



December 29, 2006

ND Industrial Commission
ATTN: Oil and Gas Research Program
State Capitol – Fourteenth Floor
600 East Boulevard
Bismarck, ND 58505

Dear Oil and Gas Research Council Members,

Attached you will find two copies of the Petroleum Safety Technology Center Grant Application. The NW ND Workforce Training Division at Williston State College is making the application.

As the Director of the Workforce Training Division, I am authorized to contract with the commission if our application should receive funding. Feel free to contact me if you have any questions or need further information at 701-774-4246 or deanette.piesik@wsc.nodak.edu. Thank you very much for your consideration of this valuable training proposal.

Sincerely,

Deanette Piesik

Deanette Piesik
Director
NW ND Workforce
Training Division

Enclosures

PETROLEUM SAFETY AND TECHNOLOGY CENTER

NW ND Workforce Training Division
Williston State College

Deanette Piesik, Director
December 29, 2006

\$87,900.00

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Abstract

This proposal is a multi-faceted effort to meet the critical workforce needs of the oil and gas industry in the Williston Basin. By developing a new training site offering hands-on experience with an actual rig, Williston State College's Workforce Training Division will educate individuals on the latest technology needed for a career in the oilfield industry. The establishment of the Petroleum Safety and Technology Center is a direct response to concerns expressed by key industry leaders.

With advances in technology and with industry attrition issues, many individuals do not have the necessary skills for oilfield employment. This hands-on center will prepare individuals with skills in troubleshooting, problem solving, computer, safety, etc. The Petroleum Safety and Technology Center will give future employees the opportunity to experience actual service rig work, decreasing turnover due to unprepared employees. The lack of a trained workforce limits the oilfield industry's ability to expand and act on new leases and drill new wells.

The outlook is positive for the oil industry in ND. Production within the Rocky Mountains is expected to increase crude supply through 2010, particularly in the Williston Basin. Advances in technology have made the Bakken formation in the Williston Basin an emerging area of interest for many oil companies. For 2006, the Williston Basin has been the top producing liquids basin in the region, contributing an estimated 29% of total production.

The main objective of this project is to develop the Service Rig Training Program. Industry partners have assisted with all of the planning stages. These partners have contributed over \$1,000,000 in equipment and services to this project. The State of ND has granted \$400,000 in Centers of Excellence Funds to insure donated equipment meets industry standards. ND Oil and Gas Research Council funds will be used for start up costs for this project.

Project Description

WSC has enlisted the services of an independent company, Electronic Media to conduct a Petroleum Industry Workforce Needs and Skills Scan. This scan will determine the number of employees the oil and gas industry will need over the next five years. This study will enable the college to assist companies with recruitment and training of individuals for specific positions within the industry. In addition, the assessment will identify skill sets needed for each position. With all of the technological changes in the oil and gas industry, many jobs require new competencies. Preliminary findings indicate that the expected employment increase for 2007 and 2008 will be at least 10-12%. The findings also show a 70% expected workforce need for the following: rig supervisors, crew chiefs, derrick workers, roustabouts, crew workers, well head pumpers, equipment operators, land men, and truck drivers. This scan and a final report will be completed by February of 2007. The information gathered from this study will allow the college to develop curriculum and training programs that meet those new skill sets, leading to a more knowledgeable oil and gas workforce.

Williston State College (WSC) in Williston, ND requests funds from the ND Oil and Gas Research Council for the Service Rig Training Program to recruit and train workers in the oil and gas industry. Based on information provided by our partner Job Service ND, the energy and oilfield industry is continuously adding jobs and is projected to add a substantial number of jobs to the economy in the Williston Basin.

In response to this demand a collaboration consisting of industry, education, economic development, and workforce providers partnered to establish the Petroleum Safety and Technology Center to meet the training needs in the energy industry. This partnership recognizes that the region's most important asset is its workforce. Having employees who can effectively

understand and utilize safety measures, use equipment and current technology, and develop and use future technologies will ensure that businesses, communities, area states, and the region remain competitive. The purpose of this project is to develop a center that can assist in meeting the training needs to support the creation of jobs in our region. This center will support an expanding economy and help develop the workforce required by a high performance economy.

Area service companies are adding innovative service rigs to the Williston Basin that are equipped with the latest technology. These rigs require technology skill sets that the industry has not seen in the past. The new service rigs are computerized, operate with a joystick, and transmit information via satellite systems. These rigs will allow companies to monitor activities (documentation, air quality, sensor data, trip speed, equipment handling, etc) at the rig remotely. Ultimately these new technologies will increase the efficiency and production.

Williston State College (WSC) is located in the Williston Basin, one of America's most productive oil and gas basins. Williston State College is a NCAA accredited public two-year community college offering a variety of degree programs and is part of the ND University System. WSC offers programs leading to Associate in Arts and Associate in Science Degrees. A Petroleum Technician Certificate and two-year degree are in the planning stages. The Dean for Academic Affairs has approved the Petroleum Technician Certificate. This certificate program needs approval by the State Board of Higher Education prior to implementation.

Standards of Success

The goal of this project is to develop the capacity of the Petroleum Safety and Technology Center to provide skills based training for the oilfield industry to meet the need for a highly skilled workforce. The center's four main goals: 1) Enhancing the region's quality of life, 2) Increasing the region's ability to compete, 3) Job creation, and 4) Investing in the region's most valuable resource - its people. The Petroleum Safety and Technology Center currently offers various safety training courses and a Commercial Driver's License course. Future programs include Service Rig Training, Drilling School, Gas Compressor, and other related technical courses.

North Dakota is the ninth largest oil producing state. North Dakota produced over 85,000 barrels of oil per day in 2004, totaling over 31 billion barrels for the year. At the end of 2004, 3,815 wells were capable of producing oil and gas in North Dakota. The average North Dakota well produced approximately 22 barrels per day. There are major gas and oil drilling and production expansion activities occurring in the Williston Basin, concentrated in Western North Dakota and Eastern Montana.

According to the most recent data supplied by our Job Service partner, oil and gas employment has increased by 7.3%. Employers identify a continuing shortage of qualified workers in the Williston Basin as an obstacle to further oil production expansion. The oil and gas industry is a major employer in the Williston Basin employing 12,300 workers in 2004 directly or indirectly (including refineries, gas plants, pipelines, retail gasoline stations, wholesalers, and transporters). Employers in the industry experience a recurring shortage of qualified well-trained workers. Job Service ND reported that in 2004 the average yearly wage in the mining industry, which includes oil and gas extraction, coal mining, sand and gravel, and

support activity for mining was \$52,998, a 4% increase over the last year. That wage is 83% above the statewide average wage of \$28,897. The State's oil industry has added more than 1,000 direct and indirect jobs over the past two years throughout western North Dakota as a result of new oil and gas activity.

The Petroleum Safety and Technology Center will result in the expansion and retention of high-value private sector employment opportunities in the region. Beginning industry wage rates published by Job Service ND range from \$17-\$22 per hour, plus benefits. Experienced and trained employees with the proper skill sets can easily earn \$50-\$90 thousand per year. The Petroleum Safety and Technology Center will increase the number of high paying jobs in the private sector. Worldwide, there is a high demand for products and services provided by the petroleum industry. This is especially true in North America where oil and gas rig counts have doubled. Rig counts are the single most important barometer for the oil and gas industry and its service organizations regarding present and future activity. The current rig count for ND is 33 and there are 27 rigs in MT, 25 of those rigs are in Richland County operated by ND oilfield companies. The forecast for the natural gas demand over the next two decades, as determined from data collected by the Center for Legislative Energy and Environmental Research, significantly exceeds the projected supply from the existing domestic supply basins.

Providing training at WSC will increase the skills of existing employees as well as new hires. Oilfield companies have saved money by utilizing the WSC safety program and will continue to save money with the creation of the service rig program. The site will focus on hands-on technical educational programs using donated equipment. New oilfield service rigs require employees to have safety training as well as industry-specific computer knowledge. The new technology on new service rigs will result in new job creation. Safety training is one of the

most expensive investments in hiring new personnel for oilfield companies. Many of these companies invest \$4,000 - \$24,000 per employee in required New-Hire and other safety courses.

The Service Rig Training Program will prepare students for entry-level employment. This program will provide the student with the understanding of equipment and the principals of operations and control. The student will understand the technical aspects of the work, the responsibilities of the work, and the importance of safety.

Marketing and recruitment efforts need to be developed for this new program. Brochures and media packets are currently being developed for distribution to prospective employees and students. Job Service ND will partner with WSC to recruit, assess, and refer individuals for the proposed training.

Advances in technology using horizontal drilling have made the Bakken formation in the Williston Basin an emerging area of interest for many oil companies. The Bakken formation in western North Dakota may contain as much as 200 billion barrels of oil. In addition, enhanced oil recovery has allowed oil companies to extract more oil out of depleted fields. This training program is designed to train oil and gas workers in various occupations. The training will be held at Williston State College. The WSC Foundation purchased nine acres of land to develop and conduct this hands-on program. Instructor ratio at the center will be one for every 10-12 students. As with any program, start-up costs are the major expense. Companies have donated necessary equipment to develop the site. The Center of Excellence grant funds of \$400,000 from the State of North Dakota will allow the college to insure donated equipment meets industry standards.

Background

The development of the Petroleum Safety and Technology Center has been industry driven. The shortage of a qualified workforce brought the opportunity for the energy industry to partner with Williston State College to develop the program and to build the workforce. An Industry Advisory Committee has been meeting since the summer of 2004. Companies represented on this committee include: Hess Corporation, Halliburton Energy Services, Key Energy, Schlumberger, Nabors Drilling, Nabors Well Services, S & S Sales, Vetco-Gray Inc., Marathon Oil, and Sun Well Service. Their involvement in the development of this training program has been instrumental. In January of 2005, a Workforce Training Specialist was hired to continue the development of this program and to do training. Due to the increase in demand for safety courses, the Workforce Training Division hired a full-time Safety Trainer. This was possible with funds provided by the ND Oil and Gas Research Council. The Workforce Training Division has provided the following types of training: New-Hire training, Hazwoper, H₂S, Medic First Aid, Crane Training, Forklift Training, HazCom, Respiratory Protection, HazMat, Defensive Driving, Confined Space, OSHA Compliant Training, etc.

- July 2005-June 2006; 2,114 individuals have participated in safety training courses.
- In January 2006, in partnership with the Center for Transportation Safety and Halliburton, a Commercial Drivers License training program started at WSC. There have been 37 participants in the training program. This partnership will allow other oilfield companies and individuals to participate in the truck driver-training program.
- WSC Foundation purchased nine acres for the Workforce Training Division to develop a hands-on training site. Two instructional wells have been drilled by Nabors Well Services. One well will have a permanent service rig (donated by Key Energy) for training and other well site will be available for testing and leasing. Over one million dollars in equipment and materials have been donated to this project.

Qualifications

In July of 1999, Williston State College was assigned primary responsibility for the workforce training initiative for the northwest quadrant of North Dakota. As the Director of the Workforce Training Division, it is my job to assist in the identification of skill shortages and workforce training needs.

The programs are in both the operational and development stages with the majority of the programs currently being delivered to business and industry on a limited basis. Instructional programs for the development of technical skills will be delivered in a nontraditional classroom utilizing hands-on training on industrial equipment. The placement of the rig donated by Key Energy will complete the major training components of the well service program. The Northwest North Dakota Workforce Training Division offers courses in industrial safety such as the Universal Oilfield Safety Training. The Universal Oilfield Safety Training course includes certifications in H₂S and CPR, as well as instruction in PPE; Machine Guarding; Welding Safety; HAZCOM; HAZWOPER; Confined Space; Lockout/Tagout; Electrical Safety; Fire Safety & Prevention; Back/Lifting; Ergonomics; Slips, Trips and Falls; Hand and Power Tools; Forklift Safety; and Man-lift Safety. The Service Rig Training Course will cover the following topics: Well Servicing Unit Components; Basic Well Servicing Tools; Power Swivel and Reverse Units; Rig-up and Rig-down Procedures; Rig Inspections; Tubing Sizes and Threads; Well Control, Pulling Rods and Tubing; Sand Line Tools and Safety; and Artificial Lift Equipment.

Williston State College is in the process of developing a Certificate and Two-year Degree program for Petroleum Technicians. This course of study is currently in the review process by the ND State Board of Higher Education. Due to the uniqueness of this program, the college anticipates that the program will be approved. The two-year degree program will offer courses

in basic engineering, which will allow WSC students to transfer credits to a four-year college or university. This program will offer pre-requisite courses needed for students who are interested in pursuing a four-year degree in engineering.

The Petroleum Safety and Technology Center has an active Industry Advisory Committee. The Advisory Committee meets on a regular basis to discuss training and program development. The committee assisted in the planning and site layout of the nine acre hands-on training field. The companies played a major role in the solicitation of equipment and services. Concerning the certificate and two-year degree program, companies are assisting the college with curriculum development and specific student skill objectives. As we move forward, identifying other areas of training concerns and new program development, these companies will be a primary resource in the decision making.

Management

The Service Rig Training Program will be coordinated and administered by WSC. The option of receiving community college credit where applicable upon satisfactory completion of the training will be made available to the training recipient.

WSC's resources for the Petroleum Safety and Technology Center will include state-of-the-art facilities (on-campus and at-site), computer-aided learning equipment, furnishings, phone and computer services, classroom materials, faculty support, and scholarships. Funding for the program will include fee reimbursement from companies, business and industry partnerships, donations received through the WSC Foundation, other public and private support, and Workforce Investment funds. Funds for ND residents and dislocated workers who apply may be available. It is the objective of the program to enroll as many students and effectively place them into positions upon completion. The applicants will be screened to help ensure the success to both the participant and the program.

Williston State College will be able to provide all financial information and reports through our Grant Department in the Business Office. As the Director of the Division, I will be directly involved in the tracking of all information needed for reporting to the Industrial Oil and Gas Commission. All evaluations and standards will be maintained in the Workforce Training Division office. The Industry Advisory Committee will receive updates on the progress of the Service Rig Training Program.

Timetable

Our grant request is for Fiscal Year 2007. The service rig trainer position needs to be filled by February 2007. The refurbished service rig donated by Key Energy is projected to arrive in Williston in mid-January.

Year One

- Hire a full time trainer (February 2007)
- Develop Rig Classes (January-February 2007)
- Offer Courses on a regular monthly/weekly basis
- Develop additional training programs (Drilling Course, Roustabout Training, Compressor Training, Transport Driver Training)

Quarterly Reports will be provided to the ND Oil and Gas Research Council. These reports will provide the following information: number of participants in training program, number of participants completing program, and number of certificates/credits earned by participants.

Budget – Year 1 (January 1, 2007 – June 31, 2007)

ITEM	GRANT REQUEST	WSC MATCH	INDUSTRY MATCH
Salaries:			
ISTP Specialist	\$0.00	\$42,500.00	\$0.00
Trainer	\$50,000.00	\$0.00	\$0.00
Director	\$0.00	\$11,275.00	\$0.00
Benefits	\$17,500.00	\$3,000.00	\$0.00
<i>Subtotal</i>	<i>\$67,500.00</i>	<i>\$56,775.00</i>	<i>\$0.00</i>
Office Equipment:			
Furniture	\$0.00	\$1,000.00	\$0.00
Laptop Computer	\$1,800.00	\$0.00	\$0.00
Software	\$100.00	\$100.00	\$0.00
Printer	\$200.00	\$200.00	\$0.00
<i>Subtotal</i>	<i>\$2,100.00</i>	<i>\$1,300.00</i>	<i>\$0.00</i>
Training Equipment:			
Training rooms/labs	\$0.00	\$13,000.00	\$0.00
Projection Unit	\$1,800.00	\$0.00	\$0.00
Projection Screen	\$0.00	\$800.00	\$0.00
Videos/PowerPoint	\$2,500.00	\$300.00	\$500.00
Site Training Equipment/Services	\$0.00	\$0.00	\$1,056,563.00
Other Training Equipment	\$10,000.00	\$4,500.00	\$10,000.00
<i>Subtotal</i>	<i>\$14,300.00</i>	<i>\$18,600.00</i>	<i>\$1,067,063.00</i>
Professional Development:			
Conferences/Training	\$4,000.00	\$4,000.00	\$0.00
<i>Subtotal</i>	<i>\$4,000.00</i>	<i>\$4,000.00</i>	<i>\$0.00</i>
TOTAL	\$87,900.00	\$80,675.00	\$1,067,063.00

Budget Narrative and Matching Funds

As with any program, the start-up costs are the major expenses. Our grant application request from the ND Oil and Gas Research Council is for the Service Rig Trainer position, including salary and benefits. In addition, the service rig trainer will need office equipment (computer, printer). This position's primary responsibility will be to provide service rig training. Materials need for those courses such as training videos/PowerPoints and projector is listed, but most of the equipment needed for the hands-on training will be or has been donated. The position will need to attend professional development conferences and trainings. This will add to their skill set.

WSC received \$400,000 from the State of ND to develop the Petroleum Safety and Technology Center. Those dollars have been allocated to insure that donated equipment meets industry standards. In addition, area oilfield companies have donated over one million dollars in equipment and services. The college is in the process of securing additional training equipment needed. Senator Conrad has proposed an allocation of \$200,000 in the 2007 HUD bill for this project. Those funds will be used for a training building to be located on the training site. WSC will match the grant with \$80,675 in salary, equipment, furnishings, etc.

Tax Liability

Williston State College operates as a two-year public community college in the ND University System. The college is one of eleven institutions under the jurisdiction of the ND State Board of Higher Education. Williston State College is considered a state agency and has no outstanding tax liability to the state of North Dakota. For further clarifications, contact Nicci Strand in the Business Office at 774-4249.

**Petroleum Safety and Technology Center
List of Items Donated
6/1/2006**

Company	Donation	Contact	Value
Nabors Well Service	Gardner Denvers PE% Pump and Reservoir Tank	Todd Appel	\$ 270,000.00
	Drilling of Two Wells		
	Rig Transportation		
	Crew Quarters Trailers		
Key Energy	250 Series Triple Workover Rig	Scott Shackelford	\$ 450,000.00
Nabors Drilling	Transportation of Drilling Rig	Scott Reid	\$ 5,000.00
Halliburton	Cement for one well site	Brent Eslinger	\$ 26,364.00
Baker Oil Tools	Tubing Anchor Catcher	Ron Piesik	\$ 6,800.00
	AD - Tension Packer		
	Bit and Scraper		
Schlumberger	Cement for one well site	Bill Morris	\$ 26,364.00
Hughes Christensen	Drill Bites	Jerry Wells	\$ 5,000.00
Hess Corporation	320'- of 9-5/8" Casing, J55, 36LB	Gary Johnson	\$ 145,130.00
	906.4' of 5-1/2" Liner, N80		
	1000' of 2-7/8" Tubing, J55		
	Sucker Rod: 1" - 14		
	Sucker Rod: 7/8" - 14		
	Sucker Rod: 3/4" - 14		
	Pumping Unit, Lufkin 80, R-5751		
	Tank, 300 BBL (2)		
	Treater: 6'x20', 50 PSIG		
Nance Petroleum	320'- of 9-5/8" Casing, J55, 36LB		\$ 28,000.00
	906.4' of 5-1/2" Liner, N80		
	1000' of 2-7/8" Tubing, J55		
Vetco	Casing and tubing heads	Gerry Gregory	\$ 5,000.00
Franz Construction		Don Franz	\$ 12,000.00
National Oil Well	Parts and Labor for conversion of 450 gear box	Kevin Grilley	\$ 38,705.00

Darbys Welding & Machine	Welding for well heads		\$ 1,700.00
National Oilwell Varco		Bruce Stoner	\$ 500.00
Corey's Septic		Corey Seidel	\$ 500.00
Stallion Oilfield Services		Curtis Salvesson	\$ 5,000.00
Spec-Tech INC		Dan Bauste	\$ 5,000.00
S & S Sales, INC		Ryan Leininger	\$ 5,000.00
WellPro INC	Drilling contractor services	Pete Peterson	\$ 10,000.00
Weatherford Evaluation, Drilling & Intervention		Cecil Tharp	\$ 500.00
Joe's Casing and Drilling INC		Joe Hughes	\$ 5,000.00
American Casing & Equipment		Steve Larvick	5,000.00
Hexom Construction		Steve Hexom	10,000.00
TOTAL			1,056,563.00