' time. Total number of crew camps in Tioga: 1.

1. Ameri-Tech Buildings

Tel: No phone number available at this time.

Run by: Ameri-Tech Industries

Location: Tioga, ND

Number of beds: 75 units with 2 beds per unit = 150 beds

Regulations: No list available at this

Equipped with: 75 units, sleeping quarters and 2-person units.

COUNTY BY COUNTY

The boom has been affecting each county in a different way. The following is a county-by-county breakdown of crew camps and other available crew housing in each area.

ADAMS COUNTY

According to the North Dakota Department of Mineral Resources, Adams County doesn't produce oil. Patricia Carroll, Adams County auditor, says there are no crew camps and nothing planned at the moment.

BILLINGS COUNTY

Total number of crew camps: 1.

1. Nabors Crew Camp

Tel: (701) 575-2106

Run by: Gary Mathieson, Nabors Well Services

Location: Near Fairfield, ND

Number of beds: 26 beds comprised of six skid shack units

Regulations: No list available at this time.

Equipped with: Common kitchen and dining room, and a small rec-room.

2. Energy Lodge - Coming Soon!

Tel: (337) 257-0997

Run by: Marc Barra, COO, Energy Resource Group

Location: On the site of the closed Fryburg Elementary School, in Fryburg, ND (30 miles west of Dickinson, ND)

Number of beds: 200

Regulations: No list available at this time.

Equipped with: Will be comprised of skid units for housing and will make use of the old school for dining and recreation. Construction not yet started.

BOTTINEAU COUNTY

There are no crew camps and nothing planned at the moment, according to Lisa Herbel.





Williston Complex: 1,182 beds



Dunn County Lodge: 600 beds



Tioga Lodge: 1,205 beds



Stanley Complex: 556 beds

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BOWMAN COUNTY

There are no crew camps or RV parks, according to Sandra Tivis, auditor for Bowman County.

BURKE COUNTY

There is an RV campground with six skid shacks located in the southwest part of the county on Highway 50, west of Battleview, ND. The campground is owned and operated by Roger and Judy Moberg, (701) 464-5742.

There are also several privately-owned RV parking sites in Columbus, Lignite, Portal, Flaxton, Bowbells and Powers Lake, ND.

"At the moment Burke County has no crew camps. We have had a number of inquiries regarding the creation of temporary crew housing facilities; however, we have received no applications," says Marla MacBeth of the Burke County Planning & Zoning Council.

DIVIDE COUNTY

There are communities with various housing types—two-bedroom housing units, RVs and trailers. There's one crew camp in the planning stage; it will be run by Lane Unhjem and will have mixed use for crew and families. Located three miles west of the City of Crosby, it could have 200-400 beds.

DUNN COUNTY

Total number of crew camps: 2.

1. Screamin' Eagle

Tel: (701) 764-6663

Run by: Screamin' Eagle Trucking & Excavating Inc.

Location: One mile east of Killdeer, ND

Number of beds: 50

Regulations: No list available at this time.

Equipped with: No list available at this

2. Dunn County Lodge

Tel: (855) 582-7438

Run by: Target Logistics

Location: Highway 22, 10 miles north of Dickinson, ND

Number of beds: 600

Regulations: For a list of camp regulations, please call (855) 582-7438, and a directory will connect you to your selected camp.

Equipped with: Shared bathrooms, TV with DVD player and free Wi-Fi; 24-hour dining, insulated central corridor, recreation room, fitness room (with

saunas), a free self-serve laundry room and three hot meals per day. This facility is protected by 24-hour security.

APPROVED CREW CAMPS TO BE CONSTRUCTED IN DUNN COUNTY

- One will be run by Nabors/Superior Wells; two miles west of Killdeer, ND; 300-person crew camp.
- 2. Another will be run by Goliath Industries; one mile south of Manning, ND; 200-person crew camp.
- 3. A third will be run by Sister N Laws; in Manning, ND; 110-person crew-camp.
- 4. A fourth will be run by Five Diamonds Fund Managers of Draper, UT, at the Dunn/Stark county line (northwest of Highway 22); 500-person crew camp (two 250-unit phases); may apply for additional units depending on the market.

GOLDEN VALLEY

Total Number of Crew Camps in the County: 1.

1. Weinreis Crew Housing and Camp Ground

Tel: No phone number available at this time.

Run by: Weinreis Brothers (farming ranching cooperative)

Location: 1.5 miles east on the I-94
Frontage Road (near City of Beach, ND)

Number of beds: 24 – no workers at the camp, drilling rig that was using the site has moved.

Regulations: No list available at this time. Equipped with: Small, low-budget, sleeping quarters with a living/family room and kitchen area.

HETTINGER COUNTY

There are no camps at this time, according to county auditor Roy Steiner, and nothing scheduled for the near future.

MCHENRY COUNTY

There are no crew camps, according to county auditor Darlene Carpenter, and nothing planned at the moment.

MCKENZIE COUNTY

They have RV Parks but no large crew camps. "A majority of what we have is RV parks. The county is currently in the process of collecting this information . . . we're in the middle of implementing building permits, zoning and temporary housing permits," says Courtney Lovaas, McKenzie County tax director.

Total number of crew camps: 4.

1. Keene Camp

Tel: No phone number available at this time.

Run by: Homestead Logistics and Crew Lodging – to be in operation by fall 2012

Location: A 20-acre development near Keene, ND, northeast of Watford City, ND

Number of beds: There are plans for a multi-use facility for 100 workers

Regulations: No list available at this time.

Equipped with: A staging area for trucks, a 19-site facility for RV parking, a truck maintenance shop and storage facility.

2. Pioneer Lodge & Commons

Tel: (701) 651-7786

Run by: Morgan Chase Management – built in May 2012, ready for summer 2012

Location: 1.5 miles outside of Watford City, ND

Number of beds: 1,200 in July 2012; growing to 3,100

Regulations: No list available at this time.

Equipped with: In-room internet access, private bathrooms, maid service, microwave, refrigerator and safe, 32" TV with DVD and cable, convenience store, game room (pool table, video games, TV lounge), basketball court, on-site medical office, some additional charges may apply. A future community center will be built including a food court, recreation center, pool and Jacuzzi, convenience store, barbershop, business center, laundry facility, and will build its own wastewater treatment system. Can be converted to apartments or other use.

3. Watford City Lodge

Tel: (855) 582-7438

Run by: Target Logistics – will be open mid-September

Location: North of the city, off of Highway 85 and County Road 35

Number of beds: 344

Regulations: For a list of camp regulations, please call (855) 582-7438, and a directory will connect you to your selected camp.

Equipped with: A common kitchen, dining room, internet café and fitness center, fully furnished rec-room with a flat-screen TV plus billiards, foosball and card tables, complimentary laundry, 24-hour food service and 24-hour security.



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"Target Logistics is at the extreme end of professionalism in its crew camps. They have the strictest rules with regards to behavior and have a zero-tolerance policy for drugs, alcohol and violence."

Randy Pruett Account Supervisor,
Pierpont Communications, Inc.

"Our crew camp ordinance is one of the toughest in the state so operators are reluctant to locate in the city. We have no permitted crew camps operating in the city of Dickinson at this time."

Shawn Kessel, City Administrator for Dickinson, ND

"We did have one [crew camp] that was issued a special use permit but it was never built due to issues getting power and water to the site. It was very expensive to get the necessary power and water to the site and the project died due to those issues."

Mike Vendsel, Ward County Director of Tax Equalization

"The moratorium on crew camps is up at our September meeting and there is a good chance it will be extended. Other than Target Logistics and ATCO facilities, many camps are advertising 10 per cent vacancy rates."

Jill Edson, Williams County Planning & Zoning Administrator

"They [crew camps] are having trouble getting water and waste service at the moment. We're in the middle of a water shortage here."

Kim Steffan, Ray City Auditor

4. Watford City Housing

Tel: (701) 580-7460

Run by: Ken Hartog, managed by Jana Stout

Location: On County Road 30, right outside of Watford City, ND Number of beds: 40 (5 x 8 bedroom

houses)

Regulations: No list available at this

Regulations: No list available at this time.

Equipped with: Four bathrooms per house, satellite TV, queen beds, internet, full kitchen, two washer-dryers and weekly maid service.

MCLEAN COUNTY

There are no crew camps in McLean County, according to Todd Schreiner of McLean E-911 Mapping-GIS / CVSO / Tax / Land Use; policy is being addressed but isn't finalized.

MERCER COUNTY

There are no crew camps and nothing planned at the moment, according to Monte Erhardt, county auditor.

MOUNTRAIL COUNTY

There are 61 approved temporary housing facilities in the county, according to Don Longmuir, zoning administrator for Mountrail County. They include single-unit mobile homes, RV parks and skid shacks. However, not all of them are up and running. "A project entitled 'Centerville,' which is a 260-unit manufactured home park has not yet begun construction but has been on the books for two years," he says.

The county currently has a crew camp moratorium and isn't able to produce water and septic services or adequate emergency response to the camps.

Total number of crew camps: 2.

1. Stanley Cabins

Tel: (855) 582-7438

Run by: Target Logistics

Location: Highway 2, Stanley, ND (adjacent to the Stanley Hotel)

Number of beds: 96

Regulations: For a list of camp regulations, please call (855) 582-7438, and a directory will connect you to your selected camp.

Equipped with: A common kitchen, bathroom, dining and living area, washer and dryer, TV and internet, weekly housekeeping; access to amenities at the Staney Hotel.

2. Stanley Hotel

Tel: (855) 582-7438

Run by: Target Logistics – Hotel open August 2012

Location: Highway 2 and 4th Street SW, Stanley, ND (adjacent to Stanley Cabins)

Number of beds: 339

Regulations: For a list of camp regulations, please call (855) 582-7438, and a directory will connect you to your selected camp.

Equipped with: Private bathroom, satellite TV, appliances, daily housekeeping services, a conference room and business center, enclosed walkways, a full-service restaurant, a recreation center with gym and saunas.

RENVILLE COUNTY

The county placed an 18-month moratorium on all crew camps in April 2012. There are no camps in the county, according to LeAnn Fisher, county auditor.

SLOPE COUNTY

There are no crew camps at this time, according to Lorrie Buzalsky, county auditor.

STARK COUNTY

The county has no crew camps as of August 2012. Small companies have 10-trailer RVs and 24 units of mobile homes, south of Belfield, ND, with temporary conditional use for a year.

This summer, the county is working on ordinances and will hopefully be ready by September. There is demand on the table for a 500-bed camp to be located on the county line, five miles north of Dickinson, ND.

WARD COUNTY

There are no crew camps and nothing planned at the moment, according to Mike Vendsel, director of tax equalization for Ward County.

WILLIAMS COUNTY

Rural Williams County recently extended a moratorium on construction of crew camps—only requests for expansion of current camps will be considered by the county. They presently have over 9,700 beds in 87 approved temporary housing facilities. They include RVs, mobile homes and skid shacks ranging from four to 1,238 beds. Some camps are established by oil and gas companies for the exclusive use of their employees.

1. Williams County Lodge

Tel: (855) 582-7438

Run by: Target Logistics – Lodge opening September 2012

Location: Williams County

Number of beds: 300

Regulations: For a list of camp regulations, please call (855) 582-7438, and a directory will connect you to your selected camp.

Equipped with: Shared bathrooms, TV with DVD player and free Wi-Fi, 24-hour dining, insulated central corridor, recreation room, fitness room (with

Continued on page 64

BASIN BITS | Fall 2012

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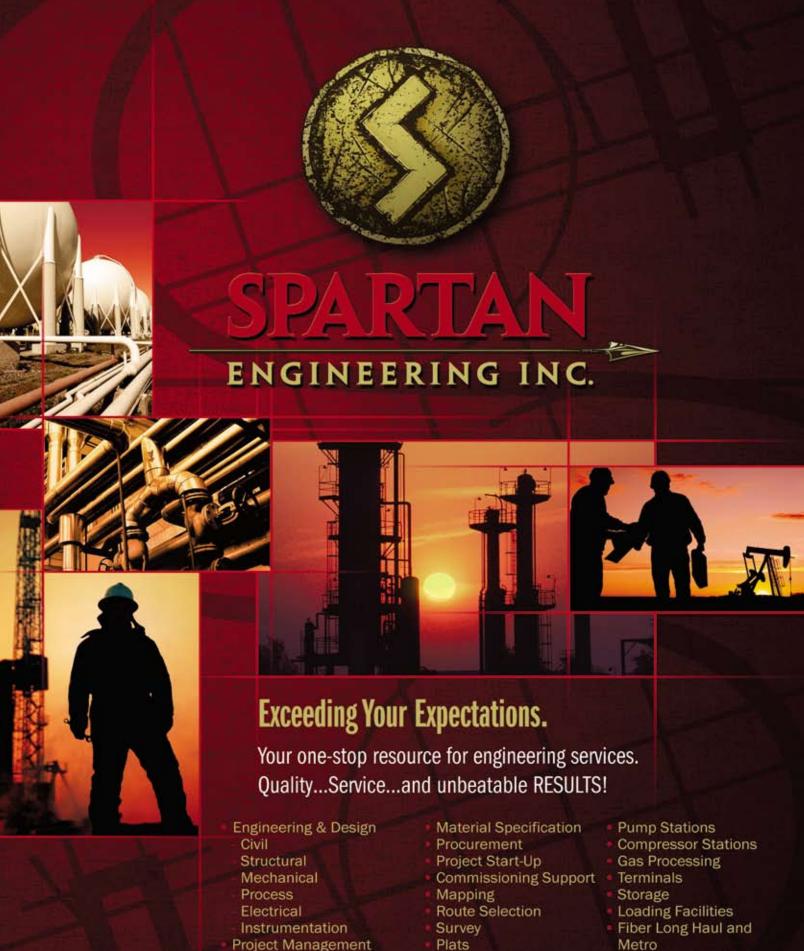
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Support

Continued from page 61 saunas) free self-serve laundry room and three hot meals per day. The facility is protected by 24-hour security.

2. Bear Paw Lodge

Tel: (855) 582-7438

Run by: Target Logistics

Location: Just outside of Williston, ND Number of beds: 686

Regulations: No smoking, a written code of conduct, quiet hours at 10:00 p.m, no overnight guests, workers must leave camp on their weeks off to accommodate other workers.

Equipped with: Arctic corridors, a large dining facility with two serving lines, an expanded rec-room, two conference rooms, two dry saunas and a convenience store. Most rooms have a shared bathroom.

3. Judson Executive Lodge

Tel: (855) 582-7438

Run by: Target Logistics

Location: On Highway 2, west of Williston, ND

Number of beds: 100 (mid-June 2012) Regulations: For a list of camp regulations, please call (855) 582-7438, and a directory will connect you to your selected camp.

Equipped with: A private bathroom, satellite TV, appliances, daily house-keeping services and three hot meals per day. The facility is protected by 24-hour security.

4. Capital Lodge

Tel: (701) 664-5555

Run by: Capital Lodge LLC

Location: 10855 Highway 2, 10 miles outside of Tioga, ND

Number of beds: 1,200, expanding to 2,500 Regulations: No list available at this time. Equipped with: A private bathroom, in-room cable TV and internet, 24-hour "Grab-n-Go", Gym, arcade, parking, 24-hour courtesy officers and a waste water treatment plan. Coming soon: a swimming pool, movie theatre, internet café, barbershop and more.

5. Tioga Lodge

Tel: (855) 582-7438

Run by: Target Logistics – largest crew camp operated by Target Logistics in ND Location: Just outside of Tioga, ND Number of beds: 1,238 (three room types)

Regulations: For a list of camp regulations, please call (855) 582-7438, and a directory will connect you to your selected camp.

Equipped with: A water treatment facility, insulated central corridor, 24-hour dining, fast food café, convenience store, barbershop, 100 parking spots with heater blocks, and tornado and gas detection systems.

6. ATCO Crew Camp

Tel: (403) 292-7775

Run by: ATCO Structures & Logistics – contact Phil

Location: Near Missouri Ridge Township

Number of beds: 202

Regulations: Alcohol allowed.

Equipped with: 4 x 49 room modular dormitories with twin beds, cabinets, chairs, single windows and TV & DVD players.

7. Black Gold Williston Lodge

Tel: (701) 572-2100

Run by: Black Gold Oil Field Services – contact Katie

Location: 5572 Highway 85, near Missouri Ridge Township

Number of beds: 374

Regulations: No list available at this time.



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"We had a zoning application for a crew camp but I believe that they decided that it would be too expensive to meet regulations because we haven't heard back from them." Lorrie Buzalsky, Slope County Auditor.

"We understand and appreciate the role of crew camps; even encourage them to locate here.

The "strict" policies are meant to allow the city and the camp owners/operators to negotiate a mutually beneficial relationship."

Shawn Kessel, City Administrator for Dickinson, ND

"All Target Logistic housing facilities are running at capacity. We can't build them fast enough. Guests are employees of oil, gas and mining companies but Target Logistics employees also live on site."

Randy Pruett Account Supervisor, Pierpont Communications, Inc.

"Target Logistics is one of the only ones running in our county and has been wonderful to work with; the camp is very nice." Sandy Rohde, Planning and Zoning Administrator for Dunn County

Equipped with: Wi-Fi, gaming center, pool, fitness center, daily housekeeping, free laundry, 24-hour security surveillance, 24-hour snacks and three meals per day.

8. Ameri-Tech Crew Camp

Tel: No phone number available at this time.

Run by: Ameri-Tech Industries, LLC Location: On Highway 2, one mile north of Williston, near Missouri Ridge Township

Number of beds: 232

Regulations: No list available at this time.

Equipped with: Dormitory style rooms, a kitchen, rec-room, internet and fitness center.

9. Solsten Hotel

Tel: (701-774-7583)

Run by: Solstenxp, Craig Harman Location: 14505 Highway 1804, near the township of Trenton, ND

Number of beds: 343

Regulations: No list available at this time.

Equipped with: Dormitory style rooms, meal service, daily housekeeping, recroom, TV, free Wi-Fi, fitness center, security surveillance and lockable cabinets.

Please address any questions regarding this list of crew camps in North Dakota to awalld@matrixgroupinc.net.

This list is up-to-date as of August 2012 and the number of crew camps in your county may have changed since the printing of this publication. To find out if new camps have gone up, please contact your county auditor.



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Looking Forward to Growth: A Vision West ND Update

Planning progresses quickly through Vision West ND initiative.

By Andrea Boe, AE,S

he Vision West ND project has continued to dive into county and community strategic planning this summer and has made great strides in assisting the western region to create opportunities for smart growth and future progress.

As you may recall, the Vision West ND project, which is made possible through grants from the United States Department of Housing and Urban Development and the North Dakota Departments of Trust Lands and Commerce, is a regional planning project covering the 19 oil and gas producing counties and communities in western North Dakota.

The first part of the project includes an intense two- to three-day planning session, which will be held in at least every county. Every planning session includes a public Town Hall meeting to engage citizens in the process. Approximately 10 to 12 county and community leaders also come together to

identify, develop, assign and carry out action items for a strategic plan.

As of July 15, 2012, 11 planning sessions have been held. The counties of Adams, Billings, Burke, Divide, Dunn, Golden Valley, Hettinger, McLean, Mercer and Mountrail, and Watford City, have all completed their planning sessions and are in the process of working to complete essential action steps to include in their strategic plans.

Through the planning session process led by lead consultant Building Communities, the county and community leaders examine a series of economic development strategies and quality of life initiatives. Each county has unique issues that have risen to the top. Adams County, for instance, felt that value-added agriculture was the top economic development strategy to expand its economy, while Billings County identified

business recruitment as the top economic development strategy, and Dunn County identified infrastructure development as a top need.

ACTING ON PLAN WEEK RESULTS IMMEDIATELY

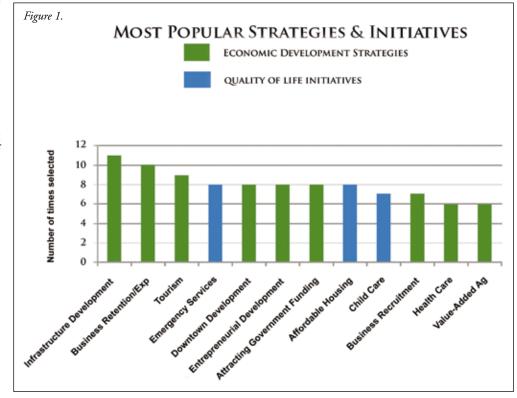
One of the highest-ranked quality of life initiatives that has prevailed through this planning process has been the need for child care in the entire region.

"We immediately saw this issue discussed over and over and knew that the lack of child care providers had reached a critical stage in western North Dakota," says Shirley Brentrup, Vision West ND team member and Southwest Rural Economic Area Partnership Zone executive director.

Brentrup and other Vision West ND team members created a Vision West ND Child Care Work Group. Along with local child care providers, Legislators, ND Child Care Providers, Inc., Child Care Resource & Referral, additional State and Federal Agencies, and other interested parties, they have been holding regular planning sessions and met on July 18, 2012 in Dickinson, ND to work through a number of solutions to address this regional issue. The regional approach to solving issues such as child care is a key component of this project.

Although every county ranked strategies and initiatives slightly different, Figure 1 summarizes some of the overarching themes that have emerged from the 11 planning sessions completed thus far.

In the following months, the Vision West ND team plans to complete at least eight more planning sessions in the region. Simultaneously, the participating counties will have planning and zoning recommendations and best practices training by a professional land use consultant. Land use and zoning have also reached a critical point in many smaller western North Dakota communities and associated counties due to the large influx of



Best practices training will ensure that counties and communities have good foundational knowledge to create practical land use and zoning ordinances that can be used to serve the best interests of the community while working with ever-growing developments.

population to serve the oil industry. Residential development, crew camps, RV parks and other housing developments have been somewhat haphazard in certain areas up until this point. Best practices training will ensure that counties and communities have good foundational knowledge to create practical land use and zoning ordinances that can be used to serve the best interests of the community while working with ever-growing developments.

INFRASTRUCTURE NEEDS GET ATTENTION

It's no surprise that infrastructure has ranked at the top of the list for economic development strategies during the first 11 planning sessions. The need for improved and expanded infrastructure has been a hot topic in oil country since the last legislative session. A major component of the Vision West ND project is the Municipal Infrastructure Needs

Assessments (MINA), which are currently in development by Vision West ND team member AE₂S in tandem with the planning sessions. The MINA creates an inventory of water, wastewater, stormwater, and street infrastructure, identifies immediate needs, and provides prioritized improvements and associated costs.

Under the original Vision West ND project, approximately 20 communities were identified through a survey as participants. Since then, the importance of the MINA portion of the project has become apparent.

"Municipal Infrastructure Assessments are so critical to our small communities out here, which have never anticipated this tremendous level of growth that is doubling and tripling the size of many communities, let alone growth like we are experiencing with increased oil production," says Vicky Steiner, Vision West ND team member and Executive Director of the North Dakota

Association of Oil & Gas Producing Counties (NDAOGPC).

"Small communities simply don't have financial wherewithal to adequately and comprehensively plan and address infrastructure needs. The NDAOGPC saw what a critical need infrastructure planning has become and decided to provide additional funding so that at least three more communities could benefit from the Vision West ND process."

Because AE₂S has provided infrastructure planning to clients in western North Dakota and understands the importance of the assessment portion of the project, they too decided to provide three infrastructure plans pro bono to the project as well. Now, MINA will be completed for 26 communities in the region.

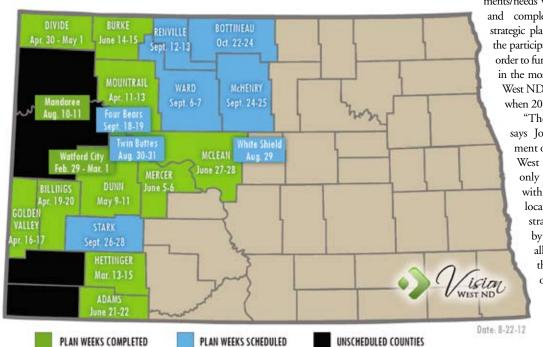
Loren Hoffman, Vision West ND Infrastructure Assessment Plan leader and former Parshall Auditor, has been busy personally visiting each community, surveying city officials and gathering the data included in the assessment. By the first week in August, Hoffman will have visited 19 cities conducting his research. Hoffman notes that by the end of October, he plans to have all of the MINA plans complete and back into the hands of the municipalities that participated.

LOOKING FORWARD TO IMPORTANT DELIVERABLES AND IMPLEMENTATION

By the end of 2012, the participating counties and communities will have completed the planning session process, obtained planning and zoning recommendations and best practices training, secured municipal infrastructure assessments/needs with conceptual cost estimates, and completed economic development strategic plans. This information will give the participants a wealth of information in order to further develop their communities in the most prudent fashion. The Vision West ND project, however, does not end when 2012 comes to a close.

"The key to Vision West ND," says John Schneider, ND Department of Commerce liaison to Vision West ND, "is that the project not only provides these communities with valuable information on a local level but incorporates these strategies into a regional plan by the end of 2013. Additionally, Vision West ND has set the stage for implementation of these crucial strategies starting right now." Vision West ND continues to prepare the region for growth both on a local and regional basis.

A breakdown of Vision West ND Plan Weeks.





NORTH DAKOTA SURPASES ALASKA/CALIFORNIA; SECOND ONLY TO TEXAS

Go big or go home? North Dakota definitely went big when it jumped into second place as the United States' number-two oil-producing state, in August 2012. North Dakota surpassed Alaska in March and California just a few months before that.

According to www.platts.com, Lynn Helms, the director of North Dakota's mineral resources department, said on the "Platts Energy Week" television show, that the Bakken Shale formation produced about 640,000

barrels of oil per day in May, second only to Texas' 1.7 million b/d. Helms added that oil production in the Bakken is consistently increasing by 15,000 to 20,000 b/d every month. This means that thousands of additional wells are going to be drilled in the upcoming years. What's more, the area has 35,000 wells left to drill in this Bakken reserve. This will take 16 to 18 more years. Helms explained that there are currently 210 drilling rigs working the Bakken and that companies there are drilling nearly 3,000 new wells every year.

Platts is a leading global provider of energy, petrochemicals and metals information, and a premier source of benchmark price assessments for those commodity markets.

GROWTH BY THE NUMBERS

North Dakota's oil production averaged 660,000 barrels per day (bbl/d) in June 2012, up three per cent from the previous month and 71 per cent over June 2011 volumes. Driving production gains is output from the Bakken formation in the Williston Basin, which averaged 594,000 bbl/d in June 2012, an increase of 85 per cent over the June 2011 average. The Bakken now accounts for 90 per cent of North Dakota's total oil production.

Source: www.geology.com/news/category/oiland-gas.shtml, quoted from the Energy Information Administration.

DRIVING UNEMPLOYMENT RATES INTO THE GROUND

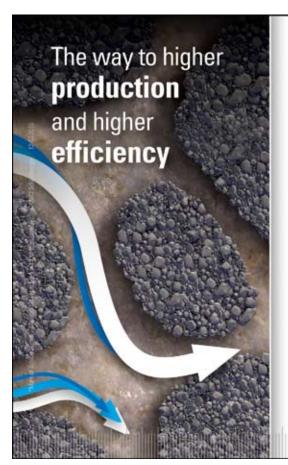
According to the BLS current population survey (CPS), the unemployment rate for North Dakota fell 0.1 percentage points in June 2012 to 2.9 per cent. The state unemployment rate was 5.3 percentage points lower than the national rate for the month. The unemployment rate in North Dakota peaked in March 2009 at 4.2 per cent and is now 1.3 percentage points lower.

Source: http://www.deptofnumbers.com/unemployment/north-dakota.

SALARY EXPLOSION

North Dakota is also seeing significant wage gains, with the average annual salary growing 79 per cent in Williams County, to \$56,857 in 2010 when compared to 2005, and 67 per cent in Mountrail County over the same period, according to the bureau.

Source: www.oilcapitalusa.com/2012/oiland-gas-companies-continue-to-stimulate-thelocal-economy-in-many-u-s-regions.





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Minor Reservations About the Boom

The boom taking place on the Fort Berthold Reservation and surrounding areas has brought many positive aspects with it but it has also brought a few areas of concern to the forefront.

By Jennifer Ryan

he economic crisis sweeping across the United States has affected millions of Americans. Stories of rising unemployment rates, foreclosures, bankruptcies and layoffs dot the daily news headlines. Regardless of socioeconomic status, it seems that no one has been left unaffected. Unless, of course, you're involved in North Dakota's modern-day gold rush, the oil boom.

In parts of North Dakota, the struggles of the economy are just stories on television. In parts of North Dakota, unemployment rates are at an all-time low. In fact, businesses are struggling to find enough workers to help them meet the demands of a rising population. As a result, wages are higher than ever before. Many landowners and businesses are also cashing in on an unprecedented level of oil activity in the state's Bakken region, and many landowners have been able to comfortably live off the royalties their land provides.

Situated in western North Dakota, where the majority of oil activity is currently taking place, is the Fort Berthold Indian Reservation, home to members of the Mandan, Hidatsa and Arikara (MHA) Nations, or Three Affiliated Tribes of North Dakota.

Previously, the Bakken formation was thought to be impregnable and therefore of little use to the oil drilling corporations. The land of Fort Berthold and its people were largely left alone. Then hydraulic fracturing was developed. In 2005, oil companies figured out how to combine horizontal drilling methods with hydraulic fracturing to unearth the untapped reservoir of oil resources they suspected were there. The geological formation, not being a typical reservoir, had posed

many insurmountable challenges: the oil was too difficult and expensive to access. Now, it was an accessible and abundant new source of oil.

SOVEREIGNTY BY THE BARREL

Recent records show that Fort Berthold now has 172 wells, producing 2.5M barrels of oil per month. An estimated 1,000 more wells are planned for the next five years. Since the tribal nations own the mineral rights to the land, the tribes have been paid approximately \$330M and can expect to see billions more before the oil boom runs its course.

The tribes are now concerned with capitalizing on the opportunity their geography has afforded them before the oil boom runs dry. Tex Hall, Chairman of the Mandan, Hidatsa & Arikara Nation Tribal Business Council has stated, "Our sovereignty can be maximized by the number of barrels of oil taken from our Mother Earth. We call it 'sovereignty by the barrel.' The potential here is to obtain financial independence for our nation, education for our youth, sustenance for our elders, maintenance of our culture and above all to set the people of the Mandan, Hidatsa and Arikara Nation on the road to independence."

It appears that the tribal nations will have no problem reaching their financial goals: the boom in the Bakken has put North Dakota in second place in terms of current oil production, nudging Alaska out of the way, and now trailing only Texas. Conservative estimates put the amount of potentially recoverable oil deep under the surface of the Bakken region at approximately three to four billion barrels of oil. These numbers are considered



The town of Mandaree was already struggling with a housing crisis and crumbling infrastructure. A surge in population and its subsequent traffic, including over-weight trucks, has only worsened those problems.

conservative because the United States Geological Survey (USGS) issued a statement in early 2012 that newly-obtained information could indicate an even higher estimate.

Oil executives, who may be less reserved than the USGS on estimating the amount of potentially recoverable oil, put the number more along the lines of 25B barrels. That would be comparable to the estimated number of barrels of recoverable oil left untapped beneath the surface of the rest of the United States combined.

While the MHA nations are hoping to gain independence, the United States also sees an opportunity to decrease its reliance on foreign oil, if only by a small percentage. Some oil production proponents say that the recent surge in oil production will eventually lead the country to total oil independence. More realistically, it will help to keep more American dollars within the country's own borders as citizens pay for "home-grown" petroleum and oil products.

CLOSER TO HOME

Reducing dependence on foreign oil is a worthy goal, on a national scope. However, many residents of the Fort Berthold Reservation are keeping an eye closer to home, where the affects of the oil boom are proving to be less than positive.

Yes, unemployment rates have decreased. But with it has come a decrease in available and affordable housing and the quality of infrastructure and roads. What has increased is crime rates and traffic accidents and fatalities.

The town of Mandaree, which is part of Fort Berthold, was already struggling with a housing crisis and crumbling infrastructure. A surge in population and its subsequent traffic, including over-weight trucks, has only worsened those problems.

Lifetime Mandaree resident Lisa DeVille says that something needs to be doneand soon. Ironically, Mandaree finds itself at the heart of a real-life oil boom, yet the community's gas station's pumps are dry. Residents must drive 30 miles or more on over-crowded highways in extreme states of disrepair just to fill their tanks.

DeVille has taken it upon herself to poll other members of the community and compiled their concerns into an essay about the impact of oil and gas development on the Fort Berthold Reservation. She has also contacted Chairman Tex Hall and Governor Dalrymple to outline the community's concerns.

MANDAREE'S MAIN CONCERNS

Mainly, the residents of Mandaree are concerned with the long-term health and environmental risks associated with drilling for oil; the lack of social services available for the rapidly growing community, including law enforcement and other emergency services; and the physical improvements necessary to live, such as the housing and infrastructure

"Addressing these issues should be in effect soon or the risk of major and possibly un-repairable consequences are at stake. The MHA Nation has had previous impacts from epidemics, eminent domain, and rapid social, economic and political challenges; the impending [oil] development is now the current challenge," DeVille's essay concludes.

DeVille says that many of the Mandaree residents she spoke to aren't opposed to the development of oil in their community: most understand the economic benefits of pursuing oil production. However, their understanding of the best way to harness these opportunities is lacking.

"Come educate us," DeVille says. "Tell us about the long-term effects. We don't understand the process." The process she's referring to is how to take advantage of a portion of the funds North Dakota's state legislature has set aside to help counties cope with the impacts of the oil boom.

In a letter to Governor Dalrymple, she says, "[In a report], it was stated \$885.3M remains to be dispersed. We, the members of the Mandaree Community, are seeking funds in addressing the unmet needs of the Mandaree Community. What is the process of accessing these state funds?"

So far, her attempts have gone unresolved. But she remains hopeful.

When she's spoken to other Mandaree residents, she says she sees disappointment and discouragement. "Something needs to happen here. Look at Killdeer," she says, citing a nearby county that has had greater success in dealing with the impacts of the boom. "They are creating employment for their people. We can do that."

Now that the Mandaree Community Assessment is complete, DeVille and her fellow residents are hoping and actively planning for a future that sees a satisfactory rise in their quality of life and an intelligent use of the abundant resources the Bakken oil boom will continue to provide for years to come.



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More people means more families and more families means more children and more children, yes, that means more day care spots are needed! A fall survey by the North Dakota Child Care Resource and Referral agency found that the counties that include the oil patch cities have a licensed day care capacity of about 1,300 children while there are about 2,800 children potentially in need of care.

For more on the area's day care situation, read No Kidding, found on page 54.

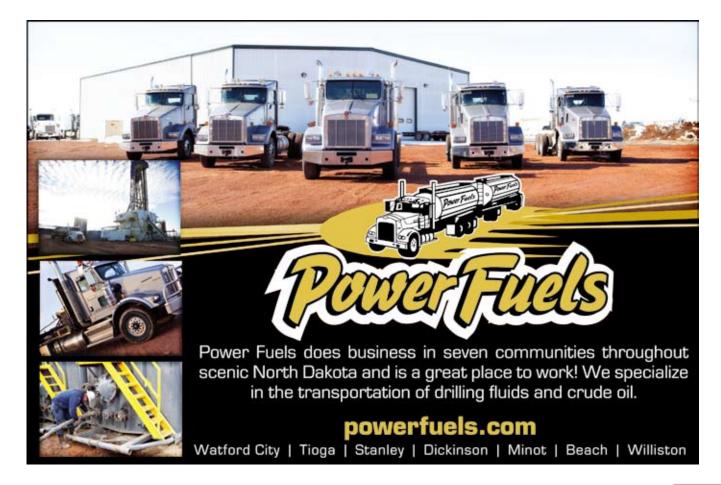




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Breaking into the Bakken

Grand Forks is joining in on the oil play.

By Paul Adair

t's no secret there's a boom going on in the Bakken. Now, the city of Grand Forks, ND is planning to be part of the explosion.

Upon revealing itself over 60

Upon revealing itself over 60 years ago, Bakken oil has historically been difficult to extract and has been considered largely inaccessible by the oil industry. However, with recent developments in extraction technologies, such as those found in the use of hydraulic fracturing, the Bakken formation has become a much more viable source for feeding America's energy needs—a source that is consistently outpacing any geological forecasts or industry predictions.

Over the last few years, the increase in Bakken production has lead to a

renaissance in the region's economy, providing jobs, opportunities for investment and a population boost for those in the position to reap the benefits. However, for those just east of the oil play, and for those without the municipal influence enjoyed by larger centers, the boom's influence has not been felt quite as strongly. This is something that the City of Grand Forks hopes to change as it strives to become a bigger player in the Bakken field.

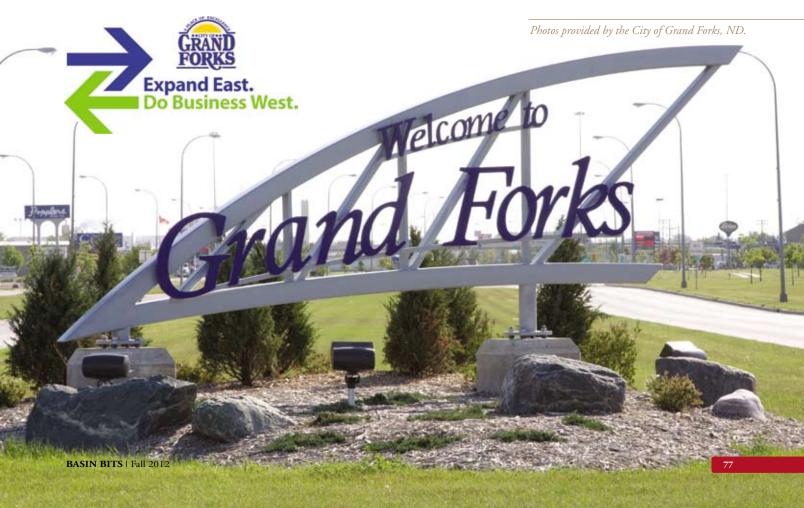
"I became kind of curious as to why Grand Forks wasn't in the discussion nationally or regionally—even within the state—about what was happening in the Bakken," says Hal Gershman, Grand Forks city council president. "When you see that kind of incredible growth, you kind of sit back and ask yourself, 'What are we doing about this?'

Then it occurred to us: the benefits in the industry expanding east to do their business west. And it's an idea that's really starting to resonate."

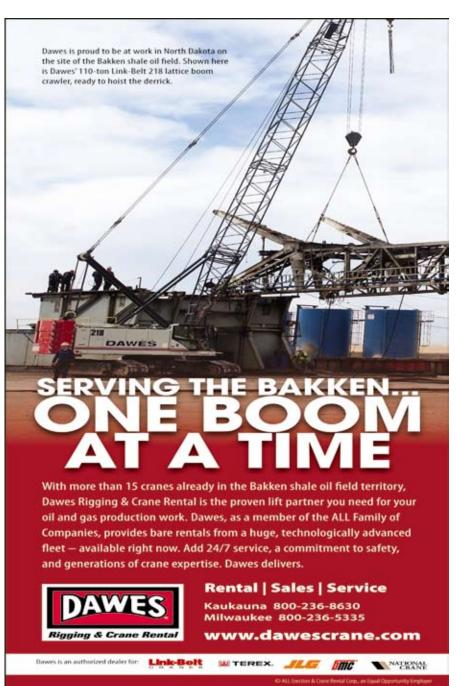
This is not to say that Grand Forks has been idle while the rest of the Bakken has taken off. "There is a lot of activity already going on," says Gershman. "In Grand Forks, we've identified 75 businesses that are doing close to 300 million dollars of work out west."

OVERCOMING OBSTACLES

Grand Forks intends to build on this existing business and to position itself in order to take advantage of a service shortfall that faces an oil industry operating primarily in the western Bakken. "Challenges bring opportunities," says Mayor Michael



Positioning itself as the eastern staging hub for the Bakken oil industry, Grand Forks offers a lot for companies wishing to do business locally for work further out west.



Brown. "And we always try to see that there are more opportunities than challenges."

Brown offers an example of a challenge in the Bakken where his city is currently finding opportunity. "Some companies would put all their vehicles on a truck, then take their vehicles to Devils Lake to get their oil changed because they couldn't get it done out west," he says. "The facilities are just so overwhelmed. This is a tremendous opportunity for people in Grand Forks to say, 'We'll change your oil. Bring your trucks to us."

Being off the grid in terms of oil development may have been a mixed blessing for Grand Forks, in that it allowed planners to learn from the examples set by neighboring communities already experiencing the boom.

"We had done east to west business before, so we were familiar, first-hand, with what those small communities were going through with their rapid growth. Of the strains on their infrastructure, police force, schools and things like that," says Brown. "But it's since evolved into a situation where we can maybe help alleviate some of the crises and problems they're having into a win-win situation for everyone."

WORKING TOGETHER

Brown believes that the city can best help relieve some of these problems not through the relocation of services but, rather, through the expansion of companies into the Grand Forks region. "We don't want to compete with other communities out there. We just want to help them do their jobs."

Klaus Thiessen, president and CEO of the Grand Forks Region Economic Development Corp., agrees that this approach is best for the city, helping take the load off a burdened Bakken oil industry. "We're not here to take business out of western North Dakota," says Thiessen. "But if a company is considering expanding, we hope that they consider Grand Forks."

The city is taking a measured, well-grounded view of its place in the Bakken. "It's not going to boom like it did in Dickinson or Williston and that's the reality of it," says Thiessen. "So if we plan to be successful, we're going to need a managed growth. And that's as good as we want it."

Before there's any substantial growth to manage, however, work needs to be done in creating some buzz about Grand Forks and the services the city can provide. "North Dakota is having so much play in the United States right now," says Thiessen. "But, currently, the play is all centered around Bismarck and Fargo, in terms of focus. So we're having a discussion, as a city, about raising our profile nationally."

Gershman admits that the task of diverting America's attention to Grand Forks is not an easy one but steps have already been taken in order to boost recognition. "We're doing some social media, which is up now. But our first initiative was to attend the Williston Basin Petroleum Conference back in May. This was really our first foray out as a city and it was very successful for us in terms of raising our profile."

"A lot of companies didn't even realize that we're on Highway 2—that we're between Minot and Duluth," continues Gershman. "And now, after the conference, they're saying, 'Let's take a good look at this city.""

DEVELOPMENT PLANS

Building relationships within the Bakken is paramount to the future development plans of Grand Forks. "I believe that the more they know about what we have here, the more chance we're going to have of expansions into our area," says Gershman. "Time will tell how successful all of this will be but I think to do nothing would simply be irresponsible."

Positioning itself as the eastern staging hub for the Bakken oil industry, Grand Forks offers a lot for companies wishing to do business locally for work further out west. "We have very good air service, we have a good road system and we have a 250-acre industrial-business park expansion in place. There are

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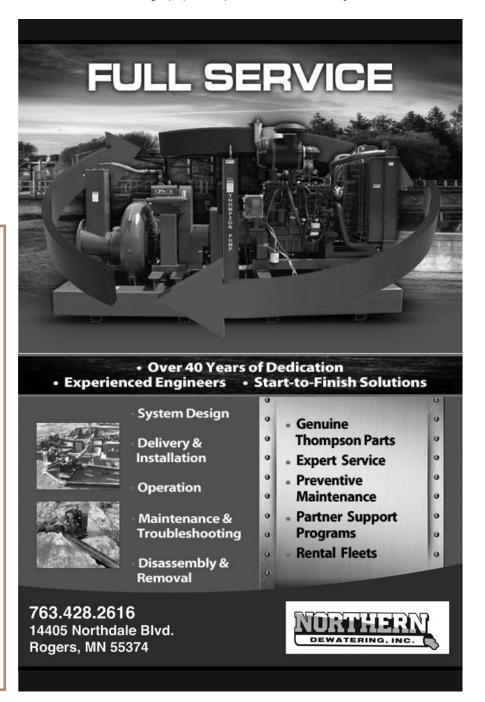
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many things to offer an expanding business," says Gershman.

The Mayor offers his assurance that, with the potential growth in Grand Forks' future prosperity, the face and personality of the city will not change. "We have a commitment to our young people, to have a chance for people to be involved, and to have a safe place to live, work, play and stay," says Brown. "We want people to improve their quality of life, so in everything we do, we look to see if it fulfills our promise to our citizens. As we grow, we'll always be responsive."

The decision to pursue expansion from the Bakken was not taken lightly by the City of Grand Forks; however, it wasn't really a difficult choice, having unilateral support from the council, business community and the public sector. "It was quite easy to get behind this because not only is it win-win," says Brown, "but it keeps the jobs in North Dakota, it builds and diversifies the local economy, it gives everyone a positive role to play and we're all going to benefit from it. I see us being stronger and better and more diverse because of it."

So, as investment and development expands in the Bakken, the City of Grand Forks is letting everyone in the Bakken know that its doors are wide open for business.

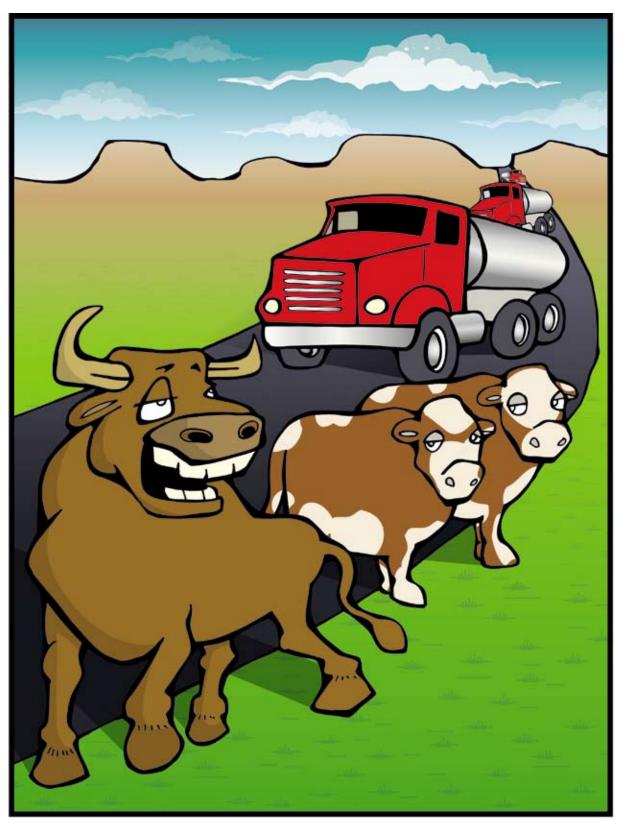


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GARTOON-GORNER



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Technologies that work in the field



What oil companies must disclose on the hydraulic fracturing chemical registry disclosure website and what's expected for the future.

By Paul Adair

hen the subject of hydraulic fracturing—or fraccing—comes up, there tends to be some polarization to the debate. There are strong cases for both proponents and detractors in this fast-growing industry practice.

Those in support of fraccing point to the vast reserves of inaccessible oil and natural gas deposits, which only make themselves viable when using hydraulic fracturing. They also stress the obvious economic benefits in unlocking those reserves and increasing the importance of national energy independence. Those against hydraulic fracturing generally concern themselves with the health and safety issues associated with the process, as well as how it affects the environment.

However, much of the rhetoric that ensues during the fraccing debate comes from a general lack of understanding as to what exactly hydraulic fracturing involves, in terms of mechanics, chemicals used and environmental impact.

To counter this lack of understating over the issues of hydraulic fracturing, the Interstate Oil and Gas Compact Commission (IOGCC) has proactively moved to develop the registry website, www.FracFocus.org, which allows the oil and natural gas industry to disclose information regarding hydraulic fracturing, and also allows the public to access that information.

"Hydraulic fracturing, in the last few years, has become quite a controversial issue and people were starting to think that fraccing was causing ground water contamination," says Carol Booth, communications manager for the IOGCC. "The IOGCC's mission is to protect the environment and educate the public and the website came out of that."

However, the IOGCC didn't work alone in the launch of FracFocus.org. It required the collaboration of many interested parties, with the input of governmental agencies, the oil and natural gas industry and environmental organizations to construct the website.

One other partner in particular has been fundamental in building the success of Frac-Focus.org. The Ground Water Protection Council, which shares common goals with the IOGCC, provides the technical expertise and science for the website.

"When it comes to looking at the chemical data, that's them," says Booth. "When it comes to the outreach, education and making

sure everyone knows about what's going on with all the state legislation, that's us."

BOOMING SUCCESS

Recently celebrating its first official anniversary, FracFocus.org has enjoyed 18 months of growth since its soft launch in January of 2011—growth that has been primarily driven forward by a boom in the oil and gas industry, a surging use of hydraulic fracturing and increasing legislation that requires disclosure compliance.

The message of the IOGCC has become so widely received that nine states have created legislation that requires the industry to report the use of hydraulic fracturing chemicals; six of those states specifically require companies to disclose directly with FracFocus.org.

As of August 2012, the website boasts the registration of more than 20,000 well sites from across the United States and over 300 participating companies, 25 of which operate within North Dakota. However, with many state governments just ending their legislative sessions and demanding full chemical disclosure, the IOGCC expects these numbers to at least double over the next year.

The website has even drawn international attention. The province of British Columbia,

With the website currently averaging a quarter of a million hits per month, there's clear demand for the information found at FracFocus.org.

with help from the IOGCC, is modifying a registry website in order to serve Canada, using FracFocus.org as its model.

Of course, with that growth comes even greater public interest in the affect of hydraulic fracturing on health safety and the environment. FracFocus.org's mandate is to address that interest.

"The website," says Booth, "is supposed to be geared towards the public, to inform the public as much as possible and to let them know what's going on, wherever they are."

To do this, the website allows the public to search for, among other things, well site locations and information concerning the chemicals used during the hydraulic fracturing process.

"You can pinpoint to a 10-acre lot of what wells (as of January 2011) are around you and what's being placed in the ground," says Booth. "There are links where you can click and enter the chemical and the site will tell you what it is, what it's used for, the scientific name, where it is on the periodic table. It will give you a list of everything and anything related to that chemical."

FULL DISCLOSURE

With the website currently averaging a quarter of a million hits per month, there's clear demand for the information found at FracFocus.org; information either supplied by the IOGCC and its partners or disclosed by the oil and natural gas industry.

The IOGCC has strived to make this disclosure process as efficient as possible,

recognizing the time and economic constraints companies face. The companies complete an Excel spreadsheet template provided by the website, which is then uploaded as a PDF so it can't be tampered with. It's a process similar to filling out Material Safety Data Sheets, a legal requirement of companies operating across the United States.

"After that, you enter your chemicals," says Booth. "It's almost like going on Facebook and uploading a picture. It's really as easy as that."

In addition to chemicals being used, in states that have disclosure legislation, a company is also required to report the locations of each of their well sites within 60 days of the well being fracced. For participating companies not bound by legislation, information is disclosed on a voluntary basis under the honor system.

This voluntary disclosure, perhaps surprisingly, is working extremely well and has been embraced by the oil and gas industry. "They have been wonderful," says Booth. "A lot of companies want the transparency—I get calls all the time asking how they could help to be more transparent. How they can be one of the over-achieving, over-compliant industry leaders."

This desire for transparency is understandable. In this day and age, it simply pays for a business to be as open as possible. "The companies don't want anyone to feel they're hiding anything. After all, they work and live in all these communities and they don't want their employees and the community to feel they can't trust them. So they're always trying to become as transparent as possible."

FRACFOCUS 2.0

Unfortunately, with the browsing public, FracFocus.org has generally drawn mixed reviews. "One of our biggest ordeals at IOGCC is that a lot of people think we're industry and we're not," says Booth. "Some of the public think we aren't disclosing everything and they want more, so we're trying to give them more, and that's why FracFocus 2.0 is up and coming very soon."

Booth is eager for what's in store in the future for FracFocus.org. Over the next year, there will be improvements to several aspects of the website, including administrative tools that will help operators upload and manage reports more efficiently, a new state database system, and, most importantly for the public using the website, a much more accessible search capability.

This ability to change is one of the strengths of FracFocus.org. With improvements in technologies and new information being discovered on an almost daily basis, the IOGCC—and FracFocus.org—is willing to adapt and adjust to meet the demands of the public.

"We didn't know how well the website was going to be received at first," Booth explains. "And now we get to go in and tweak it. It's just like anything else, there's always going to be something better we can do and as long as we keep on striving for that better thing, I think we'll be on track to be on board for a very long time."



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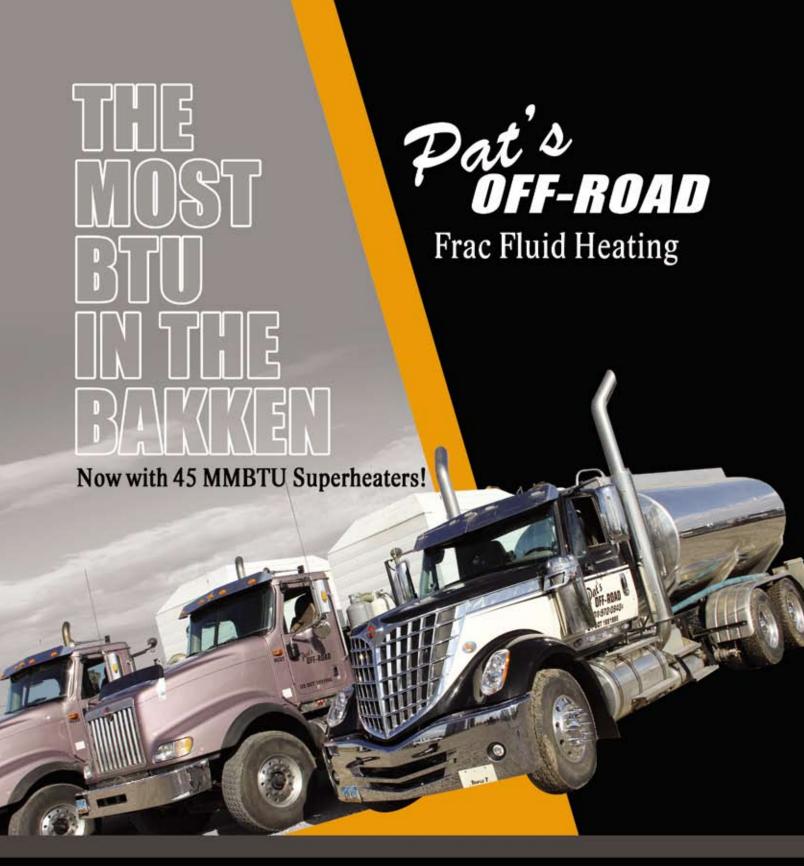
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Housing Incentive Fund Helps Housing Crisis

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A new incentive will help low-income residents and workers who don't meet typical low-income qualifications and can't afford inflated rent.

By Andrea Danelak

shortage of affordable housing continues to be a major issue in North Dakota, thanks to the economic boom driven primarily by the oil and energy industries.

"One would think a booming economy wouldn't lead to a housing crisis but it has—the high demand for workforce housing has driven rent up quite high and vacancy rates have also been really low," says Michael Carbone, executive director of the North Dakota Coalition for Homeless People. "Many native North Dakotans have been priced out of the market."

Low- to moderate-income households have been hit especially hard. In fact, according to a recent report released by the National Low Income Housing Coalition, there are only 45 affordable and available rental units for every 100 low-income renter households in North Dakota.

Taxpayers themselves now have the opportunity to help ease the state's housing crisis. Created by the North Dakota Legislature last year, the North Dakota Housing Incentive Fund stimulates the production of affordable multi-family housing units, particularly in oil- and flood-impacted areas. It allows any individual, business or financial institution with a state income tax liability to receive a dollar-for-dollar state tax credit by contributing toward housing projects for low- and moderate-income households.

"There are a lot of job openings and people moving to the state, and housing just isn't being built fast enough to accommodate that demand," says Mike Anderson, executive director of the North Dakota Housing Finance Agency, a public financial institution that helps North Dakotans secure affordable housing and also administers the unique program.

CLAIMING CONTRIBUTIONS

Tax credits earned through contributions are capped at \$15M, and public response has been positive, with North Dakotans raising about \$7M so far, and most of the contributions occurring last fall and winter at the end of the tax year. Taxpayers can claim their contributions in the same tax year that the contribution was made, or they can be carried forward for up to 10 years if the credits exceed a taxpayer's tax liability for the tax year.

"It's new to our taxpayers so we're still short of funds to allocate," says Anderson. "A lot of people are interested in participating but don't think about their tax liability until the end of the year. We had a surge of activity when we first announced the program and continue to get contributions, so we expect to get the full \$15M."

Taxpayers can request that their contribution benefit a specific eligible housing project, community or area. Ninety per cent of

Taxpayers themselves now have the opportunity to help ease the state's housing crisis.

funds are reserved for areas impacted by the oil booms or disaster areas like Minot, ND, which was ravaged by one of the worst floods in recent history, and the remaining 10 per cent is available for the rest of the state. In response to the floods in Minot, the legislature increased the fund's authorization level from its initial \$4M to \$15M.

"The entire state is being impacted by the oil production. While the Housing Incentive Fund is targeted to the west, we're hoping that if it's renewed, the east will have access to those funds as well," says Carbone. "That way, it can be used to meet the needs throughout North Dakota for years to come."

"Certainly the \$15 million is not going to solve the housing problem, especially in western North Dakota, but it's taken some very big steps towards that and it appears there's a lot of interest at the state capital to renew the program and provide more funding," adds Anderson. "There are a lot of housing needs out there and it sounds like the state is committed to do more."

Housing projects developed under the fund consist of multi-family rental housing units of at least four units each. "We use those funds to off-set the cost and bring equity, so they can eventually charge cheaper rent," says Anderson.

AFFORDABLE HOUSING FOR EVERYONE

The Housing Incentive Fund aims to help not only low- and fixed-income residents but also people who might not otherwise qualify for low-income housing. "Because of the escalating costs of housing, even gainfullyemployed people are having trouble finding affordable housing," says Anderson. "In addition to people on fixed incomes and with low incomes, it helps people on Main Street—waitresses, teachers, etc.—that keep the community thriving. It's allowing those who aren't huge earners the ability to stay where they are."

Carbone adds that the fund is designed to be flexible in order for program administrators to prioritize and determine the areas of greatest need. "If we're successful in having the fund extended, that would give them an opportunity to assess what is the greatest need and target the funds that way," he says.

As of the end of July 2012, the North Dakota Housing Finance Agency had already pre-approved 17 projects, which were in various stages of paperwork and construction, and was reviewing another seven applications. "We announce the deadline for receiving projects at the end of each quarter," says Anderson.

The end of July also marked the completion of construction on the first project. The Divide Vista Apartments in Crosby, ND hold the distinction of being the first affordable housing project in North Dakota supported by state tax dollars, with area businesses and individuals contributing more than \$240,000 to the fund in support of the project. The 12-unit apartment complex saw residents move in at the beginning of August, with apartments renting for \$515 to \$1,200 per month, depending on household income and unit size.





AWARD-WINNING APPROACH

Accolades for the Housing Incentive Fund continue to roll in, with the National Low Income Housing Coalition awarding the North Dakota Coalition for Homeless People with the 2012 State and Local Organizing Award for its work in establishing the fund.

"We give out the award each year to a state or local organization that we believe has done an excellent job in accomplishing a goal that will help to expand and support our mission," says Sheila Crowley, president and CEO of the National Low Income Housing Coalition, which educates, organizes and advocates to ensure decent, affordable housing for everyone.

"All of us would like to see the state develop a comprehensive housing policy,"

adds Carbone. "I think that approach is really essential to meeting the needs of all North Dakotans and making sure we don't leave anyone behind."

Both Carbone and Anderson are optimistic that the Housing Incentive Fund will continue to help many in need of affordable housing and urge North Dakotans to contribute to the fund.

"Our economy, overall, is doing very well and that will continue to attract people to the area. We'll have to continue to find ways to house them, and not everybody is going to be in high-paying energy-sector jobs," says Carbone, who also sits on the board of the Housing Alliance of North Dakota.

"Our housing developments (through the Housing Incentive Fund) really reflect a balanced approach so we can continue to provide housing for all income levels. This is important because the demand for workforce housing is so great, it's so easy to focus on that and forget about the other housing needs out there."

"I think the Housing Incentive Fund is very good for North Dakota—it's the first time state tax dollars have been used to support affordable housing," adds Anderson. "But we need another \$8M—projects that are conditionally approved won't be able to break ground until the \$15-million-dollar total is raised. The sooner we raise the money, the sooner we can get the units available for households."

To find out how you can contribute to the North Dakota Housing Incentive Fund, visit www.ndhousingincentivefund.org.





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LEASING

Bakken Rail Safety Blitz

Vehicle-train collisions in the Bakken are becoming a growing concern. What's being done to increase safety in the area.

By Kirsten Mangin

his summer, western North Dakota rail crossings became much safer thanks to the efforts of North Dakota Operation Lifesaver (NDOL) and its Bakken Rail Safety Blitz. The event, held from June 4-8, featured various events primarily held in the Minot and Williston, ND areas to educate residents on railroad safety training.

Due to the ND and eastern Montana oil booms, the past few years have shown an increase in the amount of traffic on the roads. Between 2007 and 2011, ND specifically experienced a 50 per cent increase in vehicle-train collisions. According to the Federal Railroad Administration (FRA) database, since 2007, there have been 98 vehicle-train incidents in ND resulting in 43 injuries and 11 fatalities, and an additional eight injuries and nine fatalities resulting from pedestrians trespassing on railroad property.

NDOL, a non-profit organization led by the ND Safety Council, decided to take the lead and teamed up with MT Operation Lifesaver, ND Petroleum Council, BNSF, Canadian Pacific RR, the FRA and the ND Motor Carriers Association to organize this Safety Blitz to help educate drivers in order to reduce the number of accidents.

"With an increase in traffic, there will be an increase in incidents. We decided it was time to attack this and get as many people involved and create a very strong presence in the Bakken region," explains Serena Schmit, NDOL Coordinator. "We received \$40,000 in grants and donations to run a media campaign and safety blitz pushing our rail safety message."

According to Schmit, Whiting Oil, BNSF Railway and Nabors Well Services all made substantial donations to the event and their generosity contributed enormously to the cost of the media campaign.

RAISING SAFETY AWARENESS

NDOL's mission is to end collisions, deaths and injuries at highway-rail grade crossings and on railroad property through education, engineering and enforcement. This Blitz definitely contributed positively to their mission. Over 2,700 people were reached through the various events and free training. Events held during the Blitz were varied and included Positive Enforcement Programs, in which organizers partnered with

law enforcement and went to rail crossings to observe drivers and their habits around crossings. When drivers followed the rules correctly they were stopped, thanked and rewarded with a small gift.

Also offered was a free Rail Safety Lunchn-Learn, sponsored by Trinity Health, at which community members, safety managers and business owners enjoyed a free boxed lunch and learned how to stay safe when navigating rail crossings. In addition, Minot and Stanley, ND had stations where a wrecked car trailer was set up and volunteers handed out safety information to residents. The Blitz also consisted of a team of volunteers who travelled to businesses and organizations interested in receiving rail safety training and education.

"We had a committee of people working for us. We had volunteers doing everything from manning the booths to walking and talking to drivers. There were about 10-15 volunteers in the area helping out. It was definitely a team effort that took months of organization and planning," says Schmit.

Organizers of the Safety Blitz were marketing the event to anyone in the Bakken region but particularly oil companies, construction

Agencies involved with Canadian Pacific Railway's Officer on the Train event included Canadian Pacific Police, Ward County Sheriff's Office, Minot Police Department, ND Highway Patrol, ND Safety Council and ND Operation Lifesaver.

The Official Publication of the North Dakota Association of Oil & Gas Producing Counties



"We want to raise awareness in the region of the fatal consequences that can result when a train and vehicle collide. Our hope is that everyone will 'Look, Listen and Live' every time they approach a

companies and health facilities. "We would go to their work sites for presentations held in parking lots and on shop floors," says Schmit. "We'd talk to groups of between five and 100 people."

OFFICER ON THE TRAIN EVENTS

crossing."

One central part of the Blitz was the multiple Officer on the Train events held by BNSF Railway, Canadian Pacific Railway and Amtrak. These events played a major part in addressing the increase in vehicle-





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train accidents in ND and took place between Minot and the Montana border, an area where a high number of collisions took place in 2011. The events worked in such a way that one law enforcement officer would be in the lead locomotive to observe motorists approaching the crossings. The ND Highway Patrol's airplane shadowed the train, while other officers paced the train or parked at assigned locations along the tracks. When a motorist or pedestrian was observed violating the law, the officer on the train radioed a nearby officer who would stop the violator, explain the dangers and take enforcement action if needed.

Officer on the Train gave officers the perspective of the train crew and what it feels like to be in a potential vehicle-train collision. Michael Bachmeier, Region 8 chief inspector for the FRA, played an important role in organizing the event and says Amtrak was thrilled to be participating for the first time. "The Amtrak crew was happy that people were thinking of their safety. They carry the nation's passengers and they were happy to let the officers know what they go through out there."

Bachmeier, who was on the train with officers during the events, witnessed firsthand how educational the experience was for the officers. "At some crossings, there are obstructions such as trees and vegetation, and sometimes when you see a car approaching a crossing, you don't know if they're going to stop. You can't see the intersection, so train workers hope they're stopped. It was eye-opening for the officers."

Another goal of Officer on the Train was to increase public awareness of dangers that exist at crossings by enforcing traffic laws and eliminating drivers' actions that could result in tragic accidents. "We want to raise awareness in the region of the fatal consequences that can result when a train and vehicle collide. Our hope is that everyone will 'Look, Listen and Live' every time they approach a crossing," says Schmit.

The Officer on the Train event was such a beneficial experience for the region and for those directly involved that Bachmeier is currently in the process of coordinating a future Officer on the Train that will run from Grand Forks, ND to Havre, MT.

LASTING EFFORTS

This is the first time a Safety Blitz of this size has been held in ND and Schmit says the feedback has been very positive. "We're still getting media attention and safety training requests. We even have volunteers interested in taking the safety training. All across the board, it has been very positive for us. We're currently trying to track if we have had an effect on the amount of collisions in the area."

In addition to eliminating collisions, education also helps motorists avoid driving penalties. According to federal law, Commercial Driver's License holders are subject to a 60-day license suspension for committing a violation at a crossing. A second violation results in a 120-day suspension, a third violation equals a one-year suspension and after the fourth violation, the license is completely revoked. For drivers that rely heavily on their vehicles for their daily commutes, just knowing about these suspensions could encourage them to pay closer attention to signs at crossings.

Since the event, safety efforts have and will continue in the area. However, drivers have a personal responsibility to be mindful around railroad tracks in order to avoid collisions. Bachmeier explains doing so is as simple as following the words of NDOL, "Look, Listen and Live." Schmit adds that knowing the signs will help avoid future incidents as well. "The simplest thing is to be educated on the signs and signals surrounding the rail tracks. Education is key to staying safe."



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The wallets of two North Dakota college students just got a little heavier. Find out who the lucky scholarship winners are and what they plan to do upon graduation.

n the last issue of *Basin Bits*, we ran a call for applications for two scholarships available to North Dakota students in their sophomore or junior year of college. Applicants must have been pursuing degrees in engineering, chemistry, geology, petroleum sciences or other studies directly related to the oil and gas industry.

After much careful consideration, the NDAOGPC Executive Committee recently selected the recipients of its 2012 scholarship awards. Several qualified and talented individuals submitted applications for the two \$1,000 scholarships. The NDAOGPC receives this revenue from the advertising in *Basin Bits* magazine—the very magazine you're reading right now—which is published two times per year, in the spring and the fall.

Western North Dakota college students Garred Olson and Bryan Decker were selected based on their letters of recommendation from their professors and their high grade point averages. They will both receive a \$1,000 scholarship this fall towards their college education. Congratulations to both of the association scholarship winners and best of luck to you, and to everyone who applied, in your future endeavors! Read on to find out more about these two up-and-comers!

BRYAN DECKER

PETROLEUM ENGINEERING, UNIVERSITY OF NORTH DAKOTA 27, SOUTH HEART, ND



From South Heart, ND, Bryan Decker is currently enrolled at the University of North Dakota in Grand Forks, ND. He began his career as a relief operator, has been a driller on a rig and is currently in the process of completing the university's four-year Petroleum Engineering degree program. The sophomore started his studies in the fall of 2011 and is on track to graduate in the spring of 2015.

"I decided to pursue my degree in petroleum engineering after working in the oilfield in North Dakota since I graduated high school in 2003. I'm currently working full-time at a service company and continuing my education online," says Decker.

"The industry is very appealing and has the potential for individuals to attain a high position within a company. The reason I decided to go to college was that we recently had a baby girl and I wanted to see our children grow up—the hours that are worked in the field can be very long at times. When I graduate, I will have my bachelor's degree in petroleum engineering and will have different options as to where I would like to use my skills."

Decker is focused on becoming a drilling engineer or completions engineer and once he graduates, he plans to do some consulting for a couple of years before getting an engineering position with a reputable company.

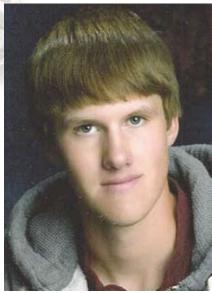
He first heard about the NDAOGPC

scholarship opportunity through the University of North Dakota's website. He filled out the application form and submitted it before he went to Utah for a summer internship. In early August, just before he had to give the final presentation of his internship to the entire Denver office, Decker found out that he was one of the lucky recipients. He was pumped, and the presentation was a success.

"Receiving this scholarship plays an important part in my schooling. Being recognized for a scholarship that comes from my home state and represents my past work experience makes me very pleased," he says. "Knowing that I only went to college when I was 26-years-old makes me feel like college isn't just for individuals straight out of high school, but is for anyone that has motivation to achieve something greater in life."

GARRED OLSON

PETROLEUM ENGINEERING, UNIVERSITY OF NORTH DAKOTA 21, WILLISTON, ND



Born and raised in Williston, ND, Garred Olson has seen the boom first-hand with his own eyes.

"I'm from Williston—I can see the booming economy. I knew I wanted a good-paying job that could bring me back to my hometown area," says Olson. "The University of North Dakota was developing a new petroleum engineering program and I knew that with this degree I could be in North Dakota but also have the opportunity to see other parts of the world if I chose."

Olson is currently enrolled in UND's four-year Petroleum Engineering program in Grand Forks. He started the program in

the fall of 2010, is on track to complete his studies in December of 2013 and is trying to decide if he wants to stay for his final semester of the four years to pursue a minor or a double major. When all is said and done, he'll graduate with a Bachelor of Science degree in Petroleum Engineering.

"After I graduate, I hope to get a job with an oil company and see where the job takes me. Hopefully I can spend time in the Bakken," he says. "I've been very fortunate in my summer oilfield experience," he continues, "the last two summers I've gotten hands-on experience. Two summers ago, I was working as a floorhand for Patterson-UTI Drilling,

and again now through my internship with Hess Corporation this past summer."

Olson heard about the NDAOGPC scholarship through his college mentor, who sent him the scholarship information in an e-mail. He found out he won at the beginning of August, while he was in Houston for his internship.

"I was listening to presentations when they called, so I later listened to my voicemail and found out that I had won the scholarship," he recalls. "I'm proud to have been selected for the scholarship—it shows that my experience and work in school has been paying off for me."



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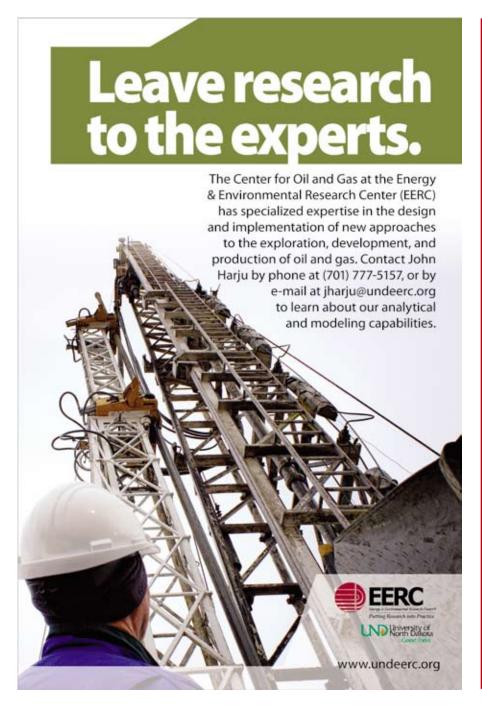
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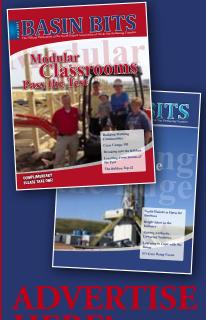


TRIVIA TIME

- There are 42 gallons in a barrel of oil; though barrels are no longer used to ship oil, they are still the unit of measurement in commerce in America. The size was determined by the practices of Pennsylvania oil companies—they shipped oil to market by wagon or train in open wine barrels that held 48 gallons. By the time they reached the market, only 42 gallons were left because of spillage, and therefore the measurement became 42 gallons.
- Bakken comes from the Norwegian word "bakke," which in English means "hill."
- Oil and natural gas supply 62 per cent of the United States energy needs on a daily basis (oil 37 per cent; natural gas 25 per cent).

Source: Trivia courtesy of the Department of Mineral Resources, North Dakota Industrial Commission.





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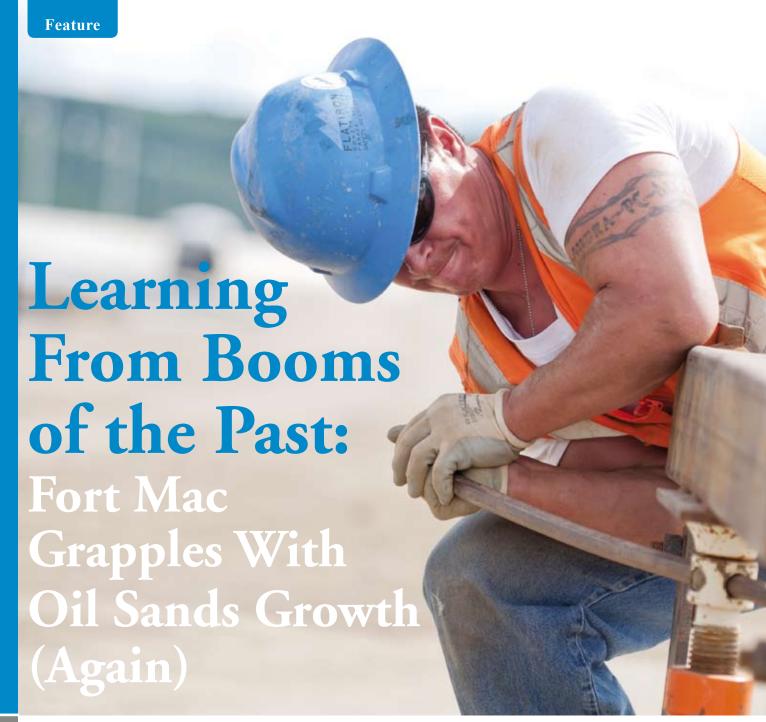
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If we look to the booms of the past, like the one in Fort McMurray, Alberta, we can find guidance for how to deal with issues like population spikes, infrastructure, litter problems, law enforcement/ security issues, traffic problems, etc. The following article and photos were originally published in September 2011 in Alberta Oil and have been reprinted with permission from the author and photographer.

By Carol Christian



elissa Blake remembers the last boom vividly. As the mayor of the Regional Municipality of Wood Buffalo that Fort McMurray is a part of, she lived it every day. And as story after story chronicled her hometown's infrastructure deficit—brought on by the oil and gas industry's grand designs to rapidly expand oil sands production—she was often the public face of a city in crisis.

The experience hasn't been forgotten by Blake, who moved to Fort McMurray in 1982 and has been Wood Buffalo's mayor since 2001. As the industry dusts off development plans it shelved during the recession, she thinks those plans should be slowed unless the city's infrastructure is beefed up substantially.

"We still aren't where we need to be for the population that exists presently. That means we're not anywhere we need to be for the population yet to come," says Blake. "If you want an aggressive pace, then you need aggressive investment in the things that make it possible to accommodate the people. If we're not getting aggressive investment, then you need to slow the train down."

Yet there seems little chance that growth in the "train" Blake speaks of—rampant oil sands development—will slow down. The nearly 170B barrels of oil sands reserves that stable and business-friendly Alberta possesses are just too tantalizing for the industry to ignore. Players in Alberta's oil sands include Canadian stalwarts such as Suncor Energy Inc., Imperial Oil Ltd. and Husky Energy. International firms—from ExxonMobil and Royal Dutch Shell to Statoil and Total SA—are all investing in Alberta's pot of black gold. Asian state-owned companies like PetroChina and the Korean National Oil Corp., have also come calling. In 2009, Asian investment in the oil sands totalled \$9.2B.

PREDICTING PRODUCTION

Daily production from the oil sands currently stands at 1.6M barrels per day. But recent forecasts see production growing to 3.7M barrels per day by 2025. In order for that growth to occur, a Canadian Energy Research Institute report states that the total capital investment for new oil sands projects from 2010-2035 could total \$253B. Such ambitious growth plans will have a profound impact on Fort McMurray. It will bring in new employees and their families and that will place additional pressures on the city's schools, health facilities, housing, roads, and water and sewer lines. But will adequate investment be made in the infrastructure Fort McMurray so desperately needs to cope with the growth? And who will pay for it?

The need for more land, more schools and improved roads continue to be hot button issues in this city of 76,797 people. Brian Jean, the region's Conservative MP, insists that the Stephen Harper government has taken action to address the city's infrastructure deficit.

"I think we've stepped up in big ways. Almost \$700M was invested over the last two to three years in the riding," says Jean, who adds that a large portion of that has gone to the municipality for future-looking infrastructure. "I think what we've done as a federal government in co-operation with the province is going to

make it a lot easier to transition into the new booming economy. I think we're still going to suffer, but maybe not as bad as we would have otherwise."

Jean points to a few major projects as proof of the federal government's commitment to investing in the city's bricks and mortar. He highlights the construction of the five-lane Athabasca Bridge that boasts the largest bridge deck in Alberta. The size of five football fields, and able to carry about 1,000 tonnes, 12.5 times the weight a normal bridge can carry, it's designed to withstand the heavy and wide loads heading to oil sands sites. The bridge is scheduled to open this fall, while the adjacent Grant MacEwan and Ralph Steinhauer bridges will be rehabilitated and used solely for southbound traffic. The bridgework will provide welcome relief from the dreaded hours-long tie-ups that occur when there is an accident on one of the bridges.

ROADWORK AHEAD

Then there is the ongoing twinning of the 240-kilometer Highway 63, which has been dubbed the "Highway of Death" because of the number of fatal accidents that have occurred on the road over the years. The highway is the city's heavily used road link to southern Alberta, and the oil sands activity means there is a high volume of traffic on what is now mostly a two-lane undivided highway. But the entire route won't be fully twinned until sometime after 2015.

Don Thompson, the retired president of the Oil Sands Developers Group (OSDG), a non-profit industry-funded organization that represents oil sands operators and developers, agrees with Brian Jean that the city is much better prepared to weather a boom than it was a decade ago.

"If you look around Wood Buffalo, what do you see? Everywhere you look, roadwork and other kinds of work," says Thompson. "You can see with your own eyes that there has been a substantial amount of infrastructure committed to and being constructed. Will that mean nobody will have an issue? Of course not, but I think we're far better prepared."

Fort McMurray-Wood Buffalo MLA Guy Boutilier isn't as optimistic. Boutilier is a former Wood Buffalo mayor and provincial cabinet minister who left the Conservative Party in 2009 and served as an independent MLA before joining the upstart Wild Rose Alliance in 2010. He's been a sharp critic of the provincial government's handling of his city's infrastructure woes, with the slow progress in twinning Highway 63 being a sore spot.

"It appears to me that when it comes to the twinning of Highway 63, when a minister of the Crown says we can't do it faster because caribou are calving and birds are migrating, that summarizes this government's attention to Fort

McMurray," he says. "Twin the damn highway. The accidents on it are unacceptable."

SCHOOLS BURSTING AT THE SEAMS

Also unacceptable to Boutilier and other civic leaders in Fort McMurray are the city's overcrowded schools. The situation isn't surprising, considering the community's population has grown by 80 per cent since 2000 and more than 32 per cent of Wood Buffalo's 104,338 residents are under the age of 25. The birth rate in the city has also soared, rising from 600 per year in 2005 to 1,200 in 2009 and 2010. As more people come to Fort McMurray for the work a growing oil sands sector will bring, the number of births will continue to rise. So will the crowding in its schools if new ones are not built.

The schools in the city's Catholic and public school boards are already bursting at the seams. When the Catholic board's St. Martha elementary opened, it opened full. Built to house 450 students, it now has almost 700 students thanks to the addition of eight portable classrooms. St. Anne school is built to comfortably house 650 but now has close to 700 students. Meanwhile, Father Patrick Mercredi Community High School, originally designed for 850 students, now holds 1,350.

The public schools are in a similar situation. Timberlea Elementary School was designed to house 450 students. It's now been capped at 750 students and it includes 23 modular classrooms.

"The district is ready and the district has the capital plan . . . We worked with the city. We have the school sites allocated. We know where they're going to be located within the subdivisions. What we don't have is the funding," says Fort McMurray Public Schools Associate Superintendent of Business and Finance Allan Kallal.

Kallal isn't optimistic the board will get the funding it needs, either. The provincial government has known about the need for new schools in Fort McMurray for some time. In 2008, it announced it was allocating \$420M to complete several infrastructure projects in the city. But only \$14M of it was set aside for schools, building École McTavish Junior High School (which opened September 2011), as well as maintenance work on the Catholic board's St. Paul and St. Anne schools.

In Kallal's opinion, the public school board isn't ready for the students that another oil sands boom will bring. "Are we prepared for the next boom? Not funding-wise because they cut our grants and not facility-wise because we're not in a situation to add modulars. We did that in the last boom and they're full."

EMPLOYMENT EXPLOSION

A spring report issued by the Canadian Energy Research Institute on the economic impacts of oil sands development forecasts some big employment numbers for Alberta and Canada. Employment in Canada as a result of new oil sands development, which would include direct, indirect and induced employment, is expected to grow from 75,000 jobs in 2010 to 905,000 in 2035. During that same period, thousands of jobs are expected to be created and preserved in Alberta as a result of new oil sands development.

Not all of those jobs will be located in Fort McMurray. But a good portion of them will be. As new people move to the community and current residents put down roots and stay there, there has to be housing and land to accommodate them. The businesses that will spring up to serve them must have land to develop as well.

HOUSING HAVOC

Economic booms are not kind to people looking to buy a house or rent an apartment. That's certainly the case in Fort McMurray. According to statistics from the Canada Mortgage and Housing Corp., the average monthly rent for a bachelor suite in the city in April 2011 was \$1,441. The average cost of a single family dwelling was \$746,315.

Freeing up land to allow for more residential, commercial and industrial development is seen as a key way to alleviate the need for new housing. But Wood Buffalo mayor Melissa Blake is less than impressed with the provincial government's efforts in this area.



"The escalation in costs is predicated on a lack of supply. We still are getting dribbles of land that are coming in and it's not enough to satisfy the pent-up demand for commercial space and the inevitable need for housing," says Blake. "We see that continuing at this point, which is completely unacceptable."

Fort McMurray Chamber of Commerce President Jon Tupper believes the municipality is in a better position to handle a boom, in part because it has a council that dealt with the last one. But he's also worried about the challenges that rapid growth in the oil sands will bring. "We need a steady and ongoing release of land, and we need that land to be mixed, residential, commercial and industrial in use," he says. "We can't think that just because we've released some land and we've seen some development happen, that we're good or that we're done. It has to be a steady stream going forward."

For all the criticism his government has taken for not properly preparing Fort Mc-Murray for an oil sands-fuelled future, Alberta's Infrastructure Minister Ray Danyluk says the province hasn't neglected Canada's largest municipality. He says the province has invested millions into its infrastructure—including money for two new schools—because it knows the city and the Wood Buffalo region are vital to Alberta's economy.

But on the touchy subject of property, Danyluk indicates the province isn't going to drastically alter the amount of Crown land around Fort McMurray that it will release for development; maintaining it would be economically detrimental to current land values. "If you have a property that might be worth \$500,000 or \$1M, and all of a sudden you release a bunch of land around it, that value depreciates," says Danyluk. "We're not trying to control the market. We're trying to keep a little bit of input into what the community needs."

INVESTING IN INFRASTRUCTURE

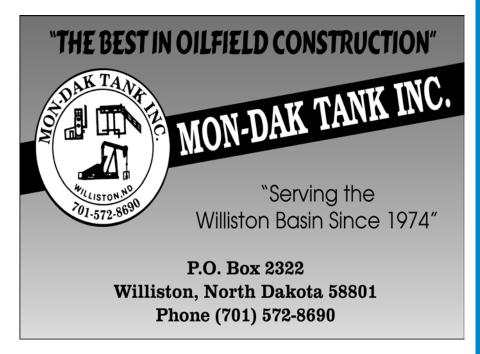
As Fort McMurray faces up to what promises to be another round of wild economic growth and even wilder needs for infrastructure, some residents are asking what the industry can do to help relieve the pressure. The argument goes that because industrial development will inevitably bring thousands of people to the city and result in the need for more services, then industry should help pay for it.

It's an old debate, and as the oil and gas industry often points out, it feels it does its part by paying taxes and royalties, which governments then use to invest in the infrastructure that's needed. The take from the oil

sands is large. Municipal taxes levied to the oil sands for 2011 are \$425M, representing 87 per cent of Wood Buffalo's tax base. And over the next 25 years, it's estimated that the oil sands sector will pay \$105B in provincial taxes and \$311B federally, plus \$350B in provincial royalties.

"We're far better served for industry to use its capital to invest in its own facilities because those are the facilities that, in turn, become taxable to the municipality and generate employment and, therefore, employment taxation," says Thompson, who left the OSDG in July. "Our role is to create the wealth."

Companies active in the oil sands have also partnered with various community organizations to help support needed facilities. Some notable examples include Syncrude Canada Ltd. donating \$1M to the Father Patrick Mercredi Science and Technology Centre, and Suncor Energy's partnership with the municipality on the Suncor Energy Theatre for the Performing Arts. Oil sands advocates also point out that the sector has taken measures to relieve some of the city's infrastructure pressures. "If we were in Edmonton, the refineries, for example, take sewer and water from the city. We don't do that. Same with garbage removal," Thompson notes.





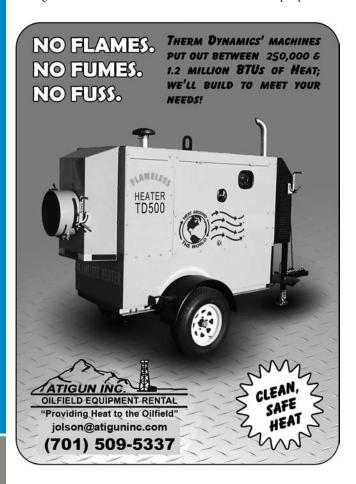
"We look after on-site roads and stuff like that. We provide busing that takes [cars] off the streets."

As Suncor, which produced over 500,000 barrels of oil per day in 2010, prepares to bring on large-scale projects over the next decade, it's keenly aware of concerns around the possibility of creating an inflationary atmosphere in the industry or the potential pressures on the community brought about by rapid growth. Addressing those challenges will require more collaboration between the operators in the oil sands, so that the growth this time around is coordinated and manageable.

"What's changed over the last four years—especially with our merger with Petro-Canada and with our partnership with Total—is that instead of competing and forging ahead on separate projects, we're now going to make a combined and coordinated effort to manage growth," says Suncor spokesman Dany Laferriere, reflecting on the last growth cycle before the economic downturn struck in 2008. For Suncor, that includes keeping the workforce at a lower level, roughly 4,000 people per site, versus some of the experiences prior to 2008 that had as many as 7,000 people on one site.

Whether the efforts of the various levels of government and the oil sands sector will be enough to avoid a repeat of Fort McMurray's infrastructure struggles from the previous decade remains to be seen. Mayor Blake holds out some hope that oil sands growth plans and her community's need for new infrastructure can both be accommodated.

"There are still some things we would like a whole lot more focus and attention on," she says. "But I don't think that we're off the page on what we desire to see happen here. The community is looking to achieve the growth standards to accommodate the daily production coming from the oil sands. It's all linked together."





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It's Not Rocket Science... or Maybe it is

Gas-cooled modular reactors with spherical fuel elements—their inherent safety and potential applications.

By Heinz Termuehlen, H.J. Hamel & Walter Jaeger

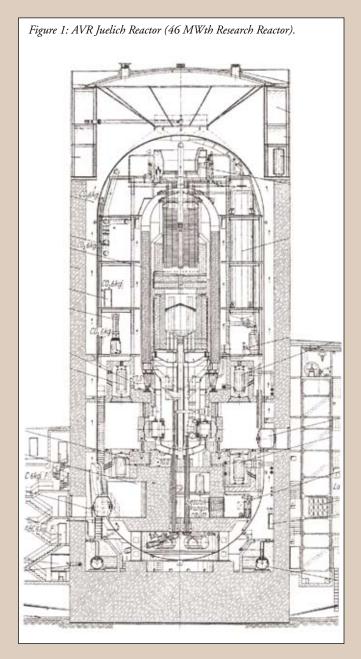
as-cooled modular reactors should be considered as a next-generation nuclear reactor design. They provide inherent safety and can be applied for not only generating power but also for liquefying coal to gasoline, extracting oil from oil sand, producing hydrogen and much more.

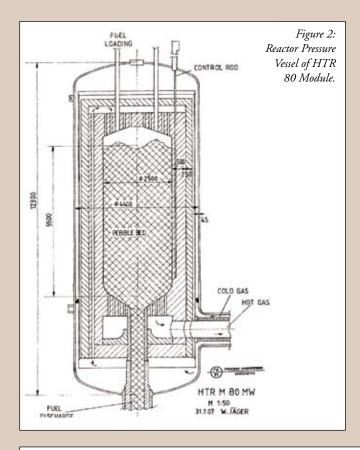
The gas-cooled modular reactors are also revered as pebble bed reactors or high-temperature gas-cooled reactors (HTGR's or HTR's) are designed to shut down safely by themselves within design temperature limits if their helium coolant stops flowing. No external action of any kind, like moving control rods or emergency cooling, is needed for a safe shutdown.

The development and testing of high-temperature gas-cooled reactors goes back to the 1960s. Two modular reactor sizes have been developed and are designed for 80 MW $_{\rm th}$ and 250 MW $_{\rm th}$ both with a helium gas discharge temperature of up to 950°C (1740°F). Their inherent safety has been proven by tests performed on the 46MW $_{\rm th}$ AVR Juelich reactor (Atom Versuchs Reactor Juelich) in Germany. This research reactor (shown in Figure 1), was in operation from 1966 to 1988. It generated a total of 1,700,000 MWh and was extensively tested and operated with a helium discharge temperature of up to 1,000°C (1,832°F).

The reactor vessel of an HTR 80 module (illustrated in Figure 2) has in its center the pebble bed with a diameter of 2.5m (8.2 feet) and a height of 5.5m (18 feet). Based on experience, it's presently recommended to keep the pebble bed diameter below 3m (9.8 feet) and the modules specific capacity to less than 3 MW_{th} per m³ (1.3 cubic yards) pebble bed volume to guarantee the inherent safety of modular reactors. The helium coolant enters the reactor container from the bottom, flows upwards and enters the pebble bed from the top. It leaves the container at the bottom with its maximum temperature and a pressure of about 30 bar (435 psi). The helium circulation is performed by a helium circulation fan. The pebbles are loaded into the pebble bed from the top and discharged at the bottom of the inner container. There are about 150,000 pebbles in an HTR 80 module. The medium residence time of the pebbles is about three years. During that period, the pebbles circulate about 10 times.

The HTR modules, since they are inherently safe, can be erected in industrial complexes and their high-temperature helium can be used as heat source for a large number of processes. Because of the small size the fully-assembled HTR module, pressure vessels can be factory built, shipped to any site and moved on oil sand fields to different locations.





The spherical fuel elements (pebbles), the size of a tennis ball, are circulated and used fuel elements are replaced during operation without any need for a refueling shutdown. Stable oxides or carbons of uranium, plutonium or thorium can be used. A silicon carbon layer is applied as a firewall and seal. Less than 1m³ (1.3 cubic yards) of pebbles have to be transported to a repository from an HTR 80 operating at full capacity 24/7 for an entire year. After storage for 200 years, the pebbles can be picked up by hand without any harm. Diverting weapon-grade material from fuel pebbles is impossible.

In as early as the mid-1980s, an HTR module in combination with a coal-to-gasoline liquefying plant, was already designed based on operating experience with both systems. Figure 3 shows the HTR module on the left providing helium at 950°C (1,740°F) to the steam reformer/steam generator vessel at the right. The helium returns from the steam generator to the HTR module with a temperature of 300°C (570°F). The nuclear energy from the HTR module is used in the steam reformer for methane cracking and in the steam generator to provide steam for mainly a steam turbine. The combination of an HTR module with a coal-to-gasoline conversion plant produces one metric ton (360 gallons) of gasoline from only 2.5 metric tons (2.8 short tons) of coal and has the following advantages over a conversion plant using coal only:

- Specific coal consumption is less than 50 per cent, plus coke is produced as byproduct. If deducting the coke production from the coal consumption, the specific consumption drops to 30 per cent.
- CO₂ discharge is only 10 per cent.
- CO₂ is collected in a concentrated form for easy use or storage.
 - There are no measurable SO₂, NO_X and Hg emissions.
 - N₂ is separated in a low-temperature gas separation unit.

HTR modules can also be used in a combination with facilities for oil recovery and refinery providing gasoline and other petroleum products from oil sand without the need for fossil fuel and without any discharge of CO₂ and other emissions. Figure 4 shows an example of the bitumen recovery from oil sand by the steam assisted gravity drainage method, eliminating the use of fossil fuels with their CO₂ and other emissions. Steam of 120 bar (1,740 psi) and 350°C (662°F) is used. If needed, both the pressure and/or the temperature can be changed. For this example, the helium discharge

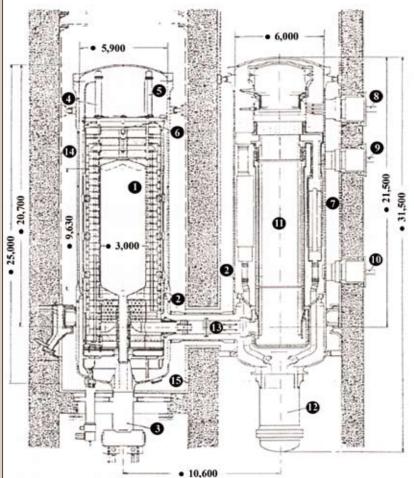


Figure 3: HTR Module with Steam Reformer/Steam Generator Vessel.

1. Graphite Pebble Bed 9. Main Steam Pipe
2. Processure Vescel 10. Feedgrafter Pipe

2. Pressure Vessel 10. Feedwater Pipe

3. Fuel Removal 11. Reformer Tubes

4. Small Pebble Scram 12. Helium Circulation System Fan

5. Reflector Rod 13. Hot Gas Pipe

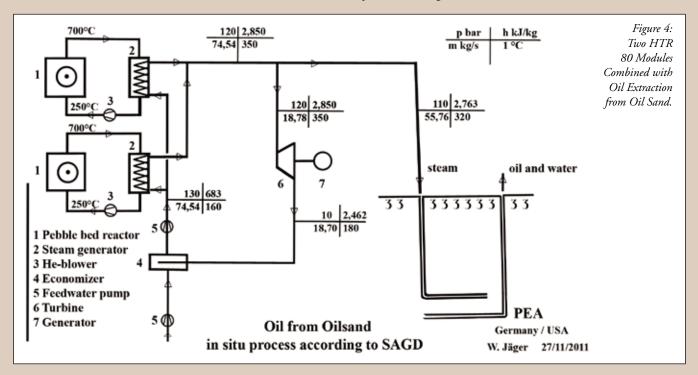
6. Fuel Loading 14. Surface Cooler

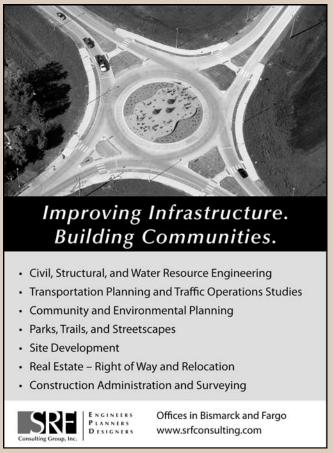
7. Steam Generators 15. Insulation

8. Reformed Gas Piping

temperature of the HTR modules is only 700°C (1,290°F), which can be raised to a higher level up to 950°C (1,740°F). The steam turbine provides power for internal consumption and for the power grid. It's estimated that the steam supply of 55.8 kg/s or 200mton/h (443,000lb/h) applied for the oil recovery can provide about 67mton (150,000lb/h) of oil.

Many other applications of HTR modules, besides those discussed above, can be developed to save fossil fuel and reduce emissions of green-house gases. Presently in China, a small HTR 10 MW_{th} research reactor has been in operation for the last 10 years. A power generation plant with two HTR 250 modules is under construction and power plants with a larger number of modules are under consideration.







BASIN BITS | Fall 2012 107



Getting to know the number-one volume railroad in North America.

By Paul Adair

he northern Great Plains are generally characterized as oceans of wide-open spaces, vast amber waves of grain, by farmers tending their crops. More increasingly, however, this pastoral image of agricultural life is now being supplemented with the sight of drilling rigs rising up from the horizon.

There's oil in the Bakken, and it's booming. And BNSF Railway (BNSF) is positioning itself to meet the demands with North Dakota now describing its outbound production in terms of barrels, as well as bushels.

BNSF, in its current form, was created out of the merger of two companies, the Burlington Northern and the Santa Fe back in 1995. However, BNSF can trace its railroading lineage back much further to the earliest days of the American rail service—over 160 years—to when the first spikes were driven into the rails of the Aurora Branch Railway of Illinois.

In 2010, BNSF was purchased by the "Oracle of Omaha," Warren Buffett, who is widely considered to be one of the most successful investors of the 20th century.

"Being acquired and privately held by Berkshire Hathaway was a vote of confidence in BNSF and the future of freight rail," says Krista York-Woolley, Director of Corporate Communications. "The acquisition hasn't changed how we operate but it's certainly changed the dynamic of how we're received publicly."

SERVING THE WILLISTON BASIN AND THE BAKKEN

With its corporate headquarters located in Fort Worth, TX, BNSF's rail network stretches across the western two-thirds of America, without neglecting its local roots. This enables BNSF to oversee, on a national scale, while still honing in on regional markets such as those found in North Dakota.

"BNSF is focused on the Williston Basin area and Bakken crude shipments," says Denis Smith, BNSF Vice-President of Industrial Products Marketing. "We have teams totally devoted to the Bakken. We also have economic development teams focus on the infrastructure and investments that are being made there. They're focused on making sure it all gets done right."

Through the development of new rail lines and facilities across the country, BNSF has established itself as the number-one volume railroad in North America. The company is the top inter-modal carrier in the United States, the top coal carrier in the Powder River Basin and one of the largest grainhauling railroads in the country. "We have real strengths in what we do," says Smith.



The Bakken has swelled in terms of production and development and this growth has given the industry a number of challenges unique to working in the region.

"The weather always poses challenges," says Smith, "as it does for everyone, whether you're a railroad, a trucker or just someone who's living up there."

Even determining just how much oil lies beneath the Bakken has proven to be tricky. As the science and technology behind hydraulic fracturing improves, so do the predictions on what the region holds in terms of oil reserves.

"There's been this moving target of how big this thing is. You can go all the way back to the late '50s to find out the forecasts for how much oil there is, and it's constantly changing," says Smith. "It just seems to be getting bigger and bigger. The only thing you can say for sure on any oil forecast is that they've always been off."

UPPING THE ANTE

The increasing potential amount of oil from the Bakken has created a huge boost in terms of development and production.

Currently BNSF ships over 230,000 barrels of crude out of the Bakken every day, with plans to be able to accommodate almost 750,000 barrels in the future. "The only thing that surprises me anymore is how fast the development has taken place. It's tripled in two years," says Smith.

"But it's not all about the outbound crude; it's also about the inbound sand, inbound clay, inbound pipe and all the other amenities that go along with the boom in population. Lumber for housing, moving big equipment out to the region—it's had a collateral effect with many different businesses."

Although business has been steadily growing to record levels in the region, the rapid expansion has created problems in terms of staffing and the infrastructure required to take care of those working in the industry. "It's become expensive to live up there," says Smith. "Housing is short and there's a lot of demand for services that aren't being provided."

The upswing in production has also brought many companies to the Bakken—companies that may lack experience in using rail as a transportation alternative. BNSF plays a big role in educating those businesses on the benefits of rail service.

"We work with many oil companies that are new to rail. There seems to be a perception among them that they can't use rail to haul crude," says York-Woolley. "But once we're able to show them how easy it is to get up and running and how they can access multiple United States markets to maximize the value of their crude, they're able to see the real benefits in using rail. We become a preferred long-term solution."

BENEFITS OF SHIPPING VIA RAIL

Cost and efficiency are two of the main benefits for the oil industry enlisting BNSF as its main mode of outbound crude transport. "With a pipeline, you need to build, you need to get permits, you've got to get across





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Denver, CO 80202 303-297-2028 Williston Basin Office 1407 W Dakota Parkway, Suite 1B Williston, ND 58801 701-572-2020 state lines, and then you're expropriating property," says Smith. "The railroad's been here for over 160 years—we're already here and we already have the expertise in shipping crude—and that's what makes shipping by rail such an expeditious thing to do."

Within the oil producing states, there's also a commitment from all levels of government to invest in the development of the Bakken. "They're building highways and schools," says Smith. "They're building the public services that they need."

This arms-wide commitment to investment allows for a more collaborative relationship between the oil industry and BNSF. It means that the rail company doesn't have to go it alone in creating the infrastructure needed to keep up with the growth.

"We have already expanded some of our yards and put in some infrastructure to handle the boom," says Smith. "But the customers have put in \$1B worth of infrastructure at the origin. Then it's just up to us to make sure we have the capacity to move it from that origin to a destination."

It's actually at the destination where a lot of the infrastructure expansion is expected to take place. "The destination may need to get built up in order to handle the production that's coming out of the area, Smith continues. "We may have to put in some extra siding out in the Pacific Northwest to get to their refineries to handle the Bakken crude."

Through all this expansion and production, BNSF remains dedicated to the community in which it serves, and in some cases, the rail company IS the community in which it serves. The company currently has almost 40,000 employees, about four per cent of whom reside in North Dakota. "Community is one of our core values here at BNSF," says York-Woolley. "It's something we focus on heavily and we pride ourselves in being active participants in the community, supporting local youth and charitable organizations."

So, as the Bakken boom affects the characterization of North Dakota, you can count on the BNSF to remain steadfast in its commitment to service, community involvement and investment—the same as it's done for more than 160 years.

FOR MORE INFORMATION:

BNSF Railway Corporate Headquarters

2650 Lou Menk Dr. Fort Worth, TX 76131-2830 Phone: (800) 795-2673 Website: www.bnsf.com

Brosz Engineering: Small Town Company, Big Time Success

How a three-person operation in Bowman, ND has grown to a 100-person company that serves eight communities throughout the Bakken.

By Paul Adair

"Not everyone fits into the culture like the one we have here in Bowman. We're more of a small town company and we like it that way."

f you've ever had the opportunity to drive the roads and highways of the Bakken Formation, you may have witnessed some of the work done by Brosz Engineering Inc.

"We're an engineering and surveying company. We do civil engineering such as roads, bridges, streets, sewer and water infrastructure improvements, airports, and whatever else it takes to do those types of projects," says Dan Brosz, President of the company. "And though we may specialize in roads and bridges—only because there's more of that kind of work right now—we're really a Jack of all Trades."

Brosz Engineering has set up shop in eight communities throughout the Bakken, serving most of South Dakota, western North Dakota and eastern Montana.

Only four short years after entering the profession, Brosz found himself with the opportunity to start up his own engineering firm—an opportunity that others might find intimidating. "But I was just too young to know any better," Brosz laughs, "I had a job to do so I kept working, and it just kept on going and going."

Now employing a staff of almost 80 fulltime workers, not including the 20-some temporary employees hired to help out during



the busier summer construction months, Brosz Engineering has come a long way from its humble beginnings 30 years ago.

"When we started, we were pretty small. There was just an engineering technician, a part-time secretary and myself," says Brosz. "But we had good community support behind us. I had a lot of people who believed in me, got me on my feet and helped me out. It's quite a community here in Bowman and those are just the kind of people we have."

And since its establishment, Brosz Engineering has been giving back to Bowman, ND in terms of the services it provides. "In a 50- or 60-mile radius around the town, there

are very few roads that have been worked on, upgraded or improved that we haven't had a hand in," says Brosz.

BUSY WITH THE BOOM

However, with the Bakken currently experiencing unprecedented growth and prosperity, the company has been looking to the oil boom for increasing business opportunities.

"The Bakken boom has kept us busy," says Brosz. "To meet the needs of the industry there are airports, along with water and sewer systems and a lot of roads that need to be improved or upgraded. That's what we do and that means there's a lot of work for us."

With the expansion of the oil industry in

the Bakken, Brosz Engineering has been required to expand in order to keep pace. "We opened the office in Stanley, ND a year-and-a-half ago," Brosz says. "And since opening, we've already added 11 full-time employees and a number of part-time employees. Plus we've added some staff here in Bowman. This boom has increased our operations quite a bit here in North Dakota."

Because Brosz Engineering provides a number of different services to its clients, the company is finding that its projects are coming in from a number of sources in both the private and public sectors. "We mostly serve the local and state government but we also have a pretty big private clientele," says Brosz.

"We do a lot of survey work in the oilfield and we do work for contractors, filling their needs. But the majority of the work is local and state government."

CHANGING WITH THE TIMES

Over the last three decades, there have been changes in the way Brosz Engineering has conducted its business, especially when working with governmental entities.

"Thirty years ago, there were much fewer regulations, so you ended up doing a lot more of the engineering and a lot less of the paperwork," says Brosz. "We probably now end up doing as much work shuffling papers, answering questions, doing all the environmental work and everything else that has to be done behind the scenes than we do actually engineering and designing something."

It's partly because of these increasing regulations that Brosz Engineering has found an increasing need for its administrative acumens. "In smaller communities, they don't have professionals that are used to lining up the funding for projects and doing that sort of thing," says Brosz. "One of the things we do now is help our clients apply for funding and then help them in qualifying and securing it."

"It's a challenge in that there's so much work to do and there are so many needs. There are a lot of projects and our clients just keep coming back and wanting us to do more," he adds. "It's a real challenge to stay ahead and get the work done on time and find all the funding to get it done."

The expertise of the staff working for Brosz Engineering is key to facing and overcoming the challenges experienced while working in the booming Bakken oil industry.

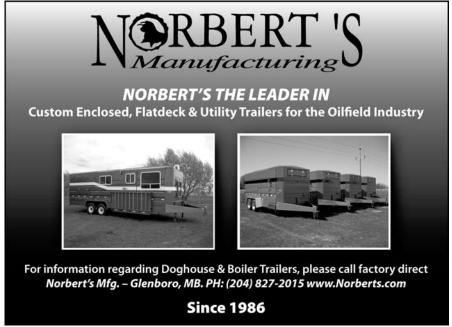
"We really are a pretty blue-collar kind of engineering firm," says Brosz. "We expect our people to do a little bit of everything—you may come to work in the morning and think that you're going into the office to work and then, all of a sudden, something comes up in the field. Then you find yourself heading out into the field for the day."

LOW TURNOVER

"We've been fortunate in that our staff has grown with us and have become more qualified," says Brosz. "We're very good at retaining employees. I have a lot of guys who started with me 15 or 25 years ago who are still with us in the firm. And we like that because it helps keep consistency with our clients."

However, Brosz admits that working for a firm such as this isn't for everybody. "Not everyone fits into the culture like the one we have here in Bowman. We're more of a small town company and we like it that way. Not





every person in the engineering field wants to live in a smaller community," he says. "But for us, and for the people who live in these communities and enjoy this kind of life, it really is fun to be able to have an engineering profession and to be able to live in a little town like this."

Over the last three decades, Brosz hasn't forgotten the support he received from the local community when he set out to start his engineering company. "They helped me then, so I try to do the same for others now," he says. "I encourage our people to be part of the community. A lot of our workload comes from local government, so we need to give back. The taxpayers are paying our wages

because they're the ones using our services and if it wasn't for those people, we wouldn't have jobs."

ON THE HORIZON

Looking ahead and predicting the future of the Bakken oil industry is extremely difficult since the forecast numbers seem to be changing daily; however, Brosz is optimistic in the longevity of his company in the region.

"I like to think that there's enough oil—and that they know where it is—that there's always going to be an oil industry here in western North Dakota, and that we'll always have plenty of work out here."

It's hard to deny this optimism as it's backed by the expertise and know-how exhibited by his staff, strengthened by Brosz's commitment to the local community and solidified by the quality work that clients have come to expect from the 30-year history of Brosz Engineering.

FOR MORE INFORMATION:

Brosz Engineering Inc.

109 S. Main St., Box 357 Bowman, ND 58623 Phone: (701) 523-3340 Website: www.broszeng.com



The heavy truck traffic flowing through South Dakota to the North Dakota oil patch has made the South Dakota Department of Transportation pay attention. A three-part traffic study on U.S. Highway 85 and South Dakota highways 79, 73 and 20 is underway to see just how much traffic is in the area. The traffic study should be finished sometime in

How do these highways compare with other busy road-ways around the world?

September.

- Busiest highway: Highway 401 in Ontario, Canada, has volumes surpassing an average of 500,000 vehicles per day in some sections of Toronto.
- Largest national highway system: The United States of America has approximately 3,995,644 miles of highway within its borders.
- Widest highway (maximum number of lanes): The Katy Freeway (part of Interstate 10) in Houston, Texas, has a total of 26 lanes in some sections (as of 2007). However, they are divided up into general use, frontage roads and HOV lanes, restricting the traverse traffic flow.
 Source: Rapid City Journal / Wikipedia



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By Vicky Steiner, NDAOGPC and Janet Sanford, ND Uniform County Permit Program

he North Dakota Association of Oil and Gas Producing Counties' Uniform County Truck Permit Committee, comprised of participating oil county commissioners, road superintendents, and sheriffs, met in Watford City on June 27, 2012. The committee discussed requests from the industry to expand county road heavy-weight and overdimension single trip e-permits to a threeday timeframe. The committee voted to go to a three-day date range for all e-permits, including the new online rig move permit, which is scheduled to be implemented and available online August 1, 2012.

E-permits are electronic permits available from the NDAOGPC's website, www. ndenergy.org. The self-issuing paper permits will still allow for only one date, as is current policy. County road staff still retain the right to discuss trip routes on county roads.

The rig move permit is a permit required to move a drilling rig in or out of a county. The cost is \$500 per move in each county, and effective August 1, it's required in all 19 oil and gas producing counties. The rig move permit must be applied for at least **three business days** in

advance of the rig move. All rig transport companies in the permit system will now get a notification of this county permit requirement. The rig move permits have been required by several of the counties prior to it becoming part of the Uniform County Permit System.

The truck permit program began in the '80s oil boom and provided information to county commissioners and sheriffs about overweight oilfield truck movement. Today, the moves are much quicker, making it more difficult to track. Due to the scale of overweight truck movement in oil counties, the fees charged don't compensate for serious damages to county roads.

Vicky Steiner, NDAOGPC executive director, reported that the NDAOGPC Executive Committee agreed to cover up to \$10,000 worth of text messaging costs associated with messaging of the association's truck permit website services. This will enable counties and members of the oil industry to increase the levels of communication on county road notifications for issues such as road closures, maintenance work and load restrictions. Previously, county road status messages were sent by e-mail only. The text messaging option is now available.

OVERWEIGHT FEE SCHEDULE

No decision was made on changes to the heavy weight fees but the committee will host a Department of Transportation official in October during the NDAOGPC AGM to discuss it further. Currently, there's a jump on the overweight fee schedule for loads over 200,000 lb. gross vehicle weight, and discussion suggested increasing the permit fee schedule at 150,000 lb. gross vehicle weight and above.

Some of the committee members wondered if the current county rate schedule encouraged certain heavier loads between 150,000 and 200,000 lb. by the current fee schedule. Road superintendents said the trucking companies are bringing in heavier loads than in previous years. It was also reported by county members that the state highway staff often directs truck drivers to county roads, rather than having them use state highways, for example, ND Highway 85. The fee schedule will again be discussed at the October meeting.

Committee Chairman, Billings County Sheriff Dave Jurgens, was re-elected chairman. Chairman Jurgens says the program is working well and needs to be as uniform as possible throughout the region for ease of use. For more information, Permit Section Operator Janet Sanford can be reached by e-mail at permits@ndenergy.org.

NDAOGPC News

REGIONAL ROUNDUP



OPPORTUNITIES IN NORTH DAKOTA SHOWCASED IN CHICAGO

Over 235 investors from the greater Chicago area and Wisconsin participated in a Bakken 101 Williston Basin conference in downtown Chicago this July. Some of the participants currently have developments under construction in residential and commercial properties in western ND counties.

Vicky Steiner, NDAOGPC executive director, explained how the Bakken oil development has changed the landscape for area political subdivisions. Steiner explained the two oil taxes, the 5 per cent Gross Production Tax and the 6.5 per cent Extraction Tax, and discussed some of the findings of the Vision West ND community meetings and the needs of western North Dakota communities. Following her talk, several investors exchanged business cards on various topics including day care centers and road projects.

The keynote speaker, former ND Governor Ed Schafer, said, "North Dakota is a game changer for the global oil market. The activity is just mind boggling." Schafer praised North Dakota's pro-business climate as an effort brought forward during the lean years when the state had few rigs drilling. One of the difficulties of government, he said, is that you have to maintain while you invest in the future. He encouraged the investors to consider North Dakota because "it's a long-term play," referring to the Bakken. "North Dakota is proof positive that it does work."

Other speakers included people from the Williston Economic Development Corp., Neset Consulting, ND Chamber of Commerce, NDIC, Bismarck-Mandan Development Association, Grand Forks Region Economic Development Corp., Minot Area Development Corp., Stone Bridge Farms of Minot, Dawa Solutions Williston, Bakken Energy Services, Whiting Petroleum Company and Aurora Energy Solutions.



Three Affiliated Tribes Tax Director Mark Fox outlines the FBIR oil and gas tax revenues being received by both the MHA Nation and the State of ND under the current tax agreement.

TRIBAL AND STATE RELATIONS COMMITTEE DISCUSSES TAX AGREEMENT

The interim Tribal and State Relations Committee of the ND Legislature met this June in New Town, ND to discuss issues surrounding local control of hydraulic fracturing, water allocations for fraccing and the possibility of a Department of Public Instruction grant to assist with Indian education issues.

Another item for committee discussion was a letter from Mandan, Hidatsa and Arikara Nation Chairman Tex Hall requesting a partial adjustment of the oil and gas tax agreement between the MHA Nation and the State of North Dakota. The adjustment proposed by Hall concerns changing the 50/50 split on oil and gas taxes that's currently in place for trust lands within the Fort Berthold Indian Reservation (FBIR) to one where the MHA Nation would receive 80 per cent and the State retain 20 per cent of earned tax revenues on trust lands.

Trust lands within the FBIR are lands held in trust by the United States federal government. Under the current agreement, the State receives 80 per cent and the MHA Nation receives 20 per cent of oil and gas taxes derived from non-trust, or "fee," Reservation lands.

THE 4TH ANNUAL COOKFEST

The cities of Ray and Belfield, ND played host to the 4^{th} Annual CookFest held at the end of July. In Ray, despite a bit of initial rain, 12 teams of 26 petroleum industry companies cooked their cuisine and shared with local residents. Over 2,000 people attended the event. Belfield also had an abundant crowd, with around 1,200 people enjoying the fine weather, excellent food and good company.

Educational sessions during the CookFest also provided important information on the Bakken oil play, how the fraccing process works and what the state and local organizations are doing to manage the growth of the industry.

The CookFest is sponsored by the North Dakota Petroleum Council and its North Dakota Oil Can! program.

PROPOSED ROAD AND INFRASTRUCTURE INITIATIVE FOR THE 2013-15 BFIENNIUM

This July, the NDAOGPC Executive Committee met with the governor to discuss how funding to western North Dakota could be increased to deal with impact issues like road repair and maintenance, city infrastructure improvements, and increased financial needs of school districts. The governor provided an outline of his plan to provide a record \$2.5B in total infrastructure improvements statewide.

Around \$1B would be directed toward a special road and highways initiative. Of that total about two-thirds would be used for four lane and bypass projects. Highway 85 from Williston to Watford City is one of the priorities on which emphasis will be placed. City bypass, or "truck reliever," routes in development in western ND are also proposed to be funded to completion.

Also discussed was the likelihood of a change in the gross production tax distribution formula, increasing the amount allocated to counties, cities, and school districts substantially. Another aspect the governor addressed was that of county and township roads. Funding for those roads, under the governor's plan, would amount to around \$145M.



NDAOGPC OFFICE RELOCATED

The main office of the NDAOGPC has moved from Dickinson to Bismarck, ND. Deputy Executive Director Brady Pelton will staff the main office in Bismarck with Executive Director Vicky Steiner maintaining her home office in Dickinson. The new office is located on the third floor of the Wells Fargo Building in downtown Bismarck and our new contact information is:

400 East Broadway, Suite 304

Bismarck, ND 58501

Tel: (701) 751-3597

E-mail: brady.pelton@midconetwork.com



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RYTEC INTRODUCES THE WORLD'S FIRST MAINTENANCE-FREE, HIGH-SPEED RUBBER DOOR

Today's industrial facilities face constant exposure to dust, rocks, mud and the elements, as well as the rigors of everyday heavy use on the extraction site. In response to the demand for lower maintenance doors capable of surviving such harsh conditions, Rytec Corp.—a leading United States manufacturer of high-performance doors—has introduced the PowerhouseTM SD industrial, roll-up rubber door. Made from the same durable material used to manufacture tires, these industrial-grade panels withstand the extreme demands of the aggregate industry.

Although conventional metal doors can certainly protect large doorways, they require significant time to open and close, as well as considerable upkeep. The Powerhouse is a fast, safe and practically maintenance-free alternative, suitable for a wide range of exterior doorways.

The engineered styrene butadiene rubber (SBR) roll-up panel is virtually indestructible. It's designed without dangerous springs, high-maintenance counterbalance systems and wear parts, saving thousands on service costs. The patent-pending design and heavy-duty construction offer speed, wind- and pressure-resistance, and the tight seals required to protect critical equipment and operations.

In the case of an accidental hit, the Powerhouse SD distinguishes itself from conventional doors by releasing without damage and restoring to full operation with just the push of a button.

Ideal for large door openings in the harshest, grittiest environments imaginable, Powerhouse doors are engineered to survive the extreme conditions in the extraction industry, anywhere uptime is critical and service may be limited.

www.rytecdoors.com



VISTA LAUNCHES WEB-BASED TRAINING PROGRAM FOCUSED ON CRAWLER DOZER BASIC OPERATION AND SAFETY

VISTA Training recently launched a new crawler dozer training module as part of its affordable, growing Silver Series of web-deliverable operator training programs. Focused on helping operators work proficiently and safely in all types of ground conditions, the content of this course, entitled Dozer – Basic Operation & Safety, looks at three key areas:

- Lesson 1 Components: In this lesson, trainees learn the major blade and track components of the track dozer and how they contribute to pushing material.
- Lesson 2 Controls: Before trainees can learn how to perform common tasks with a dozer, they must first understand the controls of the machine and their functions. This lesson also describes typical working conditions and basic operating techniques of the modern dozer.
- Lesson 3 Design and Application: One of the keys to using
 a dozer productively is effective project management—planning
 how you're going to approach your push and return cycles for
 maximum efficiency and productivity. This lesson digs deeper into
 ground conditions and how they affect productivity, as well as the
 different types of dozer operating modes, including cutting, ripping and carrying material.

This one-hour web-based, self-directed course is perfect for trainers to provide their trainees with a solid foundation of equipment and safety knowledge before they begin classroom or field training.

To learn more about the Silver Series of computer-based safety training modules from VISTA Training, visit their website.

www.vista-training.com



The following are the top 42 oil and gas operators in North Dakota, as of August 2012. The operators ranked number 35-42 are all tied in terms of active rigs and new starts. The list was provided by www.dakotapr.com.

1. Continental Resources Inc.

Rigs (Active): 23 New Starts: 7 Tel: (405) 234-9000 Toll-Free: (800) 256-8955 Killdeer: (701) 764-6582 Rhame: (701) 279-6688 Tioga: (701) 664-3001 Fax: (405) 234-9253 Web: www.contres.com

Whiting Petroleum (O&G Corp.)

Rigs (Active): 21 New Starts: 3 Tel: (303) 837-1661 Fax: (303) 861-4023 Web: www.whiting.com

Anadarko E&P (KMR)

Rigs (Active): 19 New Starts: 15 Tel: (800) 800-1101 Web: www.anadarko.com

Brigham Oil & Gas LP

Rigs (Active): 18 New Starts: 4 Tel: (512) 427-3300 Fax: (512) 427-3400 Web: www.bexp3d.com

EnCana Corp.

Rigs (Active): 17

New Starts: 8 Tel: (403) 645-2000 Toll-Free (Canada): (888) 568-6322 Fax: (403) 645-3400 Web: www.encana.com

Hess Corp.

Rigs (Active): 16 New Starts: 6 Tel: (713) 496-4000 Web: www.hess.com

OXY USA

Rigs (Active): 15 New Starts: 5 Tel: (310) 208-8800 Web: www.oxy.com

Petro-Hunt

Rigs (Active): 14 New Starts: 3 Tel: (214) 880-8400 New Town: (701) 675-2467 Killdeer: (701) 863-6622 McGregor (Tioga): (701) 546-4601 Web: www.petro-hunt.com

Questar Exploration & Production

Rigs (Active): 11 New Starts: 5 Toll-Free: (800) 323-5517

Web: www.questar.com

Oasis Petro North America Rigs (Active): 9 New Starts: 2 Tel: (281) 404-9500 Web: www.oasispetroleum.com

12.

Chesapeake Operating

Rigs (Active): 9 New Starts: 1 Tel: (701) 539-2561

Noble Energy Production

Web: www.nobleenergyinc.com

Rigs (Active): 10

Tel: (281) 872-3100

Fax: (281) 872-3111

New Starts: 6

Marathon Oil

Rigs (Active): 10 New Starts: 4

EOG Resources

Rigs (Active): 10

Tel: (713) 651-7000

New Starts: 1

Tel: (713) 629-6600

Web: www.marathonoil.com

Toll Free: (877) 363-3647 (EOGR)

Web: www.eogresources.com

15. Bill Barrett Corp.

Rigs (Active): 8 New Starts: 5 Tel: (303) 293-9100

Fax: (303) 291-0420

Web: www.billbarrettcorp.com

16. XTO Energy

Rigs (Active): 8 New Starts: 0

Tel: (817) 870-2800 Toll-Free: (800) 299-2800

Fax: (817) 870-1671 Web: www.xtoenergy.com

17. Slawson Exploration

Rigs (Active): 7 New Starts: 2 Tel: (316) 263-3201 Fax: (316) 268-0702

Web: www.slawsoncompanies.com/

exploration.html

18. Newfield Production

Rigs (Active): 6 New Starts: 4 Tel: (281) 210-5100

Fax: (281) 210-5101 Web: www.newfld.com

19. Samson Resources

Rigs (Active): 6 New Starts: 2 Tel: (918) 591-1791 Fax: (918) 591-1796 Web: www.samson.com

20. SM Energy Company

Rigs (Active): 5 New Starts: 3 Tel: (406) 245-6248 Web: www.sm-energy.com

21. Williams Production RMT (WPX)

Rigs (Active): 6 New Starts: 2 Tel: (970) 285-9377

22. Kodiak Oil & Gas Corp.

Rigs (Active): 6 New Starts: 1 Tel: (303) 592-8075 Fax: (303) 592-8071 Web: www.kodiakog.com

23. ConocoPhillips

Rigs (Active): 5 New Starts: 0 Tel: (281) 293-1000 Web: www.conocophillips.com

24. Denbury Onshore, LLC

Rigs (Active): 5 New Starts: 0 Tel: (701) 575-8188

25. Dakota-3 E&P Company, LLC

Rigs (Active): 4 New Starts: 0 Tel: (918) 488-6400

26. Enerplus Resources (Lyco)

Rigs (Active): 4 New Starts: 1 Tel: (701) 675-2135 Web: www.enerplus.com

27. Bonanza Creek Energy

Rigs (Active): 3 New Starts: 3 Tel: (720) 440-6100 Fax: (720) 305-0804

Web: www.bonanzacreekenergyinc.com

28. G3 Operating LLC

Rigs (Active): 3 New Starts: 2 Tel: (832) 538-0300 Web: www.halconresources.com/georesources

29. Hunt Oil Company

Rigs (Active): 3 New Starts: 2 Tel: (214) 978-8000 Fax: (214) 978-8888 Web: www.huntoil.com

30. Ultra Resources

Rigs (Active): 3 New Starts: 1 Tel: (281) 876-0120

31. Helis Oil & Gas

Rigs (Active): 3 New Starts: 0 Tel: (406) 248-2222

32. Murex Petroleum Corp.

Rigs (Active): 3 New Starts: 0 Tel: (281) 590-3313 Fax: (281) 590-3381

Web: www.murexpetroleum.com

33. Zavanna LLC

Rigs (Active): 3 New Starts: 0 Tel: (303) 595-8004 Fax: (303) 595-9847 Web: www.zavanna.com

34. SWEPI LP (Shell)

Rigs (Active): 2 New Starts: 2 Tel: (713) 241-6161 Fax: (713) 230-3909

35. Berry Petroleum Company

Rigs (Active): 2 New Starts: 1 Tel: (303) 999-4400 Web: www.bry.com

36. BP America

Rigs (Active): 2 New Starts: 1 Tel: (800) 333-3991 Web: www.bp.com

37. Burlington Resources Oil & Gas (Midland)

Rigs (Active): 2 New Starts: 1 Tel: (432) 688-6800 Web: www.br-inc.com

38. Devon Energy Corp.

Rigs (Active): 2 New Starts: 1 Tel: (405) 235-3611 Web: www.devonenergy.com

39. Kinder Morgan

Rigs (Active): 2 New Starts: 1 Tel: (713) 369-9000 Web: www.kindermorgan.com

40. Liberty Resources LLC

Rigs (Active): 2 New Starts: 1 Tel: (303) 749-5757 Fax: (303) 749-5759 Web: www.libertyresourcesllc.com

Triangle USA Petroleum Corp.

Rigs (Active): 2 New Starts: 1 Tel: (303) 260-7125 Fax: (303) 260-5080 Web: www.trianglepetroleum.com

41. Ute Energy Upstream Hold

Rigs (Active): 2 New Starts: 1 Tel: (435) 722-0291 Fax: (435) 722-3902 Web: www.uteenergy.com

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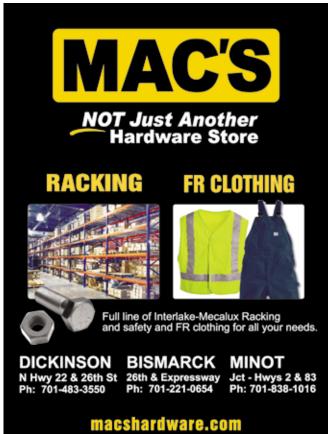
MEETING IN MEDORA

The 31st Annual General Meeting of the North Dakota Petroleum Council will be held September 18-20, 2012 in Medora, ND. This year's festivities will begin Tuesday, September 18, with the ND Oil Pac Golf Tournament at Bully Pulpit starting at 11:30 a.m. MDT. Meeting registration and a welcoming social will be held at the Chuckwagon beginning at 5:30 p.m. MDT, with an Old West BBQ, drinks and entertainment.

The AGM will officially begin at 10:00 a.m. MDT, September 19 at the Medora Community Center with a NDPC year in review, followed by a great line-up of speakers. The Chairman's Banquet will begin at 6:45 p.m. MDT at the Medora Community Center. The meeting will continue with breakfast the next morning and conclude in the early afternoon. Registration for the 2012 AGM is available online at www.ndoil.org.

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THANK YOU

On behalf of our members, thank you to the mayors, city and county commissioners, township officers and all local leaders of communities in the oil-producing counties. Your partnership is important to the growth of the energy industry and the cities in western North Dakota, and we remain committed to working with you to ensure sustained growth with minimal impacts.

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