U.S. House of Representatives
Committee on Natural Resources
Oversight Hearing
May 8, 2013
1324 Longworth House Office Building
Washington, D.C.

Testimony by Lynn D. Helms, Director
North Dakota Industrial Commission
Department of Mineral Resources

North Dakota's Bakken Resource

The Bakken Formation is a large unconventional resource that underlies most of the western portion of the state of North Dakota. The USGS stated in their April 2013 report that it is the largest continuous resource they have assessed in the lower 48 states.

The Bakken estimated ultimate recovery using current drilling and completion practices has been estimated at approximately **2.5 – 5.0%** of original oil in place, which is equal to **7–15 billion barrels.** North Dakota Bakken wells are still undergoing adjustments and modifications to the drilling and completion practices. Technology and the price of oil will dictate what is ultimately recoverable from this formation, but for every 1% increase in recovery, three billion barrels of recoverable reserves are added, which is equal to five months of United States consumption.

The thermally mature portion[1] of the Bakken underlies 15,000 square miles of western North Dakota. The current North Dakota drilling rig fleet is capable of drilling 2,000-2,500 wells each year full development could require 16 to 18 years. Production from Bakken development has moved North Dakota from number eight to number two among US states in daily production.

North Dakota's unique geology is ideal for application of 21st century unconventional resource play technology. Attached figure two illustrates how drinking water resources are separated from the disposal zone by a half mile of bentonite shale and from the hydraulic fracturing in the Bakken pool by one and a half miles of rock that includes nine layers of impermeable unfracable salt. In addition, the disposal zone is approximately two miles above the basal granite where earthquakes originate.

Not only is North Dakota's geology ideal, but our geography is as well. Mineral ownership is 82% private, 12% federal, and 6% state while surface ownership is 89% private, 9% federal, and 2% state. It is this private ownership in a rural setting and the protections afforded private contracts in our state constitution that have made the development of the Bakken possible.

For example of the current drilling rigs operating in North Dakota 159 are operating on private, eight on state, 21 on Indian Trust, and three on other federal lands. This is primarily due to the length of time required to obtain a federal drilling permit which typically involves approval from more than one federal agency and over six months compared to a drilling permit on private land that involves one state agency and 20 - 30 days.

While the federal drilling permitting process may make sense on areas with large blocks of land managed for federal ownership or trust responsibilities, figure three illustrates that outside Fort Berthold and the Dakota Prairie Grasslands federal mineral tracts in North Dakota are small parcels that resulted from right of way acquisitions and bankruptcies. In nearly every case the surface estate is privately owned resulting in a split estate situation where the processes

required to obtain a federal permit impose regulatory burdens and development delays on private property owners. 91% of all Bakken spacing units contain some federal mineral ownership or trust responsibility, but in most cases it is less than 15% of the minerals in the spacing unit with no surface ownership. This is not enough ownership to determine whether development will occur, but is enough to prevent or delay the drilling of up to one half the potential wells in the spacing unit.

Federal rules do not allow a well bore to penetrate a federal mineral tract, no matter how small, without a federal lease and a federal drilling permit. The proposed BLM hydraulic fracturing rule would add a requirement for pre-approval of fracturing processes and chemicals.

North Dakota has worked hard to create a stable tax and regulatory environment that promotes venture capital investment. Our oil and gas rules are reviewed at least every two years through a public comment process where every comment must be considered in writing. This ensures that North Dakota regulations keep up with new technologies and economic conditions.

The North Dakota Industrial Commission has taken the following position on the BLM proposed hydraulic fracturing rule:

1) This is a state's rights issue. North Dakota regulations already address flow-back disposal, chemical disclosure, well construction, and well bore pressure testing and have reduced well bore failures from six per year to zero. Source water is the jurisdiction of the states and should not be monitored by BLM. Since BLM is working to minimize any duplication in the reporting requirements, the rule should exempt states that have adopted comprehensive hydraulic fracturing rules.

2) BLM indicates it is attempting to provide a consistent standard across all public and Indian lands and working to minimize any duplication between the reporting required for state regulations. It is not possible to create a consistent nationwide standard that complies with all federal, tribal, state, and local laws, rules, and regulations. It is also not practical to apply one standard across all public and Indian lands in the United States. Each sedimentary basin has unique deposits and geologic features which result in unique local environmental and geologic conditions which must be taken into consideration when regulating oil and gas development.

3) BLM states, "[t]he reporting requirements would also pose an additional burden on BLM, since it would review an additional number of sundry forms and additional information per form." Since this will pose an additional burden on the BLM, it will further delay permitting by BLM. BLM is currently understaffed in North Dakota with the time to process a drilling permit currently taking 180-290 days. BLM's analysis indicates an additional 28,560 man hours per year will be needed to implement these rules. Imposing additional permit tasks will only further delay the process. To avoid duplication and undue delays in BLM processing time, information required by individual states on federal and Indian minerals should be accepted in lieu of requiring duplicative information to be submitted to BLM by operators. The rule must contain such language to ensure there will be collaboration between BLM and the state to accomplish this goal.

4) BLM states that the proposed rule would result in a small additional cost per well stimulation and it will not alter the investment or employment decisions of firms. The proposed rule will definitely alter the investment and employment decisions of firms. Imposing additional permit tasks will only further delay the BLM's burdensome process. Several operators have already eliminated federal and Indian mineral ownership from some spacing units to allow the timely development of fee leases that were about to expire. It is likely some of the acreage removed from such spacing units will never be developed. This has also resulted in an increased workload for the NDIC.

5) Executive Order 13132 requires a Federalism assessment if the proposed rule would have a substantial direct effect on the states. BLM has determined that the proposed rule would not have sufficient Federalism implications to warrant preparation of a Federalism Assessment. The NDIC disagrees since the proposed rule will negatively affect the royalties and taxes paid to the state of North Dakota because of development delays caused by the proposed rule.

6) BLM states, "[t]he proposed rule seeks to achieve benefits by making more information available to the public about the chemicals injected in well stimulation fluids, while protecting trade secrets and confidential business information," and further states "[u]nder existing law, BLM may nonetheless make that information available to the public…" This requirement will be an additional burden on BLM and increase the review time to issue a permit. North Dakota regulations require operators to report on FracFocus, which provides protection of proprietary information. It appears BLM rule will allow releasing such information which might encourage operators to forego using the "newest" and "proprietary" chemicals on federal and Indian lands since no proprietary protection is provided. Information needed to respond to incidents is already available through EPCRA and CERCLA laws and rules. Therefore, the rule does not require any additional information with which to respond to incidents.

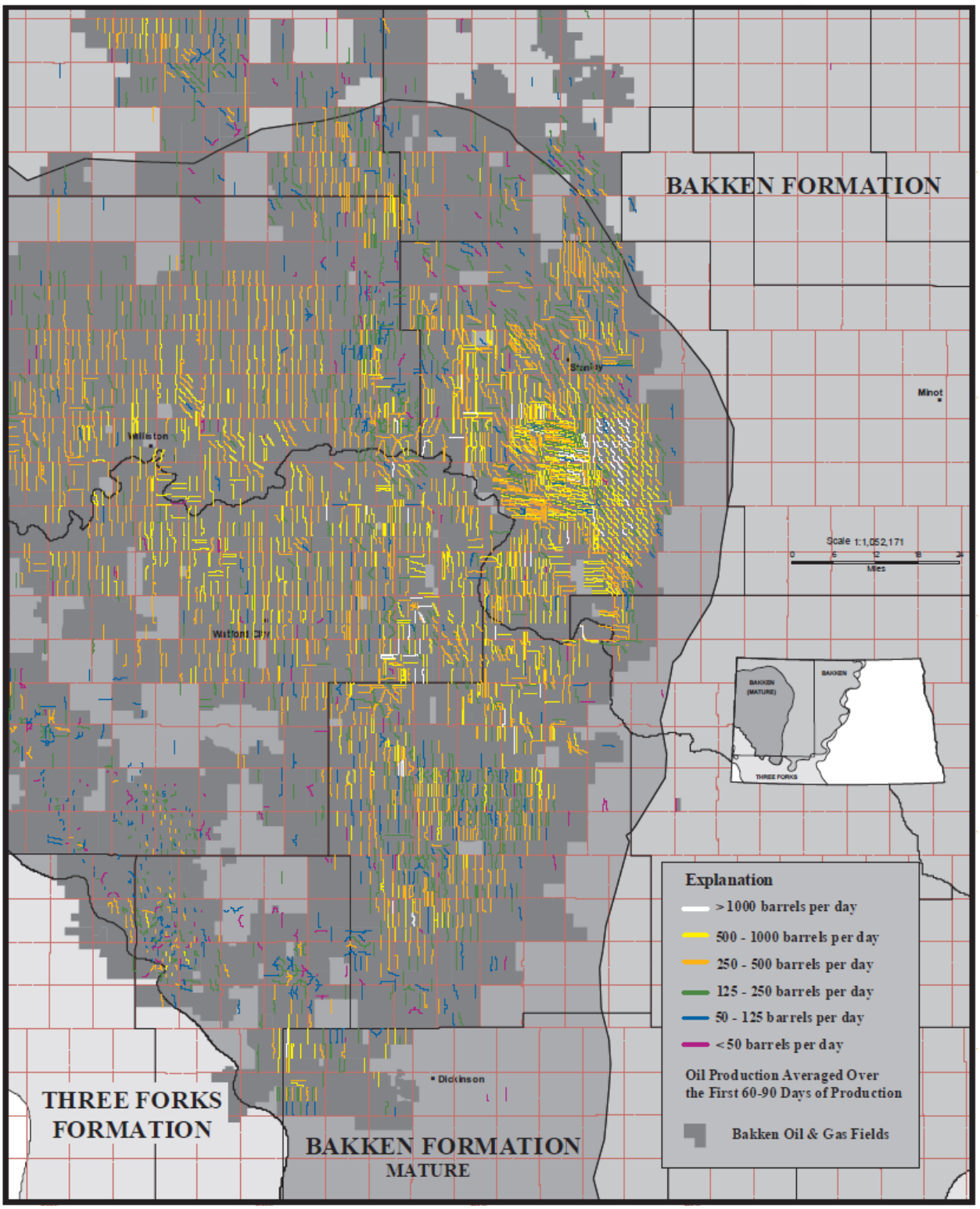

BAKKEN FORMATION
Minot
Stanley
Williston
Watford City
Scale 1:1,052,171
0 6 12 18 24
Miles
BAKKEN (MATURE)
BAKKEN
THREE FORKS
Explanation
>1000 barrels per day
500 - 1000 barrels per day
250 - 500 barrels per day
125 - 250 barrels per day
50 - 125 barrels per day
<50 barrels per day
Oil Production Averaged Over the First 60-90 Days of Production
Bakken Oil & Gas Fields
Dickinson
THREE FORKS FORMATION
BAKKEN FORMATION MATURE

Figure 1

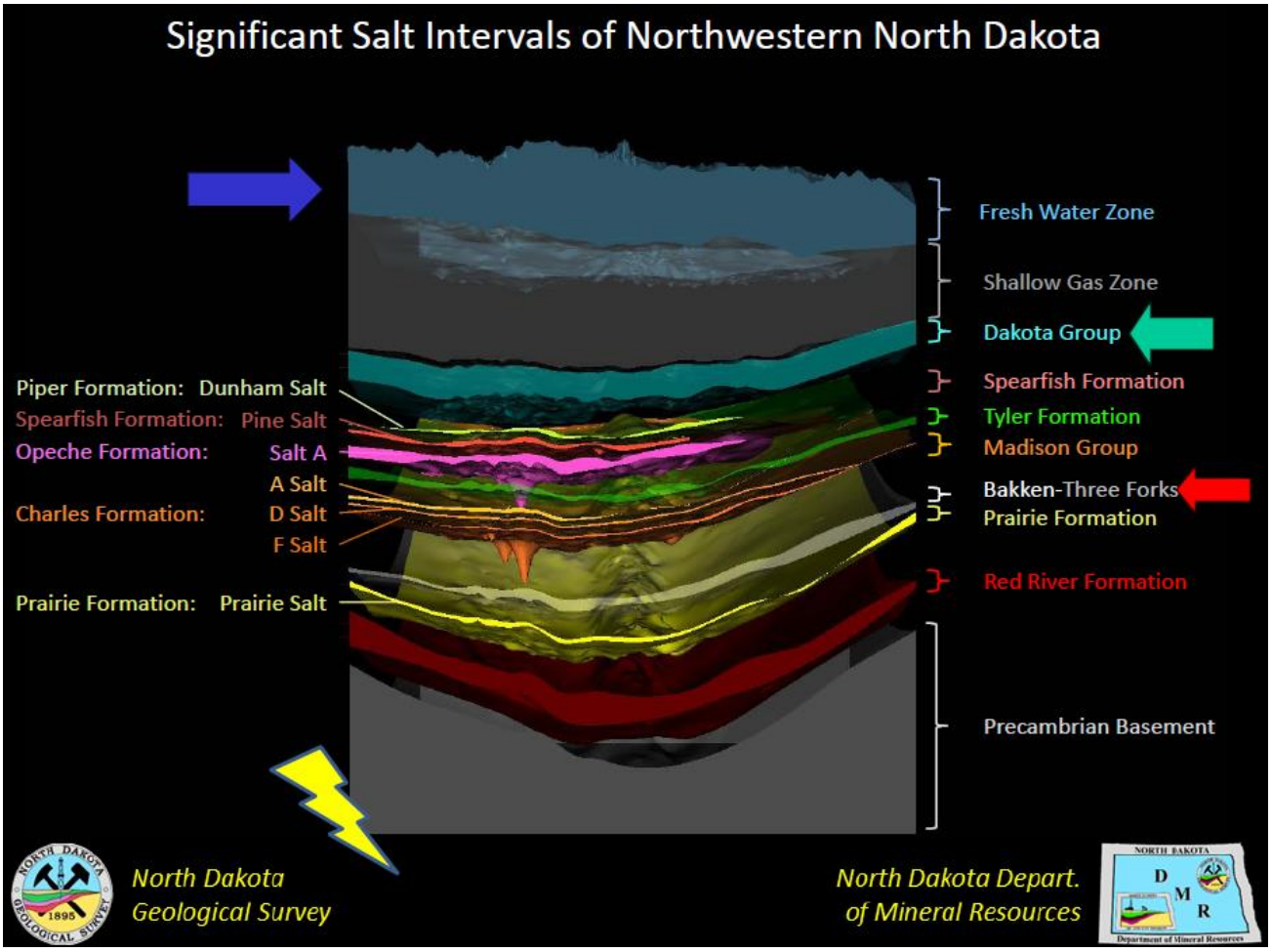
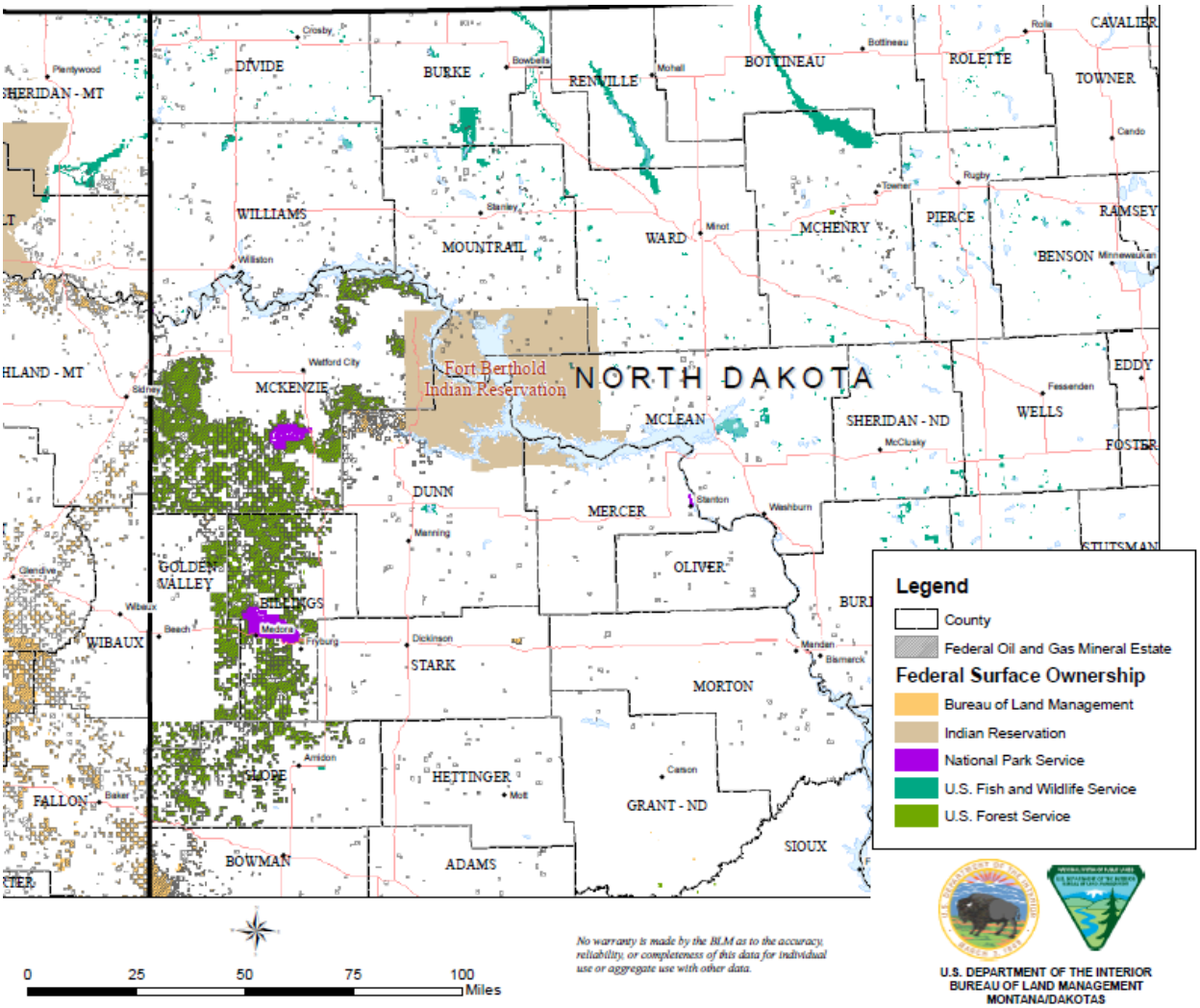

Significant Salt Intervals of Northwestern North Dakota
Fresh Water Zone
Shallow Gas Zone
Dakota Group
Spearfish Formation
Tyler Formation
Madison Group
Bakken-Three Forks
Prairie Formation
Red River Formation
Precambrian Basement
Piper Formation: Dunham Salt
Spearfish Formation: Pine Salt
Opeche Formation: Salt A
A Salt
Charles Formation: D Salt
F Salt
Prairie Formation: Prairie Salt
North Dakota Geological Survey
North Dakota Depart. of Mineral Resources

Figure 2


NORTH DAKOTA
Fort Berthold Indian Reservation
DIVIDE
BURKE
RENVILLE
BOTTINEAU
ROLETTE
TOWNER
CAVALIER
WILLIAMS
MOUNTRAIL
WARD
MCHENRY
PIERCE
RAMSEY
BENSON
EDDY
WELLS
FOSTER
MCKENZIE
MCLEAN
SHERIDAN - ND
DUNN
MERCER
OLIVER
GOLDEN VALLEY
BILLINGS
WIBAUX
STARK
MORTON
HETTINGER
GRANT - ND
SIOUX
ADAMS
BOWMAN
FALLON
SLOPE
HERIDAN - MT
HLAND - MT
Legend
County
Federal Oil and Gas Mineral Estate
Federal Surface Ownership
Bureau of Land Management
Indian Reservation
National Park Service
U.S. Fish and Wildlife Service
U.S. Forest Service
0
25
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Miles
No warranty is made by the BLM as to the accuracy, reliability, or completeness of this data for individual use or aggregate use with other data.
U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
MONTANA/DAKOTAS

Figure 3

Lynn D. Helms

Director, North Dakota Department of Mineral Resources

His work in the oil industry has taken Lynn Helms all over the world. Most recently, Lynn has served as Director of the North Dakota Industrial Commission Oil & Gas Division since July 1998 and Director of the Department of Mineral Resources since it was formed in July 2005. Before moving to Bismarck to work in state government, he worked as a production engineer, reservoir engineer, and asset team leader on projects in Abu Dhabi, Alaska, Arkansas, Louisiana, Mississippi, Montana, New Mexico, North Dakota, Texas, and Wyoming. Lynn earned his Bachelor of Science Degree in Engineering from South Dakota School of Mines and Technology. When he's not working Lynn enjoys spending his free time with his wife, college-aged children, and his four horses.