

OGRP Quarterly NEWSLETTER



This newsletter is produced by the Oil & Gas Research Program to provide periodic information and updates on Program activities to the citizens of North Dakota. It is the objective of this newsletter to report on the use of ND tax dollars to further promote ND resources for the economic benefit of the state.

From the Director's Desk

During the past year, we saw crude oil prices dip to their lowest point since the 1990s. As a result, oil producers in North Dakota shifted gears to focus on the most productive heart of the Bakken, letting activity slow at the outer fringes of the region. Many in industry and our state's government agree that this is not a "boom or bust" situation but rather an "ebb and flow" situation. Industry has responded to the oil price reduction with a combination of lower well and operational expenses coupled with improved well performance metrics. Using this formula, we can find profitable oil in North Dakota, even at the lower oil price. The Oil and Gas Research Program (OGRP) continues to focus on this collaborative approach, partnering with industry to advance "the state of the art" and promote oil and gas production in North Dakota.

We are fortunate that the Legislature put in place a continuing appropriation for the OGRP which allows the funding of research that the Industrial Commission believes will promote oil exploration and production in the state at a wide range of oil prices. We look forward to the fourth quarter of 2015 and all that is in store.

Brent Brannan
OGRP Director

INDUSTRIAL COMMISSION OF NORTH DAKOTA OIL & GAS RESEARCH PROGRAM

Governor
Jack Dalrymple

Attorney General
Wayne Stenehjem

Agriculture Commissioner
Doug Goehring

Director
Brent Brannan

Mission Statement

The mission of the Oil and Gas Research Council is to promote the growth of the oil and gas industry through research and education.

Recent Program Achievements

ND Legislature Mandates a Pipeline Study Commissioned by OGRP

On April 20, 2015, North Dakota Governor Jack Dalrymple signed into law House Bill (HB) 1358, legislation regarding the state's regulatory oversight of gathering pipelines for produced water and crude oil. The bill includes enhancements for the prevention and detection of pipeline leaks and expands the state's remediation and restoration program for land and water resources impacted by oil and gas development.

HB 1358 also authorizes the North Dakota Industrial Commission (NDIC) to develop new rules involving the construction and operation of gathering pipelines. The bill includes \$1.5 million to complete a study by the University of North Dakota's Energy & Environmental Research Center (EERC) regarding construction standards and monitoring systems for gathering lines, which will guide NDIC's consideration of new administrative rules. Funding for this study is being administered by OGRP.

The EERC has begun work and will regularly brief OGRC on findings, leading to a December 1, 2015, final report on the study

portion of the work. The study portion is to be followed by a pilot demonstration of best practices in pipeline monitoring and leak detection. This pilot project will be completed before the beginning of the next North Dakota legislative session in January 2017.

Oil and Gas Research Fund Financial Report

At the May 25 OGRC meeting, Karlene Fine, NDIC Executive Director, reported that OGRC should anticipate \$10,020,000 available in the Oil and Gas Research Fund for the 2015–2017 biennium. Of that amount, approximately \$4.8 million has already been committed by prior NDIC actions. This breakdown did not include any of the funds that the Legislature directed in HB1358 pertaining to either the EERC Gathering Pipeline Study or the legacy brine pit remediation project.

Funding Awarded to Recycled Drill Cuttings Beneficial Reuse Demonstration Projects

OGRP Funding Award: **\$759,860** Total Project Cost: **\$1,523,384**
Awardee: Nuverra Environmental Solutions, David Johnson, Director

The key objective of the project is to demonstrate, evaluate, and quantify the geotechnical and environmental performance of

drill cuttings treated by Nuverra's TerrafficientSM process. The treated cuttings from Nuverra's process will be used in three field-scale demonstrations, including 1) a gravel road-surfacing demonstration project in conjunction with McKenzie County, 2) a road construction project where Nuverra provides fill material for the road subbase, and 3) a landfill daily cover demonstration project at the McKenzie County Landfill. This quantitative assessment will allow Nuverra and its project partners to determine the technical, economic, and environmental feasibility of using treated drill cuttings for these applications, with the goal of working with the North Dakota Department of Health to obtain regulatory approval.

This project is expected to demonstrate that treated cuttings can be successfully utilized as beneficial reuse products while providing similar or improved technical performance over the native materials currently used with no adverse environmental impacts.

Update on OGRP's Interest in the EERC Resource Characterization Project with Sandia National Labs and the U.S. Department of Energy

Recent rail accidents involving crude oil that occurred between 2013 and 2015 raised questions about the safety of rail transport of crude oil. In an effort to address these questions, the U.S. Department of Energy (DOE) commissioned a study to investigate the properties of tight crude oil as they relate to its safe handling and transport. DOE contracted Sandia National Laboratories (SNL) to conduct the study, and the EERC was contracted to provide technical support in execution of the project. In parallel, NDIC established a contract with the EERC to enable greater participation in the project and fund progress reporting to NDIC.

The key objectives of the DOE study are to characterize and define crude oils based on their chemical and physical properties and to identify properties that could contribute to increased potential for accidental combustion. A two-phase approach

was developed to achieve these objectives. Phase I activities, which have been completed, included 1) a literature survey of publicly available information on crude oil properties and 2) a conceptual crude oil characterization plan that describes sampling, analytical, and experimental activities needed to address information gaps and provide comprehensive characterization of crude oil properties. Phase II activities are expected to include crude oil sampling, chemical and physical property characterization, and combustion testing. Federal funding is being pursued to allow Phase II activities to begin in third quarter 2015, but funding is not guaranteed.



Next Grant Round Deadline:
November 1, 2015

How Can You Learn More about Us?

Scan the QR code, or visit our Web site at www.dmr.nd.gov/ogrp



A Look Ahead . . .

Quarterly OGRP newsletters focus on project updates, emerging priorities for OGRP, and key insights from leaders of our Program council. The goal of these newsletters is to translate how OGRP projects are impacting oil and gas exploration and recovery in our state and why that matters to the reader.

If you would like to receive an electronic copy of this newsletter on a regular basis, please send your e-mail address to brentbrannan@gmail.gov. We would be happy to include you on the mailing list.

North Dakota Oil and Gas Research Program
State Capitol, 14th Floor
600 East Boulevard Avenue
Department 405
Bismarck, ND 58505-0840