



17th Legislative Assembly of the Northwest Territories

Standing Committee on Economic Development and Infrastructure

Report on Bakken Shale
Formation Tour 2013

Chair: Mr. Robert Hawkins

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ECONOMIC DEVELOPMENT
AND INFRASTRUCTURE**

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SPEAKER OF THE LEGISLATIVE ASSEMBLY

Mr. Speaker:

Your Standing Committee on Economic Development and Infrastructure is pleased to provide its Report on the Bakken Shale Formation Tour 2013 and commends it to the House.

Robert Hawkins, MLA
Chairperson

**STANDING COMMITTEE ON
ECONOMIC DEVELOPMENT
AND INFRASTRUCTURE**

REPORT ON BAKKEN SHALE FORMATION TOUR 2013

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**STANDING COMMITTEE ON
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REPORT ON BAKKEN SHALE FORMATION TOUR

INTRODUCTION

As part of developing the Northwest Territories' policy approach to hydraulic fracturing, representatives of the Standing Committee on Economic Development and Infrastructure joined a delegation led by the Minister of Industry, Tourism and Investment on a tour of the Bakken shale formation in Saskatchewan and North Dakota, between September 29th and October 4, 2013.

The delegation, made up of the Minister; Members of the Legislative Assembly; staff from the Departments of Environment and Natural Resources, and Industry Tourism and Investment; the Northwest Territories Geoscience Office; the National Energy Board; and leadership from Sahtu communities, travelled to Regina, Stoughton and Estevan, Saskatchewan; and Williston, New Town and Mandaree, North Dakota. The group met with a large number of people representing the Saskatchewan Ministry of the Economy, including Minister of the Economy, the Honourable Tim McMillan; the Saskatchewan Geological Survey; Cenovus Energy Incorporated; Crescent Point Energy Corporation; Statoil; the City of Williston; the State of North Dakota; the Consul General for North Dakota; members of the Three Affiliated Tribes Mandaree, Hidatsa and Arikara Nation; ONEOK Incorporated; and Cheveyo Energy Incorporated. The Standing Committee thanks all presenters for their time in meeting with the delegation and their thoughtful responses to questions and comments. Committee Members also thank the Minister and the Department of Industry, Tourism and Investment for coordinating the tour and making it possible for the entire delegation to participate.

Existing land use plans, the devolution of land and resource management and self-government agreements place the Northwest Territories in a much different position than jurisdictions in the Bakken. Our situation also differs widely in terms of volume of activity, infrastructure, workforce and regulatory regime, but valuable lessons can still be drawn from the delegation's experience. The Committee's observations may be summarized under three broad themes highlighted in a presentation by City of Williston Commissioner, Brad Bekkedahl: planning, people and partnerships. Members would also like to take this opportunity to comment on the tour's scope and further Committee direction on this important issue.

PLANNING – GET AHEAD OF THE CHALLENGE

A resounding message, by far the most emphasized to the delegation, is the need for effective planning and preparation for development. Presentations at provincial, state and community levels highlighted infrastructure, regulatory, environmental and social needs.

Infrastructure

Shale oil development in the Bakken area has placed immediate and unrelenting strain on all types of infrastructure. Transportation infrastructure is a primary concern. There are currently 9,322 producing wells in North Dakota, and the State expects that an additional 2,000 will be drilled this year. The average drilling rig requires at least 2,000 truckloads of materials and supplies, which has an equivalent impact of 25,000 light vehicles on roadways. A single loaded truck raises approximately 100 pounds of dust per mile on gravel roads, coating vegetation and reducing air quality and visibility. The State has enforced seasonal load restrictions, but allocates millions annually to new road infrastructure, maintenance and dust control to meet industry related traffic demands.

The increased number of trucks has resulted in hazardous driving conditions and serious accidents. Emergency services continue to be delivered largely by local volunteers resulting in post-traumatic stress disorders and burn-out among their ranks. Presenters in North Dakota strongly recommended identifying main arteries, bolstering existing corridors and working with industry to plan service roads and access needs.

Two exploratory wells will be drilled in the Northwest Territories this season. The impacts on roads highlight the need for responsive planning and maintenance for our comparatively fragile seasonal and all-weather roads.

The Committee heard that, although it requires more time to develop and incur greater capital costs, pipeline infrastructure can reduce the amount of truck traffic and mitigate the hazards associated with transporting large volumes of water, waste water and oil via road and rail. Natural gas pipelines can also reduce the amount of flaring and associated greenhouse gas emissions. It is estimated that a billion dollars' worth of natural gas is flared annually from the Bakken shale.

Municipal infrastructure is another area that requires well thought-out planning. State of North Dakota officials highlighted significant demands and need for preparation in the areas of:

- Zoning and land use planning;
- Water and sewer services;
- Electrical supply;
- Road infrastructure;
- Airports;
- Housing;
- Public safety services, including emergency service providers and law enforcement;
- Schools;
- Hospitals; and
- Recreational facilities

The Committee encourages Sahtu leadership and Government of the Northwest Territories Departments to work with industry to determine community needs and plan accordingly.

Geological Information

Extensive sampling and geological mapping has allowed the Province of Saskatchewan to collect comprehensive information and three dimensional imaging of the province's subsurface. This baseline information can play a key role in industry, research and regulatory decision-making and the protection of water resources. While the Northwest Territories may not have the resources required to offer similar services at the present time, the tour of the Saskatchewan Geological Laboratory highlighted the value of gathering and archiving accurate information and making it accessible, at least on a partly cost-recovery basis.

Regulatory Preparation

The devolution of land and resource management affords the Northwest Territories a significant opportunity to design and implement a responsible regulatory regime. Representatives of the Saskatchewan Ministry of the Economy recommended enacting legislative and regulatory instruments that establish and enforce meaningful consequences for industry. Saskatchewan has looked to Alberta for many of its regulations.

Some features of the Saskatchewan self-disclosure based regulatory approach include:

- Comprehensive baseline water and geological information;
- Disclosure of the chemical composition of fracturing fluid, and more importantly, in their view, identifying and monitoring transformed chemicals in well flowback;

- Explicit guidelines for the management and disposal of contaminated water; and
- Environmental protection, remediation and enforcement provisions.

The province has scheduled Crown Land sales six times a year, and makes land available through leases, exploration licences and special exploratory permits. A liability management program includes a requirement for operators to pay a monthly security deposit to fund environmental protection and remediation programs.

The Committee heard that despite ever-increasing permit applications and oil and gas revenues reaching over 1.5 billion annually, Saskatchewan regulatory staff and program funding has remained stable. The division experiences greater position vacancies than before, and few positions are dedicated to fieldwork.

Both Saskatchewan and North Dakota had established regulatory regimes, royalty and taxation structures before intense development of the Bakken began. The establishment of an effective royalty regime is a significant area of planning for the Northwest Territories to address.

The Committee heard the view that a key to successful development is to implement taxation that balances economic viability for industry and a jurisdiction's revenue needs. The Saskatchewan Ministry of the Economy felt it had reached a competitive level of taxation, while still being able to collect resources for government priorities. The Committee Members noted, however, that Saskatchewan royalty rates had decreased while the amount of drilling activity increased. Unlike either the Northwest Territories or North Dakota, the province has not established a heritage fund.

North Dakota collects a combined production and extraction tax, with revenues divided between the State and municipalities. Thirty percent of all royalty revenues are directed to the State's Legacy Fund. The fund is established under legislation that does not allow any portion to be accessed until 2017, and then, only with the consent of two thirds of the State legislature. In addition to the Legacy Fund, North Dakota allocates royalty revenues to six other trusts established to fund infrastructure projects and community needs related to intense development. Unlike the Northwest Territories, North Dakota also has the ability to tax its non-resident workforce based on earnings within their jurisdiction.

Large oil revenues have resulted in disparities between oil producing and non-oil producing counties. The State notes that it is a challenge to mitigate regional disparities since infrastructure and programming pressures are greater in areas with more industrial activity.

Wildlife

A significant concern for Members of the delegation was the lack of a clear plan to address wildlife. The tour did not include a presentation from the Saskatchewan Ministry of the Environment, and, in North Dakota, Members heard that a plan to address wildlife and habitat issues had been delayed due to the rapid pace and scale of development. When questioned about wildlife concerns, a State legislator noted his view that wildlife could move and take care of itself! This situation demonstrates to the Committee that if adequate planning to address wildlife and other environmental concerns does not take place in advance of, and alongside development, it will likely be neglected. Wildlife is highly valued in the Northwest Territories and the Department of Environment and Natural Resources and Sahtu leadership have significant roles in ensuring continued wildlife and habitat protection.

PEOPLE – LEADERSHIP WORKING TOWARD COMMON GOALS

Workforce development has been identified as a key piece of Sahtu exploration readiness. Presentations highlighted the need to enhance and establish training facilities and opportunities for workers both in the oil industry and related service fields.

Shale oil development has significant socio-economic impacts associated with the creation of many permanent and temporary high paying jobs. The Northwest Territories should anticipate that a large number of non-resident workers will be housed in industry camps. Presenters described crew camps as a “necessary evil”. They provide an appropriate solution to the accommodation needs of non-resident workers, but have resulted in many negative social impacts, and increased pressure on municipal services. The Three Affiliated Tribes put a moratorium on crew camps on their land due to disruptive behaviour in their communities. The City of Williston is making significant investments in housing, schools, health care and recreational facilities to encourage workers and their families to relocate to the area more permanently.

The Three Affiliated Tribes offered a lot of comment on the impact of development on their people. Benefits include 99% employment, unparalleled opportunities for Aboriginal entrepreneurs and businesses, improved community programming, and profits from royalties that, with proper planning, will secure the financial future of tribal beneficiaries for generations. Drawbacks include increased crime and substance abuse, disorganized road construction and heavy truck traffic throughout traditional territory, flaring, spills, impacts on wildlife and housing shortages. People who lack financial responsibility and life skills have suffered rather than benefited from increased activity and resource royalty collection.

Presenters recommended the Northwest Territories promote cultural awareness and understanding between communities, industry, and new residents, as well as education in healthy lifestyles and financial management. They also see that right now, the Northwest Territories has the opportunity to take control of the pace and scale of development.

PARTNERSHIPS – WITH ALL THOSE WILLING TO SHARE THE RISKS

The North Dakota Association of Oil and Gas Producing Counties noted its generally positive experiences with its industry partners. A representative of the Three Affiliated Tribes Tribal Economic Development Office, or TERO, shared his experience that oil companies' priority is to make a profit, but they are generally willing to work with communities and governments. Statoil emphasized its commitment to collaboration and open communication with stakeholders. North Dakota officials recommended that governments work closely with industry to determine needs and priorities.

The Three Affiliated Tribes deal directly with industry as a self-government. Through TERO, it implements a priority procurement policy, and, like Saskatchewan, has developed a database of Aboriginal-owned businesses that industry can access to source goods and services. The TERO database also verifies the capacity of a company to perform the work a potential contractor is seeking.

The Saskatchewan Ministry of the Economy discussed a number of other initiatives designed to encourage partnerships and business development:

- The Empower Program provides coaching, mentoring and training for entrepreneurs and established small business, through a funding partnership with industry.
- The annual Aboriginal Business Match provides an opportunity for businesses and industry to form partnerships through an e-profiling system that connects potential business partners online before they meet in person at this increasingly popular event.
- The Saskatchewan government is currently working on a northern opportunities forum to further support the Aboriginal Business Match.

As groups cooperate on creative solutions to challenges, and identify and work toward common goals, we share the risks, but also the benefits, which may be far greater than we could realize on our own. The Committee recommends that as much as possible, the Government of the Northwest Territories look for opportunities to form and foster strong partnerships between industry, communities and Aboriginal governments.

SCOPE OF TOUR

As Committee Members reflect on their experience of the Bakken tour, they identify elements of shale oil development that were not included on the agenda, such as water withdrawal and permitting processes, waste confinement and disposal, pipeline infrastructure, and in-depth discussion of the social and environmental impacts of the resource boom.

The tour did not include the opportunity to view any of North Dakota's open waste pits, nor was there any formal discussion of the impacts of flooding in the area earlier this year. While many presenters spoke candidly, there was limited discussion about how jurisdictions quantify environmental liabilities or how communities cope with homelessness and addictions.

Through Committee initiative, the tour group heard from a regional wildlife manager and local resident who shared observations that taxes and cost of living have increased substantially while, for many people, quality of life has declined overall, especially for those who have not been able to take advantage of the activity. The same individual commented that effects on wildlife and habitat were not being addressed in mitigation activities and encouraged tour participants to ask further questions in this area.

After the tour's conclusion, Members learned that a large oil spill, linked to inadequate monitoring, occurred in the area during the time the Committee was there. This significant event was not mentioned to participants, and only appeared in the media two weeks after the spill began.

The Committee recognizes that in order to accommodate some of these issues other components of the tour would have been missed. The exclusion of these elements highlights areas where the Committee might focus in the future. Members raise these issues to draw awareness to impacts that cannot be overlooked as the Northwest Territories develops policy on the use of hydraulic fracturing.

NEXT STEPS

Hydraulic fracturing continues to gain public attention in the Northwest Territories. It is to our immediate and long-term advantage to develop a responsible, well-informed policy on the use of this technology and ensure that all voices are heard on this important issue. The tour of the Bakken formation increased participants' awareness of the impacts of shale development, and the need for planning and action. While the Northwest Territories is in a very different position than either North Dakota or Saskatchewan in terms of its level of development, to the degree that lessons learned in the development of the

Bakken are accurately shared, they are valuable to future development in the Northwest Territories.

The Standing Committee would like to embark on further fact-finding and explore areas that were overlooked on its Calgary and Bakken tours, and hear from the public and interested organizations on the use of hydraulic fracturing in our jurisdiction. As leaders and decision-makers, the Committee wants to ensure we act in the best interest of the Northwest Territories - our land, our people and our resources.