

## Oil and Gas Research Program

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North Dakota

Industrial Commission

## Application

**Project Title:** Assessment of the Oil and Gas Industry's Workforce Characteristics

**Applicant:** Dr. Nancy M. Hodur and Dean A. Bangsund, Department of Agribusiness and Applied Economics, North Dakota State University

**Principal Investigator:** Dr. Nancy Hodur.  
Co-principal Investigator, Dean Bangsund and Kathy Tweeten

**Date of Application:** November 1, 2013

**Amount of Request:** \$217,400

**Total Amount of Proposed Project:** \$217,400

**Duration of Project:** 01/2014 – 03/2015

**Point of Contact (POC):** Nancy Hodur

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**POC Address:** 811 2<sup>nd</sup> Ave N, NDSU Dept. 7610, North Dakota State University, Fargo, ND 58108-6050

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**Transmittal and Commitment Letter**



**GRANT APPLICATION TRANSMITTAL**

**This page indicates university endorsement of the referenced proposal and is intended to be submitted to the sponsor organization.**

**Sponsor Organization:** ND Industrial Commission

**Project Title:** *Assessment of the Oil and Gas Industry's Workforce Characteristics*

**Project Director:** Nancy M. Hodur

**Department:** Agribusiness and Applied Economics

**Project Budget:**

Total Direct Costs	\$ 149,931
F&A/In-direct Costs	\$ 67,469
F&A/IDC Rate	45%
Total Requested	\$ <u>217,400</u>

**Authorized University Representative:** Amy Scott

**Title:** Assistant Director for Sponsored Programs Administration

**Address:** North Dakota State University  
NDSU Dept. 4000, PO Box 6050  
Fargo ND 58108-6050

**Phone:** (701) 231-8045

**Signature:** Amy B. Scott

**Date:** 10-31-13

**Any future notifications regarding this proposal, including award notices, should be directed to the authorized university representative at the address listed above.**

**Thank you.**

SPONSORED PROGRAMS ADMINISTRATION  
NDSU Dept 4000 | PO Box 6050 | Fargo ND 58108-6050 | 701.231.8045 | Fax 701.231.8098 | ndsu.research@ndsu.edu

Shipping address: Research 1, 1735 NDSU Research Park Drive, Fargo, ND 58102

NDSU is an EO/AA university.

**Affidavit of Tax Liability**



October 28, 2013

To Whom It May Concern,

North Dakota State University regularly pays taxes to the State of North Dakota for state income tax withholding, state sales taxes collected, and unrelated business income taxes. To the best of my knowledge, North Dakota State University is current and paid up on all tax liabilities with the State, with no past due balances.

Sincerely,

A handwritten signature in cursive script that reads "Gary Wawers".

Gary Wawers

Controller

## **ABSTRACT**

Study objectives are to make a comprehensive assessment of the demographic makeup of the current and expected oil and gas industry workforce in the Williston Basin. Lack of data on the current workforce is hindering efforts to measure existing population and limits descriptions of current and future workforce and projections of future populations. A limited understanding of the characteristics and demographic makeup of the current and future workforces affects planning for delivery of private and public services, infrastructure, and public and private investment.

The study will entail a comprehensive primary data collection effort to elicit demographic and other pertinent information from workers in the oil and gas industry. Personal interviews and focus groups will be used to gather insights on the size and composition of the various segments of the oil and gas workforces. Information obtained from those efforts will be used to help describe worker characteristic and develop a written survey instrument. A written survey will be used to collect demographic and other data about the oil and gas workforce that will be generalizable to the larger population of oil and gas workforce.

Findings will assist state agencies, local officials, planners, economic development professionals, investors, entrepreneurs, education and outreach professionals, researchers and others a better understanding of the characteristics of the current and future workforce. The insights gained will facilitate planning and development activities to address current and future demand for infrastructure, housing, and public services. In addition to advancing an understanding of the current and future workforce, findings will be use update and make refinements to employment models used to estimate housing and population in the Williston Basin.

**Duration: 15 months from contract execution.**

**Total Project Cost: \$217,400**

**Participants:** Dr. Nancy M. Hodur, Department of Agribusiness and Applied Economics, North Dakota State University will serve as Principal Investigator with Dean Bangsund, Department of Agribusiness and Applied Economics and Kathy Tweeten, North Dakota State Extension Center for Community Vitality serving as Co-Primary Investigators.

## PROJECT DESCRIPTION

### Objectives:

Study objectives are to make a comprehensive assessment of the demographic characteristics of the current and expected oil and gas industry workforce in the Williston Basin. Lack of data on the current workforce, including the workforce in other related industries, makes estimating housing demand and existing and potential future population challenging. Further, the lack of understanding of the composition and characteristics of current and future workforce complicates planning efforts to address socio-economic impacts of the rapid expansion of the oil and gas industry such as the demand for infrastructure, type and quantity of housing, day care, education, health care, and recreation services.

### Methodology:

The study will entail a comprehensive primary data collection effort to elicit demographic and other pertinent information from workers in the oil and gas industry and new residents. The study team will conduct personal interviews with business and industry representatives, state and local leaders, decision makers and others familiar with oil and gas industry activities and the associated workforce to gain an understanding of the size and makeup of various industry components. Those efforts will guide survey sampling to ensure a representative sample of various oil and gas industry activities and related activities. Interviews will also provide insight into the characteristics of the current and future oil and gas industry work force.

The study team will also conduct a series of focus group interviews with new residents in a cross section of communities throughout the Williston Basin. Focus groups will provide insights into the characteristics of the new workforce, including the non-oil and gas industry workforce. Findings from both the personal interviews and focus groups will be used to develop a survey instrument that would be administered to workers in the oil and gas industry.

The study team will collaborate with private and public stakeholders including representatives of the petroleum industry, state government agencies, business and community leaders, and non-governmental organizations to identify individuals for personal interviews. The NDSU Extension Service Center for Community Vitality and local extension agents will play a critical role in enlisting new resident participation in the focus group interviews.

A stratified sample of oil and gas employment will be developed based on the relative levels of employment in the various segments of the industry. The process would attempt to achieve representative sample for employment in oil field services, gas plant operations, rail and pipeline operations, drilling activities, fracking operations, and oil and gas-related infrastructure construction. Survey instruments would be administered by mail and online. Other distribution techniques such as intercept surveys at crew camps and participation at industry conferences, will round out the data collection effort and be added as needed to obtain a representative sample.

Data will be analyzed using widely accepted qualitative and quantitative methods. Focus group and personal interviews will be analyzed to identify common themes. A variety of quantitative analytical procedures will be used to generate descriptive statistics based on various stratifications of petroleum sector workforce such as job status (e.g. permanent versus temporary), type of job (e.g., oil field service, fracking operations, construction, etc.), and work-related characteristics (e.g., how long on the job, housing preference). Other analysis will be completed as needed.

**Anticipated Results:**

Results from this research will assist state agencies, local officials, planners, economic development professionals, investors, developers, entrepreneurs, researchers and outreach professionals assess potential future changes in population and plan for future demand for infrastructure, housing and other public and private goods and services. This research will be the first comprehensive demographic assessment of the oil and gas industry workforce in North Dakota. Other efforts have examined the type and composition of temporary housing arrangements (Caraher and Caraher 2013) and perceptions of law enforcement personnel (Archbold 2013) however neither study provides insights into worker and new resident characteristics

Findings will advance the understanding of housing demand, geographic preference of housing, and the number and type of both permanent and temporary housing units needed to meet expected demand. Finding will also provide insights that will aid in estimates of future school enrollments, planning for essential services such as day care, healthcare, and recreational services, and delivery of other public and private goods and services. Findings will also help developers, investors and entrepreneurs make investment decisions based on the type of goods and services that will likely be in demand from the new workforce.

Finding will also be used to refine forecasts of housing demand, population and workforce availability in other sectors. Findings will provide new data on expected occupancy rates to refine estimates of service population, and provide additional perspectives on workforce availability (e.g. spouse, youth entering the labor force) The availability of a secondary workforce such as spouses, young adults, teen can influence the region's ability to grow secondary employment in retail trade, personal services, and other related sectors. Without a secondary workforce business in retail and personal service often cannot compete with wages paid in other industries thereby limiting secondary economic growth and activity. Findings will be incorporated into current housing and population projection models as appropriate.

**Facilities:**

The research effort will be conducted with existing facilities and equipment at North Dakota State University. No additional facility, equipment, or analytical resources are anticipated.

**Resources:**

Resources necessary to complete this research are wages and salaries for research and extension personnel, travel expenses, mail and online survey printing and distribution, and input and participation from the oil and gas industry, state and local leaders, decision makers and relevant trade associations to assist in survey sampling and access to workers for participation in the study.

**Techniques to Be Used, Their Availability and Capability:**

The research team has performed numerous large primary data collection efforts using mail and on-line surveys, intercept surveys, focus groups and personal interviews. Research methods described here are similar to and have been successfully used to gather data from various constituency groups ranging from farmers and ranchers to participants at parks and recreation activities to investors and business managers involved in valued added agriculture processing ventures over the last decade. These procedures are well defined, widely accepted and protocols for their use are reviewed and approved by the North Dakota State University Internal Review Board (IRB).

### **Environmental and Economic Impacts while Project is Underway:**

No environmental or economic consequences are expected during the project.

### **Ultimate Technological and Economic Impacts:**

No technological effects are expected upon completion of the project. The economic consequences, while not directly measurable, are likely to be substantial as findings will result in a better understanding of future demand for public and private goods and services. Findings will improve local governments' ability to manage the long-term effects of growth and expansion related to activity in the oil and gas industry and other industries. Findings will also help define demand for housing, schools, shopping centers, recreational facilities, water supply, commercial districts and public administration. A better understanding of the current and future workforce and the associated demand for goods and services will also be important as the state allocates resources to meet future needs not only in western North Dakota but throughout the state.

### **Why the Project is Needed:**

Insights on the magnitude of oil field development and population expectations are critical to efforts to address short-term needs and to properly allocate resources for long-term development. Recent work by state agencies, planners, and researchers has produced a better understanding of the potential rate and extent of oil field development. The current understanding is that elevated levels of oil field development will likely continue for over a decade, and result in a petroleum industry that is considerably larger than historical levels.

Despite these insights, much is still unknown. Projections of future population and associated infrastructure requirements continue to be made without representative data on the demographic makeup of the current or expected future workforce in the Williston Basin. Lack of data on the current workforce is hindering efforts to accurately measure existing population and limits the ability to describe and predict the composition of future populations, which in turn affects the ability to plan for delivery of private (e.g. retail and commercial goods and services) and public services (e.g., day care, recreation schools) and private and public infrastructure (e.g., quantity and composition of housing, water systems, K-12 classroom space, etc.)

The future workforce in the oil and gas industry is expected to transition from one heavily weighted by drilling, fracking, and construction-related jobs to a workforce associated with well servicing, infrastructure maintenance, oil and gas shipment, and processing activities. This situation creates two problems: (1) the state will have a large temporary workforce over the next decade that will likely leave the state and follow employment opportunities elsewhere, and (2) the state has little understanding of what to expect from the future permanent workforce, which is expected to have different characteristics and needs than the current workforce. The likely potential for a future workforce with different characteristics than the current workforce all complicate efforts to plan at the local and state level. A study of workforce characteristics is needed to assess potential future changes in population and plan for future demand for infrastructure, housing and other public and private goods and services.



## STANDARDS OF SUCCESS

Critical to efforts to address demand for current and planning for delivery of future goods and services is an understanding future demand. This study will provide insights of future demand by advancing the understanding of the characteristics of the current and future workforce. Findings will provide insights on demand for various types of housing, infrastructure and public goods and services. Not only is this type of information important for state and local leaders; entrepreneurs, investors and developers need a similar understanding of the current and future workforce and population to guide decisions related to business development and provision of private goods and service.

Standards of success include a substantive outreach effort to ensure dissemination of research finding. Project deliverable include a written document(s), available to the public, containing description of the data collection processes, analytical methods, statistical results, and study implications and conclusions. The research team will also present findings at various industry and investor conferences and public meetings. The university extension system will be used to disseminate result on the local level. Finding will also be disseminated by various news and popular media outlets.

The research team's previous work has been used extensively by, and been of great interest to, a multitude of constituent groups with findings frequently reported in various media outlets. The Vision West Consortium has used previous work in their regional planning recommendation and to assist local strategic planning efforts. In the last 12 months the research team has spoken at multiple conferences and meetings, fielded dozens of individual queries from investors, developers, researcher and reporters from across the state and county. It is expected findings from this effort will be similarly received.

## BACKGROUND/QUALIFICIATIONS

The research team has extensive experience and proven record in research efforts that require primary data collection and analysis. The research team is experienced in both quantitative and qualitative survey design, administration and analysis using a variety of methods including mail and electronic surveys, intercept surveys, focus groups and personal interviews. The research team also has experience and expertise using available secondary data in conjunction with primary data to provide science-based findings to applied research questions. References to studies listed below are available upon request

Economic Contribution of Park and Recreation Activities in North Dakota. Intercept surveys were conducted in a year-long assessment of expenditures motivation, and characteristics of visitors to North Dakota's state parks and participants in leagues, programs, sporting events, facilities, and community activities of park and recreation districts in 12 cities in North Dakota. ( Bangsund and Hodur 2013a),

Socio-Economic Effects of the Conservation Reserve Program—CRP contract holders in North Dakota were surveyed to obtain information on the positive and negative consequences of the program. Policy makers, business leaders, and stakeholders were interviewed to gain their insight and perspectives on the socio-economic effects of the Conservation Reserve Program. (Hodur et al 2002).

Survey of Cultural and Heritage-based Tourists in North Dakota—Intercept surveys were conducted over the course on 1 year at three heritage and cultural tourism attractions.. Data collected was used to make an estimate of the local and state-wide economic contribution of visitors, determine motivation

for visiting, and create a demographic profile of visitors to various heritage and cultural tourism attractions in North Dakota. (Wolfe et al. 2010)

Evaluation of TEAM Leafy Spurge Project. Personal interview, focus groups and a large mail survey were used to survey ranchers, local decision makers and public land managers to assess changes in perceptions and gauge the success of the TEAM Leafy Spurge project. . Hodur et al. 2002).

Survey of Hunter and Angler Expenditures in North Dakota The research team has partnered with the ND Game and Fish Department in 2002 and 2012 to survey participants in hunting and fishing activities to determine personal spending patterns, economic effects, and characteristics of hunters and anglers. (Taylor et al. 2013)

Value Added Business Success Factors. A series of in-depth personal interviews with key participants involved with the financing, development and operations of various value-added agriculture processing were conducted to determine the key factors that influenced the relative success or failure of various agriculture value added enterprises. (Senechal et al 2007)

Opportunities and Constraints to Expanding Value-added Beef Production in the Northern Great Plains. Producer focus groups and a mail survey were used to gauge producers' perception on opportunities and constraints to expanding beef back grounding operations in a 4-state area. Hodur et al. 2007

Estimating the Economic Contribution of the FARGODOME. Intercept survey were conducted over the course of 1 year at various events at the FARGODOME to collect participant expenditure data. Data was used to make an estimate of the economic effects of FARGODOME participant expenditures on the local community. (Hodur et al.2004)

In addition to the above selected studies that involved large, primary data collection efforts the research team has assessed the economic effects of the petroleum sector on the North Dakota economy (Bangsund and Hodur 2013b), developed population projections for the cities of Dickinson and Williston (Bangsund et al. 2012, Hodur and Bangsund 2013a), estimated future student enrollments in selected communities in the Williston Basin (Hodur and Bangsund 2013b), and developed a model to project future employment, demand for housing and population based on various oil field development scenarios in the Williston Basin (Bangsund and Hodur 2013c).

## **MANAGEMENT**

The research team has over 35 years of combined experience in applied research effort. The research team has established a management system that clearly defines objectives, outcomes and timelines and features regular communications among principle investigators. The principle investigators on this project will be actively participating in all phases of the study, thereby directly engaged and responsible for meeting study objectives, timelines and deliverables.

The research team will also work closely with industry representatives and others in developing the survey instrument, identifying a representative sample of the oil and gas industry workforce and ultimately contacting and surveying workers in the Williston Basin. The research team has already enlisted the support and cooperation of the ND Petroleum Council and the Association of Oil and Gas

Producing Counties. (See attached letters of support). Periodic (quarterly) review of progress will ensure timely completion and address any potential impediments to timely completion of the project. Upon completion of the project the research team will publish research findings and ensure appropriate outreach efforts to disseminate results to the appropriate constituent groups.

**BUDGET**

Project Associated Expense	NDIC's Share		
<b>Wages and Salaries</b>			
Wages	\$85,024		
Benefits	<u>\$25,507</u>		
<b>Subtotal Wages and Salaries</b>	\$110,531	\$110,531	
<b>Other Expenses</b>			
Travel	\$17,300		
Focus group incentives (meals)	\$1,500		
Mailing, postage, online survey services (written survey)	\$20,000		
Printing and publications	\$400		
Communications	<u>\$200</u>		
<b>Subtotal Other Expenses</b>	\$39,400	<u>\$39,400</u>	
<b>Total Direct Expenses</b>		<u>\$149,931</u>	\$149,931
<b>Indirect Expenses</b>	\$67,469		\$67,469
<b>Total Direct and Indirect Expenses</b>			<u>\$217,400</u>

**Wages and benefits:** Salaries for Research Scientist and Assistant Research Professor, 12 months at \$7,085 per month, benefits at 30 percent of salaries.

**Travel:** Travel, accommodations and per diem for trips in North Dakota for personal interviews, focus groups and intercept surveys. 15 trips, 2 people each trip, 50 travel days.

**Mailing, postage, online survey services:** 10,000 written mail questionnaires at approximately \$2

**Indirect Costs:** 45%

**Total project cost:** \$217,400 with half payable at time of contract initiation and half upon completion. If less funding for direct expense is available project objectives will not be attainable as detailed.

**CONFIDENTIAL INFORMATION**

No confidential information.

**PATENTS/RIGHTS TO TECHNICAL DATA**

Patents and rights to technical data do not apply.

**STATUS OF ONGOING PROJECTS (IF ANY)**

Efforts related to project R-010-22 on schedule to be completed on January 31, 2014. Remaining effort from previously funded projects will not affect or hinder efforts on the proposed project. An earlier project, MB0-001-001 was completed as proposed.

**TIMETABLE**

	Jan. '13	Feb.	March.	April	May	June	July	August.	Sept.	Oct.	Nov.	Dec.	Jan. '14	Feb.	March
Develop industry and community contacts	→														
Develop interview/ focus group line of questions and discussion points		→													
Develop industry workforce matrix for survey sample		→													
Schedule and conduct personal interviews & focus groups		→													
Develop written questionnaire	→														
Administer written questionnaire							→								
Intercept survey						→									
Prepare research brief with preliminary findings from interview and focus groups								→							
Data analysis, document preparation									→						
Outreach													→		

## References

- Archbold, Carol A. 2013. *Policing the Patch: An Examination of the Impact of the Oil Boom on Small Town Policing and Crime in Western North Dakota*. Grand Forks: UND Department of Criminal Justice and Political Science.
- Bangsund Dean A., Nancy M. Hodur, Richard Rathge and Karen Olson. 2012. *Modeling Employment, Housing, and Population in Western North Dakota: The Case of Dickinson*. AAE Report No. 695. Fargo: NDSU, Department of Agribusiness and Applied Economics
- Bangsund Dean A. and Nancy M. Hodur. 2013a. *Economic Contribution of Public Park and Recreation Activities in North Dakota: A Summary of Economic Effects*. AAE Report No. 717. Fargo: NDSU, Department of Agribusiness and Applied Economics.
- Bangsund, Dean A. and Nancy M. Hodur. 2013b. *Petroleum Industry's Economic Contribution to North Dakota in 2011*. AAE Report No. 710. Fargo: NDSU, Department of Agribusiness and Applied Economics
- Bangsund, Dean A. and Nancy M. Hodur. 2013c. *Williston Basin 2012: Projections of Future Employment and Population North Dakota Summary*. AAE Report No. 704. Fargo: NDSU, Department of Agribusiness and Applied Economics.
- Caraher, William and Bret Weber. 2013. *North Dakota Man Camp Project*. Grand Forks: UND Department of History and Social Work.
- Hodur, Nancy M., F. Larry Leistritz, Dean A. Bangsund. 2002. *Perceptions of Leafy Spurge and Evaluation of the TEAM Leafy Spurge Project by Public Land Managers, Local Decision Makers, and Ranch Operators*. AAE Rpt. No. 499. Fargo: NDSU, Department of Agribusiness and Applied Economics.
- Hodur, Nancy M., F. Larry Leistritz, Dean A. Bangsund. 2002. *Local Socioeconomic Impacts of the Conservation Reserve Program*. AAE Rpt. No. 476. Fargo: NDSU, Department of Agribusiness and Applied Economics.
- Hodur, Nancy M., Dean A. Bangsund, F. Larry Leistritz and John Kaatz. 2004. *Estimating the Contribution of the FARGODOME to the Area Economy*. AAE Staff Report No. 0400. Fargo: NDSU, Department of Agribusiness & Applied Economics.
- Hodur, Nancy M., F. Larry Leistritz, Daniel J. Nudell, Clint Clark, Duane Griffith, and Tammie Jensen. 2007. *Opportunities and Constraints to Expanding Value-added Beef Production in the Northern Great Plains*. AAE Rpt. No. 613. Fargo: NDSU, Department of Agribusiness and Applied Economics.
- Hodur, Nancy M. and Dean A. Bangsund Dean A. 2013. *Population Estimates for the City of Williston*. AAE Report No. 707. Fargo: NDSU, Department of Agribusiness and Applied Economics
- Hodur, Nancy M. and Dean A. Bangsund, Richard Rathge and Karen Olson . 2013. *Estimates of Enrollment Projections: Ran, Stanley, Watford City, Williston and Dickinson*. AAE Report No. 707-S. Fargo: NDSU, Department of Agribusiness and Applied Economics
- Senechal, Donald, F. Larry Leistritz, and Nancy M. Hodur. 2007. *"Farmer Owned Processing Business Success Factors,"* AgMRC, Iowa State University, <http://www.agmrc.org/agmrc/business/strategyandanalysis/farmerownedsuccess.htm>, viewed August 18, 2008.
- Taylor, Richard D, Dean A. Bangsund and Nancy M. Hodur. 2013. *Resident and Nonresident Hunter and Angler Expenditures, Characteristics, and Economic Effects, North Dakota, 2011*. AAE Report No. 706. Fargo: NDSU, Department of Agribusiness and Applied Economics
- Wolfe, Kara L., Nancy M. Hodur, and F. Larry Leistritz. 2009. *Visitors to North Dakota Heritage and Cultural Tourism Sites: Visitor Profile, Motivation, Perceptions, and Family Decision Making*. AAE Rpt. No. 644. Fargo: NDSU, Department of Agribusiness & Applied Economics.



## North Dakota Petroleum Council

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Phone: (701) 223-6380  
Fax: (701) 222-0006  
E-mail: [ndpc@ndoil.org](mailto:ndpc@ndoil.org)



October 29, 2013

North Dakota Oil and Gas Research Council  
Oil and Gas Research Program  
State Capitol, 14th Floor  
600 E Boulevard Ave.  
Dept. 405  
Bismarck, ND 58505-0840

To the Members of the Oil and Gas Research Council:

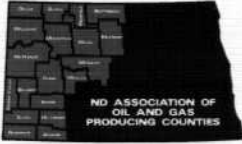
On behalf of the North Dakota Petroleum Council, I would like to express our support for the oil and gas industry workforce study to be conducted by the Department of Agribusiness and Applied Economics and the North Dakota State Extension Center for Community Vitality. The North Dakota Petroleum Council (NDPC) is a trade association that represents more than 500 companies involved in all aspects of the oil and gas industry, including oil and gas production, refining, pipeline, transportation, mineral leasing, consulting, legal work, and oil field service activities in North Dakota, South Dakota, and the Rocky Mountain Region. Petroleum Council members produced 98 percent of the 243 million barrels of oil produced in North Dakota in 2012.

Oil and gas development in western North Dakota has led to a significant growth in the state's population and has created many challenges for rural communities that are in the midst of this activity. A better understanding of the current and expected workforce will be an important tool for these communities—as well as economic development corporations, developers, investors, and others—to plan for the future development of infrastructure, housing, and other services needed to accommodate a growing population.

In addition to sending this letter of support, the NDPC is also committed to assisting the research team in meeting project objectives. The NDPC has had a great experience working with co-investigators Nancy Hodur and Dean Bangsund on studies to measure the petroleum industry's economic impact in the past, and we are fully confident in and supportive of their proposal to thoroughly and effectively study western North Dakota's workforce demographics. Your approval of this project is appreciated so western North Dakota can better grow to meet the needs of its current and future citizens. Please feel free to contact me at 701-223-6380 if you have any questions.

Sincerely,

Ron Ness  
President



# ND ASSOCIATION OF OIL AND GAS PRODUCING COUNTIES

## EXECUTIVE COMMITTEE

**Supt.  
Steve Holen**  
President  
McKenzie County PSD

**Dan Brosz**  
Past President  
City of Bowman

**Ron Anderson**  
McKenzie County

**Jim Arthaud**  
Billings County

**Greg Boschee**  
Mountrail County

**Supt.  
Jason Kersten**  
Bottineau PSD

**Shawn Kessel**  
City of Dickinson

**Gary Melby**  
City of Bowbells

**Supt.  
Mike Ness**  
Coal Conversion  
Counties

**John Phillips**  
Coal Conversion  
Counties

**Supt.  
Gary Wilz**  
Killdeer PSD

## STAFF

**Vicky Steiner**  
Executive Director

**Brady Pelton**  
Deputy Executive Director

**Janet Sanford**  
Permit Operator

**Sarah Meyer**  
Secretary/Treasurer

October 29, 2013

N.D. Oil and Gas Research Program  
State Capitol, 14th Floor  
600 E Boulevard Ave.  
Dept. 405  
Bismarck, ND 58505-0840

Dear Council Members,

The North Dakota Association of Oil and Gas Producing Counties support the continued work by Ms. Nancy Hodur and Mr. Dean Bangsund as it relates to the workforce demographics of the Bakken oil and gas industry. We have reviewed the study and we look forward to using the data for future planning.

We understand that the study of the workforce will assist our county, city and school staffs in their planning work in the future. Planning will allow our local governments to use their resources wisely as all funds are finite.

We've contracted with this team before and we were satisfied with the quality of the data.

This Association will assist the research team as is requested during the term of their contract.

We support the proposal.

Thank you.

Kindest Regards,

Vicky Steiner

Executive Director

On behalf of the Executive Committee

ND Association of Oil and Gas Producing Counties

Copy: Ms. Nancy Hodur