



Ron Ness
President

Marsha Reimnitz
Office Manager

120 N. 3rd Street • Suite 225 • P.O. Box 1395 • Bismarck, ND 58502-1395
Phone: 701-223-6380 • Fax: 701-222-0006 • Email: ndpc@ndoil.org

North Dakota Petroleum Council's Oil and Gas Education Program

Report 3: January 2, 2007

Applicant: The North Dakota Petroleum Council

Principal Investigator: Ron Ness, President

Project Summary: North Dakota Petroleum Council Oil and Gas Education Program

The objective of the North Dakota Petroleum Council's (NDPC) Oil and Gas Education Program is to effectively educate students, teachers, parents, and the general public about the benefits and opportunities provided by the North Dakota oil and gas industry. This outreach program has grown in the past few years from just a three-day Teacher Education Seminar into a year-round program named the Energy Education Awareness Partnership (ECAP) that puts someone in classrooms across the state on a daily basis to make presentations, conduct seminars and trade shows, and hold training sessions about the energy industry. These two programs compliment each other and serve as the core delivery system for the Petroleum Council's Education Program. Below is a report detailing the programs activities from June 1, 2006 through December 31, 2006.

North Dakota Petroleum Council 2006 Teacher Seminar

The North Dakota Petroleum Council held a three-day seminar in Bismarck June 12 - 14, 2006 to educate teachers about the oil and gas industry. Forty-three participants from all over the state attended the seminar; with the majority of them being middle school math and science teachers. This is the second year we had a unique mix of teachers, along with several recently employed industry employees, and a handful of employees from state agencies.

The objective of the seminar was to provide knowledge and information to the teachers about the oil and gas industry that they will find useful in their classroom. The seminar curriculum included an overview of North Dakota's oil and gas industry, history, geology, geophysics, engineering, refining, leasing, gasoline marketing, public land issues, regulations, and safety issues. Each participating teacher received over \$100 worth of hands-on activities,

posters, videos, maps, and other related materials including a CD Rom with prepared lesson plans for their classroom.

The first day was spent in the classroom learning about the history of the industry, geology, physics, engineering, and production issues. Lynn Helms, Director of the Department of Mineral Resources, did a great job of teaching geology, physics, and engineering. Industry representatives joined the participants for an oil and gas industry stock simulation game, the 5th Annual Oil Trivia Bowl was held, and teachers learned about Project Learning Tree, a classroom program designed to teach elementary school children about the energy industry.

On the second day, the teachers traveled by bus to Tioga, North Dakota. They toured a drilling rig, work-over rig, gas plant, and a reclaimed oil location. A group of more than 30 industry representatives hosted a barbecue lunch and provided tours throughout the day. This interaction put a personal perspective on the North Dakota oil industry for the teachers. They came away with a good understanding of how many small North Dakota businesses are involved with the oil industry and the various skills required for employment in the industry.

The final day was spent learning about gasoline refining and marketing. The teachers toured the Mandan Tesoro refinery and talked about the components of gas prices and how retailers competitively price their product. As a result of the seminar, they seem to have 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. Hopefully, they will incorporate their new knowledge of the oil and gas industry into their classrooms. To receive a graduate credit for attending the course, the teachers are 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 elementary school through high school. One of the teachers in attendance in 2006 was elected to the legislature in November of 2006. This exemplifies the value of the teacher education program. The new legislator will have an excellent understanding and knowledge of the oil and gas industry to base future decisions upon.

The lesson plans revealed many hands-on activities and examples of how to incorporate the oil and gas industry into their classrooms. For example, the geology instructor had a glass jar, bag of marbles, sand, cooking oil, and water and he showed them several examples related to geology that will help students understand migration, porosity, and permeability. The school library or resource center of each school represented will receive an “Energy Education Kit.” This kit will serve as a resource for the teacher, and the school. It includes core samples, information on PCOR (Partnership for Carbon Dioxide Reduction), and an abundance of written materials and brochures from the American Petroleum Institute and other organizations. The 2007 seminar is scheduled for June 11-13 and efforts to recruit teachers are underway.

The course evaluations were very positive. The teachers thoroughly enjoyed the tours and getting to meet all the industry representatives. They were surprised at how many different types of jobs exist in the industry. Sponsors and supporters of the seminar included: North Dakota Petroleum Council, North Dakota Oil and Gas Research Council, American Petroleum Institute, Landman’s Association of North Dakota, Dickinson API Chapter, Williston API Chapter, Enbridge Pipelines North Dakota, Hess, Tesoro Mandan Refinery, Bob’s Oilfield Services, DC & B Hotshot and Trucking, Industrial Equipment, Oilind Safety, Specialized Technology Threading, Wyoming Casing, and Penkota Wireline Services.

Energy Career Awareness Partnership (ECAP)

The North Dakota Petroleum Council submitted \$37,000 to Bismarck Public Schools in June 2006 for its share of the ECAP funding agreement. This contribution was supported through the Oil and Gas Research Council Energy Education grant.

A major change to the ECAP partnership agreement for 2006/2007 is that the Program Coordinator is working a half-time contract with the Bismarck School District. This will not significantly impact ECAP, since the primary duties related to ECAP will still be completed. The additional duties for the school district and some related projects will be eliminated or reduced in scope. The ECAP funding for 2006/2007 will be extended to include the 2007/2008 school year. The Petroleum Council will submit \$18,500 in June 2007 and \$18,500 in June 2008 for its share of the program funding per the agreement. The energy industry partners and the school district are confident this arrangement will be satisfactory.

ECAP directly presented to nearly 8,300 students, teachers, and parents in the past six months. Over the past five and one-half years, ECAP has reached nearly 37,000 students, teachers, and parents. ECAP has developed a reputation of providing excellent information to students and has become popular with teachers across the state and expands its outreach each year. In June 2006, the Program Director was involved with the Petroleum Council Teacher Seminar and several other summer education programs as well as assisting with a number of energy industry tours. In August of 2006, the Program Director developed career information and data for presentations, attended energy and job fair events in communities, and visited classrooms in schools throughout North Dakota. The Director, over the past few years, has established an events calendar. These annual events account for over 4,000 of the direct contacts

annually with topics spanning North Dakota's energy resources, exploration, production, refining, energy generation, transmission, reclamation, history, careers and postsecondary training.

In addition to the direct classroom visits, ECAP continues active participation with the ND Energy Generation Conference, Junior Achievement, Marketplace for Kids, Marketplace for Entrepreneurs, Job Service ND, ND Teachers Instructional Conference, ND Teachers Conferences for Mathematics and Science, High School Career Fairs, and ND Petroleum Council Teacher Seminar.

In order to accomplish the primary goals of this program, providing North Dakota's energy industry with a robust, well-trained workforce, and our students with high value, long term careers in North Dakota, we must actively and aggressively engage parents in this education process as well. Parental acceptance of a child's career aspirations is the single most influential element in career development. That has become one of the primary goals of the program this year. We are trying to develop ways to reach more parents about the great career opportunities in North Dakota's energy industry.

Following is the list of schools receiving direct ECAP services during the first six months of the 2006/2007 academic year: Bismarck schools, Hettinger, Stanley, Minot, Fargo/Moohead, Wahpeton, Valley City, Jamestown, Bottineau, Devils Lake, Fort Yates, Steele, Washburn, Beulah, Cooperstown/Glenfield, Drake/Anamoose, and West Fargo. The Director has also presented at several career fairs, Bismarck Ethics Day, Basin Electric, and to legislators as part of the North Dakota Petroleum Council's Legislative Briefing Tour.

Oil and Gas Education Program - Expense for Reporting Period 6/1/2006 – 12/31/2006

| | | |
|---|--------------------|----------------------------|
| 2006 Teacher Seminar | | |
| Seminar Expenses | \$ 8,000.00 | |
| Administrative Expenses | \$ 3,000.00 | |
| Energy Education Kits | <u>\$ 1,200.00</u> | |
| Total Teacher Seminar Expenses | | <u>\$ 12,200.00</u> |
| ECAP | | |
| Program Coordinator Salary/Benefits (6 months) | \$34,800.00 | |
| Travel/Training | \$ 4,400.00 | |
| General Office Expenses/Printing | <u>\$ 3,000.00</u> | |
| ECAP Total Expenses 6/1/05 – 1/31/05 | | <u>\$ 42,200.00</u> |
| Total Energy Education Expense 6/1/06 – 12/31/06 | | <u>\$ 54,400.00</u> |

Total Energy Education Expenses 6/1/2005 – 12/31/06

| | |
|--|---------------------|
| Total Petroleum Council Education Expenses to Date | \$ 24,200.00 |
| Total ECAP Expenses to Date | <u>\$121,125.00</u> |
| Total Expenses 6/1/05 – 12/31/06 | <u>\$145,325.00</u> |

| | |
|--|----------------------------|
| Two-Year Budget for Energy Education 6/1/05 – 6/30/07 | \$210,000.00 |
| Total Expenses to Date | <u>\$145,325.00</u> |

| | |
|---|----------------------------|
| Unexpended Energy Education Budget | <u>\$ 64,675.00</u> |
|---|----------------------------|