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North Dakota Petroleum Council's Teacher Education Program G-013-025

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Applicant: The North Dakota Petroleum Council

Principal Investigator: Ron Ness, President

North Dakota Petroleum Council 2008 Teacher Seminar

The objective of the North Dakota Petroleum Council Teacher Education Seminar (Seminar) is to educate teachers about the economic benefits and career opportunities provided by the North Dakota oil and gas industry enabling them to educate their students about the industry. In addition to this seminar, the Petroleum Council continued its production of the *Oil & Gas Tidbits (Tidbits)*. This is a publication distributed quarterly to North Dakota policy makers including past teachers who have attended the seminar, legislators, elected state, county and city officials, school superintendents, oil and gas industry representatives, and other interested parties in the oil and gas industry. The Petroleum Council feels this approach of reaching out to educate policy makers across the state is an important step in educating the public about North Dakota's oil and gas industry and informing them of key issues facing the industry as it expands.

The North Dakota Petroleum Council held a three-day seminar in Bismarck June 2007 and a four-day seminar in June 2008 to educate teachers about the oil and gas industry. This was the Petroleum Council's 16th and 17th Teacher Education Seminars. Since the beginning, 633 teachers have taken the seminar. Computing the number of students those teachers have exposed the information learned at the Teacher Seminar to is virtually impossible to derive, however, we believe that number to be in the tens of thousands.

Continuing a change that was made in previous seminars to allow better monitoring and tracking success of the program, the teachers were given an "Oil Industry Pop Quiz" when they arrived on day one. Four days later, at the completion of the seminar, they were given the same pop quiz to determine if we impacted their opinions and understanding of the industry. The quiz results revealed that our industry has much work to do on improving its image in North Dakota. Registrants showed a basic understanding of the importance of the industry in North Dakota and the fact that it offers good jobs, but the opinion of the industry in North Dakota mirrors the less favorable national opinion. The quiz revealed that the 41 registrants that attended the seminar, with the exception of a few from areas with oil activity, have virtually no concept of the size or scope of the industry in the state or how the industry conducts its business. However, we did realize that the results of the quiz changed drastically after four days of intense education about the industry. Therefore, we know that negative opinions about the oil industry can be changed with proper education.

Day one was spent in the classroom learning about the history of the industry, geology, physics, engineering, and production issues. Lynn Helms did a great job of teaching geology, physics, and engineering. Dave Fischer and Kent Ellis also did a great job in following up on these topics and leading into industry simulation events. Industry representatives joined the participants for an oil and gas industry stock simulation game and the Annual Oil Trivia Bowl was held.

On day two, the teachers toured the Mandan Tesoro Refinery and traveled to Dickinson, North Dakota where a group of industry representatives provided lunch and short presentations on their company's involvement in the oil extraction business. The teachers toured a drilling rig and producing well, but, due to rainy weather, did not make it to a work-over rig or reclaimed well site.

The third day was spent learning about the refining process, how retailers competitively price their product, and the various components reflected in the price of gas. The elementary teachers were educated about Project Learning Tree, a classroom program designed to teach elementary school children about the energy industry, while the middle school and high school teachers explored career opportunities in the energy industry.

Teachers were introduced to a number of new topics on the fourth day. The additional day allowed discussion on global warming, oil impacts on the state, and state tax policies. The final day also gave teachers an opportunity to explore the prehistoric beginning of oil and gas in North Dakota. The State Paleontologist, Dr. John Hoganson, provided a detailed historical look at the dinosaurs, animals, and plant life that have become the fossil fuels that power our society today. This presentation was then followed up with a tour of "travel through time" section of the North Dakota State Museum.

As a result of the seminar, the teachers seemed to have gained a better understanding of the complexity of the oil and gas industry and a better understanding of the volatility of gas prices and the input costs. To receive the two graduate credits for attending the course, the teachers were required to submit a lesson plan on how they will incorporate what they learned into their classroom. The lesson plans submitted indicate they learned a great deal about the oil and gas industry and came up with creative methods of incorporating their new knowledge into the classrooms from grade school through high school.

The course evaluations have consistently been positive. The appreciation for such a wide variety of information provided to teachers about the oil and gas industry has been commented on many surveys throughout the years. The teachers seem to enjoy the tours and getting to meet all the industry representatives. Many teachers were shocked at how many different types of jobs exist in the industry and the technology used to produce oil.

The expected result of the seminar is to provide an on-going education effort to educate students through their classrooms about the industry. This awareness will create a positive mindset about the oil and gas and energy industry in young people who, as future leaders, might translate their knowledge into a positive public opinion of the industry and ultimately effectuate favorable public policy towards the industry. A positive public opinion will help attract a workforce and create an interest and awareness of the career opportunities afforded by the North Dakota energy industry.

In March 2008, the Petroleum Council produced a *Tidbits* focusing on the distribution of oil tax revenues throughout the state of North Dakota. The *Tidbits* highlighted the funding that schools, foundation aid, the Resource Trust Fund (water), counties and cities, and the state general fund receive on behalf of oil taxes. The *Tidbits* included quotes from the State Treasurer and the State Tax Commissioner regarding positive impacts oil dollars have on the State's wealth. A section in the *Tidbits* also discussed growing activity seen on state trust lands and the benefit education funding is seeing from the increased activity.

In August 2008, another version of *Tidbits* focused on education efforts taken by the oil and gas industry to educate the public. The *Tidbits* provided a short summary and photos of the Teacher Education Seminar. The *Tidbits* then went on to recap the first eight Town Hall meetings that were held in western North Dakota. The *Tidbits* finished off with a section on the Energy Career Awareness Partnership and the work done by Kent Ellis to promote North Dakota's next generation of oil and gas industry workers.

In December 2008, the Petroleum Council released a *Tidbits* discussing the economic growth of the oil and gas industry from 2005 to 2007. This *Tidbits* compared results of the 2005 economic impact study and that of the most recent economic impact study completed for the North Dakota oil and gas industry. Significant gains were seen in every major category. In fact, in just two years, the industry doubled its activity in the state.

In June 2009, the Petroleum Council released a *Tidbits* focusing on the developing technology in North Dakota's oil industry. The *Tidbits* highlighted multistage fracturing and extended reach horizontal drilling and the impact it has had on developing North Dakota's oil reserves. This *TidBits* has been instrumental in illustrating and communicating the impacts the new technology has had on the industry.

In August 2009, a *Tidbits* was produced and distributed about the Oil Can! Bakken Rocks Cookfest. An estimated 1,800 people attend the two nights of family fun and great food. There were also educational booths on pipelines, oil activity, and geology. The cooking was done by oil and gas operators in the communities.

In October 2009, a *Tidbits* describing the Royalty Owner Information Center was distributed to over 1,400 people by direct mail, 700 via email, and 500 additional copies were made for distribution at presentations. The *Tidbits* helped get the word out about the information available on the website and described how to find information about royalty payments and oil activity where minerals are owned.

The Petroleum Council's budget for the Energy Education program was on target for the projected June 2007 - December 2009 budget as proposed in the grant. The 2007 Teacher Seminar expenses were reported in a previous report.

NORTH DAKOTA PETROLEUM COUNCIL OIL & GAS EDUCATION PROGRAM EXPENSES

INCOME:

Grant (Oil & Gas Research Council)	\$ 10,400.00	
Contribution from Industry	4,875.00	
Total Income		<u>\$ 15,275.00</u>

2008 TEACHER SEMINAR EXPENSES:

Printing/Postage:

Labels/postage/sort fliers (Quality)	\$ 1,671.92	
Printing & Mailing (Presort)	1,612.43	
Labels from DPI for mailing	62.50	

Facilities/Food:

BSC Administrative Fee	\$ 1,800.00	
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BSC Housing (\$15/person/2 nights)	1,920.00	
BSC Food and Beverages	2,739.00	
Hawktree Dinner and Refreshments	2,150.54	
Heritage Center food	639.19	
Miscellaneous:		
Harlow's Bus Service to rig & refinery	\$ 1,410.00	
Other Expenses	754.80	
Energy Education Kits (\$100 x 25)	5,000.00	
Facts & Figures Brochure (3,500)	890.00	
Administrative/Professional Support Expenses	<i>(Paid by NDPC)</i>	
Total Teacher Seminar Expenses		\$ 20,650.38
Oil & Gas Tidbits		
Development, Design and Production	\$ 3,497.14	
Tidbits Copies and Distribution	4,616.14	
Research/Staff Time \$500 per * 7 Tidbits	<u>3,500.00</u>	
Total Tidbits Expenses		<u>\$ 11,613.28</u>
Total Expenses		<u>\$ 32,263.66</u>

Respectfully Submitted by Ron Ness