

**Materials relating to 2013  
North Dakota legislative  
action concerning  
setbacks for oil and gas  
wells**

# N.D.C.C. 38-08-01, 2012 and 2018 version:

## **38-08-01. Declaration of policy.**

It is hereby declared to be in the public interest to foster, to encourage, and to promote the development, production, and utilization of natural resources of oil and gas in the state in such a manner as will prevent waste; to authorize and to provide for the operation and development of oil and gas properties in such a manner that a greater ultimate recovery of oil and gas be had and that the correlative rights of all owners be fully protected; and to encourage and to authorize cycling, recycling, pressure maintenance, and secondary recovery operations in order that the greatest possible economic recovery of oil and gas be obtained within the state to the end that the landowners, the royalty owners, the producers, and the general public realize and enjoy the greatest possible good from these vital natural resources.

# N.D.C.C. 38-08-05, as of the year 2012:

## **38-08-05. Drilling permit required.**

It is unlawful to commence operations for the drilling of a well for oil or gas without first obtaining a permit from the industrial commission under such rules as may be prescribed by the commission and paying to the commission a fee for each such well in an amount to be prescribed by the commission. The applicant shall provide notice to the owner of any permanently occupied dwelling located within one-quarter mile [402.34 meters] of the proposed oil or gas well. Unless waived by the owner or if the commission determines that the well location is reasonably necessary to prevent waste or to protect correlative rights, the commission may not issue a drilling permit for an oil or gas well that will be located within five hundred feet [152.4 meters] of an occupied dwelling. If the commission issues a drilling permit for a location within five hundred feet [152.4 meters] of an occupied dwelling, the commission may impose such conditions on the permit as the commission determines reasonably necessary to minimize impact to the owner of the dwelling.

**HB 1348**  
**as introduced**

**HOUSE BILL NO. 1348**

Introduced by

Representatives Froseth, Drovdal, Hunskor, Kempenich, Monson

Senators Andrist, Laffen

1 A BILL for an Act to amend and reenact section 38-08-05 of the North Dakota Century Code,  
2 relating to setbacks for oil and gas wells.

3 **BE IT ENACTED BY THE LEGISLATIVE ASSEMBLY OF NORTH DAKOTA:**

4 **SECTION 1. AMENDMENT.** Section 38-08-05 of the North Dakota Century Code is  
5 amended and reenacted as follows:

6 **38-08-05. Drilling permit required.**

7 ~~It is unlawful to~~ A person may not commence operations for the drilling of a well for oil or gas  
8 without ~~first~~ obtaining a permit from the industrial commission under ~~such~~ rules as may be  
9 ~~prescribed~~ adopted by the commission and paying to the commission a fee for each ~~such~~ well in  
10 an amount to be ~~prescribed~~ determined by the commission. The applicant shall provide notice to  
11 the owner of any permanently occupied dwelling located within ~~one-quarter mile~~ one thousand  
12 three hundred twenty feet [402.34 meters] of the proposed oil or gas well. Unless waived by the  
13 owner or if the commission determines that the well location is reasonably necessary to prevent  
14 waste or to protect correlative rights, the commission may not issue a drilling permit for an oil or  
15 gas well that will be located within ~~five~~ one thousand three hundred twenty feet [~~152.44~~ 402.34  
16 meters] of an occupied dwelling. If the commission issues a drilling permit for a location within  
17 ~~five~~ one thousand three hundred twenty feet [~~152.44~~ 402.34 meters] of an occupied dwelling, the  
18 commission may impose ~~such~~ conditions on the permit as the commission determines  
19 reasonably necessary to minimize impact to the owner of the dwelling.

**Transcript of  
January 31, 2013  
House hearing  
on HB 1348**


# 2013 HOUSE STANDING COMMITTEE MINUTES

House Energy and Natural Resources

Pioneer Room, State Capital

HB 1348  
January 31, 2013  
18107

Conference Committee



Relating to setbacks for oil and gas wells.

**Minutes:**

*10 testimony*

Rep. Porter: We will call the hearing on HB 1348.

Rep. Froseth: Oil and gas has been good for N.D. and the future. This bill does one thing it changes the setback which current law says it has to be at least 500 feet from an occupied dwelling. This bill would change that to 1325 feet which is a ¼ mile. I received lot of emails on this bill; one that indicated problems that people encounter that living that close to an oil site was spelled out in this letter from Rosella Person. (See testimony1)

Rep. Keiser: Would there be a time when the person of an occupied place might approve a closer location and would this preclude that?

Rep. Froseth: I think it can be done in negotiations with the oil company.

Rep. Droval: We need to have a good business environment for people to make money whether they are in the oil business or agriculture etc. We must also protect our citizens and our land for future generations. We need to do a better job protecting our citizens. We shouldn't have to force the oil companies to move the rig further away. I do think 500 feet is too close. If a flare gets out of control 500 is not much time to get out of there.

Derrick Braaton: I am an attorney with Baumstark Braaton Law Partners; I am here as a lobbyist for Northwest Land Owners Association. Our office requested the oil and gas division to get copies of all the studies and science that were referred to in that hearing and that were reportedly support of the 500 foot setback. We read them and don't believe that they support the idea of 500 setbacks as the maximum even if there is any magic to the 500 foot setback. Included with my testimony is a letter from John Coefield (See testimony 2) the bottom line is that there is no demonstration that would support the notion that a 500 setback will protect the public.

Myron Hanson: President of the Northwest Landowners; Mr Baaton addressed a lot of the issues that I wanted to talk about so I won't address those. We heard previous testimony last week on SB 2206 that the industry feels that these considerations are adequately addressed by the current statute. (See testimony 3)

Dan Wogsland: Executives Director of the N.D. Grain Growers Association and we are in support of HB1348. During our deliberations at the N.D. Grain Growers Associations Annual meeting in December,2012,NDGGA membership adopted the following resolution.(See testimony 4)

Kristie Schlosser Carlson: I represent the 40,000 members of the N.D. Farmers Union and the Policy and Action developed democratically by our grassroots memberships.(see testimony 5)

Brenda Jorgenson: I am from White Earth Valley here is my story of what happened on Sunday 4/10/11. (See testimony 6)

Clark Stevens: I live in Glenburn N.D. and I am in favor of this bill. This is my personal story.

Ron Ness: President of the N.D. Petroleum Council. The N.D. Petroleum Council represents more than 400 companies in all aspects of the oil and gas industry, including oil and gas production, refining, pipeline, transportation, mineral leasing, consulting legal works, and oilfield service activities in N.D.(See testimony 8) I think the 500 feet has worked.

Rep. Silbernagel: Is the current setback by statute?

Ron Ness: I think 500 feet from the well head.

Rep. Keiser: Can you go into how waste work correlative rights are?

Ron Ness: Waste is not utilizing the best process or the best knowledge in order to develop the resource. Anybody that comes in with a permit; the engineers at the Dept. of Mineral Resources are looking at a possible way to ensure that the return to the parties and to everyone interested are using the best technology and getting the most out of that resource and that is now they permit those wells.

Rep. Keiser: Correlative rights; is that the same?

Ron Ness: Correlative rights are the right of that mineral owner to develop their assets.

Rep. Hunsakor: I haven't heard you give strong arguments for that when you compare that with the testimony we already heard. What is the reason for that when we heard the testimony against the 500 feet?

Ron Ness: I think the question is what is the right distance for any of these things?



Rep. Hunsakor: You haven't answered my question. What is the reason as far as the oil industry argument why it should stay at 500 feet?

Ron Ness: The 3 issues are 1 the waste and correlative rights and trying to ensure that mineral owner has a chance. 2 we are talking about the impact to wildlife and habitat in N.D.

Rep. Hunsakor: You did mention and 2 are here today that allotted to how serious this is.

Ron Ness: I can't speak to that. I did hear the 2 today there are other people across the state that don't like there's either.

Rep. Kelsh: Why aren't some of the wells not being flared?

Ron Ness: I don't know.

Rep. Kelsh: There was also the question of "who do we call"?

Ron Ness: I think the Dept. of Health, the Dept. of Mineral Resources are some good sources.

Kent Beers: I work for Oasis Petroleum; I hear today representing the N.D. Petroleum Council. Some of you may have heard of Oasis we have been active in the Baaken since 2008 we drilled over 300 wells. (See testimony 9). If you are the individual in the home you do not want to stand at the window and look at the well site or put up with some of the smells that the people talked about but the unintended consequences of this is sufficient. The amount of service that will be disrupted and economically the cost and the operators to do things differently are equally important; there would be lots of loses in reserves.

Rep. Keiser: Do you have any idea how often the homeowner has requested that the well be moved more than the 500 feet?

Kent Beers: It has been asked and well bent over backwards to try and accommodate them.

Lynn Helms: Director of the Dept. of Mineral Resources; my testimony is very short did want to address some of the questions that was raised about the science that we talked about. (See testimony 10).

Rep. Anderson: How many of us in here today would like to live 500 feet from oil flare?

Rep. Porter: We will close the hearing on HB 1348.

**Attachments**  
**#1 - #10**  
**to transcript of**  
**January 31, 2013**  
**House hearing**

From Rep. Rosetta

1

Mr. Chairman, Mr. Vice Chairman and Legislative members of the North Dakota Energy and Natural Resources, House Standing Committee,

Thursday, January 31, 2013 you will receive testimony on House Bill NO. 1348

I am unable to stand before you to testify in favor of this bill. I would however like to send this e-mail in my stead.

I live in the White Earth Valley of Mountrail County in North Dakota. We are right in the thick of oil Country.

The nearest wells are approximately three fourths to one mile away from my home.

The well to the East of my home on Section 15-Township 156-Range 94- in Myrtle Township is the well I will use for this letter.

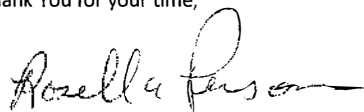
The current set back policy for oil wells is not nearly enough. You have to factor in the topography of the area also. I live in a Valley that lies below this well. During the 2012 year I called at least 5 times about the heavy odor being emitted from this well site during flaring. I will say Hess investigated and even upgraded their equipment. They gave me three numbers to call in the event this happened again and they even gave out their control room number. This makes me believe this was a serious error be hit human or just a fluke.

Not only were the smells horrible, the windows in my home in the fall we coated with some type of oil film that window washing fluids would not take off. I had to use old fashioned hot water with vinegar going over them twice to clean them. Think about this if the windows held this type of film what was and is in my lungs and everyone else's in the area.

I shudder to think of having children close to an oil rig that is flaring, not to mention the other fumes emitted from the rig site. House Bill NO. 1348 is an important one. After what I have experienced, I think a 1320 foot set back from occupied dwellings or places of business is a reasonable request.

If you would care to speak with me my telephone number is 701-755-3353.

Thank You for your time,



Rosella Person

2

**Testimony in Support of  
HOUSE BILL NO. 1348**

**House Energy and Natural Resources Committee – January 31, 2013**

Chairman Porter, House Energy and Natural Resources Committee members, my name is Derrick Braaten. I am an attorney with Baumstark Braaten Law Partners in Bismarck, and I appear today as a lobbyist on behalf of the Northwest Landowners Association to support House Bill 1348.

As many of you know the Northwest Landowners Association is a network of farmers and ranchers whose purpose is to inform, support, and promote the property rights of landowners in North Dakota. The Association has approximately 350 members across the state.

The Senate Natural Resources Committee recently held a hearing on Senate Bill 2206 which also relates to increased setbacks from homes for oil and gas wells. It is my understanding that at that hearing a question was asked of Lynn Helms, director of the North Dakota Oil and Gas Division, regarding any studies related to setbacks, and Mr. Helms had indicated that certain studies were conducted. We requested and received the studies Mr. Helms was referring to in that testimony. We do not believe these studies indicate in any way that a greater setback from homes for oil and gas wells in North Dakota is needed. One is titled “A Municipal Officials Guide to Diesel Idling Reduction in New York State,” and contains information on setbacks for truck stops at which diesel semis are idling. Another study is titled “Structure Response and Damage Produced by round Vibration From Surface Mine Blasting.” Although explosions from oil wells are a concern, this study does not address the various reasons North Dakota landowners are asking for increased setbacks, and was originally introduced as part of a bill in 2005 related to setbacks for seismic blasting. The third study is an Oil and Gas Impact Report conducted in

La Plata County, Colorado. This study does have some relevant information on setbacks of 300 feet, but the primary discussion with respect to the 300 foot setback relates to an oil or gas well's impact on the visual landscape. While this is certainly a concern of landowners, there are many reasons justifying an increased setback, and the study does not contain any comprehensive analysis of why a 300 foot setback was used, other than stating that at 300 feet, most people would agree that an oil or gas well is the most prominent feature of the landscape. The longer study from which this report is culled contains some telling statements. The study's authors note that "Increased development of CBM in La Plata County may cause environmental changes at the Fruitland Outcrop, increasing the risk of methane seeps or fires and associated risks to public health and safety. Direct impacts associated with the anticipated development of CBM in the study area include an increased risk of methane seepage, releases of toxic gases and odors and fires or explosion." Additionally, the La Plata study was done in a study area that contained 285 existing wells, with 318 additional wells projected. It is unreasonable to extrapolate from this small, focused study and argue that it supports a rule for all of North Dakota's landowners living in the midst of the largest oil boom in recent history. In summary, we do not believe that these studies contain information that justified the current 500 foot setback over the large setback distance being proposed here.

With my written testimony, I have provided a letter from John Coefield, a retired scientist who formerly worked for the Montana Department of Environmental Quality. Mr. Coefield agrees that the studies provided do not offer support for the proposition that the current setback should not be increased.

There is some information on setbacks from the North Dakota Department of Health that we believe is instructive. Attached to my written testimony is an excerpt from a model zoning

ordinance for animal feeding operations, developed in part by the North Dakota Department of Health. For livestock operations with 300-1000 head of livestock, the setback distance is half of a mile. The setback for the largest operations is one and a half miles. Also attached to my testimony is a table containing actual setbacks for animal feeding operations in several counties in oil country, which range from a half mile to two miles. Landowners have many serious concerns related to siting of oil wells that are as significant and sometimes more significant than the concerns related to siting animal feeding operations. Farmers and ranchers have prospered in North Dakota and have been able to do so with these significant setbacks in place. And this bill does not even provide setbacks as stringent as those by which the farmers and ranchers of North Dakota must comply.

Finally, it is also my understanding that in the prior hearing on the senate bill related to increased setbacks, there was also discussion of the setbacks in other states. Based on my reading of the minutes, it appears that someone made the comment that most states are at 500 feet. It is important to recognize that some states, such as Texas, allow setback decisions to be made by local governments. I have attached a table which lists several cities in Texas, and the setbacks they have for oil and gas wells from homes (Table Source: <http://www.leaguecity.com/DocumentCenter/Home/View/4390>). As you will see, many of them have setbacks of 1,000 feet, and some as far as 2,000 feet. I checked the GIS map server from the Texas Railroad Commission, and verified that these cities do have oil and gas development as well. Texas is well-known for its prolific oil and gas development, and several cities in Texas have setbacks of 1,000 to 2,000 feet.

Finally, I want to note something we all know. Northwestern North Dakota is not a compacted urban area. It is largely farm and ranch land, and there are plenty of wide open

spaces where oil and gas development occurs. It is not at all unreasonable for the landowners of North Dakota to ask that these oil and gas wells be set back from their homes so that they are not in danger, and so that they do not have to live with the constant smells and noise from an oil and gas well, particularly when we already have more stringent setbacks in place for animal feeding operations in the state. Most importantly, however, there should be no cause for concern that oil will be left in the ground as a result of a larger setback. If an oil and gas well needs to be located somewhere for topographical or geological reasons, this bill retains the language which allows the Industrial Commission to determine that the well location is reasonably necessary to prevent waste or to protect correlative rights. The Commission indicated at a recent hearing related to development in the Killdeer Mountains that leaving oil in the ground is waste. Therefore, if the setback would actually ever result in the inability to drill a well, the developer can apply to the Industrial Commission and request a waiver as anticipated by the law that is already in place.

In conclusion, I urge a **DO PASS** recommendation for **House Bill 1348**, and I would be happy to answer any questions at this time.

2

From: John Coefield

January 30, 2013

1165 Erickson Road

Helena, MT 59602

To: Derrick Braaten

**BAUMSTARK BRAATEN LAW PARTNERS**

109 North 4th Street, Suite 100

Bismarck, ND 58501;

Derrick,

As you requested, I have reviewed: Draft language for ND HB 1348; Page 4 of the record of testimony on SB 2006 from January 24, 2013 where Lynn Helms discusses the increase in the setback distance from 350 feet to 500 feet that resulted from the 2005 session; the September 2006 Municipal Official's Guide to Diesel Idling Reduction in New York State; the La Plata County Oil and Gas Impact report appended to the 2007 session HB 1299 staff report; and the 1987 Vibration and Blasting Study report.

I have also drawn on more than 30 years of experience working with the State of Montana Air Quality Program. At the time of my retirement I was the State Air Quality Meteorologist and had reviewed dozens of Oil and Gas Projects for compliance with Ambient Air Quality Standards and Increments. I have attended several Oil and Gas Workshops and have toured many Oil and Gas projects. I am very familiar with the kinds of impacts expected from these kinds of facilities and have been involved in attempting to resolve complaints from the public when they are adversely impacted by Oil and Gas emissions.

The bottom line is that there has been no demonstration that would support the notion that a 500 foot set-back will always protect the public. The basic problem is the uncertainty in the quantity and character of the emissions from these facilities. The first issue, quantity, is the nature of this kind of essentially fugitive emission of a flammable gas. The emissions are generally not confined in a stack with a testable emission rate and there are really no emission monitors available that would provide a record of what is emitted over time. These sources do not usually have enforceable emission limits even for criteria pollutants. The second issue is the question of just what pollutants are being emitted. Generally speaking the two main pollutants from these sources are characterized as either Volatile Organic Compounds (VOCs) or Hydrogen Sulfide but both of these categories are generally a mix of gases. VOCs are usually expressed as Methane (CH<sub>4</sub>) but other products like Butane are usually present as well. Some of these other VOCs are extremely toxic and or carcinogenic. Hydrogen Sulfide (H<sub>2</sub>S) is the result of the natural presence of Sulfur in the rock formation where the gas and Oil originate and the

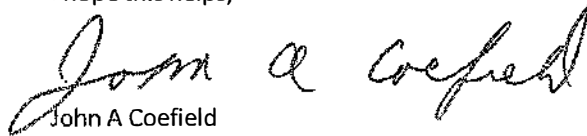


amount of sulfur present varies widely from production zone to production zone as the geology changes. H<sub>2</sub>S is extremely toxic and is usually combusted to Sulfur Dioxide (SO<sub>2</sub>) to protect workers, wildlife and nearby residents. Of course SO<sub>2</sub> is a criteria pollutant with known health effects of its own.

These uncertainties make a generic impact analysis that could be applied in all cases impractical. The only sure way to confidently assess the health impacts of a facility would be through some sort of field study measuring the concentration and chemistry of emissions downwind and then back calculating to an emission rate. This could then be used in a dispersion analysis to predict worst case impacts at known distances. This is not a practical solution and I am strongly in favor of substituting set-back distances for this kind of project.

North Dakota has made a good start with the 500 foot set-back but empirical evidence of un-acceptable impacts at that distance makes it clear that this distance is not always going to work. In my opinion, absent a demonstration that 500 feet will work, the set-back should be increased. I think ¼ mile is a good place to start but if residents continue to be driven from their homes at that distance, it would need to be increased again.

I hope this helps,

A handwritten signature in cursive script that reads "John A. Coefield". The signature is written in dark ink and is positioned above the printed name.

John A Coefield

Meteorologist

2

**A**  
**MODEL ZONING ORDINANCE**  
**FOR**  
**ANIMAL FEEDING OPERATIONS**

**Developed by a**  
**ZONING WORK GROUP**  
**for Animal Feeding Operations**

**Final**  
**March 2000**

**Facilitated by the**



**NORTH DAKOTA DEPARTMENT OF HEALTH**  
**Environmental Health Section**  
**P.O. Box 5520**  
**Bismarck, North Dakota 58506-5520**

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## PREAMBLE

Public concern about odors produced by animal feeding operations and agricultural concern for rights to practice farming and ranching emerged within North Dakota during 1998. As remedies for these concerns, the 1999 North Dakota Legislative Assembly approved amendments to law that (1) limited the powers of local governments to prohibit or prevent the use of land or buildings for farming or ranching but allowed local governments to regulate the nature and scope of concentrated feeding operations, and (2) established a state standard for odors. The 1999 legislation was Senate Bills 2355 and 2365.

Subsequent to signing this legislation, Governor Edward T. Schafer issued Executive Order 1999-03, which reads in part:

The Department of Health shall . . . take steps reasonably necessary to protect the environment of the state of North Dakota, according to its responsibilities under law; and,

The Department shall establish a working group with interested political subdivisions, or their associations to develop model zoning regulations for the subdivisions to implement as they deem appropriate; . . .

The Department of Health arranged for and facilitated meetings of the work group and a committee of the work group. The work group was comprised of representatives of two livestock producer associations, three boards of county commissioners, two township officers associations, two city officers and the Department of Health. At times, several other people participated in meetings or assisted the work group, including county planners and land-use administrators.

This document is the product of the work group. It represents the consensus recommendation of the work group for zoning of concentrated feeding operations, sometimes referred to as feedlots or animal feeding operations. Its purpose is to:

- ☞ Provide a reference, or model, for zoning and ordinances pertaining to concentrated feeding operations for use by the local governments across North Dakota.
- ☞ Remind local governments of their roles in protecting public safety and health and in planning the uses, conservation and protection of natural resources, including land for farming and ranching.
- ☞ Foster uniform zoning ordinances for concentrated feeding operations among counties and townships. Since regional differences in population density, climate, and soil and water resources occur across the state, local governments can revise the model as appropriate.
- ☞ Avoid duplication among state environmental protection rules and local government zoning ordinances.

<b>Setback Distances for <i>Animal Feeding Operations</i></b>		
<b>Number of Animal Units</b>	<b>Hog Operations</b>	<b>Other Animal Operations</b>
fewer than 300	none	none
300 - 1000	0.50 mi (0.805 km)	0.50 mi (0.805 km)
1001 or more	0.75 mi (1.207 km)	0.50 mi (0.805 km)
2001 or more	1.00 mi (1.609 km)	0.75 mi (1.207 km)
5001 or more	1.50 mi (2.414 km)	1.00 mi (1.609 km)

The *operator* of a new *animal feeding operation* shall locate the site of that operation from existing residences, businesses, churches, schools, public parks and areas of property that are zoned residential so as to exceed the corresponding listed setback from these places.

If notified in writing by an *operator* of a planned future expansion of an *animal feeding operation*, the local unit of government may implement the corresponding odor setback for a temporary time period not to exceed two years, after which time the setback will remain in effect only if the expansion was completed.

A local unit of government may, upon recommendation of the zoning commission or land use administrator, increase or decrease a setback distance for a new *animal feeding operation* after consideration of the proposed operation's plans, if it determines that a greater or lesser setback distance is necessary or acceptable, respectively, based upon site conditions or demonstrable safety, health, environmental or public welfare concerns.

### **3. CONDITIONAL USES**

#### **3.1 PERMIT PROCEDURES**

##### **3.1.A. Applicability.**

The *operator* of a new *livestock* facility or an *existing livestock* facility, which meets the definition of an *animal feeding operation* and which is a conditional (or special) use of land as listed below, shall apply for and obtain a conditional (or special) use permit.

1. A new *animal feeding operation* that would be capable of handling, or that expands to handle, more than 1,000 animal units is a conditional (or special) use of land.
2. An *existing animal feeding operation* that expands to handle more than 1,000 animal units is a conditional (or special) use of land.

### Setback Distances from Established Residences for Animal Feeding Operations

County	Number of Animal Units	Hog Operations	Other Animal Operations
<b>Dunn</b>	100-299	1 mile	.5 miles
	300-999	2 miles	1 mile
	1000 or more	2 miles	2 miles
<b>Mountrail</b>	5-50	0.50 mi	Not Applicable
	51-299	2.00 mi	0.50 mi
	300 – 1000	2.00 mi	0.50 mi
	1001 or more	2.00 mi	0.50 mi
	2001 or more	2.00 mi	0.75 mi
	5001 or more	2.00 mi	1.00 mi
<b>Renville</b>	300 – 1000	.5 miles (0.805 km)	.5 miles (0.805 km)
	1001 or more (300-700 more for swine)	.75 miles (1.207 km)	.5 miles (0.805 km)
	2001 or more (1401 or more for swine)	1.00 mi (1.609 km)	0.75 mi (1.207 km)
	5001 or more (3501 or more for swine)	1.50 mi (2.414 km)	1.00 mi (1.609 km)
<b>Williams</b>	Less than 300	None	None
	300 – 1000	.5 miles (0.805 km)	.5 miles (0.805 km)
	1,001 or more	.75 miles (1.207 km)	.5 miles (0.805 km)
	2001 or more	1 mile (1.609 km)	.75 miles (1.207 km)

Information taken from <http://www.ndhealth.gov/WQ/AnimalFeedingOperations/CountyZoning>

1000-Foot Drilling Setbacks from Protected Uses of Cities Within Texas

	Population	Square Miles	Density (# of residents per square mile)	Public Park	Private Park	Residence	Commercial Building	Religious Institution	Hospital Building	School	School Boundary	Day Care	Day Care Boundary	Public Building	Other Off-site Structure	Water Well	Public Library	Property Line
Aledo	2,716	1.9	1,429	1,000	N/A	1,000	1,000	1,000	1,000	1,000	N/A	1,000	N/A	1,000	1,000	200	1,000	N/A
Bedford	46,979	10	4,698	600	N/A	600	600	600	600	1,000	N/A	600	N/A	600	N/A	500	600	N/A
Converse	18,198	6.3	2,889	N/A	N/A	1,000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Coppell	38,659	14.94	2,588	1,000	N/A	1,000	1,000	1,000	1,000	1,000	N/A	1,000	N/A	1,000	1,000	N/A	1,000	N/A
Corinth	19,935	41	2,523	1,000	N/A	1,000	N/A	1,000	1,000	1,000	N/A	N/A	N/A	N/A	N/A	200	N/A	200
Denison	22,682	22.9	990	N/A	N/A	1,000	1,000	N/A	1,000	1,000	N/A	N/A	N/A	1,000	N/A	N/A	1,000	N/A
Denton	113,383	62.3	1,820	1,000	N/A	1,000	N/A	1,000	1,000	1,000	N/A	N/A	N/A	N/A	500	1,000	1,000	N/A
Dickinson	18,680	9.8	1,906	N/A	N/A	500	500	N/A	1,000	1,000	N/A	N/A	N/A	1,000	N/A	1,000	1,000	500
Flower Mound	64,669	43.4	1,490	1,000	N/A	1,000	500	1,000	1,000	1,000	N/A	N/A	N/A	1,000	500	1,000	1,000	500
Grapevine	46,334	35.9	1,291	1,000	N/A	1,000	N/A	1,000	1,000	1,000	N/A	N/A	N/A	1,000	100	1,000	1,000	500
Kingsville	26,213	13.9	1,886	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
La Marque	14,509	14.8	1,015	N/A	N/A	2,000	N/A	2,000	2,000	N/A	2,000	N/A	N/A	2,000	2,000	N/A	2,000	N/A
Lumberton	11,943	9.4	1,271	N/A	N/A	1,000	1,000	1,000	1,000	1,000	N/A	1,000	N/A	1,000	N/A	N/A	1,000	N/A
Manvel	5,179	23.3	222	N/A	N/A	2,000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
McKinney	131,117	62.9	2,085	1,000	N/A	1,000	500	1,000	1,000	1,000	N/A	500	N/A	1,000	N/A	1,000	1,000	500
Morgan's Point	4,170	1.8	2,317	N/A	N/A	1,000	1,000	N/A	N/A	N/A	1,000	N/A	N/A	1,000	N/A	1,000	1,000	N/A
Nederland	17,547	5.7	3,078	N/A	N/A	1,000	1,000	N/A	N/A	1,000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Port Neches	13,040	9.2	1,417	N/A	N/A	1,000	1,000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Roanoke	5,962	6	994	1,000	N/A	1,000	500	1,000	1,000	1,000	N/A	500	N/A	1,000	500	1,000	1,000	N/A
Rockport	8,766	14.5	605	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Seabrook	11,952	21.5	556	N/A	N/A	1,500	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Southlake	26,575	21.9	1,213	N/A	N/A	1,000	1,000	1,000	1,000	N/A	1,000	1,000	N/A	1,000	1,000	N/A	1,000	N/A
Victoria	62,592	33.1	1,891	N/A	N/A	600	600	1,500	1,500	1,500	N/A	N/A	N/A	1,500	N/A	N/A	1,500	N/A
Weatherford	25,250	22.7	1,112	1,000	N/A	1,000	N/A	N/A	1,000	N/A	1,000	N/A	N/A	N/A	N/A	1,000	N/A	N/A
Westlake	992	6.7	148	1,000	N/A	1,000	1,000	1,000	1,000	N/A	1,000	1,000	N/A	1,000	N/A	N/A	1,000	N/A

Notes:

1. This data is primarily composed of research from the Municode database and may not incorporate every city that has a 1,000-foot drilling setback.
2. Some cities allow reduction in 1,000-foot setback with or without City Council approval if property owners within the buffer give consent.
3. These cities measure setbacks from the well bore or the drill site, which may encompass more than one well bore.
4. The ordinances for the cities of Aledo, Bedford, Corinth and Denton only pertain to the drilling of gas wells.

Mr. Chairman, members of the Committee

Myron Hanson, President of Northwest Landowners

The Northwest Landowners supports the increased setback requirement for an oil and gas production facility adjacent to an occupied home from the current 500 feet to 1320 feet.

We feel that a setback of 1320 feet more adequately addresses the health, safety and quality of life issues faced by the farmers and ranchers that have to live in the middle of this activity.

We heard previous testimony last week on SB 2206 that the industry feels that these considerations are adequately addressed by the current statute.

This is not 1951 and they are not drilling the Iverson number one. This is not even 2007 when I believe this issue was last considered, before the explosion in the level of activity.

This is an evolving situation with evolving technologies that would seem to allow for a greater degree in the flexibility of operations.

Additionally we would like to ask the question of why the North Dakota Dept. of Health recommends a setback of one half mile for a 300 cow feeder operation but the 500 feet is deemed sufficient for a serious industrial process. A requirement that is five times greater than the setback for oil and gas.

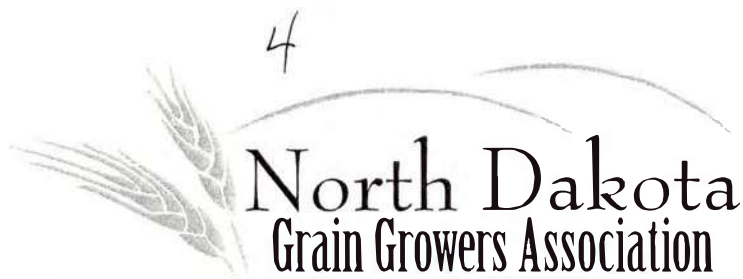
H2S gas, spills, blowouts, and fire represent a serious threat to people living and working on our states farms and ranches.

Because of the waiver provisions that are retained in the bill, that allow for the industry to move inside the setback requirement, we feel that this would allow for the resolution of potential conflicts with topographical concerns or the



closeness of neighboring homestead, or to prevent waste, we feel that this represent a better margin of safety for North Dakota farmers and ranchers.

We urge a do pass recommendation for HB 1348.



Your voice for wheat and barley. [www.ndgga.com](http://www.ndgga.com)

North Dakota Grain Growers Association  
Testimony on HB 1348  
House Energy and Natural Resources Committee  
January 31, 2013

Chairman Porter, members of the House Energy and Natural Resources Committee, for the record my name is Dan Wogsland, Executive Director of the North Dakota Grain Growers Association. The North Dakota Grain Growers Association is in support of HB 1348.

During our deliberations at the North Dakota Grain Growers Association's Annual Meeting in December, 2012, NDGGA membership adopted the following resolution:

"In order to protect one of North Dakota's most precious resources, its productive farm and ranch land, NDGGA hereby resolves that it supports that the setback for all drilling and production operations be increased from 500 feet to 1320 feet to protect the value of occupied farm and ranch homes."

Increasing the setback distances for drilling and production operations from occupied dwellings is the right thing for North Dakota. This isn't just an issue of economics; it is an issue of public safety. Additionally it is an issue of a show of respect by the drilling and production industry for the North Dakota farmers and ranchers who have lived on the land for generations and who will continue to live on the land long after the oil boom.

NDGGA fully supports HB 1348; its setback distances for drilling and production operations are a common sense approach to landowner/industry relations. With today's drilling and production technology, coupled with the abundance of area in North Dakota in which to operate, there is no need to "crowd" occupied residences.

Mr. Chairman, members of the House Energy and Natural Resources Committee, some will say this legislation will create a hardship for the drilling and production industry; I would submit the current setback law creates a hardship for rural North Dakota. Therefore, Mr. Chairman, members of the House Energy and Natural Resources Committee, the North Dakota Grain Growers Association supports HB 1348 and would urge the Committee and the House to concur.

*NDGGA provides a voice for wheat and barley producers on domestic policy issues – such as crop insurance, disaster assistance and the Farm Bill – while serving as a source for agronomic and crop marketing education for its members.*

House Energy and Natural Resources  
North Dakota Farmers Union  
Written Testimony on House Bills 1333, 1348, 1349, 1352, 1355, 1407  
January 31, 2013

Mr. Chairman and Members of the Committee, my name is Kristi Schlosser Carlson, and I represent the 40,000 members of the North Dakota Farmers Union and the Policy and Action developed democratically by our grassroots membership. In that policy, we establish our foundational belief that family farmers and ranchers are stewards of the land. We strive for a balance among protecting the due process of landowners; producing food, fiber, and fuel; valuing natural resources; and meeting energy needs.

We recognize that balance is a difficult one to strike. Many of the bills the committee hears today appear to attempt to plug holes in current processes and an attempt to find that balance. Generally, we support many of these efforts, and encourage a comprehensive response that strives for consistency across regulatory agencies. For example, HB 1333 appears to begin a conversation about unclear jurisdiction, and we encourage ongoing discussion on those issues. We will also continue to educate our members about those processes and engaging companies in ways to address concerns.

Our policy speaks specifically to assuring landowners the same standards in energy development leases and easements that are extended to state lands, such as those in HB 1349. It also directly addresses certain process protections that should be included in these contracts, such as those in HB 1407, part 1. And it specifically enumerates that 1,320 feet is the appropriate distance between homes and wells, supporting HB 1348. We do not believe that enumerating protections and standards in statute or rule interferes with the negotiation process in a “willing seller – willing buyer” relationship. In fact, the process protections in part 1 of HB 1407 are similar to those in N.D.C.C. 17-04-06 regarding wind energy and property rights. Similarly, HB 1355 regarding the definition of “commencement of drilling operations” clarifies statute and prevents unwarranted litigation. It would be difficult to imagine that a landowner would believe that, among the more commonly negotiated terms (location, compensation, construction, etc.), he/she should have to define this term. Therefore, such a definition would be a reasonable statutory protection, and not one that would jeopardize meaningful negotiation of a contract. Additionally, in HB 1348, the negotiation process remains in place – a homeowner can waive that requirement or the commission can grant an exception.

In the spirit of balancing landowner protections and that opportunity to negotiate terms, the committee might consider adding language found in other statutes, such as “unless otherwise agreed by the parties,” in HB 1349’s specified details of certain reclamation processes, like the type of grass seeded or the depth of the topsoil. The committee can do this, but still protect the landowners by requiring that broader standards be met.

Finally, NDFU supports using the North Dakota mediation service in these processes; it’s been an accepted and welcome process by all parties.

RE: House Bill 1348 January 31, 2012

4  
testimony by Brenda Jarafenson

On our way to church on Sunday, 4/10/11, we saw a man on top of the frac' tanks at the location ½ mile west of our house, holding a yellow hose, pumping from a chemical crate on a flat-bed truck into the frac' tanks.

While out for an evening walk on April 10, 2011, Richard and I encountered strong chemical smells from the location ½ mile west of our house. We learned later that our granddaughter (6) couldn't stop coughing, after checking out the spring run-off with us on the 4-wheeler earlier that afternoon.

So the next day, April 11, 2011, I was very careful to check the wind before I went for a walk. When I returned home my eyes were burning and stinging and my voice was very distorted and scratchy for over two hours! That evening our son-in-law came over to our house and was in the yard rubbing his eyes, complaining and wondering what that was from. There was no obvious smell that day, but there were obvious reactions.

We now live next to a location that is unconfirmed to be 800' from our house. That means the wellhead is 800' away, which allows all the frac' tanks to be much closer to our house, and all the chemical trucks loading the frac' tanks are that much closer to our house. Because of those reactions, I just mentioned above, we are very leery to be outside. We loved the outdoors. We used to cross-country ski and snowshoe in the winter. Walking is not even something I can enjoy. I always check the wind, but the North Dakota wind switches, and then we've been caught up in some foul fumes. This year the winds have been predominantly from the South/Southwest, which is the direction of the location closest to my house.

The flare on the first well drilled within 800' from our house has gone out several times – 6 times that we know of. Two of those times it was very disrupting and scary:

On Saturday, Aug 25, 2012, the house was full of gas when we returned from a funeral of a dear friend. The flare was out before we left mid morning and was still out four hours later. Who do we call? What do we do? I got the horses moved out of the pasture right after making several calls. We are not given any emergency numbers.

On May 23, 2012, I wrote, "The flare was out during the night. I was up since 3:00 a.m. because of strong propane smells in the house. Todd Peterson in the State Health Department, Air Quality, was called. He will talk to Petro Hunt LLC about location #20975. That flare's been out three times and Richard has called PHLLC about that each time. I've had a sore throat for a week now."

On Feb 4, 2012, the whole Valley was full of sulfur smell when we drove home in the dark fog. When that was reported, I was asked if I knew where that was coming from?

On Feb 4, 2012, there was a terrible smell like someone was giving a permanent in my house, like ammonia, coming from the outside into my house! They were preparing to frac'.

On Oct 31, 2012 the past two days the air outside the patio door is foul and has a strong diesel smell.

The vibration from drilling is felt in your body, right in your soul. It feels like you're at a concert with the bass way too loud. Sometimes my ears wanted to be held tight. It's very unnerving. On Jan 7, 2012, Our grandson (5) and granddaughter (now 7) told us they had been waking up in the night and not being able to sleep. Our grandson said, "I can hear it and feel it. It feels like a truck in my bed – shaking my bed. On

The rumbling of the frac' trucks is heard and felt all day, all night, on all levels of the house. That affects all the neighbors along the way though too.

The school bus driver brought our granddaughter to our house after school, and on her way out, she reported a semi and tanker pulled off the location at the end of our driveway and nearly ran her over.

I asked to be notified of chemical activity so as to protect our health and that of our neighbors and herds. I asked for air monitoring equipment again and again. I've asked for disclosure of the chemicals used. This is just too close.

There's more – always is,

Brenda Jorgenson - Box J Ranch

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Good morning Mr. Chairman and members of the committee, my name is Clarke Stevens, I live at 2241 78<sup>th</sup> St NW in Glenburn ND and I am in favor of this bill. As I mentioned before I live in Glenburn. I live on a farm about three miles from town. I'm married to my wife of twelve years Lora and have three children. Blaine 10, Valerie 7, and Ava 4. We have lived on our farm for around six years. I have lived and farmed around Oil wells, Oil Treater Plants, Salt Water Disposal Units and Oil Tank Batteries all my life. If you have been around it you know the distinct smell of the Sulfur gas that is a waste product in the extraction and production of oil. I currently live 200 yards from an oil tank storage site. To say the smell that comes from this site is overwhelming would be an understatement. Although the smell is not constant, it does occur on a daily basis. The smell of the gas can be so strong at times that it radiates throughout our house. It doesn't matter if it's spring, summer, fall, or winter. The gas is always in the air. The company that operates the sites near my home have installed 3 flares that **"WHEN"** and I do stress **when** working do provide some relief from the pungent smell. The problem has progressed to the point that some days in the summer my kids can't even stand to be outside playing. The smell bothers my daughter Valerie to the point of nausea and has made her vomit on occasion. It's not fun trying to weed your garden on a nice summer day only to be startled by the sound of your seven year old daughter vomiting because of the smell. The smell of the gas burns all of our noses, causes our eyes to water, and gives my wife, son, and myself headaches. Waking up in the morning with a headache and the smell of sulfur radiating throughout your home is not, a pleasant start to the day. All of this, because we decided to open the windows and let the cool summer night air in after a hot August day, I think we all love the sweet smell of harvested crops on the fall night air. Well, just replace that with the smell of ten week old rotten eggs and you have the smell my family is living with. The latest instance worth mentioning occurred just last Sunday. My family and I headed out the door for church. Our garage is about 20 feet from our front door. That short walk was all the time it took for all of us to start experiencing the beginning side effects of the gas. Only time will tell if my family develops any long term side effects from the daily gas smell we are dealing with.

With all that said. My farmstead was here long before the oil industry was. Although there might not be anything that can be done in my situation, I can only hope going forward that you as elected officials will take the proper measures to insure that another family like mine will not have to deal with the same problems. One thing that no doubt would help is increasing setback requirements for oil well sites. Mr. Chairmen I'm asking you and the other members of this committee to strongly consider instituting stronger restrictions set back requirements. Don't let the North Dakota life so many of us love be affected by a problem that could be solved by simply not allowing oil well sites to be built so close to people's homes, farmsteads, and cities, etc. Mr. Chairmen I thank you and also all the members of this committee for giving me the time to address you this morning.

Clarke Stevens

Glenburn, ND

Cell 701-833-3472





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**Testimony of Ron Ness**  
**House Bill 1348**  
**House Natural Resources Committee**  
**January 31, 2013**

Chairman Porter and members of the House Natural Resources Committee, my name is Ron Ness, president of the North Dakota Petroleum Council. The North Dakota Petroleum Council represents more than 400 companies in all aspects of the oil and gas industry, including oil and gas production, refining, pipeline, transportation, mineral leasing, consulting, legal work, and oilfield service activities in North Dakota. I appear before you today in opposition of House Bill 1348.

North Dakota, through administrative rule, increased the setback provision from 250 feet to 500 feet in 2006. The 500 foot setback rule has worked allowing enough distance to ensure safety for homeowners but also allow developers and landowners to locate wells in places where the minerals can be extracted and impacts to the land reduced. To my knowledge safety has not been an issue with oil wells in relation to occupied dwellings, and I'm not aware of any incidents of fire impacting anyone located near a well in the 62 years of oil activity in North Dakota.

This bill will likely result in more controversy since it not only would make the distance required from occupied dwellings the most restrictive in the nation, but it would also discourage what we are all working so hard to accomplish in the Bakken: Responsibly developing our natural resources while working to reduce the footprint of industry to limit the impacts on farming, ranching and wildlife.

With nearly 5,000 Bakken wells drilled since 2006, there have been very few instances where the operator and home owners haven't been able to workout an agreement. Increasing the setback to 1,320 feet will make the process even more challenging for the parties to agree. farmers, ranchers and tenants will lose more control as mineral developers who have a right of access will place the wells where they are needed with limited options to make adjustments.

If passed this bill will:

- 1.) Discourage reduced footprint operations with multi-well pads and corridor development.
- 2.) Increase impacts on farming and ranching by forcing the wells into the fields rather than drilling the wells by the road which would mean fewer roads and pipelines across the fields impacting the land.
- 3.) Increased impacts on wildlife by requiring the mineral developer to spread operations across the landscape instead of working the edges, which is a huge benefit of extended-reach horizontal drilling.
- 4.) Increase the waste of mineral resources by limiting access to certain areas of a spacing unit and essentially taking some oil and gas formations requiring vertical drilling off the table where you are trying to locate trapped oil and gas in anticlines with the use of 3 or 4D seismic technology.
- 5.) Add more trucks, dust, and traffic as pipelines will be more challenging to develop. This will result in more roads and truck loads across the fields, spreading dust even further into the cropland.

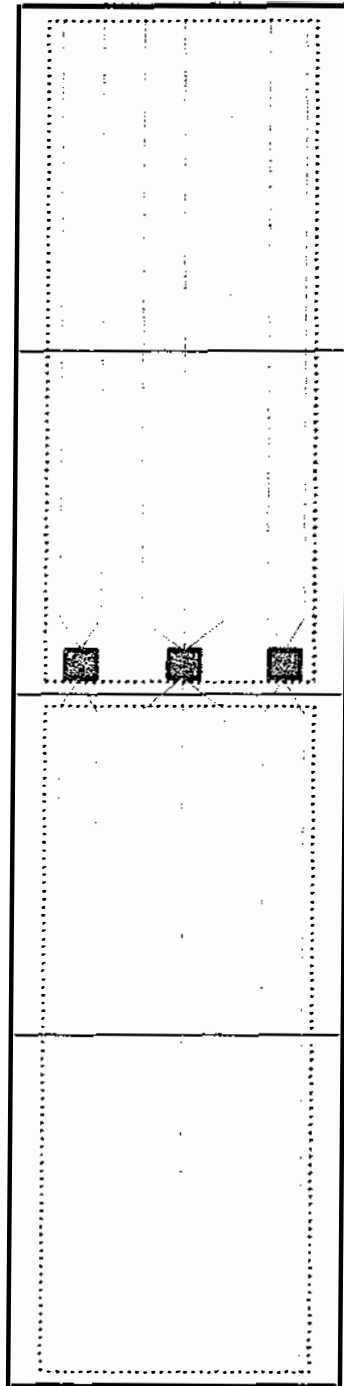
The consequences of increased setbacks include inefficient land use, drilling of additional wells, more truck traffic, fragmented wildlife habitat, and loss of farmland. Increased setbacks also harm the royalty owner. Expanded setbacks increase development costs and decrease access certainty, putting millions of dollars of royalty interests at risk and potentially denying the mineral owner (who might be the farmer or rancher who doesn't live in the house) the right to develop their property.

Current setback rules acknowledge and accommodate these stakeholders and adequately address the perceived health and safety risks while allowing the surface owner, mineral owner, oil operator and regulators the ability to determine the best location of the well in order to maximize the resource and protect private property rights. For some people there is no amount of distance setback that would appease them.

We strongly urge a Do-Not Pass on HB 1348. I would be happy to answer any questions.

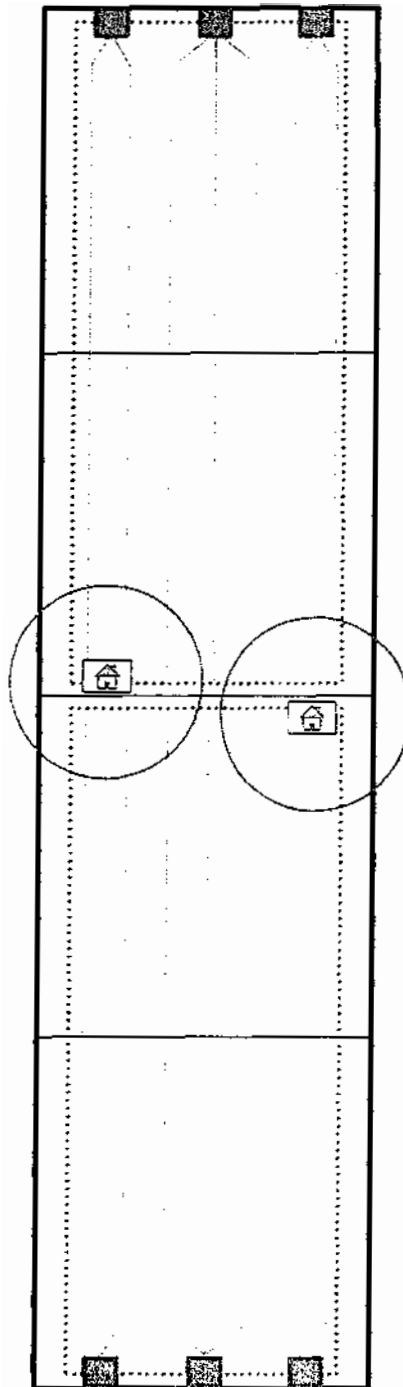


# Ideal Scenario



13 Acres Total Surface Disturbance  
0.5% Total Disturbance

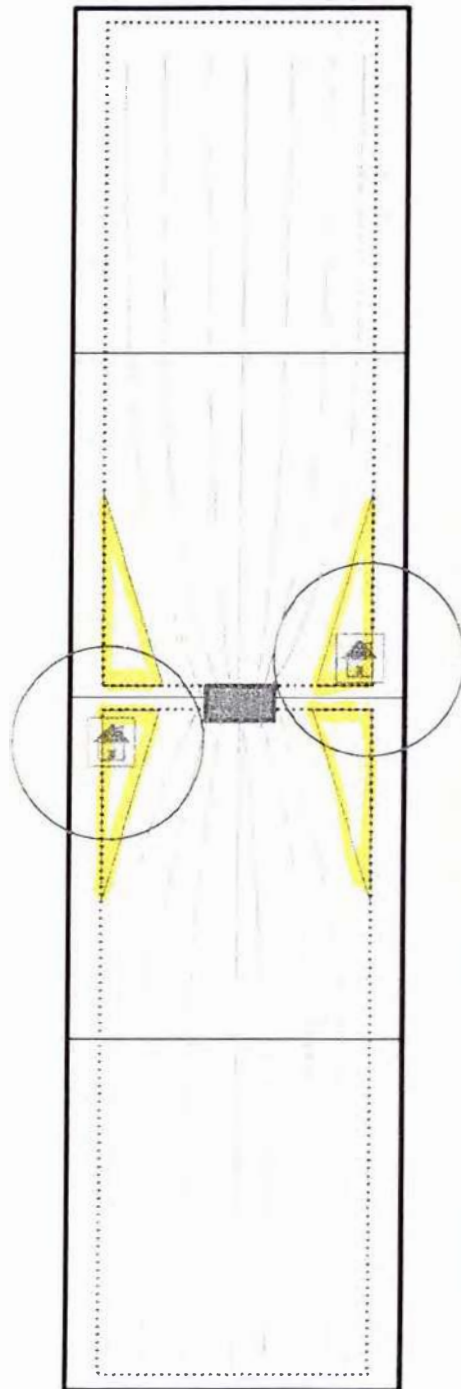
# Increase Surface Disturbance



21 Additional Acres additional Disturbance  
0.9% Total Pad Disturbance  
6 Miles of extra Pipelines  
Up to 6 miles of extra Road

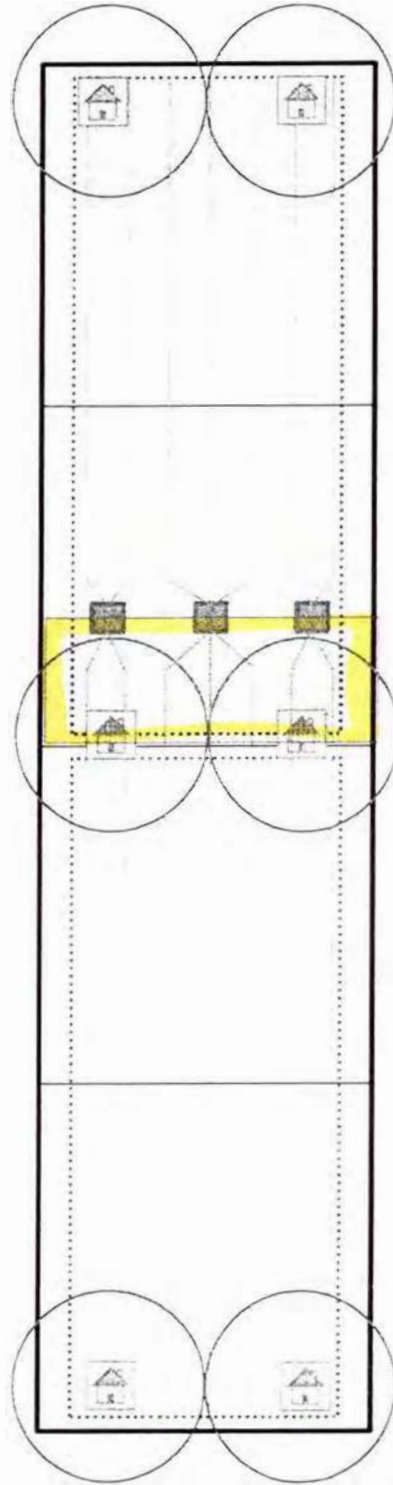
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# Undrained Acreage Due to Directional Constraints



80 Acres of Lost drainage area (shaded blue)  
3 Acres Less Pad Disturbance  
0.4% Total Pad Disturbance  
No extra Road or Pipe

# Undrained Acreage



160 Acres of Lost Drainage (shaded blue)  
1.5 Miles Extra Piping  
1.5 Miles Extra Road ~ 6 Acres increased disturbance



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Image USDA Farm Service Agency

Google earth

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**House Bill 1348**  
**House Energy and Natural Resources**  
January 31, 2013

Testimony of Lynn D. Helms, Director

This bill takes us back to discussions in the 2005 session and 2007 legislative sessions.

In 2005 testimony, I presented the results of the US Bureau of Mines investigation into setback distances for blasting and the legislature concluded that 500 feet is the appropriate setback for shot hole seismic.

In 2007, I provided for this committee the results of the Colorado Oil and Gas Association study in LaPlata County Colorado and the New York State – EPA study of appropriate setbacks for Diesel Idling Reduction. That legislature concluded that increasing the setbacks to 500 feet was appropriate.

In 2010, the North Dakota Industrial Commission signed an order establishing rational east-west development corridors based on 1280 acre stand up spacing and 500 foot setbacks from occupied dwellings. This bill will have the unintended consequence of pushing that development back toward a more random pattern based on windows of available land outside the 1,320 foot radius circles.

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Mr. Chairman and members of House Energy and Natural Resources, while Bakken and Three forks development and the proponents of this bill have presented new ideas and arguments today, the science hasn't changed. Therefore, the North Dakota Industrial Commission urges a do not pass for House Bill 1349.