



NORTH DAKOTA
PETROLEUM
COUNCIL

100 West Broadway, Ste. 200 | P.O. Box 1395 | Bismarck, ND 58502-1395
701.223.6380 | ndpc@ndoil.org | www.NDOil.org

December 31, 2014

Ms. Karlene Fine
North Dakota Industrial Commission
600 East Boulevard Avenue
Bismarck, ND 58505

Re: Grant Contract G-029-059 Final Report

Dear Ms. Fine:

Enclosed is the Final Report for the North Dakota Petroleum Council Oil Can! program grant, contract number G-029-059. The report covers activities that have been conducted through the program between Jan. 1, 2013 and December 31, 2014.

The Oil Can! program continues to be very successful and a powerful tool for industry outreach, and the North Dakota Petroleum Council, its members, and its partners thank you for your continued support of this program and its initiatives. It has been a pleasure to administer this program, and I look forward to working with the Oil and Gas Research Council and other partners to further this program and its goals.

Please contact me if you have any questions or need additional information for the enclosed grant report.

Sincerely,

Tessa Sandstrom
Communications Manager

Enclosure



North Dakota Petroleum Council's *Oil Can!* Program

Contract number: G-029-059

Phase IV/Final report: December 31, 2014

Applicant: North Dakota Petroleum Council

Principal investigator: Ms. Tessa Sandstrom, Communications Manager



NORTH DAKOTA
PETROLEUM
COUNCIL

100 West Broadway, Ste. 200 | P.O. Box 1395 | Bismarck, ND 58501-1395
701.223.6380 | ndpc@ndoil.org | www.NDOil.org

1.0 PROJECT SUMMARY

The objective of the North Dakota Petroleum Council's Oil Can! program is to open the lines of communication and improve understanding between the petroleum industry of North Dakota and key stakeholder groups such as property owners, royalty owners, policy makers, community leaders, media and the general public. The North Dakota Petroleum Council (NDPC) has been developing, delivering, and engaging in public education of oil and gas for several decades and continues to build upon its successes by enhancing education efforts through improving existing projects and/or events and adding new ones. Since 2008, the North Dakota Oil Can! program has been a primary tool to promote public awareness of the benefits and opportunities provided by the North Dakota oil and gas industry, which is one of the statutory goals and purposes of the Oil and Gas Research Council (OGRC).

The Oil Can! program achieves this through several education and outreach events, including Bakken Rocks CookFest, Pick Up the Patch!, Teachers Education Seminar, Energy Career Awareness Partnership (ECAP), and Oil Can! Power Kids' Futures session, as well as paid television, online and radio promotion. The program reaches thousands of people through a number of different venues each year, and support and engagement continue to grow. Each of these events and the ways in which they contribute to promoting the industry are outlined throughout the grant report.

These education and outreach initiatives are costly and time-consuming, but the feedback received is always positive and these programs become more critical each year as the oil and gas industry strives to educate individuals about the industry, help correct misperceptions, provide opportunities for feedback and airing concerns, and to maintain healthy partnerships with the people and businesses of North Dakota.

2.0 PROJECT DESCRIPTION

Founded on the principles of listen first, develop partnerships and respect others, the Oil Can! program consists of three objectives – education, outreach, and marketing and promotion – that are designed to promote awareness about the benefits of oil and gas development in North Dakota, open the lines of communication, and improve understanding between the petroleum industry of North Dakota and property owners, policy makers, community leaders, media and the general public. The following information includes an explanation of program component activities from January 1, 2013 – December 31, 2014.

2.1 Outreach

Bakken Rocks CookFest

The Bakken Rocks CookFest was held in four communities in the last two years:

July 16, 2013: Powers Lake

July 18, 2013: Parshall

July 15, 2014: Kenmare

July 17, 2014: Dunn Center

The focus of these events is to provide an afternoon and evening of free food and entertainment while providing general education regarding the oil industry. This is done through the use of informational booths manned by industry professionals and a Bakken Basics Education Session. Each event attracted approximately 1,500 people and continues to be one of the most popular Oil Can! events. Because of this, it is an important tool for building goodwill across the western portion of the state. These events give industry operators the opportunity to connect with the people directly impacted by their business on a day-to-day basis and members of the community an opportunity to meet and learn more about the businesses and people working in the region.

Although there is no quantitative way to measure the success of the event, the event is always highly praised and city leaders request that CookFest be held in their respective communities years in advance. In coming years, we will work to collect surveys to better gauge the effectiveness of the program and find ways to improve.

Pick Up the Patch

Pick Up the Patch has continued to be a popular event among both the industry and communities and generates goodwill while also bringing community members and industry employees together to improve the areas in which they work and live. In the last two years, more than 1,200 volunteers by dozens of companies have helped pick up more than 2,000 bags of trash from communities and more than 100 miles of roadways. The program has been such a success that it was awarded the Environmental Partnership Award by the Interstate Oil and Gas Compact Commission (IOGCC) in 2013. This national award recognized the program's success in bringing industry and non-industry stakeholders together to improve the environment.

In addition to holding community-wide clean-up events, NDPC members also work to promote a no litter culture by encouraging companies to include trash disposal in employee training, providing trash bags in company vehicles, and organizing regular clean-up efforts. Other companies have voluntarily adopted highways or have offered to serve as Team Leads throughout western North Dakota. Team Leads are listed on both www.ndoil.org and www.northdakotaoilcan.com and may be contacted to help organize a clean-up as needed.

While this is another event that is difficult to measure quantitatively, it continues to receive media attention (especially in local papers) and positive feedback from individuals and leaders. The NDPC will continue to work on behalf of the companies to alert and attract media; provide neon Oil Can! t-shirts to help identify the crews as petroleum industry volunteers and ensure visibility when they are working in ditches for safety; feature companies who help clean up on Facebook, our website, and monthly newsletter; and place ads in local papers thanking member companies for their

efforts. This recognition, in turn, should incentivize companies to host events and communicate to us and others their efforts and results.

Code for the Road (formerly ProgressZone)

Traffic safety continues to be a top concern for people statewide. As a means to help remind North Dakotans that cautious driving is important, the NDPC launched ProgressZone in partnership with the North Dakota Highway Patrol (NDHP) and the North Dakota Department of Transportation (NDDOT) on July 22, 2011. The development phases were partially funded by a grant from the National Highway Traffic Safety Administration (NHTSA).

The NDDOT recently launched another public safety campaign called *Code for the Road*, however, which is dedicated to similar messaging. Rather than pursue two different campaigns, the NDPC decided to partner with the NDDOT on its campaign. Billboard slogans were brought up to date, and the NDPC produced a television commercial, which aired the summer of 2014 and will air again going into 2015. The ad is also available on YouTube, Facebook, and on the Oil Can! website and was distributed to NDPC member companies, many of which incorporated it into employee safety meetings. Corresponding radio and online banner ads were also created as a part of the campaign (Appendix A). The television and radio ad and safe driving tips, including a video from the NDHP, are available at the *Oil Can!* website, www.northdakotaoilcan.com/solutions/TrafficSafety/.

Educational Sessions

Educational sessions continue to be among the most important ways to educate the public about oil and gas development, regulations, and impacts while giving attendees an opportunity to ask questions or share concerns. Over the past biennium, nine educational sessions were held, including one at each of the CookFests, two at the 2013 NDPC Annual Meeting in Grand Forks, two at the Williston Basin Petroleum Conference (WBPC) in May, and one at the

Annual Meeting in Dickinson in September of this year. Through these sessions, we reached an estimated total of 2,500 people (because the events are free and there are often multiple entrances to each venue, it's difficult to get an exact count). Similar to many other NDPC events, providing a quantitative measure of the events is difficult, but the comments received after the event are always very positive. The NDPC will make an effort to collect surveys for feedback in the coming years to ensure we are providing information that is important to attendees.

Wildlife & Outreach

The NDPC has worked hard to engage sportsmen and conservation groups over the past two years, serving as a member of the ND Energy Forum's Sporting and Oil Industry Forum as well as sponsoring various projects and groups, most notably the Mule Deer Foundation's Tracy Mountain Habitat Rehabilitation project. This past year, the NDPC also provided habitat consulting and grantwriting services for smaller wildlife groups that don't have the expertise or volunteers to apply for Outdoor Heritage Fund grants. This past year, two groups that took advantage of these services were awarded Outdoor Heritage Fund grants, one of which received additional funding from funds raised by the Oil Can! Fishing Derby.

The Oil Can! Fishing Derby was held in July 2013 and July 2014 and is growing in popularity. All participants agree to donate winnings back to the NDPC to use for wildlife and habitat projects. It must be noted that the NDPC and Oil Can! program are responsible for 100 percent of the funds used in these efforts. This program also does a tremendous job of raising awareness for issues related to conservation and wildlife while creating goodwill among both the industry and advocacy groups.

2.2 Education

Teacher Seminar

The objective of the NDPC Teacher Education Seminar (seminar) is to educate teachers about oil and gas development as well as the economic benefits and career opportunities provided by the North Dakota oil and gas industry. The NDPC has provided this continuing education program for over a decade and has helped educate teachers about all aspects of the industry from its prehistoric beginnings to its final refined and value-added products. Presentations are also given about the industry's regulatory and social impacts, including employment needs, policy decisions and impacts of oil tax on state tax revenues and the state's budget surplus. In addition, teachers are given a tour of well sites, a drilling rig, the Mandan Tesoro Refinery, and the North Dakota Heritage Center.

These presentations and tours have, in turn, given teachers the background and tools needed to incorporate lessons about the energy industry in their lesson plans and/or better advise students on possible career opportunities following graduation. Ninety teachers from across the state participated in the program over the past two years. Surveys are given to teachers after each day and tour, giving the NDPC valuable feedback to ensure the seminar continues to evolve and meet the expectations and interests of teachers in attendance.

Energy Career Awareness Program (ECAP)

Just as the Teacher Seminar helps advise teachers about the growing need for skills and education for jobs and careers in North Dakota's growing energy sector, the Energy Career Awareness Partnership (ECAP) reaches thousands of students each year, giving them the tools and information they need to make career decisions in the future. ECAP is another nationally recognized program and continues to be a resource and point of contact for North Dakota's energy industry statewide.

Over the course of the past two years, our contractors attended college fairs, did classroom presentations and attended the Fargo Health Trades & Tech Career Expo reaching a total of approximately 18,400 students. While it's difficult to qualitatively measure the impact of the program, the demand for presentations and interest in energy careers expressed by teachers, parents, guidance counselors and students helps confirm the need for the program. Furthermore, because many of the jobs and careers needed in the oil and gas industry require training and skills needed throughout other energy sectors and even industries, the program is an overall benefit to North Dakota's workforce development efforts.

Oil Can! Power Kids' Futures

As a supplement to ECAP, the NDPC hosted "Oil Can! Power Kids' Futures," an educational session for 230 elementary students, teachers and parents in the Bismarck-Mandan area that was held in conjunction with the WBPC in May. The sessions included instruction on Bakken geology, oil and gas production, products made from crude oil, and jobs and skillsets needed in the oil and gas industry. Students also received a tour of equipment used in the fields that was on display as part of the trade show.

Similar lessons are incorporated within our sponsorship of the North Dakota Wildlife Federation's Conservation Camp held in August of 2013 and 2014 near Garrison. About 50 kids attended each year. At this camp, our contractors sponsor a full day of activities, including orienteering, canoeing, archery, and obstacle courses. The lessons are tied to energy lessons and skills needed in the oil and gas industry, including safety and teamwork.

2.3 Promotion and Marketing

Oil Can! Advertising, Branding, and Promotion

Education and outreach are important components of educating individuals and promoting the industry on a one-on-one basis, but reaching the masses requires promotion through other

means, including newsletters, social media, and paid advertising. A significant part of the Oil Can! budget went toward paid advertising, but it was an important means of sharing our message with a larger audience.

During the last biennium (2011-2012), advertising messages focused on the economic and employment benefits supported by the oil and gas industry. In this past biennium (this grant period), the NDPC focused on testimonials to personalize how the industry has positively impacted many individuals. The individuals profiled included entrepreneurs, a native North Dakotan who was able to come home to pursue a great career, a mayor who has seen his city grow, a family that moved to North Dakota for better opportunities, and an eastern North Dakota business owner who has seen development positively impact North Dakota statewide.¹ Four three-week flights ran in both 2013 and 2014 and each included television and online ads. A separate, targeted online-only flight also ran during the summer (Appendix B). Each television ad was aired so that each person within the target range (18-64 years of age) saw the ad at least eight times. Accompanying online ads have continually had a higher click-through rating than the national average. Furthermore, the ads and their expanded versions have received thousands of total views on Facebook, YouTube, and the Oil Can! website. The NDPC will work to further promote these going forward.

Publications

The NDPC also has two publications it distributes to help share more information about the oil industry and its impacts and efforts in the community. These include the monthly Oil Can! Newsletter, which highlights members' goodwill efforts in communities and/or achievements and *Oil & Gas Tidbits (Tidbits)*. *Tidbits* is distributed quarterly to policy-makers and interested parties in the oil and gas industry to keep them informed about technical and educational aspects of the oil industry. *Tidbits* is developed by the NDPC with past editions featuring key issues such as the crude

¹ YouTube: <https://www.youtube.com/playlist?list=PLKAWfsVncRyFwffL79Q5Jx961fMJlQHUI> and <https://www.youtube.com/playlist?list=PLKAWfsVncRyH5Gp-nBPzQ0ezW5wj5Gn9N>
Facebook: <https://www.facebook.com/NorthDakotaOilCan>

oil transportation bottlenecks, geology of the Bakken, oil and gas economic impacts, Bakken crude characteristics, and numerous other topics (See Appendix C). The NDPC has published seven issues of Tidbits over the past two years and the eighth is currently being sent to print with distribution slated for the first part of January. This biennium's topics focused on:

- Economic impact of oil and gas in eastern North Dakota;
- The industry's partnership with sportsmen and the North Dakota Game and Fish to improve habitats and reduce impacts;
- An update on Pick Up the Patch efforts;
- Young professionals who moved to or stayed in North Dakota to pursue careers;
- One million barrel per day production milestone;
- Bakken crude standards;
- Rail transportation safety efforts; and
- Naturally Occurring Radioactive Materials (currently printing and to be distributed soon).

Tidbits is sent out to about 1,600 people and efforts will be made in the coming years to build upon the mailing list.

The NDPC also distributes a quarterly newsletter via email that contains news about the industry otherwise not covered by state or local media.² This include contributions to organizations or the community, safety milestones or records, best practices, infographics helping explain different components of the industry, among other topics. Previously, the newsletter was sent as a PDF attachment, but starting in July 2014, the NDPC began sending it as an E-Newsletter allowing us to better track how many people open the newsletter or click-through to other topics or links. The newsletter is sent to about 1,200 people. Our newsletter has an average 30 percent open rate, which is above average for many industries.³

² View the archives here: <http://northdakotaoilcan.com/news/newsletters/>

³ <http://support2.constantcontact.com/articles/FAQ/2499>

Infographics

Visual content remains popular and is, in fact, 30 times more likely to be read than a text article.⁴ For this reason, the NDPC has put focus on creating infographics to promote information about the oil and gas industry (Appendix D).

Columns

Lastly, the NDPC has provided more than 40 columns in the past two years to the Bismarck Tribune's *Bakken Breakout*, *The Bakken Magazine*, and a few other publications. These columns focus on hot topics, advancements made by the petroleum industry, contributions to the state and impacted communities, and other industry news.

Website & Social Media

Social media platforms such as Facebook and Twitter continue to grow as a means for getting the news according to a recent study by the Pew Research Center.⁵ This has prompted more focus on sharing the industry's positive message on the most popular venues. Oil Can!'s Facebook page has grown substantially since it was started in July of 2012, and currently has more than 2,300 "likes" which translates to an average reach⁶ of about 85,000 people per post, helping us further push our message and news. Likewise, the number of followers on Twitter has increased to over 1,400 "followers" with a potential reach of up to 75,000 or more per mention⁷ and 31,000 or more per retweet⁸. Both platforms represent a tremendous opportunity to share more information about the industry, and efforts will be made over the course of the next grant period to build that base.

All information provided on Facebook and Twitter will be posted or made available at the program's website, www.northdakotaoilcan.com. Currently, the site receives 2,100 visits on average

⁴ <http://blog.hubspot.com/marketing/effectiveness-infographics>

⁵ <http://www.pewinternet.org/fact-sheets/social-networking-fact-sheet/>

⁶ The number of people who have seen any content associated with the page.

⁷ A mention is when another Twitter user mentions you in a post, or "tweet."

⁸ A retweet is when someone re-posts one of your messages, or tweets.

with approximately 80 percent of them from new visitors. The most visited pages for the entire two year period of the grant include the “Jobs” page, “Bakken Info” page (general information about the Bakken), and the ND Energy Facts page (general information and statistics about energy development with links to the process of development). For much of 2014, however, the “Bakken Crude Characteristics” page, which has information about the Turner, Mason & Company study, was among the most visited pages, which shows individuals are landing on the Oil Can! page when looking for information on timely issues.

Our goal is to continue making the website a primary source of information about the oil and gas industry in North Dakota. Over the course of the coming year, emphasis will be put on making the site more user friendly, providing more frequent updates, posting a regular blog, and developing more informational videos and graphics.

3.0 RESULTS

The NDPC traditionally has funded a public perception survey to help measure the image of the oil and gas industry and thus our efforts to promote the industry through the Oil Can! program. The last survey conducted in November 2013 identified that, overall, North Dakotans continue to have a very favorable attitude toward the oil and gas industry. Eighty-three percent of those surveyed statewide favor oil and gas development in the state. In the oil and gas producing counties, 80 percent of those surveyed favored oil and gas development in the state. The survey also measured concerns about the oil industry. Social and infrastructure issues continue to be the greatest concerns of oil and gas development, especially with voters in oil-producing counties where crime, traffic, and roads and infrastructure top the list.

The NDPC did not conduct a public perceptions survey this year because of data received from other polls and a focus group studies conducted outside the program. These polls and groups indicate that while issues still linger about some of the impacts of oil and gas development, North

Dakotans generally favor the oil and gas industry. These studies will continue in the future, though will not be a part of the Oil Can! budget going forward.

4.0 Oil Can! Program Budget

Jan. 1, 2013 – December 31, 2014

	Budgeted Amount	Expenditures
Outreach Progresszone, CookFest, Pick Up the Patch, Town halls	\$ 288,400.00	\$ 231,535.36 ⁹
Education ECAP, Teachers Seminar, Power Kids' Futures	\$ 159,400.00	\$ 171,460.15
Promotion & Marketing Advertising, Creatives, Web and Social Media, Publications	\$ 1,100,120.00	\$ 1,095,623.54
Next Top Issue	\$ 23,000.00	\$ 12,235.26
Totals	\$ 1,560,420.00	\$ 1,510,854.31

Respectfully submitted by Tessa Sandstrom, communications manager, North Dakota Petroleum Council.

⁹ Well under budget because ProgressZone did not expend all of its 2013 dollars due to NDDOT's efforts to launch a new campaign, Code for the Road.

APPENDIX A

“Code for the Road” Campaign Materials

Billboard Design



Television Commercial:



Link: https://www.youtube.com/watch?v=JFCzRwB36HI&list=UU_uUeX_gStry5t_4dGVb7w

Online Ads:

For More Information
CLICK HERE

CODE FOR THE ROAD
FOLLOW THE RULES. FOLLOW THE LAW.






For More Information
CLICK HERE

CODE FOR THE ROAD
FOLLOW THE RULES. FOLLOW THE LAW.



For More Information
CLICK HERE

CODE FOR THE ROAD
FOLLOW THE RULES. FOLLOW THE LAW.

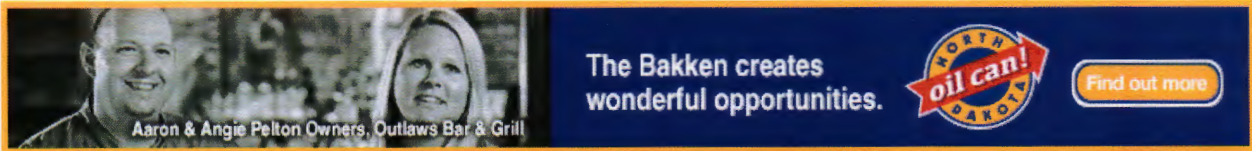


APPENDIX B

Television Ads:

<https://www.youtube.com/playlist?list=PLKAWfsVncRyFwffL79Q5Jx961fMJIQHU1>

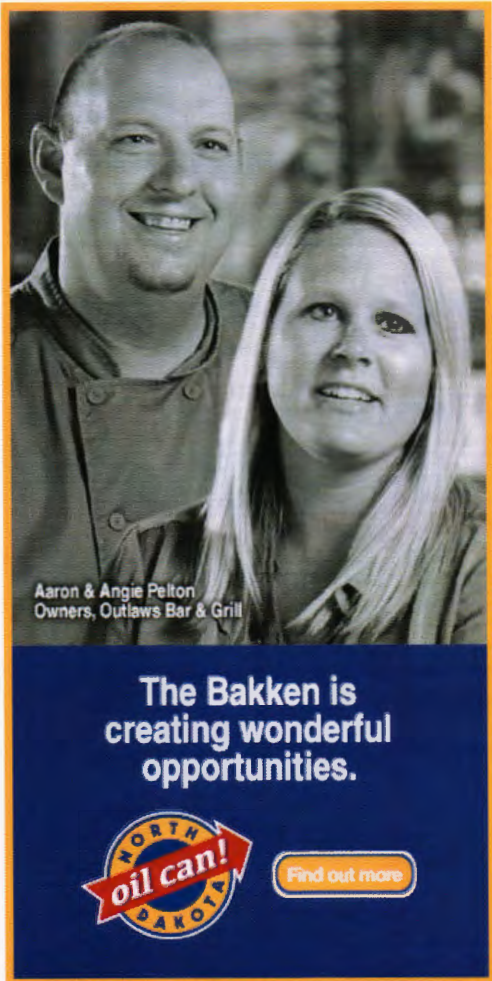
Online Ads:



A horizontal banner advertisement. On the left, a black and white photo of Aaron and Angie Pelton. Below the photo is the text "Aaron & Angie Pelton Owners, Outlaws Bar & Grill". To the right of the photo, the text reads "The Bakken creates wonderful opportunities." Below this text is the "NORTH DAKOTA oil can!" logo. On the far right is a rounded rectangular button with the text "Find out more".



A vertical advertisement. The top half features a black and white photo of Aaron and Angie Pelton with the text "Aaron & Angie Pelton Owners, Outlaws Bar & Grill" overlaid. The bottom half has a dark blue background with the text "The Bakken is creating wonderful opportunities." on the left, the "NORTH DAKOTA oil can!" logo in the center, and a rounded rectangular button with "Find out more" on the right.



A vertical advertisement. The top half features a black and white photo of Aaron and Angie Pelton with the text "Aaron & Angie Pelton Owners, Outlaws Bar & Grill" overlaid. The bottom half has a dark blue background with the text "The Bakken is creating wonderful opportunities." on the left, the "NORTH DAKOTA oil can!" logo in the center, and a rounded rectangular button with "Find out more" on the right.

Other Banner Ads:

[NDPC Say Anything Luke Taylor display 300x250 retargeting.html](#)

[NDPC Inforum Luke Taylor display 300x600 campaign.html](#)

[NDPC Inforum Luke Taylor display 300x250 campaign.html](#)

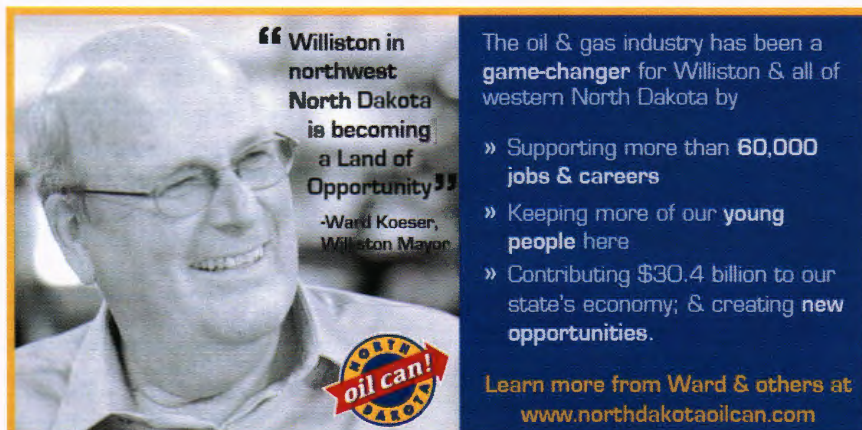
[NDPC BMO Luke Taylor display 160x600 campaign.html](#)

[NDPC Bismarck Tribune Luke Taylor display 728x90 campaign.html](#)

Extended Testimonial Videos:

<https://www.youtube.com/watch?v=RXNChVngrdQ&list=PLKAWfsVncRyH5Gp-nBPzQ0ezW5wj5Gn9N>

Print Ads:



“ Williston in northwest North Dakota is becoming a Land of Opportunity ”
-Ward Koester, Williston Mayor

The oil & gas industry has been a **game-changer** for Williston & all of western North Dakota by

- » Supporting more than **60,000 jobs & careers**
- » Keeping more of our **young people** here
- » Contributing \$30.4 billion to our state's economy; & creating **new opportunities**.

Learn more from Ward & others at www.northdakotaoilcan.com



“ History is being made in Western North Dakota, and the Bakken is moving us toward energy independence. ”
-Luke Taylor, Watford City, ND

Oil production in North Dakota is providing our nation with a reliable energy source that is reducing our dependence on foreign oil and helping stabilize energy prices for consumers and ag producers.

Hear more from Luke & learn what North Dakota oil production does for our nation at www.northdakotaoilcan.com

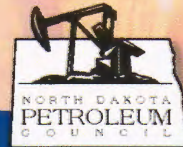
Tidbits



VOLUME VIII ISSUE 1 SPRING 2014

Oil & Gas TIDBITS

We Keep North Dakota Going Strong



One million barrels and counting: North Dakota reaches rare milestone

North Dakota will reach a significant milestone this spring that will catapult the state to heights that few countries and even fewer states have achieved: 1 million barrels of oil production per day.

One million barrels of daily oil production is a milestone only four states have ever reached in U.S. history, but for about a decade, only Texas has continued to produce more than seven figures per day in the U.S. Over these past ten years, Texas' status has been a lonely one, as it serves as the only U.S. representative in an exclusive group of only

Million Barrel Status

Only 19 countries are producing 1 million barrels per day or more, placing North Dakota among the top oil producers in the world.¹

Russia	10
Saudi Arabia	9.7
United States	7.5
China	4.2
Canada	3.4
Iran	3.2
Iraq	3.1
UAE	2.8
Kuwait	2.7
Mexico	2.6
Nigeria	2.4
Venezuela	2.3
Brazil	2.0
Angola	1.8
Kazakhstan	1.6
Qatar	1.6
Norway	1.5
Algeria	1.5
Colombia	1.0
Born	.94
Lilya	.92
Azerbaijan	.87
Indonesia	.83
United Kingdom	.81
India	.77

¹According to the Energy Information Administration's report for 2013 average daily production.
Daily production as of April 2014.

19 countries and one Canadian province that currently produces 1 million barrels per day.

"Since 2003, North Dakota has grown from the ninth to the second largest energy producing state in the country, and today we are producing one million barrels of oil daily," Hoeven said. "This is a tremendous and timely milestone for the petroleum industry, our state and our nation. If recent events in Iraq and Syria teach us anything, it is that we must build our domestic energy resources and reduce our reliance on Middle Eastern oil to strengthen America's national and economic security. North Dakota is a big part of making that happen."

ONE MILLION BARRELS | ONE MILLION THANKS CELEBRATION

When: Wed., June 25
11 a.m. - 3 p.m.

Where: Neset Consulting Service
6844 Highway 40, Tioga, ND

More Info: www.ndoil.org/events



North Dakota's rise to this status is thanks to the Bakken shale play, which has become a world-class resource since the first North Dakota well was drilled in the formation in 2006. Today, Bakken crude accounts for 94 percent of North Dakota's oil production, and its impacts continue to reverberate throughout the nation and the world.

Production of shale oil resources has led to an energy revolution in the United States that is reducing the nation's dependence on foreign oil and restoring the country's place as the top oil and gas producer in the world. The Permian Basin and Eagle Ford Shale in Texas and the Bakken are three of just ten super-giant oil fields in the entire world to ever produce 1 million barrels per day. These and other smaller U.S. shale plays now account for more than 10 percent of the world's oil supply.

North Dakota's oil production is a large contributor to that. Since 2006, U.S. oil imports have dropped 18.5 percent. At 1 million barrels per day, North Dakota's production alone is equal to 75 percent of the oil imported from Saudi Arabia and would be enough to fuel nearly 48,272 cars per day.

Oil production a boon for economy

Along with growing oil production, North Dakota is also seeing staggering growth in its economy and job market. Last year, North Dakota's economy grew 9.7 percent, making it the fastest growing economy in the nation for the fourth year straight, and that growth is expected to



Online: Read more about what 1 million barrels means at www.northdakotaoilcan.com



/NorthDakotaOilCan



@NDDoilCan



/NOPetroleumCouncil

continue. Dean Bangsund, research scientist North Dakota State University (NDSU), estimates that 1 million barrels of production will translate to \$50 million being pumped into our state and local economies per day.



One million barrels of oil produced each day will contribute \$50 million per day to North Dakota's economy.

Economic impacts are rippling out from the Bakken toward other parts of the state, but those benefits and opportunities could be greater as the Bakken matures.

“The state has the potential to further leverage expansion in the oil and gas industry not only in western North Dakota, but statewide, especially as secondary businesses develop to provide inputs and services to the oil and gas industry,” said Nancy Hodur, NDSU Research Assistant Professor.

This economic growth is also translating into new jobs and income growth. Since 2011, the rise to 1 million barrels per day has been accompanied by rising wages and incomes. In 2006, North Dakota was among the one-fifth poorest states in the nation in terms of average wages and income. Today, North Dakota is second behind only Connecticut in wages and income.

Decades of opportunities

Along with economic growth, however, the state has also seen new challenges, which include expanding the state's workforce, improving infrastructure, and accommodating growing populations with increased services, housing, and

quality of life amenities, among others.

Many of those challenges can and are being overcome with record revenues flowing into state coffers. In 2013, the petroleum industry paid \$2.9 billion in oil and gas production and extraction taxes, accounting for more than 50 percent of total revenues collected that year. Revenues collected from the oil and gas industry have grown by 1,507 percent since 2006. At 1 million barrels of production per day, it is estimated the industry will pay about \$11 million per day in production and extraction taxes, further growing state revenues.

“Oil and gas has contributed significantly to state government revenues, helping us provide more than \$2.4 billion in property and income tax relief since 2009, benefiting our families, businesses, and farmers and ranchers,” said state Tax Commissioner Ryan Rauschenberger.

The state's rise to 1 million barrels per day has also contributed over \$2 billion to North Dakota's Legacy Fund, and another \$1 billion is expected to be deposited into the fund during the 2013-2015 biennium, further strengthening North Dakota's fiscal position for the future.

With an estimated 14 to 17 years' worth of drilling left to fully develop the Bakken with today's technology and several decades of production to follow, opportunities for the state abound.

“There is a sense of optimism about the state's economic future,” Bangsund said. “People of ND have opportunities to influence their own future in ways the previous generations could not.”



North Dakota Petroleum Council
We Keep North Dakota Going Strong
 120 North 3rd Street, Suite 200
 PO Box 1395
 Bismarck, ND 58502-1395
 phone: 701.223.6380
 fax: 701.222.0006
 e-mail: ndpc@ndoil.org

Please note: If you do not wish to receive further mailings from us, please e-mail ndpc@ndoil.org and you will be removed from our mailing list.

North Dakota Petroleum Council
 PO Box 1395
 Bismarck, ND 58502-1395

See other issues here: <http://northdakotaoilcan.com/news/OilandGasTidbits/>

APPENDIX D

Infographics

BAKKEN BY THE NUMBERS

OIL & GAS INDUSTRY FACTS & FIGURES

North Dakota has been an oil and gas producing state since 1951, but it is only recently that technology, particularly horizontal drilling and hydraulic fracturing, has unlocked the potential of the Bakken-Three Forks formations, making North Dakota a top oil producer for the nation.

- 1 Texas
- 2 North Dakota
- 3 California

North Dakota would also tie with Columbia for the 19th largest oil producer in the world.

OIL & GAS PRODUCTION

North Dakota produced **1,039,635 barrels** of oil per day (bopd) in May and **1,191,628 MCF** of natural gas per day in May.

The state's average daily production in 2013 was **888,904 bopd**, totaling **313.5 million barrels** for the year. This is 70.5 million barrels more than the 2012 total.

10,892 wells capable of producing oil in May. 7,526 wells, or 69% were Bakken-Three Forks wells.

91.6 barrels were produced from the average well.

In 2013, North Dakota produced **346 billion cubic feet** of natural gas & sold 232 billion cubic feet of natural gas.

North Dakota has seen a **686%** increase in annual oil production since 2006 when the Bakken play began.

on average operated in North Dakota in 2013. The drilling rig count is a prime barometer for measuring new oil and gas activity. The all-time high was 218 rigs on May 29, 2012.

McKenzie County produced **303,849 bopd** in May to become the largest oil-producing county in the state.

Mountrail County produced **237,624 bopd** in May to rank as the third largest oil-producing county.

Dunn, Williams, and Divide round out the top 5 producing counties.

There are **17 oil-producing counties** in North Dakota.

But oil and gas exploration has occurred in every county in the state except Traill County.

The average cost of completing an oil well in North Dakota was **\$8.9 million** in 2012, up from about \$8.5 million in 2011 and \$7.1 million in 2010.

RESPONSIBLE DEVELOPMENT

The surface impact from a well pad has decreased from **10%** to only **four-tenths of 1 percent** of the field.

Together with the U.S. Forest Service, the petroleum industry has reclaimed **824 well sites** and **243 road miles** in the Little Missouri National Grasslands.

WHERE DEVELOPMENT OCCURS

First successful oil well in North Dakota was drilled south of Tioga, ND, in Williams County. That well, the Clarence Iverson #1, produced more than 85,000 barrels of oil in 25 years.

April 4, 1951

McKenzie County produced 303,849 bopd in May to become the largest oil-producing county in the state.

Mountrail County produced 237,624 bopd in May to rank as the third largest oil-producing county.

Dunn, Williams, and Divide round out the top 5 producing counties.

There are 17 oil-producing counties in North Dakota.

But oil and gas exploration has occurred in every county in the state except Traill County.

REFINING & TRANSPORTATION

North Dakota has **1 crude oil refinery... with a 2nd on the way.**

The Tesoro refinery in Mandan, ND, has a daily capacity of 68,000 barrels. A diesel refinery is being constructed near South Heart, ND, that will process 20,000 barrels of Bakken crude oil per day. When completed in late 2014, it will be the first refinery built since 1977.

22 gas plants

operate in ND with enough capacity to process 1.3 billion cubic feet per day of natural gas.

OIL PATCH EMPLOYMENT

In 2014 an average of **24,012 jobs** were supported by oil and gas extraction and direct support activities.

Each drilling rig results in about 180 direct and indirect jobs.

In 2014, the average wage in the oil and gas extraction industry in the US was \$99,841. That was 10% above the statewide average wage of \$47,776.

OIL & GAS TAX COLLECTIONS

The industry paid a total of **\$2.9 billion** in oil & gas extraction taxes in 2013, accounting for 50% of all state taxes collected.

Since the first North Dakota Bakken well was drilled in 2006, oil and gas production and extraction tax revenues have increased **1507%**.

The tax on natural gas for calendar year 2013 was 8.33 cents per thousand cubic feet (MCF).

In 2013, the industry paid \$894 million to the Strategic Investment and Improvements Fund, which is for one-time expenditures relating to improving state infrastructure or for initiatives to improve the efficiency and effectiveness of state government.

The industry paid a total of **\$332.5 million** to the Common Schools Trust Fund as well as 12 other permanent trust funds managed for the Board of University and School Lands. This included \$194 million in royalties, \$20 million in bonuses and \$119 million in production taxes.

OIL EXPORTS & IMPORTS

In 2013, petroleum remained the biggest source of U.S. energy.

In 2013, the U.S. produced an average of 7.5 million bopd, a 15% increase from 6.5 million bopd in 2012.

Meanwhile... Petroleum imports fell 26% from 10.4 million bopd in 2012 to 7.6 million bopd in 2013.

The U.S. imported about 40% of its total oil needs in 2012. Largest importers include:

- Canada 27.9%
- Mexico 9.7%
- Venezuela 9%
- Saudi Arabia 12.8%
- Russia 4.5%

The industry paid a total of **\$184.2 million** in Fiscal Year 2013 in oil and gas revenues to the U.S. Forest Service and Bureau of Land Management for federally administered lands. \$92.1 million (half) was returned to the state's general fund and the first money expended for education state-wide.

oil can't wait

Learn more at www.northdakatoilcan.com

ONE MILLION BARRELS

WHAT IT MEANS TO OUR STATE, NATION AND YOU

In April, North Dakota surpassed one million barrels of daily oil production for the first time, putting the state in an exclusive group of only a few countries, states, provinces and oilfields ever to do so.

Only 19 countries

Produce one million barrels per day or more!

Production by Country (in million barrels)

Russia	10	Nigeria	2.4
Saudi Arabia	9.7	Venezuela	2.3
United States	7.5	Brazil	2.0
China	4.2	Angola	1.8
Canada	3.4	Kazakhstan	1.6
Iran	3.2	Qatar	1.6
Iraq	3.1	Norway	1.5
UAE	2.8	Algeria	1.5
Kuwait	2.7	Colombia	1.0
Mexico	2.6		

Only 5 states

produced at least one million bopd at one time:

- Alaska
- California
- Louisiana
- North Dakota
- Texas¹

But only Texas & North Dakota currently produce more than one million barrels.



Only ten basins have ever surpassed one million barrels of daily oil production. The Permian Basin, Eagle Ford Shale and Bakken Shale are the most recent to reach this milestone because of advancements in horizontal drilling and hydraulic fracturing.

National Security

One million barrels of oil production per day meets the needs of:

75% of our nation's average daily imports from Saudi Arabia.⁴

13% of our nation's total daily imports.⁴

three times the fuel needed by the entire U.S. military per day.⁵

11 times the fuel needed by the U.S. navy per day.⁵

North Dakota Impacts

One million barrels of oil produced each day will contribute \$50 million per day to North Dakota's economy.



One million barrels of oil will deposit more than **\$11 million per day** to North Dakota's coffers in oil and gas extraction and production taxes.



One million barrels of oil could fuel about 48,272 cars with gasoline.

SOURCES

- ¹ <http://www.eia.gov/dstaps/pd/psproj/EDIndex3.cfm?c=5&pd=53&id=1>
- ² <http://www.oel-ideas.org/2013/11/bakken-oil-fields-will-hit-1-million-barrels-per-day-in-dec-and-become-3rd-oil-field-to-reach-million-barrels-milestone/>
- ³ <http://www.eqs.osu.edu/coalfields/pdf/OKG%20NotesPDF.pdf>
- ⁴ http://www.eia.gov/dnav/pet/pet_move_impact_a2.txt#?00=im0&tbl=im
- ⁵ <http://americassecurityproject.org/ASP%20reports/Ref%200109%20%20FOcalities%200505%20%99%20Bakken%20Program.pdf>

Compiled by



PO Box 1395
Bismarck, ND 58501
701.223.6380
ndoil.org
northdakota3.com

value-added: of, relating to, or being a product whose value has been increased especially by special manufacturing, marketing, or processing.

Polyethanene from Natural Gas:



Natural gas is produced at the well head, separated from oil and water, and transported to a processing facility.



Ethane is refined or "cracked" into ethylene.

Polyethylene is made, which is used to manufacture an array of products used everyday.

Intermediate products

» PVC

- » Pipes
- » Bottles & Packaging
- » Windows & doors
- » Liners & bags

» Ethylene glycol

- » Polyester
- » Fabrics
- » Antifreeze
- » Paint

» Styrene

- » Insulation
- » Rubber
- » Medical devices
- » Wind turbine parts

» Polystyrene

- » Food containers
- » Optic fiber
- » Film
- » Instrument lenses

THE FACTS ON NORM

NATURALLY OCCURRING RADIOACTIVE MATERIAL

Naturally occurring radioactive material (NORM) is all around us. It is in the



And even us.

Radioactivity is commonly measured in picocuries. A picocurie is one trillionth of a curie, or the radioactivity of one gram of radium.

If Earth was reduced to one trillionth of its diameter...



/ One Trillion =

Dust
it's diameter would be smaller than a speck of dust.

NORM, for disposal purposes, is defined as material with radioactivity in excess of 5 picoCuries per gram (pCi/g) of bulk material and cannot be disposed of in North Dakota landfill. Common household items & their radioactivity are:



Banana
4 pCi/g

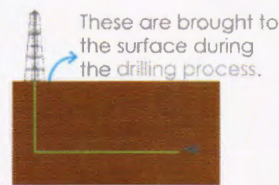


Brazil Nut
6 pCi/g

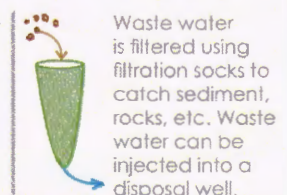


Coffee Grounds
27 pCi/g

NORM associated with oil and gas development includes sludge, sediment, mud, rocks, water and pipe scale.



These are brought to the surface during the drilling process.



Waste water is filtered using filtration socks to catch sediment, rocks, etc. Waste water can be injected into a disposal well.

Because there are no licensed disposal facilities in North Dakota, solid NORM waste and used filtration socks must be hauled to Montana, Idaho, Colorado or Texas, illustrating the need for licensed disposal sites within our state.



Sources:

US Army Corps of Engineers, "EUSRA" Fact Sheet: How Big is a Picocurie? http://www.wildcat.army.mil/Portals/45/docs/EUSRA/FactSheet/01_eap15-picocurie.pdf
 Paleontological Research Institution, "Understanding Naturally Occurring Radioactive Material in the Marcellus Shale," March 2010, Issue 4, <http://www.museumwithearth.org/files/marcellus2010.pdf>
 Energy and Environmental Research Center, "Bakken Smart: NORM," <http://www.eerc.org/Bakken/Naturally-Occurring-Radioactive-Material.aspx>

Holiday Cheer and Traditions

Presented by Petroleum

When thinking about the role of oil and gas in our lives, most people look only at their vehicles and the price of gasoline. But, petroleum plays an integral role in nearly every aspect of our lives, including the Holiday Season. Learn more about how petroleum products will help bring joy this Christmas season.

Domestic oil production has lowered gas prices, saving the average U.S. driver **\$500 Annually** of the amount the average person will spend on the holidays this year. **62%**

98.6 million people Will travel more than 50 miles this year - the highest volume since 2001.

5.7 million American travelers will fly to their destinations to celebrate the holidays.

89.5 million or 91% will drive

75% of Americans Plan to watch holiday movies and TV specials this season. Televisions, DVDs, streaming players, and other equipment are, of course, petroleum products as are the cameras, film, and other materials used to make the movies.

9.5 million Fake trees are sold each year. Artificial trees are made with plastic, a petroleum-based product.

77% of Americans plan to exchange gifts, many of which will be petroleum-based. Whether it's nylon, polyester, plastic or paint, petroleum is a lot of things we use everyday, making it a good chance you're getting petroleum this Holiday Season!

51% of shoppers bought clothing or accessories for gifts.

35% of shoppers bought books, CDs, DVDs, videos or video games.

36% bought electronics or computer accessories.

36% bought toys.

34% bought gifts.

PETROLEUM

Thanksgiving

TRADITIONS BROUGHT TO YOU BY TRADITIONAL ENERGY

Giving Thanks ALL YEAR ROUND

The oil and gas industry has given us a lot to be thankful for - a strong economy, thousands of good paying jobs and careers, lower energy prices, and a more energy-secure nation, which means we can bring more of our servicemen and women home this holiday season.

But what you may not realize is that the petroleum industry is a big part of your holiday traditions, bringing you closer to friends and family and comfort this time of year.

Thanksgiving Dinner

46 million turkeys are served each Thanksgiving

98.6% Of Americans own a gas or electric stove, essential for cooking Thanksgiving Dinner.

67% Of our nation's electricity was generated by fossil fuels in 2014

39% from coal and **20%** from gas and oil

Celebrating with Friends and Family GETTING YOU WHERE YOU NEED TO GO

this Thanksgiving, 46.3 million Americans will travel to spend the holiday with friends and family

3.55 million travelers will fly to their destinations to celebrate Thanksgiving

41.3 million (90%) Americans will drive more than 50 miles

But it won't break the bank, because domestic oil production has helped lower gas prices by **18%** since August, saving the average U.S. driver **\$500 annually*** just in time for...

62% of the amount the average person will spend on Christmas, Kwanzaa and/or Hanukkah this year.

Supporting another tradition

98.3% of households had at least one TV (a petroleum-based product) in 2013.

Over 50% of which will be tuned into football - also featuring many petroleum-based products and safety equipment.

Black Friday

Just like every year, petroleum-based items will top the shopping list this November 28. Of the shoppers heading out on Black Friday

60.9% will buy clothing and accessories. Nylon, polyester, and other synthetic fibers, which are petroleum-based, account for much of the clothing worn today, surpassing even cotton.

46.3% will buy books, CDs, DVDs and video games (again, petroleum-based products)

42% will buy toys (plastic is petroleum-based).

30.7% will buy technology and electronic items (also petro-based).

Sources

<http://newsroom.oca.com/2014/11/04/46-million-americans-celebrate-thanksgiving-holiday-glowing-since-2007>

<http://www.census.gov/commerce/foreign/commerce/newsroom/factsheets/2014/11/14/25-Trade-giving.pdf>

<http://money.cnn.com/money/blog/money/2014/11/18/can-avoid-air-polluting-facts-about-air-travel-savings-04/>

<http://www.usatoday.com/story/news/nation/2014/11/08/articles-for-america-black-friday-travel-4/185332597>

<http://www.businessweek.com/news/2014-11-18/story-for-thanksgiving-travelers-ask-to-please-gop-wait>

<http://www.rtt.com/article/2014/11/05/us-economy-appears-lukewarm-but-2014-11-05>

<https://www.federalreserve.gov/press/prspk/2014/11/05/20141105a.htm>

www.northdakoilcoal.com

oil can!

Compiled November 2014