

2019 SENATE ENERGY AND NATURAL RESOURCES COMMITTEE

SB 2344

2019 SENATE STANDING COMMITTEE MINUTES

Energy and Natural Resources Committee Fort Lincoln Room, State Capitol

SB 2344
2/1/2019
Job Number 32003

- Subcommittee
 Conference Committee

Committee Clerk: Marne Johnson

Explanation or reason for introduction of bill/resolution:

A bill relating to injection or migration of substances into pore space; relating to pore space and oil and gas production.

Minutes:

4 Attachments

Vice-Chair Kreun: Opened the public hearing.

Senator Jessica Unruh, District 33 (0:20-4:25) Introduced the bill, please see attachment #1, See attachment #2 for amendments.

Representative Todd Porter, District 34 (4:50-) Testified in support. I am a co-sponsor of this bill. In 2009 session we worked on a bill that came to us at the request of the North Dakota Industrial Commission. It was during a time period where there was a definite war on coal fired generation. We were looking at the ability to sequester CO₂, no other state had a law in place to do CO₂ sequestering; we were looking, once the Supreme Court decided that CO₂ was a perceived problem that needed to be dealt with; we needed to find a fix for our coal fired generation plants. We passed a bill that developed pore space for the injection of CO₂. This bill, this system was not for anything other than the storage of CO₂. It was to be piped out to areas where pore space existed, it was to be injected and stored. At some point, when it was determined to be filled, and certified by the NDIC, then the state of North Dakota would end up owning it in perpetuity, because of the liabilities that would exist, that it did stay with the surface. While the pore space for the injection and storage of CO₂ was not severable, and belong to the surface, at a point the state of North Dakota would own that CO₂ injected into the ground from our coal fired power plants. So fast forward to today, part of the confusion on tertiary recovery and the injection of fluids or gas into the ground for enhanced oil recovery has got combined into the pore space bill that we worked on in 2009 that was specifically for storage of CO₂. That it had nothing to do with other than figuring out how to capture the CO₂ at the source, move it someplace and inject it. Inside of this bill, as we work on Project Tundra, and we have a reprieve on our coal fired industries; we're using that as an opportunity to work on projects that EERC has been commissioned not only through our lignite energy fund, but also our oil and gas research fund to figure out what can we do to make sure our electrical generation system stays at its peak and our 800 year supply of lignite coal remains useful and beneficial. So Project Tundra captures the CO₂ and moves

it by pipe or truck to our old oil fields. Into units where it will be injected for secondary tertiary recovery. This language inside of this bill is necessary to delineate that when we did the bill in 2009, SB2139, that that was for storage of CO₂. What we're doing now is enhanced oil recovery, and it is a different animal. We need to make sure we're clear in our laws on what we're doing. One is storage that belongs to the surface, inside of enhanced oil recovery that belongs to the pore space of the mineral estate, that is the beneficial owner, the mineral owner.

Senator Roers: You're talking about delineating the two ownership units, one with the surface one with mineral, I assume that at the same time there's liability or exposure that goes with those units if something goes wrong. Is that some of the purpose?

Representative Porter: Partially; the big delineation is that you have split estates. Someone who owns the minerals has always had the right to use whatever means necessary to get the most out of their personal property. That belongs to that mineral estate, the storage of a gas, injected in there for the purpose of storage, that belongs to the surface. It still does with this bill. If it's used for the recovery of the mineral estate, then it belongs to the mineral estate and is and regulated as such.

Senator Roers: How big are these storage areas we're talking about? We're talking about the wells drilled in the 70 and 80s, correct? Is there large storage capacity in these wells?

Representative Porter: I would tell you that Mr. Helms or someone from EERC would be able to tell you. They will tell you what some of these unit sizes are, and how many wells are inside of that. The spacing units are different.

Senator Piepkorn: I believe you said that after a certain time ownership goes to state?

Representative Porter: That is correct. As we did that bill, it was going to be stored in perpetuity, and after a certain time, the state would certify that it's sealed and stored. The liability for that gas would go from the surface owner to the state of North Dakota for the next 100,000-200,000 years in hopes that if there was ever a beneficial use for that CO₂, they could retap into that storage vessel underground in that pore space, and out it to use in the future. I don't believe there are any in North Dakota, but Montana has natural gas storage underground in some sandstone areas. They inject it when they need it and bring it out when need it.

Senator Piepkorn: This was done to benefit the state, were there any possible negative effects to storing the CO₂?

Representative Porter: In 2009, the only potential harm we saw was if the cavern leaked. That was the responsibility of the oil and gas division to make sure it was being placed into pore space that was contained on the top and the bottom by layers of dense rock. That was really the only risk, the other risk is that it would leak into atmosphere.

Doug Goerhring, North Dakota Agriculture Commissioner (15:20-16:40) Testified in favor, please see attachment #3.

Ron Ness, North Dakota Petroleum Council (17:05-18:30) Testified in favor. As we get closer to Project Tundra, this becomes an increasing risk. In Chapter 47, with the surface owner retaining the damages and payments that result of impact on surface. I don't think that actions in 2009 were intended to creep into that section. We think it will insure and eliminate that uncertainty of risk when you walk the path of these big projects you're certain where your liabilities lie.

Jason Boher, Lignite Energy Council (18:40-19:10) Testified in support. From the coal industry perspective, it gives certainty for us to do what we need to do for further development in industry. It protects the property rights of everybody involved.

Lynn Helms, Director, North Dakota Industrial Commission, Department of Mineral Resources (19:35-23:40) testified in support, please see attachment # 4 What you see on the front of the page is the results of a study the EERC did for the Industrial Commission showing what happens if you take a Bakken Three Forks well pad, rather than flaring the gas, store it in the Bloom Creek formation, it's about 7,000 feet in depth, it has incredible porosity and permeability. They used the characterization done for Project Tundra to model what would happen if we captured that produced gas and stored it instead of flaring it. What you see is pictures of gas going in and out, that's the upper right hand corner. Pictures of what the gas plume at its maximum extent in the lower left corner. It occupies a space a mile in diameter. The gas plume would stay under the spacing unit. You can see the economics in the right hand corner. The initial cycle is not economic, the second and third cycle are. The overall project economics result in recovery of gas at just under \$3 per 1,000 cubic feet. Interesting to note, industry's projections for the value of natural gas in 2017 was \$2.96 per M, and for 2019 \$2.88. I bring that up because you can see this project stores and reproduces the gas at \$2.96, which means it can't endure any additional burden from having to compensate for pore space being temporarily used for the storage of natural gas. The economics aren't there. They type of things, the uncertainties surrounding the Supreme Court decision, put this in too uncertain for people to progress with it. On the backside is potential benefits and economics. A single demonstration project, estimated to cost about \$16 million to implement, could add five additional well completions, reduce flared volume by 618 million cubic feet, and yield \$28 million in additional gross production and extraction taxes. If it works and is applied statewide, you could be looking at over the next 10 years, 100 additional well completions, 111 billion cubic feet of gas that would be stored and recovered as opposed to flared and an additional billion dollars in gross production and extraction taxes. A very compelling case for passing SB 2344 and removing the uncertainty that would prevent this underground storage of produced gas from taking place.

No opposing or neutral agency testimony.

Chair Unruh: Closed the hearing.

2019 SENATE STANDING COMMITTEE MINUTES

Energy and Natural Resources Committee Fort Lincoln Room, State Capitol

SB 2344
2/8/2019
Job Number 32471

- Subcommittee
 Conference Committee

Committee Clerk: Marne Johnson

Explanation or reason for introduction of bill/resolution:

A bill relating to injection or migration of substances into pore space; relating to pore space and oil and gas production.

Minutes:

1 Attachment

Chair Unruh: Opened committee action. This was the bill we heard last week, relating to the migration of substances into pore space. It has a lot of implication regarding temporary storage of natural gas, enhanced oil recovery projects, and disposal wells. I had introduced some amendments when I introduces the bill, they were not complete; what you have is the amendments I handed out, with the addition of a couple of pieces of language. Page 2, line 11, disposal operation is new, and geologic storage of carbon dioxide is removed from here, because as we heard in the hearing, all the work that was done in the 2009 session, regarding that topic. Just to not confuse the issue, we've got these amendments in front of us. **Please see attachment #1.**

Senator Roers: I move adopt the amendment.

Vice-Chair Kreun: I second.

A voice vote was taken.

Motion carries.

Senator Roers: I move Do Pass As Amended.

Vice-Chair Kreun: I second.

A roll call vote was taken.

Motion passes 5-1-0.

Senator Roers will carry.

Chair Unruh: Closed committee action.

February 8, 2019

af
(10b)

PROPOSED AMENDMENTS TO SENATE BILL NO. 2344

Page 1, line 8, replace "Storage" with "Temporary storage"

Page 1, line 8, remove " and carbon dioxide"

Page 1, line 13, remove "geologic storage of carbon dioxide;"

Page 1, line 20, replace "geologic storage" with "use"

Page 1, line 23, remove "geologic storage"

Page 1, line 24, replace "may increase" with "increasing"

Page 1, line 24, after "availability" insert "is important"

Page 2, line 1, remove "Geologic storage requires"

Page 2, remove lines 2 and 3

Page 2, line 8, replace "may" with "to"

Page 2, line 10, remove "geologic storage of carbon dioxide."

Page 2, line 11, after "minerals" insert ", disposal operations"

Page 2, line 14, remove "geologic"

Page 2, line 15, remove "storage of carbon dioxide."

Page 2, line 16, after "minerals" insert ", disposal operations"

Page 2, line 17, replace the second "the" with "such"

Page 2, line 21, remove "geologic storage of carbon dioxide."

Re-number accordingly

Date: 2/8
Roll Call Vote #: 1

**2019 SENATE STANDING COMMITTEE
ROLL CALL VOTES
BILL/RESOLUTION NO. 2344**

Senate Energy and Natural Resources Committee

Subcommittee

Amendment LC# or Description: 19.1141.01002

Recommendation: Adopt Amendment
 Do Pass Do Not Pass Without Committee Recommendation
 As Amended Rerefer to Appropriations
 Place on Consent Calendar
Other Actions: Reconsider _____

Motion Made By Sen. Roers Seconded By Sen. Kreun

Senators	Yes	No	Senators	Yes	No
Senator Jessica Unruh			Senator Merrill Piepkorn		
Senator Curt Kreun					
Senator Donald Schaible					
Senator Dwight Cook					
Senator Jim Roers					

Total (Yes) _____ No _____

Absent _____

Floor Assignment _____

If the vote is on an amendment, briefly indicate intent:

*Voice Vote
Motion Carries*

Date: 2/8
 Roll Call Vote #: 2

**2019 SENATE STANDING COMMITTEE
 ROLL CALL VOTES
 BILL/RESOLUTION NO. 2344**

Senate Energy and Natural Resources Committee

Subcommittee

Amendment LC# or Description: 19. 1141. 01002

- Recommendation: Adopt Amendment
 Do Pass Do Not Pass Without Committee Recommendation
 As Amended Rerefer to Appropriations
 Place on Consent Calendar
 Other Actions: Reconsider _____

Motion Made By Sen. Roers Seconded By Sen. Kreun

Senators	Yes	No	Senators	Yes	No
Senator Jessica Unruh	X		Senator Merrill Piepkorn		X
Senator Curt Kreun	X				
Senator Donald Schaible	X				
Senator Dwight Cook	X				
Senator Jim Roers	X				

Total (Yes) 5 No 1

Absent 0

Floor Assignment Sen. Roers

If the vote is on an amendment, briefly indicate intent:

REPORT OF STANDING COMMITTEE

SB 2344: Energy and Natural Resources Committee (Sen. Unruh, Chairman) recommends **AMENDMENTS AS FOLLOWS** and when so amended, recommends **DO PASS** (5 YEAS, 1 NAYS, 0 ABSENT AND NOT VOTING). SB 2344 was placed on the Sixth order on the calendar.

Page 1, line 8, replace "Storage" with "Temporary storage"

Page 1, line 8, remove " and carbon dioxide"

Page 1, line 13, remove "geologic storage of carbon dioxide;"

Page 1, line 20, replace "geologic storage" with "use"

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Page 2, line 17, replace the second "the" with "such"

Page 2, line 21, remove "geologic storage of carbon dioxide."

Renumber accordingly

2019 HOUSE ENERGY AND NATURAL RESOURCES

SB 2344

2019 HOUSE STANDING COMMITTEE MINUTES

Energy and Natural Resources Committee Coteau A Room, State Capitol

SB 2344
3/1/2019
33043

- Subcommittee
 Conference Committee

Committee Clerk, Kathleen Davis

Explanation or reason for introduction of bill/resolution:

Relating to injection or migration of substances into pore space and oil and gas production

Minutes:

Attachment 1,2,3,4,5,6,7,8,9,10,11,12

Chairman Porter: opened the hearing on SB 2344. Set time certain for 1 hour for support and 1 hour for opposition, hearing closed and the bill will be assigned to a subcommittee.

Sen. Jessica Unruh, Dist.33: presented **Attachment 1**.

9:10

Commissioner Doug Goehring, ND Dept. of Ag: presented **Attachment 2** in support.

Chairman Porter: Ag Commissioner you have already been a property rights advocate. Do you see changes to existing standards of operations? Do you see a takings inside of the current operations of mineral and surface estate?

11:50

Commissioner Goehring: This was a concern from onset, how can we responsibly use land, minimize impacts. Also very concerned about surface owner especially those that don't have mineral rights. One of the things I looked at with this bill and visited with the Dept of Mineral Resources, bill sponsors, those with concerns, to make sure nothing changes going forward. Yes this does identify and define pore space so we can capture CO₂, natural gas and store it properly. But that whoever has the injection well, injection site on the surface is being compensated, covered for damages in any activity that's taking place up there. Going forward nothing changes in respect to injection wells for salt water, those agreements in place. I've been assured this bill does not do that. One thing I've learned in my legislative time here, whatever legislative intent is, it's how the rules are written and put in place. I don't see anybody moving or diverting from where that would go with respect to how things exist and business is done now, and how this should actually work on the landscape. I want to make sure our landowners, farmers and ranchers are being protected and covered. That doesn't address the issue that some people want to be paid for what's being put in the ground. The problem is CO₂ and natural gas; someone else owns it. If we're extracting your minerals, we need to pay you for that. These aren't your minerals if they're going in the ground, they're someone else's.

Rep. Keiser: They're not your minerals, but they're going into your ground. So what's the difference of grazing my cattle on your land?

Commissioner Goehring: The difference is that's the surface. You don't own the airspace above you. You don't own the minerals unless it's defined, or the pore space underneath. You don't own the ground water below your space. You have the right to access it, and if using it for any other purpose, watering livestock or washing clothes, you have to get a permit to utilize it.

15:25

Jim Arthaud, Billings Co, ND: operator of oil and gas wells, a mineral owner, a surface owner, presented **Attachment 3** in support of the bill.

Chairman Porter: Under your 5000-acre scenario, with EERCs lack of being able to model anything as far as where that's going, it's not enough acreage to assure that it can exist.

Mr. Arthaud: There's always potential litigation, and it's migrating. I used that as an example.

Chairman Porter: You can't have enough acres to guarantee that certainty. It would shut down the existence of injection wells.

23:47

Mr. Arthaud: You should get your GIS map out and go buy some surface around every disposal well if this bill does not pass. That's what it's going to come to. There will be a land rush of litigation. I think this protects what we've had in place since 1979 as Sen Unruh stated. One of my disposal wells is right on the section line.

26:00

Lynn Helms, director of ND Dept. Mineral Resources, ND Industrial Commission: presented **Attachment #4**.

30:53

Rep. Anderson: How do you detect CO₂ and natural gas and how accurate is that technology if you could explain that a little bit?

Mr. Helms: You're correct. There's no physical way to look at a salt water injection plump underground. For temporarily stored natural gas or for CO₂ you can detect it using seismic typically. It's costly, but possible to track and quantify the area that's occupied by that plumb for permanent CO₂ storage or temporary natural gas storage. We would anticipate if put into pore space on a permanent basis, there would be compensation required for damages. There's century code that deals with that.

Rep. Keiser: How do we define temporary versus permanent?

Mr. Helms: We don't have a definition and rely on the dictionary. We use the definition of temporary and the opposite of that for permanent. You use the pore space, but you take it back out. Permanent means you sequester it there longer than any of us are going to be alive, millennia.

Chairman Porter: It was never the intention to impede or muddy the waters of the mineral estate. We did that in a fashion that it doesn't stay in the ownership in perpetuity of the surface. We as a

state let the surface collect money for a period of time and we take over all responsibility in an effort to save the lignite industry. How can that be suddenly used against us?

Mr. Helms: I agree. In 2009 Chapter 47 was added to the Century Code and the concept of geologic sequestration of CO₂ was brought to the state, and we have since gotten primacy. The surface owner is to be compensated because their pore space is permanently taken out of use. The state did put into statute, as soon as 10 years after injection stops, the state would take custody of that CO₂ plumb and use a trust fund based on per ton fees to deal with any future problems that might come from the plumbs. The CO₂ transfers ownership. The pore space doesn't that's why that chapter provides compensation for that use of pore space. This bill we believe correctly severs that muddy water of using pore space or permanently taking pore space out of use versus damage. To use that use of pore space for sequestration, to say damages should be paid is not a correct interpretation.

36:30

Ron Ness, president of ND Petroleum Council: presented **Attachment #5**.

38:50

Keith Kempenich, Dist 39, sponsor of the bill came in to testify. There may be some clarification needed. Mr. Helms brought up an issue I've struggled with. Especially surface owners, well sitings. When you look at court cases it's frustrating. In a lot of the court cases it says the Legislature is silent on this issue, here's how we rule. I think that's a dereliction of duty of this body when we do this because we are subrogating our duty to another branch of government. I think this needs to come forward.

Chairman Porter: further testimony in support? Seeing none, opposition?

41:00

Troy Coons, NW Landowners Association: presented **Attachment 6**.

45:00

Rep. Keiser: If I understand your position, the bill as written is ok if there's compensation?

Troy Coons: There are several concerns.

Rep. Keiser: Would you address those.

Mr. Coons: The right to litigate for the trespass, for the compensation and the change in definition of land. Some of the experts after me will speak to that.

46:15

Rep. Lefor: In your testimony, last line first page, could you explain that a little further.

Mr. Coons: several others after me will address that.

Dennis E Johnson, Watford City ND: presented **Attachment #7**. I am an attorney, own land in McKenzie County. I have several salt water wells near me, had one offered to me, didn't want one. (1) gas storage, (2) secondary recovery, (3) disposal of waste, salt water is garbage, oil field waste.

This law would take my ownership away. This is not DAPL, that's fear mongering. Lawsuits also. If I bring a lawsuit, I have the burden of proof.

1:05

Nathan Brenna, McKenzie County, ND, farmer, rancher, attorney: I asked for a Do Not Pass on this bill. I just heard about this land use bill that affects landowners. As currently written I ask for a Do Not Pass to SB 2344. I used to be a trial attorney. There is a plain meaning on the face that may become the statute. I have a disposal on my property, it's not for the 25c I heard Jim talk about today as a royalty for the disposal of water, it's much less than that. Private landowners and the industry have done a very good job of allowing the free market to determine what the fair price for the disposal underneath surface owner's property. There's a whole industry that's worked up to support that. It's not the oil companies, but trucking companies, pipeline companies, disposal companies that move those fluids and move them into the Dakota sands. All the service and safety companies that go along with that, welders, you name it, the people who live in Watford City support this business one way or another. It's not the drilling rigs we see on the surface. Why is that important? Nothing that prevents interpretation that an oil production company can place a disposal well within a production spacing and no longer have to pay the surface owner a cost for the injection of the fluids. That's an important distinction we haven't heard. We've heard we didn't want to change the system to dispose of fluids, but this does do that. Last sentence of HB 2344, look at the independent clauses concerning the injection of fluids. It says the injection of substances into pore space for disposal operations does not constitute trespass. It says the migration of substances does not constitute trespass. The injection of substances for oil recovery operation is not trespass but those are all independent. You just gave a gift to trial lawyers if we enact this bill. I agree with the intent, which is to allow secondary and tertiary operations. As a surface owner, as in Dennis' sponge, does belong to me. The State of ND has said it belongs to me. I was glad Mr. Helms used the word "use". He said, "use is not damage." If I were to use my neighbors in my neighbor's pasture, I've damage it. If I farm Mr. Sorenson's field, I would have used his field. What do we have if we don't have use. The only thing a great majority of landowner's care about is use. We use the land to grow crops, to store water. The oil production companies do not need to have the use for free, and that's what the last sentence of SB 2344 does. Gas capture plays into this as well. I know many mineral owners. One of their frustrations is gas capture. When that gas is captured, is it being sold or flared. We solved that and said they had to capture 87% by a certain date and that wasn't being met. How do we solve that, inject it back into the ground, but it's not paid for when it's injected into the ground, there's no science to show you can get it back out so that valuable gas resource will be gone. This bill doesn't address the issue of compensating those mineral owners for that valuable asset. The only thing that has value to me as a surface owner is the ability to use the land. If you want to use the land, I'm entitled to compensation.

1:14:00

Gary Satterthwaite, New Town ND, a past county commissioner: presented **Attachment 8** in opposition.

1:17:00

Connie Triplett, attorney, Grand Forks, ND: presented **Attachment 9** and urged not to take rights away from landowners.

Curtis Sorenson, McKenzie County, farmer: against this bill

Kelly Hanna, McKenzie County, opposed the bill.

Leif Jellesed, McKenzie County, recommends a Do Not Pass.

1:30:00

Derrick Bratten, attorney, Bismarck ND: You have a moral issue here and that's why so many farmers and ranchers here. Let's use another analogy, a fallow field, you're not using it. Does it give someone the right to come and take it from you? No, you own it and have rights in it. Former US Attorney Steve Easton, I believe appointed by the Bush administration as a trial attorney on the Mosser case. He commented on this law recently in the press. He's the former ND US attorney, interim dean of WY law school, huge oil and gas law school. His words ring true, this is a wolf in sheep's clothing. There are legitimate concerns here. I have been one of numerous attorney's who brought class actions over the flaring issue because I think flaring is a problem. Temporary storing gas in pore space is a great idea if we can. Using CO₂ sequestration and capture to produce gas is a great idea. There's a lot discussion saying we don't understand it what they're trying to do. We get it. We know what's going on. There are some legitimate issues that could be address but this is going way further than it needs to and creating uncertainty, causing unintended consequences, that's what's scaring us. Some people were terrified by the Mosser decision, we're terrified by this bill for the same reasons. There are very savvy oil and gas attorneys that represent landowners and we do understand this. We are concerned for real reasons. As an example, under the Surface Damages Act, you can recover for a well pad, that's your typical recovery. Spills are included. Salt water going down into your land. What's pore space? It's the stuff between the soil. Now I've got salt water in that space between the soil, and I don't have the right to now to recover for the damage to the space between the soil even though that's affecting my soil? Logically, we can't parse that out. We're not going to even parse that out in a case. My point is it creates uncertainty. We're going to be dealing with this in many cases. Pore space is not 2 miles under the ground. Pore space is the space between the hard matter of the soil of the land. The Mosser Decision, the State Supreme Court recognized there's different definitions of land used in different contexts. We have to look at the context we're in and we can't just take one from one chapter and stick it somewhere else. We talk about regulatory certainty. My point is I've talked to Dennis and Nathan and others, even though we generally agree, even we don't agree on all finder points of what this means and what's going to happen. My other point is that in every lawsuit, you have 2 attorneys who disagree. This is anything but certain in its affect. What'd I'd like to echo, this Mosser decision confirmed existing law as did Title 47. This has been the law and Mosser was decided by the state supreme court of ND not some radical judiciary body, our state Supreme Court. They decided this after one of our federal judges decided this. What the industry is asking you to do is say well, the way we've been doing things, we didn't realize the affect would be and now we're scared so fix it for us. My concern, fix it for us, means you guys pay for it, the state's going to pay for it because it is a taking and someone has a right to be compensated. It's a partial taking, you're not taking the pore space from them necessarily, but in a way you are and you're taking most of or all of their ability to use that pore space or compensate from it. There will be taking cases. I agree there are issues, but they're complex dicey issues that require slow and careful thought. What's being done here is surgery with a machete. There are very complicated issues to work out. The ideas are good ones. We have time. Despite what you may have heard even for Project Tundra, even for gas storage to get something in place and do it right. This bill is not the way to do it. This bill is an offensive taking of property rights from private landowners. I urge a Do Not Pass.

Gary Sorenson, Kuehn ND opposition

Bud Bombach, Keene, Mckenzie County ND, in opposition

Roger Flatland, Watford City ND, in opposition

1:39:00

Larry Sorenson, in opposition. One warning on storage. I had an oil well in 1984. The company said they were going to take the gas and store it. They supposedly did and said it was supposed to be a salt dome storage. About 3 years later I got a hold of them and said what's going on with the gas, I never get a check from it. They said all that is gone, it never got recovered. They are deceiving.

Larry Siegal, land owner, in opposition.

Kenneth Mogen, McKenzie County farmer, requested a Do Not Pass

Lyle Flatland, McKenzie County landowner: in opposition

Charlie Sorenson, William & McKenzie, Moss ND. Today my land is worth something. If this bill is passed, my land is worth less than something. I use my land as collateral to guarantee my loan. If we start toying with that we have 45 million acres of land, that's a risk to be considered. This hasn't been mentioned yet. I am opposed to this bill.

Liz Anderson, Dakota Resource Council: presented Attachment 10.

Chairman Porter: Closed the hearing, then assigned a subcommittee consisting of Rep. Keiser, Rep. Roers Jones, Rep. Anderson and Rep. Mitskog.

Attachment 11 - Randy Mosser in opposition

Attachment 12 – Lawrence Bender in favor of the bill

2019 HOUSE STANDING COMMITTEE MINUTES

Energy and Natural Resources Committee Coteau A Room, State Capitol

SB 2344
3/7/2019
33359

Subcommittee
 Conference Committee

Committee Clerk, Kathleen Davis

By: Elaine Stromme

Explanation or reason for introduction of bill/resolution:

Relating to injection or migration of substances into pore space and oil and gas production

Minutes:

Attachment 1,2

Chairman Keiser: opened the subcommittee hearing on SB 2344.

Subcommittee members present: Chairman Keiser, Rep. Roers Jones, Rep. Mitskog, Rep. Anderson

Other members present: **Rep. Porter**

Chairman Keiser and covered his outline, Attachment 1.

13:00

Charles Gorecki, Director of Subsurface R&D, at the University of North Dakota's **Energy & Environmental Research Center**. (EERC), presented (Attachment 2). Temporary gas storage could mean capturing the gas that is being produced along with the oil, compressing it and injecting it into a subsurface formation for later recovery. The issue of porosity, the void spaces between the solid grains, in the subsurface. All of the rock below us contains porosity, sometimes it is interconnected, which allows fluids to flow between points, and sometimes it is very tight and prevents fluid flow. This porosity is currently filled, with either air, salt water, or oil and gas. When we inject water into a pore space it changes the temperature, allowing us to push more fluid out. In the case of carbon dioxide, when we inject that into the surface it mixes with the oil and it allows it to flow more easily. It also pushes the oil to the production well and we produce some of that back again. The pore space is unaffected the pressure is maintained throughout the course of the operation. In the end what remains in the pore space is oil, water and carbon dioxide in that situation.

6:11

Rep. Anderson: When you are injecting natural gas into the subsurface, are you putting it back where the oil was?

Mr. Gorecki: That is possible. The EERC recently conducted a study for the state of North Dakota, looking at natural gas storage, we looked primarily at the injection into the Broom Creek formation, which is currently filled with salt water. It is sometime used for produced water disposal that is one potential target, it would cost less to do that, and the recovery of that gas would be more feasible. So injection, temporary storage until you have enough capacity to take away that natural gas or use it

for power production or enhance oil recovery. It could also be used in an oil and gas horizon, such as a conventional oil field or back into the Bakken itself.

Rep. Anderson: Is there currently natural gas in that Broom Formation?

Mr. Gorecki: In the Broom Creek Formation, there is not natural gas that we know of. It contains salt water in some locations it is known to contain nitrogen gas.

Rep. Anderson: So if you injected it in an area, will it stay in that area?

Charles Gorecki: So natural gas or oil or carbon dioxide under pressure is less dense than salt water. So it has a tendency to move up.

Rep. Anderson: So it is sealed so it will stay where you put it?

Charles Gorecki: Yes.

Chairman Keiser: How large of an area does this distribute to when you inject it?

Charles Gorecki: It would vary greatly depending on the amount injected. We would need to have time to access those conditions.

Chairman Keiser: So how would we ever calculate the value for recovery?

Charles Gorecki: It is a scenario by scenario, similar to what the oil and gas industry currently use for the exploration and production of hydro carbon.

Chairman Keiser: What technology would we use to determine that?

Charles Gorecki: We would use our best geologic knowledge, so we would use our core library to understand the porosity the permeability in the interconnectedness. We would create computer models that would help us estimate how fluid flows from the subsurface. That is an imperfect science of course because we are making estimations but they are good at accessing how far natural gas would move away from the injection point.

Rep. Anderson: You said you would have a model to base everything on. Is there a verification process for your model?

Charles Gorecki: Yes. We have built these models, run simulations, then there's geophysical methods, such as conducting seismic surveys, fluid sampling or what we receive off the production side. We can calibrate, verify or validate those models.

Rep. Anderson: What about the cost for that, is it prohibitive to do often?

Charles Gorecki: It can be expensive and time consuming.

Chairman Keiser: Is there any successful recovery from a financial stand point occurring in the United States from injection of CO₂? Is it really a viable alternative financially?

Charles Gorecki: At this point CO₂ has been limited to a couple of projects in the United States. Those injected for storage purposes require that they cannot recover it. It stays in there permanently. There is a North Dakota law right now that governs permanent storage and that isn't in my estimation addressed in this bill at all.

Chairman Keiser: In this bill currently if we're using water injection for fracking purposes an alternative use would be CO₂ and other products. So that we can enhance oil production by injecting CO₂ and not flaring it. We don't put the value on recovery of water, why would we put a value on the recovery of CO₂, if it is really not feasible to recover it from a financial standpoint?

Charles Gorecki: In the case of enhanced oil recovery when you inject carbon dioxide, for every slug of carbon dioxide you inject, about half of that comes back up with the oil and gas and water to be separated out and reinjected.

Rep. Keiser: Why should there be a difference in the importance of water and CO₂?

Charles Gorecki: In the case of enhanced oil recovery I don't think there should be.

Rep. Mitskog: What's the viability of recapture of natural gas?

Charles Gorecki: WBI Energy operates natural gas storage fields for the purpose of temporarily storage. One of these is in the Cedar Peak Incline area in MT another in WY, that is a regular part of their business, it's very viable; it is a business model that's feasible.

Chairman Keiser: The bill states temporary storage is that an issue, and what is the definition of temporary storage?

Charles Gorecki: I can only speak to the perspective on the investigation that we conducted. The idea behind the investigation was to prevent the flaring and how could you bring on the wells, and then there is more gas than we can take away. If you had an option to inject that on site into a temporary storage until you had enough capacity to take it away then you would not be flaring it, there wouldn't be the loss of that resource. We looked at injecting for a couple years, until enough capacity was brought on line and then immediately producing back, then repeating the cycle.

Rep. Anderson: Where I was looking last night they define temporary storage 2 to 5 years. That's what they consider temporary.

Charles Gorecki: That may be from our investigation because that's what we looked at.

Rep. Anderson: Would you ever put the natural gas back into the Bakken formation?

Charles Gorecki: Yes sir, it currently is being put back in right now to determine the viability for its enhanced recovery.

Rep. Anderson: So they are not storing it, they are just pushing it out of the ground with the oil?

Charles Gorecki: Yes. Oil and water don't mix well so they build up the pressure and it pushes the oil to the production well.

Rep. Anderson: Is the Bakken Formation more sealable than the Broom Formation?

Charles Gorecki: They both have multiple shale sequences to the surface, the Bakken is actually deeper than the Broom Creek Formations.

Rep. Anderson: So it's more expensive then?

Charles Gorecki: Yes, it is more expensive to drill. Broom Creek has very good porosity and very good flow properties.

Rep. Anderson: Is our archaeology very unique from the rest of the country?

Charles Gorecki: We have fantastic geology, we have layer cake geology it's not very broken up. We have several horizons full of oil and gas. We also have several formations that are highly permeable but contain no oil and gas such as the Broom Creek Formation and the Dakota Formation which is currently the primary targets for salt water disposal.

31:41

Chairman Keiser: If I'm owner operator of a well, I can use water in the fracking operation to enhance oil production, that's the primary. In the 2nd stage I as owner operator could buy CO₂ or natural gas and inject that into the same well and enhance oil production. Why would anybody else have access to it as a commodity if I've already paid for it and I'm using it?

Charles Gorecki: I don't see how they would.

33:05

Nathan Brenna, NE McKenzie County, ND: Flaring is an important issue to us. Both in terms of our quality of life and in terms of the assets. We looked at the EERC study; it lacks the economics analysis. We need that to understand what is the viability to inject, re-extract, who owns what's injected and re-extracted. The study shows the best case for re-extraction in 74%, the worst case is zero percent. A bucket of mineral owners want to be paid for that gas that is either stored or used for the production of additional oil. These are models built at a desk, they don't even touch on the cost to pull it out of the formation.

Rep. Anderson: I imagine over time they'll figure that out.

Nathan Brenna: That's right. Until we know the answers, making it a law, will paint us into a corner of setting the rules for the stakeholders without knowing the answers. Who is going to benefit and who is going to lose? It doesn't work regardless if we pay the owners or not. We don't want to pay the mineral owners to store it because then we lose too much money. At this point the analysis that works is to move the gas to market.

40:08

Chairman Keiser: It's not the surface owners you're concerned about, it's the mineral owners. Is that correct? So when the well/operator owner injects water, the royalty goes up for the mineral owner. That's something you'd like, so an enhanced recovery, using CO₂, based on EERC, we can't tell you how much it goes up but we can say production goes up.

41:12

Nathan Brenna: Yes, let's take natural gas as the EOR vehicle, we are not an efficiency model, a drilling spacing unit (DSU). It is either 2 sections or sometimes a unitized DSU that is thirty thousand acres. 42:00 We are talking about mineral owners in a drill spacing unit. Now we have another DSU and we now have an additional set of owners. So you take the gas out and you don't pay them and you store it in another DSU, now we have the problem of not getting it all back, and in another unit and they aren't compensated. You can run your well on natural gas. What these contracts won't contemplate is taking that natural gas and using it for something else other than the recovery of oil.

Now we can talk about the surface owners, if we take that gas and store it under the land now he can't use that space for the storage of something else or can't benefit from the co-interest of being a land and a mineral owner.

44:59

At the risk of repeating myself, the change of the language of injection, migration, of produced water not being unlawful, or trespassed. I want to be clear on producing water. We have 2 kinds of surface owners: (1) surface owners who have an injection well, and (2) the surface owners adjacent to the injection well land and may complain about migration. That would be where adjacent landowners are complaining. We have a model where its worked well.

Geologically where salt water disposals have gone in, they are close together, right by my house, there are 6 of them, within 2-3 miles of each other. It's one of those areas that can take a lot of water, it is a very thick area. We need regulation as it relates to migration. I think the industry and some of the landowners are on the same page.

47:55

Chairman Keiser: I'm a well owner/operator, I am on your land, I inject natural gas into the well for enhanced recovery. I had to pay for that commodity, then I recover it. Why isn't it belonging to me because I paid for it? Why is it that it becomes the property of the mineral owner's property? Just because it was used to benefit the mineral owner?

49:25

Nathan Brenna: I think most landowners in my neck of the area would agree with you.... If you have title to CO₂, most mineral owners would think title passed when you wrote the check. What gets more difficult is that if you used natural gas, and if you haven't paid for it, then a mineral owner is going to say you're using my asset in the recovery.

Chairman Keiser: So if I flare it, nobody gets paid anything. But if I pay to recover it, it is an additional recovery and that mineral owner says if it is used outside of the unit then they should get compensation.

51:00

Rep. Roers Jones: Is there not a royalty that is paid for natural gas at the well site? If this is so, is it not purchased and paid for if it were moved somewhere else and re-injected?

Nathan Brenna: Yes. If natural gas is sold, the mineral owner gets paid. It depends on the field, the Antelope Field, the Bakken, the Three Forks. It depends on the location within those fields, and the production company. There is a range 4 to 20 percent of your total royalty check is going to be related to gas.

Rep. Anderson: If you're pulling gas from another area and you are going to deposit it in the ground and store it, you normally wouldn't pay as much for the gas knowing you're not getting all of it out of the ground that you inject. It would be that vs flaring. I think you should put it right back into the ground from where you get it. I think you get a lot of questions when you start moving it in from another area.

Nathan Brenna: Comingling of any asset is always problematic. It's a bit of a title issue.

53:28

New speaker: There have been a lot of questions and comments on who gets paid. When oil and gas is initially extracted from a well, you have an oil and gas lease and that will indicate how people should be paid. Most oil and gas leases will say you have to pay royalties on gas that is produced and saved. In my view taking gas and putting it into a temporary storage facility or a permanent storage facility is saved. You own that gas, so if you take it out and use it for your own oil recovery you don't get paid any royalties.

A number of years ago the North Dakota Industrial Commission approved a tertiary recovery operation where the operator was injecting natural gas into the reservoir to push the oil out of the producing wells. That gas was purchased from WBI, so it was processed gas. In that case the only issue was taxes. That company made an arrangement with the tax department to determine how much of the gas that was being produced on a monthly basis. It was the WBI gas that was injected and how much gas was coming out of the reservoir. Then the tax was paid only on the reservoir gas not the WBI gas.

Chairman Keiser: Closed the meeting to reconvene at 4 PM

2019 HOUSE STANDING COMMITTEE MINUTES

Energy and Natural Resources Committee Coteau A Room, State Capitol

SB 2344
3/7/2019
33424 Afternoon

Subcommittee
 Conference Committee

Committee Clerk, Kathleen Davis

By: Elaine Stromme

Explanation or reason for introduction of bill/resolution:

Relating to injection or migration of substances into pore space and oil and gas production

Minutes:

Attachment 1

Chairman Keiser: opened the hearing on SB 2344.

Subcommittee roll call: Chairman Keiser, Rep. Anderson, Rep. Roers Jones, Rep. Mitskog.

Others in attendance: Rep. Porter

Troy Coons, NW Landowners Association: Presented Attachment 1. Introduced Mr. Braaten.

Mr. Derrik Braaten: from Braaten Law Firm

- Surface Damage Act – exception when you're off unit. I understand concerns of migration of salt water and a potential claim.
- MT's Surface Damage Act is almost identical to ND- in 2011 I don't think this is an issue
- What we're talking about is compensation
- What the landowner is entitled to is 7:40
- Right now the landowners own that pore space and we're going to take that away, they could have sold that to someone else and now they can't
- If the salt water goes into the soil, it's actually sitting in pore space
- Biggest complaints are coming from surface owners living next to flaring – they agree we should be recovering. The policy change, take away right of trespass, unintended consequences

Rep. Roers Jones: Do you see the pore space in use and is already been paying out to mineral owners and the injection of fluid is only being done to enhance the oil recovery? Is there a difference between salt water disposal and saving CO₂? As whether or not they should be compensated?

Mr. Braaten: I do see that differently. This is not the Landowners Association point of view. I could use that core space, now you're taking it away, I should be compensated. If that pore space is already being occupied by minerals and all you are doing is replacing them with CO₂, then I think as a matter of law, the judge would say you can't prove damages because you can't show evidence of damage.

16:13

Rep. Roers Jones: Let's say the minerals underneath someone's surface, are entirely leased and not owned by the surface owner, who do you feel the pore space belongs to is there a certain depth? Does the land always belong to the landowner?

Mr. Braaten: The legal view, from the beginning, the landowner owns from center of the earth and to the sky. The federal government steps in and says we are taking away these certain rights in a certain area. However, as a land owner I still have rights to the wind and can lease for a wind tower. What did the mineral owner get? There was either a reservation of minerals or a conveyance of minerals and what they got was just the minerals; the oil, the gas, and the coal, that is all they got. So it is not a question who has more of a claim or a right. Unless someone sold that right or reserved it at some point everything belongs to the surface owner except whatever was specified in the sale.

Chairman Keiser: Let me give you scenarios.

You are the surface owner on Sec 1, I'm an oil producer, I drill a well, I start with water, then I inject CO₂ or natural gas, to enhance the well, I pay the royalty owner and I win. You don't get anything. You own Sec 2, I own Sec 3, I now drill a well there and bring natural gas, transport over your land and inject it in Sec 3. Does the mineral owner and myself still own everything? And you own nothing? If I get into your pore space, because you are between us that is an asset, you could then sell that asset?

Mr. Braaten: Yes, that is right. We have to keep in mind there are still limitations in the courts so when we go back to the Mosser decision you have to keep in mind that. That case was about an operator putting a disposal on someone's land and telling them you aren't going to pay them. The other person saying, no you are going to pay me for that disposal. Chairman, in your scenarios, the gas migrates into their pore space would cause a loss to them.

Chairman Keiser: The real reason you have a problem with the bill, is on page 4, and by itself does not constitute trespassing, or nuisance. So that says even if I get into your pore space I am not trespassing.

Mr. Braaten: There are other parts of the bill. This was not an intentional act but it could be argued very reasonably when you say a migration into a pore space is not a trespass. What about a salt water spill on my neighbor's property? That's a very real argument that could be made.

26:00

- 2 judges defining land as the solid part of the earth
- If we take away the landowners right to payment, that has to be paid for if not by them, then by the state.
- Handful of attorney's oil and gas attorneys who work on behalf of the landowners
- Mosser, in MT Burlington case. Under the surface damage act, eminent domain, use is part of your damages.
- It's the occupation of that pore space that makes the damage

Lynn Helms

- Typically salt water disposal, thick sand, extends from MT border to Kelly Slough in Grand Forks, pretty much the same thickness
- Broom Creek
- Bakken Three Forks – doesn't want to go in there without hydraulic fracturing
- Devonian Duperow

Rep. Anderson: Walk me through when you select a salt water disposal.

Lynn Helms: Transportation is the number one cost in disposing of salt water, so getting as close to the producing site as possible is an important issue and so often these are located by a paved site close to a highway. The pore space is the space between the rocks. The Dakota Formation and Broom creek has about 75% pore space. The Bakken only about 5% pore space. Ownership of the container. During fracking the pore space does change, but it is so small it's immeasurable. What does change is how connected they are and will fluid move from one pore space to the next.

Chairman Keiser: If I have a well and I enhance it, what's the migration into my neighbor's land?

Lynn Helms: That's the reason we have setbacks in our spacing units. We keep the well bore that is going to hydraulically fractured 200 feet to 500 feet away from the neighbor's property. It will not stop the water or oil from migrating. They are fluid minerals and will move as much as a mile. We have setbacks to try to avoid altering the neighbors pore space. Porosity can be measured quite accurately but only in a small area. A model called "Kriging" is a mathematical technique to plot those different measurements.

Rep. Anderson: What is the cost to take a core sample? Do you have a pretty good idea of the pore space in the Western part of the state?

Lynn Helms: We have about 85 miles of core in the library in Grand Forks. The costs to cut a core and get it analyzed is \$250,000-\$500,000.

Rep. Anderson: Who assumes the cost?

Lynn Helms: The oil companies. They have to submit at least a third of the core to the library in Grand Forks. Our estimation is that the gas and oil production will not peak for 20 years. (2038) Our expectation is that is the length of time we might need to store pore gas. Temporary could be from 2 yr cycle, 2 to get it in and 2 to get out – so 4-20 years. We use the word temporary to distinguish it from permanent storage of CO₂ that we deal with in Chapter 47.

Fred Kershisnik: I'm speaking as a property owner, & mineral owner – I am retired from the oil field where I worked for a little over 40 years. I have been involved in all the projects you are speaking about right here. The last seven years I worked for a salt water disposal company, then we started up a company because we saw a need. What's gone on with salt water disposal has been in place for 50 years and how they allocate them out. To consider a disposal well and pore space beyond the allotted unit, goes against everything that's been happening the last 50 years. We pick and choose landowners and oil companies we can get along with. We have put 8000-20,000 barrels of salt water a day, so you have to find a spot where you can put the most down.

Rep. Anderson: You can take 8-20,000 barrels, what happens if you push that.

Fred Kershisnik: Every well is set with injection pressure limits from the State Industrial Commission.

Rep. Anderson: If you get too many injection wells in the same area it would slow it down?

Fred Kershisnik: Sometimes yes sometimes no. We pick out our areas pretty carefully.

Rep. Anderson: How many barrels of water does an average well produce a day in the Bakken Formation?

Lynn Helms: In the Bakken Formation roughly when they start out it is 4-5000 barrels a day and decline to 500 a day by the first year.

Rep. Anderson: How do you monitor disposal wells?

Lynn Helms: When the permit is issued calculations are made on pressure effects on the formation, the pressure is limited so the water will not break out of the formation and leak up toward the drinking water. We use an EPA formula. Monthly records have to be made and our field inspectors go out unannounced for inspections. If we have a disagreement, we call the 2 owners in and 99% of the time they work out an agreement. We try to force them to work it out. I can't recall a case we've had to adjudicate.

Chairman Keiser: His issue for the surface owner, pore space under their surface, unless someone has a mineral lease on that area. The value in having the pore space is there could be a salt water storage and could receive revenue. Everything's going into the pore space and there's movement, it's hard to know how much pore space there is, someone uses the water above or below, so there's no development there. Why would we then think, the state owns the water?

Mr. Braaten: If you're pore space owner and mark it and have a well there, you might not get one if your neighbor 100 yards away put one on their property. I don't think it's right to have a blanket taking of this right to compensation because it has impacts beyond this scenario. The difficulty is proving someone's taking your pore space. I think they should be able to make that claim.

Chairman Keiser: Members of the audience, If you want to propose any amendments, get them drafted, address your concerns, rough form, give us an idea what you're asking. Keep in mind

- What is the problem?
- What is our objective?
- Compensation?
- What is the difference between what MT has done and ND has done?
- Would pooling of spacing work?
- Is salt water a mineral?
- Do we own waste water?

Lynn Helms; No, the waste water brought out of the well, it's private property, belongs to the operator and they're responsible for it until it's placed in subsurface. All ground water belongs to the state. The world is starving for lithium and produced water appears to have some value. Any valuable mineral in the water or ground belongs to the mineral owner.

The underground river is recharged in the Black Hills of SD and flows North, then East and is discharged in the Red River Valley area.

Chairman Porter: adjourned the meeting.

2019 HOUSE STANDING COMMITTEE MINUTES

Energy and Natural Resources Committee Coteau A Room, State Capitol

SB 2344
3/11/2019
33503

- Subcommittee
 Conference Committee

Committee Clerk, Kathleen Davis By: Elaine Stromme

Explanation or reason for introduction of bill/resolution:

Relating to injection or migration of substances into pore space and oil and gas production

Minutes:

Attachments: 1 - 9

Chairman Keiser: opened the hearing on SB 2344.

Roll Call: Chairman Keiser, Rep. Anderson, Rep. Mitskog, Rep. Roers Jones

Others present: Rep. Porter

Lynn Helms, Director of Department of Mineral Resources: presented Attachments 1,2,3,4,5,

Rep. Anderson: Where does the salt water disposal go in those areas?

Lynn Helms: The salt water in those areas go into the Dakota Formation as well. The main source is Spearfish in the area you represent; the depth is 4000-5000 ft.

Rep. Mitskog: Title 61, referring to attachment 4; water, clean water vs. produced water

Lynn Helms: State treats it all the same. When it's in the pore space, it all belongs to the state but in the custody of someone else.

Rep. Mitskog: I don't think we should treat it all the same, clean water vs used by an industrial process.

8: 20

Lynn Helms: We don't treat the permitting the same. It is just the ownership of the water that is all the same. (referring to attachment 5)

Rep. Anderson: What's the deepest well water we could use for consumption?

Lynn Helms: That would be in the Fox Hills Formation, it is 2200 feet deep.

Rep. Anderson: How far down does the cement level go?

Lynn Helms: We have 2000-2500 feet of bentonite clay between the Fox Hills Formation and the Dakota, which is the shallowest disposal formation. Disposal wells are required to run 2 strings of casing. The first string of casing and cement goes all the way through the deepest drinking water source, 50 feet below the Foxhills Formation into the Peer shale and is cemented all the way to the surface. The second casing string goes down through the Dakota or Broom Creek Formations and is required to be cemented at least back up to the casing shoe of the first one. There are 4 layers of protection to begin with, then we require tubing and packer inside that well bore so we now have a 5th layer of protection between all the layers of steel.

Rep. Keiser: When the water is in the ground it belongs to the State of North Dakota, when extracted, ownership changes to the producer. When the producer reinjects into the ground ownership goes back to the state.

Lynn Helms: That is correct.

Rep. Mitskog: So when you extract lithium from the water who owns that?

Lynn Helms: When the sodium and lithium could be extracted from the water, and sold to reduce the cost of all the water handling. The mineral would belong to the mineral owner but once back in the ground the water belongs to the State.

Rep. Keiser: The real issue is if we take the salt water and transfer it 100 miles, once in the ground belongs to the state. Who would get compensated for having that salt water in the ground 100 miles away?

Lynn Helms: The surface owner would get compensated for use and for damage, and typically a per barrel fee. To get a water permit you have to have an interest in the land. This is why we are here.

16:40

Lynn Helms: presented Attachments 6 & 7

- Spacing and pooling – fair division of fluid minerals under the ground
- Pooling, the concept that people get their fair share
- Disposal is a Safe Drinking Water Act – never anticipated spacing and pooling
- ND primacy- A fixed width of not less that (1/4) one-fourth miles for the circumscribing area may be used.

Chairman Keiser: We have heard testimony that frequently the wells are located near the road to save time and money. Does that create a problem?

Lynn Helms: In my mind it does. The circle crosses multiple section lines.

Chairman Keiser:

- the commission has the authority
- 25:15 State water act
- Courts have become involved
- To bribing certainty to the language
- 26:20

Nathan Brenna, landowner in NE McKenzie County: introduced Brennan Tharaldson.
28:20

Brennan Tharaldson: Works for McKenzie Energy Partners

- Presenting disposal from the commercial point of view
- A need to dispose of salt water
- Approached by a producer that does not want to hold salt water
- Pull numerous well logs to find the thickest part of that formation
- Find landowners that we possibly already have a relationship with
- Make an offer, per barrel rate for every barrel injected.
- If there's pipeline surround
- If trucked, I'd only be working with the exact landowner
- Have to send out notices to everyone in the ¼ miles area – adjacent landowners
- Yes, you have the right to give the permit
- No we have not run into that yet.

35:00

Ron Ness, ND Petroleum Council

- Part of the former sea
- Use is damage
- Surface Compensation Act of 1979

Lawrence Bender, ND Petroleum Council- presented (attachment 8)

- Buchholz court case- Burlington had to continue to pay
- Pore space in ND vs pore space in MT
- Lange case in 2011- unitized
- Mosser court case- took a producing well and converted it into salt water disposal as in Lange case; ND Surface Protection Act- nuisance and trespass- if any of the water migrates, the surface owners will have to be compensated
- Uncertainty created in Mosser case – page 5
- In my opinion water migrating to adjoining land owners does not cause damage
- The proposed amendment would add a definition for land and pore space

49:00

Greg Schecke, Executive Director of Governmental Regulations for Denbury Resources: presented Attachment 9

- 20-30 million barrels of recoverable oil
- Our company does consider a failure to address this risk
- High risk up front capital risk projects
- This notion of compensation for salt water changes the game in terms of risk, the opposite of where we stand in MT
- Are you herding your oil towards one area? The CO2 is pushed to a well bore driving the oil out.
- Early 1970s – CO2 recovery in TX, we're the 3rd largest in the nation
- We take CO2 from natural and industrial sources, we work closely with EERC in Grand Forks
- Without these clarifications, crafted artfully, could bring a lot of projects to a halt.

55:00

Chairman Keiser: Salt water disposal is really the issue here. You're saying you still want this in statute. You're able to capture quite a bit of the CO2

Greg Schecke: yes

Chairman Keiser: How far outside of the area do you have to go to bring in the CO2?

Greg Schecke: CO2 is out of WY. We get it from Conoco Phillips

Surface Owners

Troy Coons, Chairman of the NW Landowners Association.

- Leave Sub 1-2-3 on Page 1; Page 2, Section 4 slight modifications and everything from there on out deleted- this should help set policy.
- All those areas are a taking the rights from the property owner.
- We wish we could sit at the table and be more thoughtful, there are many unnerving consequences and we are very concerned.

Derrick Braaten, Braaten Law Firm

- Mosser decision, I don't think the Supreme Court had adjacent landowners in mind when deciding this case, unintended consequences with adjacent landowners in a pore space.
- The implications for other cases in the future is what's an issue. We are taking away all of the rights of the property owner.
- Mosser case wasn't that ground breaking. 1:04:00 It was the first case in ND for compensation for pore space for the surface owner.
- Lange decision- landowner had 2 people from oil and gas board and believed the surface owner should be compensated for use of pore space.
- Evidence of lost use in a pore space is different. How do we document this is very slow moving fluid - extremely difficult and responsibility of the surface owner?
- Do they have to prove that the salt water is there? That all the space is utilized, experiencing a loss- prove their space is being used, prove I have x amount of barrels occupying my core space to get compensation.
- How do we determine how much is my pore space and how much is yours (adjacent property owners)? (1) regulated by the oil and gas division, a permit or complaint, or civil action.
- Disagree with Helms, State Water Act – my view is that doesn't come into play. Not relevant. It has to be as stringent as the federal law. It's the concept of pooling and spacing.
- Implementation is rush, stakeholders (landowners) weren't at the table.

What's it going to do if you have to start paying adjacent landowners. How would you handle it? Very difficult – realistic of putting salt water disposal out of business, especially the smaller ones, about 50% of them. It would limit oil production in the state.

Chairman Keiser: The real question isn't on the financial side. The bigger issue, any one of those parties files a lawsuit and that puts you out of business. The cost would dramatically go up.

1:19:00

Nathan Brenna, NW McKenzie County landowner:

- Pooling and spacing – extracting gets measured
- Injection – distinct differences under the land
- Dakota Sands is not sand – 20% of porous rock
- Buchholz came about because Meridian held a lease on the property, it wasn't Burlington. Buchholz's owned one of those wells in 1990. In 2001, we get to dispose in here, if you agree we get to use this and we'll keep paying you for a short period of time. Modification

of an existing contract. Denbury needs that. We want to inject for free. They don't want to pay the disposal fee. That shouldn't be borne by these landowners.

- Don't mess with the disposal policy in that area.
- Progressive local regulation can deal with 1:27:30;
- Talked about a carve out of the bill / amendment

Chairman Keiser: What's the position of the proposed amendment?

- State needs to set the policy
- I don't support it
- Some companies are getting ready to inject CO2 so we need to get this going now.

We can set policy.

We are going to do something not just a study

Please have amendments ready at next meeting.

If we put this bill through we will have a lot of litigation.

Work with a legislator to have LC work on this.

We need to have our regulations in place.

Meeting adjourned

2019 HOUSE STANDING COMMITTEE MINUTES

Energy and Natural Resources Committee Coteau A Room, State Capitol

SB 2344
3/21/2019 (8:30 AM)
34067

- Subcommittee
 Conference Committee

Committee Clerk: Kathleen Davis by Donna Whetham

Explanation or reason for introduction of bill/resolution:

Relating to injection or migration of substances into pore space and oil and gas production

Minutes:

Attachment 1,2

Chairman Keiser: Opened the subcommittee hearing on SB 2344. We want to receive amendments that you want to present then we will open the hearing for comments on the amendments of the bill.

Subcommittee members present: Chairman Keiser, Rep. Roers Jones, Rep. Mitskog, Rep. Anderson.

Rep. Roers Jones: Presented a proposed amendment to SB 2344. **(See Attachment 1).**

4:30

Nathan Brenna, NE McKenzie County, North Dakota Resident: The amendment specifically in Chapter 47 I am referring to it as a carve out for existing salt water disposal operations, this satisfies at least the salt water portion of the bill and I support that change in the amendment.

5:03

Derrick Braaten, Braaten Law Firm: with respect to the proposed amendment.

- Has no value for new contracts.
- No incentive for a company to get a new contract because they can get it for free.
- It's still a fact a company can drill a disposal well somewhere else cheaper and there is no incentive to get a new contract.
- There would be compensation for just the surface site.

Chairman Keiser: There would be something compensated for the site and something negotiated?

Derrick Braaten: There would probably compensation for just the surface site but not for per barrel payment as there is now.

Troy Coons, Northwest Landowners Association

- We are in alignment with the previous speaker.
- Presented (**Attachment 2**).
- Opposed to the unprecedented taking of private property rights.

12:00

Rep. Anderson: Is there more concern with one part or the other or with the whole bill?

Troy Coons: There are too many things covered in this bill that have unintended consequences here. CO2 and natural gas, the change of lands, the right to be compensated. This should be 2-3-4 different bills.

Rep. Anderson: I have read numerous cases in different states and there has never been a ruling on this because it is hard to submit evidence when you can't find where everything is going. How can you declare damage when you don't know where the product goes when it is injected in the ground?

Troy Coons: That's just one piece of it there are just so many other pieces. The legal part I would defer to the attorneys.

14:02

Kayla Pulvermacher, North Dakota Farmers Union: I have two main concerns.

- the carve out piece causes concern because it is picking winners and losers those that have existing will still have the same protection but new people that have this done on their property will not have that same protection.
- On Page 3 Line 12. I am not a lawyer but simply saying it cannot be construed as a taking doesn't seem like it would hold up.

Chairman Keiser: Sometimes those who are not lawyers see things differently and maybe better, who knows.

15:40

Nathan Brenna: I sensed some confusion on existing saltwater disposal wells and a contract and how they work. It matters who owns the saltwater disposal well.

- Is the mineral well owned by a mineral developer as defined in Title 38 or is it owned by a saltwater disposal company.
- Title 38 has always allowed a mineral developer to dispose of produced water within a drill space unit. It doesn't allow disposal from outside that unit.
- I don't like that part of the law.
- As it relates to an existing or a new one after the enactment of this bill, I don't read the amendments of SB 2344 as preventing new salt water disposal wells being drilled by the saltwater disposal industry.

- Any water that comes from outside that unit requires a fee.
- I don't read it foreclosing future commercial salt water wells
- I'm not speaking on behalf of an entire group of landowners. I'm speaking for myself and like-minded landowners like myself that might have a saltwater well and wish to carve out what protections we can in this bill.
- SB 2344 as a whole in removing my ability to use the pore space in other ways is still objectionable to me. It would be better in my mind if we didn't have SB 2344.
- If we can carve out some portions of it and create some protections, we should do that.

Rep. D. Anderson: What percentage of saltwater is disposed of in the same unit?

Nathan Brenna: That is a good question but I don't know. In my area most of the water, clearly a majority, well over 50% in McKenzie county, goes to a commercial disposal. There are situations where a developer takes care of it themselves.

Rep. D. Anderson: They dig an injection well? It is not an old well?

Nathan Brenna: When I have seen examples of an injection operation by a mineral developer it is usually as a consequence of an abandoned well, on occasion they get converted to a saltwater disposal well. The model is to drill a new well in my area of the country, larger casing, move more water.

21:55

Chairman Keiser: I have the same production site and want to transport off my site. I need to contact surface owner to drill a well site, so they would have to give me permission and they would get compensation. Is that true?

Nathan Brenna:

- When you use the word producer you mean mineral developer.
- Yes, you need to have an injection agreement and compensation.
- That landowner at the well head would get the compensation, we have to be clear what we are saying.

Darryl Dunkirk, Dunn County Commissioner: Opposed to the SB 2344. We are asking for a Do Not Pass. The bill is vague and lacks clarity. This bill does not fit the education and the public hasn't been involved enough prior to its design.

Lyn James, President of Bowman City Commission: With this bill as to the amendment it is favorable to us to have that passed. Bowman county produced 40% of the oil in North Dakota prior to the Bakken and our field continues to produce. We are anticipating CO2 injection and if this does not pass we will not see that happen. We are very concerned about that and also if it shuts down a field such as the Cedar Hills field down the road could it shut down other fields. Could we have a trickle-down effect that we won't have oil production in North Dakota. We support this bill as amended.

26:34

Ryan Niles, Rancher by Williston: My concern is an economic one.

- Let's say it doesn't go the way we thought it would and that it doesn't generate a lot of income for the surface owner. If that money does go away, how does that impact the state? A lot of these people are farmers and ranchers and we are good at spending excess money on the operation.
- The state would not be impacted by the savings to the oil company in a form of reduced costs whereas when the landowner receives the money and spends it here.

Chairman Keiser: Any questions? Any other testimony? Seeing none.

Rep. Anderson: I move to adopt the amendment 19.1141.02003 to SB 2344.

Rep. Roers Jones: Seconded

Roll Call vote: Yes 4 No 0 Absent 0. Motion carried to amend SB 2344.

Chairman Keiser: One of the members requested to wait for action on the bill for more information. We will reconvene at noon.

Hearing closed.

2019 HOUSE STANDING COMMITTEE MINUTES

Energy and Natural Resources Committee Coteau A Room, State Capitol

SB 2344
3/21/2019 (12:00 PM)
34120

- Subcommittee
 Conference Committee

Committee Clerk: Kathleen Davis by Donna Whetham

Explanation or reason for introduction of bill/resolution:

Relating to injection or migration of substances into pore space and oil and gas production

Minutes:

Chairman Keiser: Opened the subcommittee hearing on SB 2344.

Subcommittee members present: Chairman Keiser, Rep. Roers Jones, Rep. Mitskog, Rep. Anderson.

Other members present: Rep. Porter

Rep. Mitskog: I'm going back to the original bill version 19.1141.02000.

- Remove Page 2 lines 26-31
- Page 3 remove lines 1-11
- I think this will create some uncertainty. It could affect surface damages and end up in some legal proceedings. I don't think this has to do with pore space.
- The reason behind the bill is to create certainty. I have concerns with this section.
- Chapter 38-11.1-01 is protecting farmers, ranchers and agriculture production in that part of the century code.

Rep. Anderson: Regardless of what we do I think it may lead to more litigation.

Rep. Mitskog: That is a question that I also have. Every expert I have had contact with says this is complicated. I think there is a lot of uncertainty.

Rep. Keiser: You do realize that the language currently on Page 2 lines 26-31 are in the law just as on Page 3 subsection 2 and 3 are current law and to delete those would cause a really significant change that I don't think we want that taken out of the law. That could be problematic.

Derrick Braaten, Braaten Law Firm: I agree with you. That was not the intent. Because this is in existing law the intent was to remove Section 2 but in terms of the new language in the bill the intent is to remove the addition of language to that language in the Century Code.

Rep. Keiser: Would you explain your concerns with this language in the bill.

Derrick Braaten:

- Not speaking on behalf of the Northwest Landowners Association
- This amendment really doesn't have anything to do with the discussion on pore space.
- That can be addressed by redefining pore space
- I don't want this to be a stamp of approval on what is happening
- Could have consequences totally beyond pore space. We are talking about Legislative finding and the purpose and interpretation sections of the Surfaces Damages Act.
- The Act was passed so agricultural producers receive compensation as a result of oil and gas development.
- You have existing language here in Section 2 and there is an attempt to add some language about facilitating exploration and the greatest possible economic recovery or oil and gas, that language doesn't belong in an act to provide damages
- Another Act 38.08 that governs the regulation of the oil and gas industry in the state. In that Act there is a declaration of policy and it is in the public interest to promote utilization of natural resources, oil and gas in the state to prevent waste. My point is it doesn't make sense to put a statement in there about how we are trying to protect agricultural production any more than it does to put a statement about maximizing oil and gas resources into the Surface Damages Act.
- The problem is it will upset how courts interpret that Act but not relating to pore space.
- This goes beyond anything to do with pore space. It's not necessary to address pore space issue. It doesn't address landowners concerns it will create a lot of problems and uncertainty and unintended consequences how the Surface Damages Act is interpreted by the courts. This does not address the landowners concerns.

Ron Ness, President of North Dakota Petroleum Council: We will have Lawrence Bender explain the intent of that language.

10:38

Lawrence Bender, North Dakota Petroleum Council:

- Mosser vs. Denbury case there is specific language that the court relied upon to determine that the pore space should be under the Surface Owner Protection Act.
- They said this Act which is codified as 38-11.1 provides that it is necessary to exercise the police power of the state to protect the public welfare etc. and to protect the individuals engaged in agricultural production and to provide the maximum amount for the surface owners. That is why they said you have to compensate the pore space owner as well as the surface owner.
- They took a statute that this Legislature adopted that was clearly designed to protect farmers and ranchers from oil and gas development and they added on to that pore space. It was language in this section that they relied upon to do it.
- We believe the language has to be included to make it clear to the North Dakota Supreme court or any other court. We need to make the intentions clear of this legislation.

Rep. Anderson: What it looks like is we are correcting prior mistakes.

Lawrence Bender: I don't think I would call this a mistake I think the Legislature knew what they were doing in 1979 when they adopted the Surface Owner Protection Act. I think they believed the only thing they were providing for is that the adverse effects on the ranching and agriculture should be compensated. When the Legislature adopted the pore space statute the Supreme court brought those two things together.

Rep. Anderson: As technology has improved it might have caused more problems, was CO₂ injection talked about much in 1979?

Lawrence Bender: I don't recall seeing anything in Legislative history that talked about gas storage.

Rep. Keiser: This language would affect a spill on a pad site? Do you have any concerns about that? It would be a concern to us.

Lawrence Bender: I do not think it would have an impact on a spill because this statute pertains to providing the maximum protection for the adverse effects of oil and gas development on farming and ranching. I think all this does is make it clear that you can use pore space to facilitate exploration and development of oil and gas reserves.

14:55

Derrick Braaten: What Mr. Bender said is the court used this language and the court uses this language every time it interprets this statute and it will use that language whether it is pore space or something else. The Mosser Decision dealt with this pore space issue, land means the solid material of the earth regardless of the ingredients but excludes pore space. We can't be any clearer than that in terms of telling the Supreme Court that pore space is not included under this chapter.

16:58

Rep. Mitskog: I make a motion to amend SB 2344.

Chairman Keiser: we have a motion for the amendment, which we don't have (yet).

Rep. Roers Jones: Do we want to clarify the amendment because there questions about removing more than Rep. Mitskog intended including the existing language.

Chairman Keiser: The motion would be to remove the new language beginning with the word "while" on line 1 page 3 and ending with "permitted by law" on line 6. Is there a second. Seeing none motion fails due to lack of a second. We have engrossed SB 2344 as amended before the committee. What are your wishes?

Rep. D. Anderson: I move to recommend a Do Pass as Amended

Rep. Roer Jones: second.

Chairman Keiser: roll call vote: 3 yes, 1 no, to recommend this to the full committee.

2019 HOUSE STANDING COMMITTEE MINUTES

Energy and Natural Resources Committee Coteau A Room, State Capitol

SB 2344 afternoon
3/21/2019
34131

- Subcommittee
 Conference Committee

Committee Clerk, Kathleen Davis

Explanation or reason for introduction of bill/resolution:

Relating to injection or migration of substances into pore space and oil and gas production

Minutes:

Attachment 1

Chairman Porter: opened the hearing on SB 2344.

Rep. Keiser: presented a proposed amendment Attachment 1, the Christmas tree version of the bill which is a compromise by both sides. The subcommittee did not vet it, did not have it at that time. I would move the adoption of 02006 to the bill.

Chairman Porter: The amendment that's been passed out must have the wrong, must have the wrong number.

Rep. Keiser: It's on the original bill, not the Christmas tree bill. Go back to the original bill, BUT I'm telling you on the Christmas tree bill, it starts on Page 3 Line 4 and strikes the word "for" in the middle of the sentence, "for, and development of, oil and gas reserves in this state," and all of Line 5, and the first word in Line 6, "including." That's what this amendment does and I move it.

Rep. Mitskog: second.

Chairman Porter: any discussion on the proposed amendment? Mr. Braaten, if you would come up and speak to the discussion with Mr. Bender and Mr. Braaten, and have him address the concerns since this wasn't part of the subcommittee and the agreement they came to, to get both sides on board.

Derrick Braaten, attorney, Bismarck ND: I represent myself and in a way my clients, brought forth this amendment. I had a concern about the language in this because it addresses the legislative findings. The concern I had was that it could have been construed to address not just the pore space issue but other cases brought under the surface damages act. So Mr. Bender and I talked about it. This change in that language limits it so this change in that policy language just addresses the pore space issue. With that change we both agreed on that language. Any questions for Mr. Braaten or Mr. Bender.

Chairman Porter: Thanks for working through that. Further discussion? Voice vote, motion carried.

Rep. Keiser: I move a Do Pass as Amended on engrossed SB 2344.

Chairman Porter: There was another amendment that was passed out from Rep. Roers Jones if we could have the discussion. On Page 2 of the Christmas tree bill, line 6 Sub 5, I believe it's just a comma that's missing in the reading of the sentence. If that is the case, then Legislative Council just fixes those grammar things.

Rep. Keiser: The word should be for. I would so move that.

Rep. Roers Jones: second.

Chairman Porter: Motion from Rep. Keiser to amend SB 2344 after the word interest, insert "for". Voice vote, motion carried. Rep. Keiser, you did not make a motion for the adoption of the subcommittee amendments by the committee as a whole.

Rep. Keiser: I would so move.

Rep. Zubke: second.

Chairman Porter: we have a motion from Rep. Keiser and a second from Rep. Zubke, to adopt the subcommittee amendments that appear in the Christmas tree bill. Discussions? Voice vote, motion carried.

Rep. Keiser: move a Do Pass as Amended on SB 2344.

Rep. Roers Jones: second.

Chairman Porter: We have a motion and a second for a Do Pass as Amended on SB 2344.

Rep. Eidson: I'd like to ask for clarification. On the Christmas tree version, Page 3 Lines 28-29, it still defines land, still separates pore space from land. We heard a lot of testimony from the Landowners Association and Connie Triplett that eluded to the fact that if we split that, it's going to take away rights from surface owners in order to lease that pore space. In effect it's taking away rights of landowners and allowing organizations to store whatever they want in the pore space, and again, if that could be taking rights away from landowners. If there's some clarification on that.

Rep. Keiser: It is just the definition of land that is being placed in this bill. We did not, other than Connie's statement which I don't recall, the committee did not explore that further.

Rep. Eidson: On her statement she talked about being a former Senator here and in 2009 when the Legislature first defined pore space. She said in the second bill they considered at the time, SB 2139, defined pore space and clarified that it belonged to the surface owner. By excluding pore space from the definition of land in this bill, we're effectively taking away those rights from landowners as exist right now is what I was led to believe.

Chairman Porter: In the part of the bill that definition is being placed, is in the Surface Damages Act, the Oil and Gas Production Compensation Act. The part of the bill that dealt with the Supreme Court ruling came out of Chapter 47 which was the Sequestration Act. It was my understanding this clarification in the oil and gas production damage compensation component, as described by Mr. Helms, was the definition that was needed inside of there. Mr. Helms is here and we want to get the question answered.

Lynn Helms, director of the Dept. of Mineral Resources: I believe your concern is answered on Page 3, Lines 14-15 in the Christmas tree version. That was amended into this bill to make certain that that separation of land from pore space had no effect on the title of pore space belong to the

surface estate. So that was amended in to make certain that this couldn't be misunderstood as taking the pore space away from the surface estate or the surface owners.

Rep. Mitskog: Could you repeat that again.

Lynn Helms: the amendment on Page 3 Lines 14-15 was intended to make it crystal clear to everyone that separation of land and pore space with their own definitions, did not remove either one from the surface owners surface estate. Both of those remain as defined in 47-31 as belonging to the surface owners, as 2 separate parts of the surface estate.

Rep. Mitskog: so then the compensation just hasn't been addressed?

Lynn Helms: what that means is that they would be separately compensated. The surface, the land, would be compensated for damage, disruption, use of the surface of the land. In some cases, the pore space would be compensated like for permanent storage of carbon dioxide or bringing in water from outside the spacing unit. So water from multiple spacing units being injected would require a per barrel payment. The whole point of this is they both remain part of the surface estate but their compensation is treated differently. One compensated for certain uses, the other for damage and disruption. Both had compensation associated with them.

Rep. Mitskog: So in your opinion what's the opposition to the surface or the landowners to this bill?

Lynn Helms: I think the opposition dominantly stemmed from this separation and definition of land as one thing and not including pore space and then a separate definition of pore space. It was the phrase, excludes pore space, that led people to believe their pore space ownership was being taken and removed from the potential compensation. That was never the intent of the bill. I think that was the purpose of the amended bill putting Line 14-15 on Page 3, to make sure that was clearly dealt with.

Rep. Eidson: I believe you were here when we had the first committee hearing. If you could provide clarification again on another thing. Could you explain the difference between permanent and temporary and the compensation rates are for both of those?

Lynn Helms: temporary means not permanent. The law in ND provides that the mineral owners have the right to use as much of the surface estate as necessary to explore for, produce and transport the minerals. That is limited to the spacing unit, or drilling unit that those minerals or water or natural gas come from. There's one type of compensation in that instance. That would be for use of the surface of the land. If water comes from other spacing units or natural gas were to come from other spacing units, and be stored or disposed of within this well, it becomes a commercial operation and there would not only be compensation for the surface but also for, a per barrel or MCF payment for the storage component. So the difference is, does the mineral owners or the mineral lessee have a right to that use through the leases and the law, or do they not? It depends on whether or not it's materials that come from that spacing unit or multiple spacing units and actually a commercial operation.

Rep. Eidson: I mean, when it comes to pore space specifically, if there's going to be storage in pore space versus temporary versus permanent. What's the difference in compensation if any?

Lynn Helms: If there is going to be material permanently placed in the pore space, and the one we know about is carbon storage, then 47-31 lays out a very clear mechanism for that pore space to be brought together and amalgamated and requires the Industrial Commission to address that project and to make certain the pore space owners are justly compensated for that permanent storage. If it's temporary storage or water disposal operation, then it's treated differently.

Rep. Eidson: so if it comes to temporary storage, there's not necessarily compensation that comes with that? Is that correct?

Lynn Helms: that is correct. That would be under the case where the material temporarily stored, came from that spacing unit and remained in that spacing unit. You could take natural gas from say your 20 wells, temporary store it within that spacing unit and the only compensation would be for taking the land or surface out of operation. But if you brought natural gas from outside that spacing unit, then it switches to a commercial operation and there would be multiple compensations.

Rep. Eidson: does the landowner have any control when it comes to temporary storage? I do recall there wasn't a clear definition of temporary. At what point and time do we decide, or is it decided when it's going to be permanent? Or temporary? What's to stop a company from saying this is just temporary and leaving it there 10 years and removing it later just to deny compensation for our landowner or pore space owner? Are there clear definitions or certain times that have to be designated when said organization is going to be storing anything in the pore space, or this is going to be permanent or temporary?

Lynn Helms: I don't think there are bright line numbers in the statutes in regard to that. That's going to be an industrial commission rule making and enforcement process to decide, is this temporary and for how long are we going to call it temporary? There's going to have to be some rule making on the part of the Industrial Commission fully anticipated with regards to temporary gas storage to sort all of that out. Does the surface owner have any control? The only real thing the dominate mineral ownership rights allow, is for the mineral owner or the mineral developer to be able to proceed with 20-day notice. They are still required to offer surface owner compensation and they still required ultimately to pay surface owner compensation. The surface owner can accept the offer and terms or negotiate with them or go through a mitigation process where they negotiate in front of someone from the ag commission and can ultimately go to court. If the court determines that there actually owed \$1 more than what the best offer from the mineral developer was, they get their legal fees paid. So yes, there will be compensation. If it's going to occur strictly within that spacing unit, under the rights of the mineral leases, it allows the mineral developer to move forward with notice and an initial offer. If it is a commercial operation there has to be an agreement in place that covers not damages and compensation for the land, but per barrel, per MCF fees or nothing moves until there's an agreement in place. If it's confined to the rights of the mineral developer, then 20-day notice and an initial offer gets the project moving. There still has to be compensation. It may happen through negotiation or the courts.

Rep. Anderson: everything I've read, temporary is really 2-5 years until they get the infrastructure in place to remove the natural gas out, but that's what they claim in natural gas.

Lynn Helms: that would certainly be temporary. Newer projections we're making for natural gas production indicates natural gas production is not going to peak until 2037, so it could be as much as 20 years before the full complement of infrastructure to gather and process the natural gas and market it is in place. I don't want to mislead you that we're talking 2-3-5 years. It's possible that under the Industrial Commission rules, that we would allow 20 years before that gas had to come back out of the ground and go to market because we're seeing more and more natural gas come from these wells. The newest projections that I've got from the pipeline authority show that peak in 2037.

Chairman Porter: we have a motion and a second for a Do Pass on amended version of SB 2344. Discussion? Roll call vote: 10 yes, 2 no, 2 absent. Motion carried. Rep. Keiser is carrier.

PROPOSED AMENDMENTS TO ENGROSSED SENATE BILL NO. 2344

Page 1, line 2, after "space" insert "and contract obligations"

Page 2, line 19, replace the underscored comma with an underscored semicolon

Page 2, line 20, replace the underscored comma with an underscored semicolon

Page 2, line 21, replace the third underscored comma with "; disposal operations;"

Page 3, after line 11, insert:

"4. This chapter may not be construed to alter, amend, repeal, or modify the law concerning title to pore space under section 47-31-03."

Page 4, line 10, after "minerals" insert "- Contracts"

Page 4, line 15, after the underscored period insert "This section and chapter 38-08 may not be construed to impair the obligations in a contract between parties who have entered an agreement for the use of the surface estate for disposal operations."

Renumber accordingly

PROPOSED AMENDMENTS TO ENGROSSED SENATE BILL NO. 2344

Page 3, line 2, remove "for, and development of, oil and gas reserves in"

Page 3, remove line 3

Page 3, line 4, remove "including"

Renumber accordingly

19.1141.02004
Title.

Prepared by the Legislative Council staff for
Representative Jones
March 21, 2019

PROPOSED AMENDMENTS TO ENGROSSED SENATE BILL NO. 2344

Page 2, line 6, after "interest" insert "for"

Renumber accordingly

PROPOSED AMENDMENTS TO ENGROSSED SENATE BILL NO. 2344

Page 1, line 2, after "space" insert "and contract obligations"

Page 2, line 6, after "interest" insert "for"

Page 2, line 19, replace the underscored comma with an underscored semicolon

Page 2, line 20, replace the underscored comma with an underscored semicolon

Page 2, line 21, replace the third underscored comma with "; disposal operations;"

Page 3, line 2, remove "for, and development of, oil and gas reserves in"

Page 3, remove line 3

Page 3, line 4, remove "including"

Page 3, after line 11, insert:

"4. This chapter may not be construed to alter, amend, repeal, or modify the law concerning title to pore space under section 47-31-03."

Page 4, line 10, after "minerals" insert "- Contracts"

Page 4, line 15, after the underscored period insert "This section and chapter 38-08 may not be construed to impair the obligations in a contract between parties who have entered an agreement for the use of the surface estate for disposal operations."

Renumber accordingly

Date: 3-21-19
 Roll Call Vote #: 1

**2019 HOUSE STANDING COMMITTEE
 ROLL CALL VOTES
 BILL/RESOLUTION NO SB2344**

House Energy and Natural Resources Committee

Subcommittee

Amendment LC# or Description: 19.1141.02003

- Recommendation: Adopt Amendment
 Do Pass Do Not Pass Without Committee Recommendation
 As Amended Rerefer to Appropriations
 Place on Consent Calendar
- Other Actions: Reconsider _____

Motion Made By Rep. Anderson Seconded By Rep. Roers Jones

Representatives	Yes	No	Representatives	Yes	No
Chairman Porter			Rep. Lefor		
Vice Chairman Damschen			Rep. Marschall		
Rep. Anderson	✓		Rep. Roers Jones	✓	
Rep. Bosch			Rep. Ruby		
Rep. Devlin			Rep. Zubke		
Rep. Heinert					
Rep. Keiser	✓		Rep. Mitskog	✓	
			Rep. Eidson		

Total (Yes) 4 No 0

Absent 0

Floor Assignment Motion carried.

If the vote is on an amendment, briefly indicate intent:

Date: 3-21-19
 Roll Call Vote #: 1

**2019 HOUSE STANDING COMMITTEE
 ROLL CALL VOTES
 BILL/RESOLUTION NO. SB2344**

House Energy and Natural Resources Committee

Subcommittee

Amendment LC# or Description:

new language
Remove on Page 3 line after "while" and ending with "permitting by law" on line 6.

Recommendation:

- Adopt Amendment
- Do Pass Do Not Pass Without Committee Recommendation
- As Amended Rerefer to Appropriations
- Place on Consent Calendar

Other Actions:

- Reconsider
- _____

Motion Made By

Rep Mitskog

Seconded By _____

Representatives	Yes	No	Representatives	Yes	No
Chairman Porter			Rep. Lefor		
Vice Chairman Damschen			Rep. Marschall		
Rep. Anderson			Rep. Roers Jones		
Rep. Bosch			Rep. Ruby		
Rep. Devlin			Rep. Zubke		
Rep. Heinert					
Rep. Keiser			Rep. Mitskog		
			Rep. Eidson		

Total (Yes) _____ No _____

Absent _____

Floor Assignment Motion Failed due to lack of second.

If the vote is on an amendment, briefly indicate intent:

Date: 3-21-19
 Roll Call Vote #: 2

**2019 HOUSE STANDING COMMITTEE
 ROLL CALL VOTES
 BILL/RESOLUTION NO. SB 2344**

House Energy and Natural Resources Committee

Subcommittee

Amendment LC# or Description: _____

Recommendation: Adopt Amendment
 Do Pass Do Not Pass Without Committee Recommendation
 As Amended Rerefer to Appropriations
 Place on Consent Calendar
 Other Actions: Reconsider _____

Motion Made By Rep. D. Anderson Seconded By Rep. Roers Jones

Representatives	Yes	No	Representatives	Yes	No
Chairman Porter			Rep. Lefor		
Vice Chairman Damschen			Rep. Marschall		
Rep. Anderson	✓		Rep. Roers Jones	✓	
Rep. Bosch			Rep. Ruby		
Rep. Devlin			Rep. Zubke		
Rep. Heinert					
Rep. Keiser	✓		Rep. Mitskog		✓
			Rep. Eidson		

Total (Yes) 3 No 1

Absent 0

Floor Assignment Motion carried

If the vote is on an amendment, briefly indicate intent:

Date: 3-21-19
 Roll Call Vote #: 1

**2019 HOUSE STANDING COMMITTEE
 ROLL CALL VOTES
 BILL/RESOLUTION NO. 2344**

House Energy and Natural Resources Committee

Subcommittee

Amendment LC# or Description: 19.1141.02006

Recommendation: Adopt Amendment
 Do Pass Do Not Pass Without Committee Recommendation
 As Amended Rerefer to Appropriations
 Place on Consent Calendar
 Other Actions: Reconsider _____

Motion Made By Rep Keiser Seconded By Rep Mitskog

Representatives	Yes	No	Representatives	Yes	No
Chairman Porter			Rep. Lefor		
Vice Chairman Damschen			Rep. Marschall		
Rep. Anderson			Rep. Roers Jones		
Rep. Bosch			Rep. Ruby		
Rep. Devlin			Rep. Zubke		
Rep. Helnert					
Rep. Keiser			Rep. Mitskog		
			Rep. Eidson		

Total (Yes) _____ No _____

Absent _____

Floor Assignment Voice vote, Motion carried.

If the vote is on an amendment, briefly indicate intent:

Date: 3-21-19
 Roll Call Vote #: 2

**2019 HOUSE STANDING COMMITTEE
 ROLL CALL VOTES
 BILL/RESOLUTION NO. 2344**

House Energy and Natural Resources Committee

Subcommittee

Amendment LC# or Description: _____

Recommendation: Adopt Amendment
 Do Pass Do Not Pass Without Committee Recommendation
 As Amended Rerefer to Appropriations
 Place on Consent Calendar
 Other Actions: Reconsider _____

Motion Made By Rep. Keiser Seconded By Rep. Roers-Jones

Representatives	Yes	No	Representatives	Yes	No
Chairman Porter			Rep. Lefor		
Vice Chairman Damschen			Rep. Marschall		
Rep. Anderson			Rep. Roers Jones		
Rep. Bosch			Rep. Ruby		
Rep. Devlin			Rep. Zubke		
Rep. Helnert					
Rep. Keiser			Rep. Mitskog		
			Rep. Eidson		

Total (Yes) _____ No _____

Absent _____

Floor Assignment Voice Vote. Motion carried

If the vote is on an amendment, briefly indicate intent:
Page 2 Line 6 insert "for" after interest

Date: 3-21-19
 Roll Call Vote #: 3

**2019 HOUSE STANDING COMMITTEE
 ROLL CALL VOTES
 BILL/RESOLUTION NO. 2344**

House Energy and Natural Resources Committee

Subcommittee

Amendment LC# or Description: 19.1141.02003

Recommendation: Adopt Amendment sub
 Do Pass Do Not Pass Without Committee Recommendation
 As Amended Rerefer to Appropriations
 Place on Consent Calendar
 Other Actions: Reconsider _____

Motion Made By Rep Keiser Seconded By Rep Zubke

Representatives	Yes	No	Representatives	Yes	No
Chairman Porter			Rep. Lefor		
Vice Chairman Damschen			Rep. Marschall		
Rep. Anderson			Rep. Roers Jones		
Rep Bosch			Rep. Ruby		
Rep. Devlin			Rep. Zubke		
Rep. Helnert					
Rep. Keiser			Rep. Mitskog		
			Rep. Eidson		

Total (Yes) _____ No _____

Absent _____

Floor Assignment voice vote Motion carried.

If the vote is on an amendment, briefly indicate intent:

Date: 3-21-19
 Roll Call Vote #: 4

**2019 HOUSE STANDING COMMITTEE
 ROLL CALL VOTES
 BILL/RESOLUTION NO. SB 2344**

House Energy and Natural Resources Committee

Subcommittee

Amendment LC# or Description: 19.1141.02007 Title 03000

Recommendation: Adopt Amendment
 Do Pass Do Not Pass Without Committee Recommendation
 As Amended Rerefer to Appropriations
 Place on Consent Calendar
 Other Actions: Reconsider _____

Motion Made By Rep Keiser Seconded By Rep Roers Jones

Representatives	Yes	No	Representatives	Yes	No
Chairman Porter	✓		Rep. Lefor	✓	
Vice Chairman Damschen	AB		Rep. Marschall	✓	
Rep. Anderson	✓		Rep. Roers Jones	✓	
Rep. Bosch	AB		Rep. Ruby	✓	
Rep. Devlin	✓		Rep. Zubke	✓	
Rep. Helnert	✓				
Rep. Keiser	✓		Rep. Mitskog		✓
			Rep. Eidson		✓

Total (Yes) 10 No 2

Absent 2

Floor Assignment Rep Keiser

If the vote is on an amendment, briefly indicate intent:

REPORT OF STANDING COMMITTEE

SB 2344, as engrossed: Energy and Natural Resources Committee (Rep. Porter, Chairman) recommends AMENDMENTS AS FOLLOWS and when so amended, recommends DO PASS (10 YEAS, 2 NAYS, 2 ABSENT AND NOT VOTING). Engrossed SB 2344 was placed on the Sixth order on the calendar.

Page 1, line 2, after "space" insert "and contract obligations"

Page 2, line 6, after "interest" insert "for"

Page 2, line 19, replace the underscored comma with an underscored semicolon

Page 2, line 20, replace the underscored comma with an underscored semicolon

Page 2, line 21, replace the third underscored comma with "; disposal operations."

Page 3, line 2, remove "for, and development of, oil and gas reserves in"

Page 3, remove line 3

Page 3, line 4, remove "including"

Page 3, after line 11, insert:

"4. This chapter may not be construed to alter, amend, repeal, or modify the law concerning title to pore space under section 47-31-03."

Page 4, line 10, after "minerals" insert "- Contracts"

Page 4, line 15, after the underscored period insert "This section and chapter 38-08 may not be construed to impair the obligations in a contract between parties who have entered an agreement for the use of the surface estate for disposal operations."

Renumber accordingly

2019 CONFERENCE COMMITTEE

SB 2344

2019 SENATE STANDING COMMITTEE MINUTES

Energy and Natural Resources Committee Fort Lincoln Room, State Capitol

SB 2344
4/9/2019
Job Number 34624

- Subcommittee
 Conference Committee

Committee Clerk: Marne Johnson

Explanation or reason for introduction of bill/resolution:

A bill relating to injection or migration of substances into pore space and contract obligations; and relating to pore space and oil and gas production.

Minutes:

No attachments

Chair Unruh: Opened the hearing, all members were present.
The House made some significant and good changes to the bill.

Representative Keiser: We did make a change and added 'and contract obligations' to the title. The next change occurs in section 1, subsection 6, reads 'recovery of oil, gas, and other minerals,' we added 'disposal operations, or any other operation conducted under this chapter.' On section 2, we added a new subsection 4; in our subcommittee hearings, we had a lot of concern expressed by various parties that this was going to upset the current law relative to pore space, so we added subsection 4, which states, 'this chapter may not be construed to alter, amend, repeal, or modify the law concerning title to pore space under section 47-31-03. The final change is on section 4, the last page, we added contracts and that this section and chapter 38-08 may not be construed to impair the obligations in a contract between parties who have entered an agreement for the use of the surface estate for disposal operations. We wanted to clarify that we were not going to interfere with existing contracts by passing this legislation. The bill sponsor's intention was to bring certainty to this issue for all parties, and to continue allow the state to develop its resources. These are the changes we made with input from various parties.

Chair Unruh: Thank you for the explanation, I think there were still some additional concerns that were expressed as the changes were made public, and people continued to discuss the bill. There is a group of legislators, landowners, and industry that have been meeting to address further concerns that people have had. One of them specifically being the temporary storage of natural gas, there are some amendments are being drafted; we will meet again when those are ready, and decide our actions at that time. Senator Patten has been working on amendments with Representative Zubke.

Closed the conference committee.

2019 SENATE STANDING COMMITTEE MINUTES

Energy and Natural Resources Committee Fort Lincoln Room, State Capitol

SB 2344
4/10/2019
Job Number 34652

- Subcommittee
 Conference Committee

Committee Clerk: Marne Johnson

Explanation or reason for introduction of bill/resolution:

A bill relating to injection or migration of substances into pore space and contract obligations; and relating to pore space and oil and gas production.

Minutes:

2 Attachments

Chair Unruh: Opened the conference committee. All conferees were present.

We have some amendments, version 2009, both the legislative directive and the Christmas tree versions (**please see attachment #1 and #2**).

On the first page, we are removing all of the language that refers to the temporary storage of natural gas, it's been a contentious issue. It's a technology that we don't quite have nailed down yet, and while I think the intention of reducing flaring by temporarily storing natural gas is a very good thing to work toward; before we address the policy in this manner, I think it's best to figure out exactly how that technology works. All of the references to temporary storage of natural gas have been stricken in this version of the amendments, that's on pages 1 and 2. On page 3, you see the removal of some language here, 'for, and the development of, oil and gas reserves in this state so the greatest possible economic recovery of oil and gas might be obtained including' Those words are proposed to be been removed. Subsection 4 is redundant language that reiterates that surface owners do retain control of their pore space as referenced in chapter 47. Page 4 is the heart of the bill, subsection 1 has not been changed, subsections 2 through 4 are proposed amendments to address some of the concerns that arose with previous and existing contracts for commercial saltwater disposal wells. Subsection 2 protects all those existing contracts for commercial disposal of wells, subsection 3 protects future and expired contracts or contracts that would expire, subsection 4 states that the surface owner can sue if the operator violates a contract in specific situations. Where an operator is doing something they aren't supposed to be doing anyway, this ensures the surface owner's right to go after them and claim damages for things that happen on the surface, which of course they can already do, this talks about the pore space, and the ability to sue based on that.

We got here in some sit down meetings with a bunch of lawyers, landowners, industry and legislators, whose constituents are impacted by this bill. I think what we accomplished there was identifying what the issues were from the groups that have been opposing this bill. We made an attempt to address those. I think we've done a good job of that. There are still some outlying issues, as far as I'm concerned I think this is the best solution, which is why I brought

it here. It covers a majority of the scenarios that have come up in all of these conversations. I don't think we are quite ready to move on them yet; I'd like to make some tweaks.

Representative Keiser: I haven't been part of that process, I want to have somebody address the subsection 2 on page 1, that is a statement of intent, I don't understand what the objection is. I would like a specific response to what is the problem with including language of intent there. That we intend to discourage natural gas flaring? I want to know who is opposed to that and why. We do set the policy as a legislature, and I think that section of intent did a good job. On section 3, the same thing, that top amendment where we are striking 'for, and the development of, oil and gas reserves in this state so the greatest possible economic recovery of oil and gas might be obtained including.' When we take action legislatively and intent is involved, by striking that language, we are indirectly saying we don't want it to be. Because we disagree with it, the greatest possible economic recovery. I'm wondering why there is objection to those specific statements. They seem very consistent with what our policy should be.

Chair Unruh: I think I'm starting to understand why Legislative Council typically doesn't allow intent language in our century code. You do get into these discussions of overarching policy choices that the legislature does make in the process. I'll address the second question first; I think that the remaining intent language makes clear that the state's objective is to make sure that we can recover as much oil and gas as we can, make sure that that recovery is economic. That's why I'm comfortable with excluding that language. I think all of our other language here makes it very clear that that is the state's intent, and that language isn't necessary. As for the intent language on the temporary storage of natural gas; I think we would be remiss not to admit that emotion has been injected into this conversation. When we start talking about the rights of our landowners in the state of North Dakota, that they have held since statehood, people get engaged. They want to protect what they have. That has been a goal of mine as I have worked on this bill, to make sure that those fears are quelled, that our policy reflects what our intent is. I think one of the big fears that we have, because what is unknown to us about temporary storage of natural gas, is that we don't know how that will work. While I think with previous policy that this legislature has passed, we have made very clear that we would like to discourage the flaring of natural gas. Since this has caused such consternation with this particular bill, I'm not sure it's necessary to include it in here. I don't think that it reverses any previous policy decisions we have made on discouraging the flaring of natural gas, both our policies and the Industrial Commission's policies have been very clear. We want to capture and get as much of that gas out as we can and not flare it, I don't think removing this language indicates anything other than that. I am open to the discussion of leaving part of it or all of it, that will be up to us as a conference committee.

Senator Piepkorn: To Representative Keiser's comment on page 3, it does seem redundant, I would presume that we would be seeking the greatest possible economic recovery, we wouldn't put something in saying recover half. We don't use language like that, I think if we don't reference it at all, aren't we just assuming that we're going to be doing the best that we can? I don't see the necessity for having that in there, to delete it makes sense.

Representative Keiser: I would agree, but the language was in the bill, now we are striking that, so you are saying you're not doing that. You are now saying, we were going to do this

as a policy, and now we are taking it out. When you take stuff out, you are taking action, it may be the right thing to do, this amendment is an action.

Senator Piepkorn: What is it about the temporary storage that is a concern? I understand it could be, we don't know how we will be getting it out, or is it the migration of the gas underground in pore space, or quality, possible environmental consequences? What is it that you don't know that concerns you?

Chair Unruh: Yes. There is hopefully going to be a pilot project to take a closer look at actual utilization of underground temporary storage of natural gas in the next couple of years, that is in a different piece of legislation. Jumping to conclusions on compensation on compensation for use of pore space in those scenarios, it is too soon to try and figure it out, that is why the language is removed from here, and can be addressed at a later date, once we have more information. Since we're talking about intent language, I had two questions on House language. Page 1 subsection 3, we have some intent language about why we as a state think it is in the public interest to promote the use of carbon dioxide. That line 21 on page 1 talks about the global environment by reducing greenhouse gas emissions. From my perspective, it might be better for us to focus as we have on the rest of the bill, on the economics and enhanced oil recovery, rather than talking about something globally. I would like to reword that, and bring these amendments back with that. I was wanting some clarification on subsection 5, starting on line 12 on page 2, there is a lot included in that subsection, it puts together all of the operations, including enhanced oil recovery, utilization of CO₂ for enhanced oil recovery, for oil, gas, minerals, includes disposal operations, which is a different animal than recovery operations, although all necessary in the picture as a whole. Can the House provide any type of background as to why that was done?

Representative Keiser: I'm not sure, were those House amendments? I think those were on the bill that came to us.

Chair Unruh: Did you have any discussion on that subsection 5 in the House?

Representative Keiser: We did not disagree with the Senate on that. We did add disposal operation on subsection 6, after minerals, that was the clarifying that disposal operations would be included.

Chair Unruh: I think that was the heart of my question, the inclusion of disposal operations with all of the other recovery operations.

Representative Keiser: The disposal operations are on the third line of that, that is coming from the Senate as well, the term disposal operation. We repeated it to clarify on other operations conducted under this chapter, we thought based on input from Legislative Council that it was a clarification of the previous intent.

Senator Piepkorn: On page 1, section 3, line 21, if indeed this language came out of our original Senate bill, went to the House, was not amended out, I don't know why we need to go back and now amend that out now. I don't see why we need to look at it now.

Representative Keiser: Sometimes conference committees can do that.

Senate Energy and Natural Resources Committee

SB 2344

4/10/19

Page 4

Chair Unruh: Closed the conference committee meeting.

2019 SENATE STANDING COMMITTEE MINUTES

Energy and Natural Resources Committee Fort Lincoln Room, State Capitol

SB 2344
4/12/2019
Job Number 34707

- Subcommittee
 Conference Committee

Committee Clerk: Marne Johnson

Explanation or reason for introduction of bill/resolution:

A bill relating to injection or migration of substances into pore space and contract obligations; and relating to pore space and oil and gas production.

Minutes:

2 Attachments

Chair Unruh: I have passed out some amendments (**Please see attachment #1**), they should be the version ending .02010, they include all of the previous changes, in addition to a couple of other things we talked about. On page 1, line 21, I struck the global environment by reducing greenhouse gas emissions, to remove that language from the bill to stay consistent with our focus on the state's economy when it comes to recovery of our oil and gas in the state of North Dakota. On page 2, for consistency, we added on line 19, the words 'subsurface geologic' before the word formation just as it is previously in the sentence. One that got missed, on line 21, for consistency, after 'and other minerals,' we need to insert the words 'disposal operations' if you look further up in that section, similar language is used. Page 3, line 1, that language of police power seemed unnecessary, we replaced it with 'incumbent on,' all of the other amendments that you see include amendments that the House adopted, in addition to the further amendments that we talked about in conference committee last week.

Senator Piepkorn: The last one mentioned, the page 3, 'exercise police power' compared to 'incumbent,' is that similar to a 'shall' versus a 'may,' what is the difference?

Chair Unruh: Since this is all in this chapter, intent language, phraseology is important. The use of the words 'police power' are just intimidating, you could look at it as a 'may' to a 'shall.' I think 'incumbent upon' is more appropriate for this section.

Senator Piepkorn: On page 1, line 21, it seems like the only nod to environmental issues, one the oil industry wouldn't be opposed to, is a nod to the environment by the public interest to promote the use of carbon dioxide to benefit the state and the global environment by reducing greenhouse gas emissions, it seems to be a harmless, if not positive statement, I'm wondering why you deleted that?

Chair Unruh: All of the other focus throughout the intent language in the bill focuses on the recovery of oil and the economy, I thought it was appropriate that we continue with that language being consistent in all the sections.

Representative Keiser: I have just handed out a correspondence from Derrick Braaten to myself, (**Please see attachment #2**). As you know, in our previous meetings, I raised concern similar to Senator Piepkorn's concern, why do we need to delete language that talks about facilitating natural gas storage and those things on subsection 2, on page 1, and also on page 3, the struck language on lines 4 and 5, and even the police power statement. Mr. Braaten provided to me was the information regarding what already is in code, 38-08-01, as well as 38-11.1.01. You can see that many of the general concepts that were included in that have already been addressed in other sections of code, that certainly would be redundant. It does include a slight additional concept, like we have a desire to reduce flaring, but I do think the statement in 38-08-01 already addresses that. It states the State basically wants to do the best job we can. My concerns are addressed relative to those two areas.

I move the House recede from its amendments and further amend.

Senator Schaible: I second.

Chair Unruh: To make a clarification, I was trying to be very careful how I phrased everyone's input and support, and I indicated that all of the landowner groups were on board with the bill. That was not what I intended to state, what I meant was that the landowner groups were comfortable with the amendments, and appreciated the additional amendments to the bill that we've got in front of us.

A roll call vote was taken.

Motion passes 4-2-0.

Chair Unruh and Representative Keiser will carry.

Chair Unruh: Closed the conference committee.

2019 SENATE STANDING COMMITTEE MINUTES

Energy and Natural Resources Committee Fort Lincoln Room, State Capitol

SB 2344
4/12/2019
Job Number 34728

Subcommittee
 Conference Committee

Committee Clerk: Marne Johnson

Explanation or reason for introduction of bill/resolution:

A bill relating to injection or migration of substances into pore space and contract obligations; and relating to pore space and oil and gas production.

Minutes:

No attachments

Chair Unruh: Opened the conference committee. All conferees were present. Representative Keiser has found an error in one word.

Representative Keiser: It is a very important word, on page 5, line 2, it read operations of disposal well in violation of subsections 2 and 3. That makes it really complicated, 2 is one thing, 3 is another thing, there is no overlap. What I would do is to **move to reconsider our actions by which the House receded from amendments and further amended.**

Senator Schaible: I second.

**A voice vote was taken.
Motion carries.**

Representative Keiser: I move that the House recede from its amendments and adopt the amendments as distributed on the most recent version, 02010, with the exception of making the correction on page 5, line 2, to change 'and' to 'or'.

Chair Unruh: We want to make sure it includes the same change we made on page 2, line 21, of making sure that disposal operations come in the same placement that it was before.

Senator Schaible: I second.

**A roll call vote was taken.
Motion passes 6-0-0.**

Chair Unruh and Representative Keiser will carry.

Chair Unruh: Closed the conference committee.

April 11, 2019

PROPOSED AMENDMENTS TO ENGROSSED SENATE BILL NO. 2344

That the House recede from its amendments as printed on page 1167 of the Senate Journal and page 1330 of the House Journal and that Engrossed Senate Bill No. 2344 be amended as follows:

Page 1, line 8, remove "**Temporary storage of natural gas -**"

Page 1, line 12, remove "the temporary"

Page 1, line 13, remove "underground storage of natural gas:"

Page 1, line 16, remove "It is a valid exercise of the state's police powers to discourage the flaring of natural"

Page 1, remove lines 17 through 19

Page 1, line 20, remove "3."

Page 1, line 20, remove "and"

Page 1, line 21, remove "the global environment by reducing greenhouse gas emissions"

Page 2, line 3, replace "4." with "3."

Page 2, line 6, replace "5." with "4."

Page 2, line 6, after "interest" insert "for"

Page 2, line 8, remove "the temporary storage of natural gas."

Page 2, line 12, replace "6." with "5."

Page 2, line 12, remove "operations for"

Page 2, line 13, remove "temporary storage of natural gas."

Page 2, line 19, after the second "the" insert "subsurface geologic"

Page 2, line 19, remove "temporary storage of natural gas."

Page 2, line 24, replace "7." with "6."

Page 2, line 30, overstrike "necessary to exercise the police power of" and insert immediately thereafter "incumbent on"

Page 3, line 2, remove "for, and development of, oil and gas reserves in"

Page 3, remove line 3

Page 3, line 4, remove "including"

Page 3, after line 11, insert:

"4. This chapter may not be construed to alter, amend, repeal, or modify the law concerning title to pore space under section 47-31-03."

Page 4, after line 10, insert:

"1."

Page 4, after line 15, insert:

- "2. This section and chapter 38-08 may not be construed to impair the obligations of any contract for use of the surface estate for disposal operations, provided the contract was entered before the effective date of the unit approved by the commission pursuant to sections 38-08-09 through 38-08-09.17, and provided the disposal well is located within the unit area of the approved unit.
3. This section and chapter 38-08 may not be construed to allow the operator of a disposal well where the contract has expired after the effective date of the unit approved by the commission pursuant to sections 38-08-09 through 38-08-09.17 to claim the surface owner should not be compensated as if the new contract for the disposal well on which the contract has expired had been entered after the effective date of the approved unit.
4. The owner of the surface estate upon which the surface location of a disposal well is located does not lose, and may not be deemed to have lost, a claim for trespass, nuisance, or other tort if the operator of the disposal well commences or continues operations of the disposal well in violation of subsections 2 and 3."

Renumber accordingly

April 12, 2019

1002
4/11

PROPOSED AMENDMENTS TO ENGROSSED SENATE BILL NO. 2344

That the House recede from its amendments as printed on page 1167 of the Senate Journal and page 1330 of the House Journal and that Engrossed Senate Bill No. 2344 be amended as follows:

Page 1, line 8, remove "Temporary storage of natural gas -"

Page 1, line 12, remove "the temporary"

Page 1, line 13, remove "underground storage of natural gas;"

Page 1, line 16, remove "It is a valid exercise of the state's police powers to discourage the flaring of natural"

Page 1, remove lines 17 through 19

Page 1, line 20, remove "3."

Page 1, line 20, remove "and"

Page 1, line 21, remove "the global environment by reducing greenhouse gas emissions"

Page 2, line 3, replace "4." with "3."

Page 2, line 6, replace "5." with "4."

Page 2, line 6, after "interest" insert "for"

Page 2, line 8, remove "the temporary storage of natural gas."

Page 2, line 12, replace "6." with "5."

Page 2, line 12, remove "operations for"

Page 2, line 13, remove "temporary storage of natural gas."

Page 2, line 19, after the second "the" insert "subsurface geologic"

Page 2, line 19, remove "temporary storage of natural gas."

Page 2, line 21, after the third underscored comma insert "disposal operations."

Page 2, line 24, replace "7." with "6."

Page 2, line 30, overstrike "necessary to exercise the police power of" and insert immediately thereafter "incumbent on"

Page 3, line 2, remove "for, and development of, oil and gas reserves in"

Page 3, remove line 3

Page 3, line 4, remove "including"

Page 3, after line 11, insert:

"4. This chapter may not be construed to alter, amend, repeal, or modify the law concerning title to pore space under section 47-31-03."

Page 4, after line 10 insert:

"1."

Page 4, after line 15, insert:

- "2. This section and chapter 38-08 may not be construed to impair the obligations of any contract for use of the surface estate for disposal operations, provided the contract was entered before the effective date of the unit approved by the commission pursuant to sections 38-08-09 through 38-08-09.17, and provided the disposal well is located within the unit area of the approved unit.
- 3. This section and chapter 38-08 may not be construed to allow the operator of a disposal well where the contract has expired after the effective date of the unit approved by the commission pursuant to sections 38-08-09 through 38-08-09.17 to claim the surface owner should not be compensated as if the new contract for the disposal well on which the contract has expired had been entered after the effective date of the approved unit.
- 4. The owner of the surface estate upon which the surface location of a disposal well is located does not lose, and may not be deemed to have lost, a claim for trespass, nuisance, or other tort if the operator of the disposal well commences or continues operations of the disposal well in violation of subsections 2 or 3."

Renumber accordingly

Date: 4/12 AM
 Roll Call Vote 1

**2019 SENATE CONFERENCE COMMITTEE
 ROLL CALL VOTES**

BILL/RESOLUTION NO. SB 2344 as (re) engrossed

Senate Energy and Natural Resources Committee

- Action Taken**
- SENATE accede to House Amendments
 - SENATE accede to House Amendments and further amend
 - HOUSE recede from House amendments
 - HOUSE recede from House amendments and amend as follows
 - Unable to agree, recommends that the committee be discharged and a new committee be appointed

Motion Made by: Rep Keiser Seconded by: Sen. Schaible

Senators	4/9	4/10	4/12	Yes	No	Representatives	4/9	4/10	4/12	Yes	No
Senator Unruh	X	X	X	X		Representative Keiser	X	X	X	X	
Senator Schaible	X	X	X	X		Representative Roers Jones	X	X	X	X	
Senator Piepkorn	X	X	X		X	Representative Mitskog	X	X	X		X
Total Senate Vote				2	1	Total Rep. Vote				2	1

Vote Count Yes: 4 No: 2 Absent: 0

Senate Carrier Sen. Unruh House Carrier Rep. Keiser

LC Number 19. 1141 . 02010 of amendment

LC Number _____ of engrossment

Emergency clause added or deleted

Statement of purpose of amendment

Date: 4/12
 Roll Call Vote 1

**2019 SENATE CONFERENCE COMMITTEE
 ROLL CALL VOTES**

BILL/RESOLUTION NO. SB 2344 as (re) engrossed

Senate Energy and Natural Resources Committee

- Action Taken**
- SENATE accede to House Amendments
 - SENATE accede to House Amendments and further amend
 - HOUSE recede from House amendments
 - HOUSE recede from House amendments and amend as follows

 - Unable to agree**, recommends that the committee be discharged and a new committee be appointed

Reconsider

Motion Made by: Rep. Keiser Seconded by: Sen. Schaible

Senators	<u>4/12</u>			Yes	No	Representatives	<u>4/12</u>			Yes	No
Senator Unruh	X					Representative Keiser	X				
Senator Schaible	X					Representative Roers Jones	X				
Senator Piepkorn	X					Representative Mitskog	X				
Total Senate Vote						Total Rep. Vote					

Vote Count Yes: _____ No: _____ Absent: _____

Senate Carrier _____ House Carrier _____

LC Number _____ of amendment

LC Number _____ of engrossment

Emergency clause added or deleted

Statement of purpose of amendment

*Voice vote
 Motion carries*

Date: 4/12
 Roll Call Vote 2

**2019 SENATE CONFERENCE COMMITTEE
 ROLL CALL VOTES**

BILL/RESOLUTION NO. SB 2344 as (re) engrossed

Senate Energy and Natural Resources Committee

- Action Taken**
- SENATE accede to House Amendments
 - SENATE accede to House Amendments and further amend
 - HOUSE recede from House amendments
 - HOUSE recede from House amendments and amend as follows
 - Unable to agree, recommends that the committee be discharged and a new committee be appointed

Motion Made by: Rep Keiser Seconded by: Sen. Schaible

Senators			Yes	No	Representatives			Yes	No
Senator Unruh			X		Representative Keiser		X		
Senator Schaible			X		Representative Roers Jones		X		
Senator Piepkorn			X		Representative Mitskog		X		
Total Senate Vote			3		Total Rep. Vote			3	

Vote Count Yes: 6 No: 0 Absent: 0

Senate Carrier Sen. Unruh House Carrier Rep. Keiser

LC Number 19.1141 · 02011 of amendment

LC Number 19.1141 · 04000 of engrossment

Emergency clause added or deleted

Statement of purpose of amendment

REPORT OF CONFERENCE COMMITTEE

SB 2344, as engrossed: Your conference committee (Sens. Unruh, Schaible, Piepkorn and Reps. Keiser, Roers Jones, Mitskog) recommends that the **HOUSE RECEDE** from the House amendments as printed on SJ page 1167, adopt amendments as follows, and place SB 2344 on the Seventh order:

That the House recede from its amendments as printed on page 1167 of the Senate Journal and page 1330 of the House Journal and that Engrossed Senate Bill No. 2344 be amended as follows:

Page 1, line 8, remove "Temporary storage of natural gas -"

Page 1, line 12, remove "the temporary"

Page 1, line 13, remove "underground storage of natural gas,"

Page 1, line 16, remove "It is a valid exercise of the state's police powers to discourage the flaring of natural"

Page 1, remove lines 17 through 19

Page 1, line 20, remove "3."

Page 1, line 20, remove "and"

Page 1, line 21, remove "the global environment by reducing greenhouse gas emissions"

Page 2, line 3, replace "4." with "3."

Page 2, line 6, replace "5." with "4."

Page 2, line 6, after "interest" insert "for"

Page 2, line 8, remove "the temporary storage of natural gas,"

Page 2, line 12, replace "6." with "5."

Page 2, line 12, remove "operations for"

Page 2, line 13, remove "temporary storage of natural gas,"

Page 2, line 19, after the second "the" insert "subsurface geologic"

Page 2, line 19, remove "temporary storage of natural gas,"

Page 2, line 21, after the third underscored comma insert "disposal operations,"

Page 2, line 24, replace "7." with "6."

Page 2, line 30, overstrike "necessary to exercise the police power of" and insert immediately thereafter "incumbent on"

Page 3, line 2, remove "for, and development of, oil and gas reserves in"

Page 3, remove line 3

Page 3, line 4, remove "including"

Page 3, after line 11, insert:

- "4. This chapter may not be construed to alter, amend, repeal, or modify the law concerning title to pore space under section 47-31-03."

Page 4, after line 10 insert:

"1."

Page 4, after line 15, insert:

- "2. This section and chapter 38-08 may not be construed to impair the obligations of any contract for use of the surface estate for disposal operations, provided the contract was entered before the effective date of the unit approved by the commission pursuant to sections 38-08-09 through 38-08-09.17, and provided the disposal well is located within the unit area of the approved unit.
3. This section and chapter 38-08 may not be construed to allow the operator of a disposal well where the contract has expired after the effective date of the unit approved by the commission pursuant to sections 38-08-09 through 38-08-09.17 to claim the surface owner should not be compensated as if the new contract for the disposal well on which the contract has expired had been entered after the effective date of the approved unit.
4. The owner of the surface estate upon which the surface location of a disposal well is located does not lose, and may not be deemed to have lost, a claim for trespass, nuisance, or other tort if the operator of the disposal well commences or continues operations of the disposal well in violation of subsections 2 or 3."

Renumber accordingly

Engrossed SB 2344 was placed on the Seventh order of business on the calendar.

2019 TESTIMONY

SB 2344

SB 2344
2.1.19
#1
Pg.1

02/01/2019



North Dakota Senate

State Capitol
600 East Boulevard Avenue
Bismarck, ND 58505-0360

Senator Jessica Unruh
District 33
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Beulah, ND 58523-6301

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Committees:
Energy and Natural Resources,
Chairman
Finance and Taxation

The purpose of SB 2344 is to ensure landowners, mineral owners and developers maintain their long existing rights and can produce their minerals, protect their property rights, and not be restricted in ways that would overturn these long-held protections.

We all know that energy is a major economic driver in North Dakota. In the oil and gas industry when fields decline in production, we are counting on the oil industry to take on greater risk and significant new capital investment to revitalize these fields by using water or CO₂ to boost field production to develop secondary and tertiary projects - also known as Enhanced Oil Recovery or EOR. For example, a typical EOR project requires several hundred million dollars of up-front capital investment to literally rebuild an aging oilfield before a single barrel of new tertiary production occurs to pay the project back. These and all other energy projects need certainty to attract the investment required to take the substantial risk for multiple types of underground operations that are a necessary part of the production process.

Unfortunately, at times governmental action can create confusion and uncertainty. We've seen it numerous times and we've seen it recently. A recent Supreme Court opinion has caused question to whether NDIC permitted secondary or tertiary projects, disposal wells and other subsurface actions may continue to use standard operations practices such as injection of CO₂ and the re-injection of produced water for enhanced recovery without creating unprecedented new requirements under North Dakota's Surface Damage Compensation Act.

Enacted in 1979, the purpose of this law was to protect farmers and ranchers from the adverse effects of oil and gas production in the state. It has successfully provided protection to farmers and ranchers by requiring farmers and ranchers to be compensated for damages to their farming and ranching operations and was never intended to create interference with or prevent oil and gas exploration activities in the state.

As they say, "If it ain't broke, don't fix it." SB 2344 makes clear that NDIC permitted production Units, disposal wells, leases or other agreements may proceed as planned to prevent waste of our valuable oil resources and at the same time maintains the well understood requirements operators have followed since 1979 to compensate owners for true surface damages.

Senate Bill 2344 reiterates the intent and purpose of North Dakota's Oil and Gas Production Damage Compensation Act and reflects the Legislative History of the Act. This bill essentially reinstates the true intent and purpose of the Damage Compensation Act and makes it clear that permitted operations such as hydraulic fracturing, injection of water to enhance oil and gas production and injection of CO₂ to enhance oil and gas production may occur without new and unintended claims for damages.

The North Dakota Legislature is the policy making branch of state government. It is our job to clarify matters when necessary. The Legislature should confirm that the purpose and intent of the Surface Damage Compensation Act is to protect farmers and ranchers from the adverse surface effects of oil and gas drilling operations and maintain a positive working relationship that has served our State well for 40 years. Failure to clarify this uncertainty would potentially negatively impact major ND lignite CO₂/Enhanced Oil Recovery projects like Project Tundra. It is our responsibility to step up to the plate and address this issue.

19.1141.01001
Title.

Prepared by the Legislative Council staff for
Senator Unruh

January 30, 2019

PROPOSED AMENDMENTS TO SENATE BILL NO. 2344

Page 1, line 13, remove "geologic storage of carbon dioxide;"

Page 1, line 20, replace "geologic storage" with "use"

Page 1, line 23, remove "geologic storage"

Page 1, line 24, replace "may increase" with "increasing"

Page 1, line 24, after "availability" insert "is important"

Page 2, line 1, remove "Geologic storage requires"

Page 2, remove lines 2 and 3

Page 2, line 10, remove "geologic storage of carbon dioxide."

Page 2, line 14, remove "geologic"

Page 2, line 15, remove "storage of carbon dioxide."

Page 2, line 21, remove "geologic storage of carbon dioxide."

Renumber accordingly



**Testimony of Doug Goehring, Agriculture Commissioner
North Dakota Department of Agriculture
Senate Bill 2344
Senate Energy and Natural Resources Committee
Fort Lincoln Room
February 1, 2019**

Chair Unruh and members of the Senate Energy and Natural Resources Committee, I am Agriculture Commissioner Doug Goehring. Thank you for the opportunity to appear before the committee. I am here today in support of Senate Bill 2344.

We are a state that has been blessed in a very unique way, with a diverse agricultural system and abundant natural resources such as coal, oil and gas. With all of this activity happening on the landscape, we have for the most part coexisted very well. We certainly have challenges from time to time but have taken a common-sense approach to remediate. When necessary, we have modified policies to protect and encourage the responsible use of the land and mineral resources being developed, all while respecting the constitutional right to develop.

I believe this bill addresses my concerns for the surface owner recovering damages because of activities on the land while defining pore space in formations below. This bill also supports the continued effort and investment by the industry to increase CO2 capture for enhanced oil recovery. It also allows industry to capture gas for temporary storage, to avoid flaring.

Chair Unruh and committee members, I thank you for your consideration and would be happy to take any questions.

Testimony of Lynn D. Helms
Director, North Dakota Industrial Commission Department of Mineral Resources
February 1, 2019
Senate Energy and Natural Resources Committee
SB 2344

The North Dakota Industrial Commission (NDIC) supports SB 2344 and urges a do pass vote.

This bill removes uncertainty surrounding the rights of mineral developers to utilize pore space for commission approved recovery processes such as hydraulic fracturing, temporary underground storage of natural gas, use of carbon dioxide for enhanced recovery, unit operations for enhanced oil and gas recovery, and class II waste disposal operations.

The NDIC supports the testimony of others regarding hydraulic fracturing, use of carbon dioxide for enhanced recovery, unit operations for enhanced oil and gas recovery, and class II waste disposal operations. I would like to offer the following regarding temporary underground storage of produced natural gas:

The EERC has studied the potential for produced gas storage and determined that it is technically and economically feasible based on computer simulations:

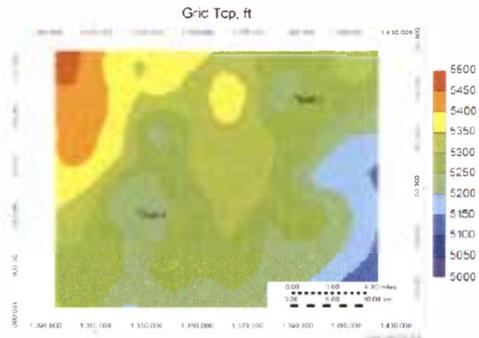


Figure 8. Map view of the simulation model showing the injection well locations and depth of the Broom Creek Formation top. North is toward the top of the image.

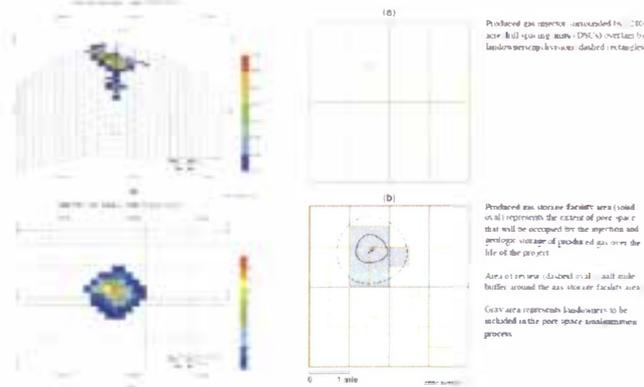


Figure 9. (a) Vertical cross-section of the well and storage area. (b) Vertical cross-section of the well and storage area with a color-coded scale. The vertical cross-section is shown in Figure 9.

Figure 10. Vertical representation of pore space analogization considerations with respect to landowners within a given gas storage project area.

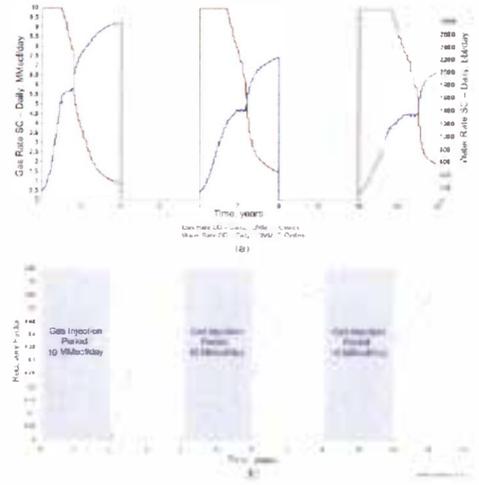


Figure 12. Gas and water production rates following 1 year of gas injection (a) and gas recovery factors (b) for a cyclic gas injection and recovery scenario.

	cycle 1	cycle 2	cycle 3	
MCFD Inj	10,000	10,000	10,000	
Days/Yr	365	365	365	
Years	4	4	4	
MCF Inj	7,300,000	7,300,000	7,300,000	
RF	50%	57%	63%	
MCF Prod	3,650,000	4,161,000	4,599,000	12,410,000
Investment	\$15,700,000			
\$/MCF	\$2.15			
Oper Cost	\$7,000,000	\$7,000,000	\$7,000,000	
Total Cost	\$22,700,000	\$7,000,000	\$7,000,000	\$36,700,000
\$/MCF	\$6.22	\$1.68	\$1.52	\$2.96

A single demonstration project could result in 5 additional well completions, reduce flared volume of 618 million cubic feet, and almost \$28 million in additional GPT+OET revenue:

Five well Bakken pad with potential for 20 wells and Produced Gas Storage

Year	Well Count	Oil Production		Gas Production		Gathering Capacity		Excess Gas		Flared Gas		GPT&OET @ \$50/BO & \$0.07/MCF
		BOPD	Annual	MCFD	Annual	MCFD	Annual	MCFD	Annual	MCFD	Annual	
2019	5	6,300	2,299,500	11,598	4,233,380	10,207	3,725,374	1,392	508,006	1,392	508,006	\$11,498,214
2020		2,575	939,875	4,741	1,730,310	10,207	3,725,374					\$4,699,707
2021	10	7,625	2,783,125	14,038	5,123,733	10,207	3,725,374	3,831	1,398,359	1,263	461,136	\$13,916,519
2022	10	3,375	1,231,875	6,213	2,267,882	10,207	3,725,374					\$6,159,810
2023	10	1,850	675,250	3,406	1,243,135	10,207	3,725,374					\$3,376,488
2024	10	1,175	428,875	2,163	789,559	10,207	3,725,374					\$2,144,526
2025	15	7,125	2,600,625	13,117	4,787,751	10,207	3,725,374	2,911	1,062,377	1,181	430,898	\$13,003,961
2026	15	3,175	1,158,875	5,845	2,133,489	10,207	3,725,374					\$5,794,784
2027	15	1,825	666,125	3,360	1,226,336	10,207	3,725,374					\$3,330,860
2028	15	1,225	447,125	2,255	823,157	10,207	3,725,374					\$2,235,783
2029	20	7,200	2,628,000	14,581	5,321,963	10,207	3,725,374	4,374	1,596,589	1,312	478,977	\$13,140,929
2030	20	3,325	1,213,625	7,407	2,703,483	10,207	3,725,374					\$6,068,643
Total			17,072,875		32,384,177						1,879,016	\$85,370,225
Difference	5		5,572,820		10,415,021						618,315	\$27,865,981

Five well Bakken pad with potential for 20 wells without Produced Gas Storage

Year	Well Count	Oil Production		Gas Production		Gathering Capacity		Excess Gas		Flared Gas		GPT&OET @ \$50/BO & \$0.07/MCF
		BOPD	Annual	MCFD	Annual	MCFD	Annual	MCFD	Annual	MCFD	Annual	
2019		6,300	2,299,500	11,598	4,233,380	10,207	3,725,374	1,392	508,006	1,392	508,006	\$11,498,214
2020		2,575	939,875	4,741	1,730,310	10,207	3,725,374					\$4,699,707
2021		1,325	483,625	2,439	890,354	10,207	3,725,374					\$2,418,296
2022		800	292,000	1,473	537,572	10,207	3,725,374					\$1,460,103
2023		525	191,625	967	352,782	10,207	3,725,374					\$958,193
2024	10	6,297	2,298,405	11,593	4,231,364	10,207	3,725,374	1,386	505,990	1,043	380,823	\$11,492,762
2025	10	2,360	861,400	4,345	1,585,837	10,207	3,725,374					\$4,307,304
2026	10	1,285	469,025	2,366	863,475	10,207	3,725,374					\$2,345,291
2027	10	840	306,600	1,546	564,451	10,207	3,725,374					\$1,533,108
2028	10	620	226,300	1,141	416,618	10,207	3,725,374					\$1,131,580
2029	15	5,590	2,040,350	11,320	4,131,913	10,207	3,725,374	1,114	406,539	1,019	371,872	\$10,202,470
2030	15	2,990	1,091,350	6,661	2,431,102	10,207	3,725,374					\$5,457,216
Total			11,500,055		21,969,157						1,260,700	\$57,504,244

State wide implementation following a successful demonstration project could result in 100 additional well completions, reduced flare volume of 111 billion cubic feet, and more than \$1 billion in additional GPT+OET revenue:

With 15-20 produced gas storage facilities

Year	Well Count	Oil Production		Gas Production		Gathering Capacity		Excess Gas		Flared Gas		% Annual	GPT&OET @ \$50/BO & \$0.07
		BOPD	Annual	MCFD	Annual	MCFD	Annual	MCFD	Annual	MCFD	Annual		
2019	13500	1,375,000	501,875,000	2,531,375	923,951,875	2,279,500	832,017,500	251,875	91,934,375	251,875	10%	91,934,375	\$2,509,534,565
2020	14500	1,476,852	539,050,926	2,854,828	1,042,012,392	3,114,500	832,017,500	-259,672		-259,672	0%	0	\$2,695,472,645
2021	15500	1,578,704	576,226,852	3,204,299	1,169,569,082	3,359,500	832,017,500	-155,201		-155,201	0%	0	\$2,881,369,424
2022	16500	1,680,556	613,402,778	3,581,579	1,307,276,409	3,359,500	832,017,500	222,079	81,058,909	-377,921	0%	0	\$3,067,291,054
2023	17500	1,782,407	650,578,704	3,988,577	1,455,830,547	3,359,500	832,017,500	629,077	229,613,047	29,077	1%	10,613,047	\$3,253,170,684
2024	18500	1,884,259	687,754,630	4,427,320	1,615,971,907	4,359,500	832,017,500	67,820	24,754,407	-532,180	0%	0	\$3,439,120,313
2025	19500	1,986,111	724,930,556	4,899,967	1,788,487,826	4,759,500	832,017,500	140,467	51,270,326	-459,533	0%	0	\$3,625,027,943
2026	20500	2,087,963	762,106,481	5,408,809	1,974,215,408	5,159,500	832,017,500	249,309	90,997,908	-350,691	0%	0	\$3,810,935,572
2027	20500	2,087,963	762,106,481	5,679,250	2,072,926,179	5,559,500	832,017,500	119,750	43,708,679	-480,250	0%	0	\$3,810,963,572
2028	20500	2,087,963	762,106,481	5,963,212	2,176,572,488	5,959,500	832,017,500	3,712	1,354,988	-596,288	0%	0	\$3,810,991,572
2029	20500	2,087,963	762,106,481	6,261,373	2,285,401,112	5,959,500	832,017,500	301,873	110,183,612	-298,127	0%	0	\$3,810,991,572
2030	20500	2,087,963	762,106,481	6,574,442	2,399,671,168	5,959,500	832,017,500	614,942	224,453,668	14,942	0%	0	\$3,810,991,572
Total			8,104,351,852		20,211,886,393							102,547,422	\$40,525,860,489
Difference	100		215,620,370		529,935,807							-110,852,588	\$1,078,479,852

Without produced gas storage

Year	Well Count	Oil Production		Gas Production		Gathering Capacity		Excess Gas		Flared Gas		% Annual	GPT&OET @ \$50/BO & \$0.07
		BOPD	Annual	MCFD	Annual	MCFD	Annual	MCFD	Annual	MCFD	Annual		
2019	13500	1,375,000	501,875,000	2,531,375	923,951,875	2,279,500	832,017,500	251,875	91,934,375	251,875	10%	91,934,375	\$2,509,534,565
2020	14500	1,476,852	539,050,926	2,854,828	1,042,012,392	3,114,500	832,017,500	-259,672		-259,672	0%	0	\$2,695,472,645
2021	15500	1,578,704	576,226,852	3,204,299	1,169,569,082	3,359,500	832,017,500	-155,201		-155,201	0%	0	\$2,881,369,424
2022	16500	1,680,556	613,402,778	3,581,579	1,307,276,409	3,359,500	832,017,500	222,079	81,058,909	222,079	6%	9%	\$3,067,249,054
2023	16200	1,650,000	602,250,000	3,692,283	1,347,683,135	3,359,500	832,017,500	332,783	121,465,635	332,783	9%	121,465,635	\$3,011,485,165
2024	17200	1,751,852	639,425,926	4,116,211	1,502,417,124	4,359,500	832,017,500	-243,289	-88,800,376	-243,289	-6%	0	\$3,197,434,795
2025	18200	1,853,704	676,601,852	4,573,302	1,669,255,305	4,759,500	832,017,500	-186,198	-67,962,195	-186,198	-4%	0	\$3,383,342,424
2026	19200	1,955,556	713,777,778	5,065,812	1,849,021,261	5,159,500	832,017,500	-93,688	-34,196,239	-93,688	-2%	0	\$3,569,250,054
2027	20200	2,057,407	750,953,704	5,596,139	2,042,590,674	5,559,500	832,017,500	36,639	13,373,174	36,639	1%	0	\$3,755,157,684
2028	20400	2,077,778	758,388,889	5,934,123	2,165,955,061	5,959,500	832,017,500	-25,377	-9,262,439	-25,377	0%	0	\$3,792,361,609
2029	20400	2,077,778	758,388,889	6,230,830	2,274,252,814	5,959,500	832,017,500	271,330	99,035,314	271,330	4%	0	\$3,792,361,609
2030	20400	2,077,778	758,388,889	6,542,371	2,387,965,455	5,959,500	832,017,500	582,871	212,747,955	582,871	9%	0	\$3,792,361,609
Total			7,888,731,481		19,681,950,586							213,400,010	\$39,447,380,637

SB 2344
2-8-19
#1
Pg. 1

PROPOSED AMENDMENTS TO SENATE BILL 2344

- Page 1, line 8, after “-” insert “Temporary”
- Page 1, line 8, remove “and carbon dioxide”
- Page 1, line 13, remove “geologic storage of carbon dioxide;”
- Page 1, line 20, replace “geologic storage” with “use”
- Page 1, line 23, remove “geologic storage”
- Page 1, line 24, replace “may increase” with “increasing”
- Page 1, line 24, after “availability” insert “is important”
- Page 2, line 1, remove “Geologic storage requires”
- Page 2, remove lines 2 and 3
- Page 2, line 8, replace “may” with “to”
- Page 2, line 10, remove “geologic storage of carbon dioxide;”
- Page 2, line 11, after “minerals” insert “disposal operations”
- Page 2, line 14, remove “geologic”
- Page 2, line 15, remove “storage of carbon dioxide”
- Page 2, line 16, after “minerals” insert “disposal operations”
- Page 2, line 17, replace the second “the” with “such”
- Page 2, line 21, remove “geologic storage of carbon dioxide”



North Dakota Senate

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Senator Jessica Unruh
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jkunruh@nd.gov

Committees:

Energy and Natural Resources,
Chairman
Finance and Taxation

03/01/2019

SB 2344
3.1.19
Attachment 1

The purpose of SB 2344 is to ensure landowners, mineral owners and developers maintain their long existing rights and can produce their minerals, protect their property rights, and not be restricted in ways that would overturn these long-held protections.

This is a complicated topic, so I'm going to begin my testimony with an easy to understand analogy. If you're a rancher and you've got a creek running through your land, you have the right to use that water for your herd. And you do, just as you have been for the past 30 years. Let's say a new neighbor moves in two neighbors down and complains your cows are drinking too much water and reducing the quality. Now, all of a sudden, after 30 years of responsibly using this resource, you need to compensate this new neighbor for your use of the water on your land, even though nothing has changed. This is the type of situation this bill is attempting to avoid. Land owners who have established permitted, existing operations will continue to be able to operate them and not have someone "two doors down" lay claim to it. This is a land owner protection bill, not the other way around.

We all know that energy is a major economic driver in North Dakota. In the oil and gas industry when fields decline in production, we are counting on the oil industry to take on greater risk and significant new capital investment to revitalize these fields by using water or CO₂ to boost field production to develop secondary and tertiary projects - also known as Enhanced Oil Recovery or EOR. For example, a typical EOR project requires several hundred million dollars of up-front capital investment to literally rebuild an aging oilfield before a single barrel of new tertiary production occurs to pay the project back. These and all other energy projects need certainty to attract the investment required to take the substantial risk for multiple types of underground operations that are a necessary part of the production process.

Unfortunately, at times governmental action can create confusion and uncertainty. We've seen it numerous times and we've seen it recently. A recent Supreme Court opinion has caused question to whether NDIC permitted secondary or tertiary projects, disposal wells and other subsurface actions may continue to use standard operations practices such as injection of CO₂ and the re-injection of produced water for enhanced recovery without creating unprecedented new requirements under North Dakota's Surface Damage Compensation Act.

Enacted in 1979, the purpose of this law was to protect farmers and ranchers from the adverse effects of oil and gas production in the state. It has successfully provided protection to farmers and ranchers by requiring farmers and ranchers to be compensated for damages to their farming and ranching operations and was never intended to create interference with or prevent oil and gas exploration activities in the state.

As they say, "If it ain't broke, don't fix it." SB 2344 makes clear that permitted production Units, disposal wells, leases or other agreements may proceed as planned to prevent waste of our valuable oil resources and at the same time maintains the well understood requirements operators have followed since 1979 to compensate owners for true surface damages.

Senate Bill 2344 reiterates the intent and purpose of North Dakota's Oil and Gas Production Damage Compensation Act and reflects the Legislative History of the Act. This bill essentially reinstates the true intent and purpose of the Damage Compensation Act and makes it clear that permitted operations such as hydraulic fracturing, injection of water to enhance oil and gas production and injection of CO₂ to enhance oil and gas production may occur without new and unintended claims for damages.

The North Dakota Legislature is the policy making branch of state government. It is our job to clarify matters when necessary. The Legislature should confirm that the purpose and intent of the Surface Damage Compensation Act is to protect farmers and ranchers from the adverse surface effects of oil and gas drilling operations and maintain a positive working relationship that has served our State well for 40 years. Failure to clarify this uncertainty would potentially negatively impact major ND lignite CO₂/Enhanced Oil Recovery projects like Project Tundra. It is our responsibility to step up to the plate and address this issue.

After the hearing on the senate side, there has been some consternation over the intentions of this bill. I want to make sure I'm clear - this bill will continue to allow operations as usual, just as they have been since the law change in the '70's. It ensures surface rights stay with surface owners, and those who own disposal wells will continue to be protected from someone else making a claim to your project.

Clarification on this topic is necessary. It's complicated and was difficult to draft. My intentions are to ensure landowners, mineral owners and developers maintain their long existing rights and can produce their minerals, protect their property rights, and not be restricted in ways that would overturn these long-held protections.

COMMISSIONER
DOUG GOEHRING



SB 2344
3.1.19
Attachment 2
ndda@nd.gov
www.nd.gov/ndda

**Testimony of Doug Goehring, Agriculture Commissioner
North Dakota Department of Agriculture
Senate Bill 2344
House Energy and Natural Resources Committee
Coteau A
March 1, 2019**

Chairman Porter and members of the House Energy and Natural Resources Committee, I am Agriculture Commissioner Doug Goehring. Thank you for the opportunity to appear before the committee. I am here today in support of Senate Bill 2344.

We are a state that has been blessed in a very unique way, with a diverse agricultural system and abundant natural resources such as coal, oil and gas. With all of this activity happening on the landscape, we have for the most part coexisted very well. We certainly have challenges from time to time but have taken a common-sense approach to remediate. When necessary, we have modified policies to protect and encourage the responsible use of the land and mineral resources being developed, all while respecting the constitutional right to develop.

I believe this bill addresses my concerns for the surface owner recovering damages because of activities on the land while defining pore space in formations below. This bill also supports the continued effort and investment by the industry to increase CO2 capture for enhanced oil recovery. It also allows industry to capture gas for temporary storage, to avoid flaring.

Chair Porter and committee members, I thank you for your consideration and would be happy to take any questions.

Senate Bill 2344
Testimony of James Arthaud
House Energy & Natural Resources Committee
March 1, 2019

Chairman Porter and members of the House Energy & Natural Resources Committee. I am James Arthaud. I am an operator of oil and gas wells, a mineral owner, and a surface owner, and I am here today to testify in favor of Senate Bill 2344.

SB 2344 proposes, among other things, to amend the law in North Dakota relative to surface damage payments. The purpose of these amendments is to provide clarity and certainty as to legislation related to the use of pore space for the disposal of salt water into salt water disposal wells. SB 2344 does not eliminate the obligation of oil and gas companies to compensate farmers and ranchers for damages caused by these sorts of operations. SB 2344 does, however, provide much needed clarity as to who the operator of a salt water disposal should pay for the disposal of salt water.

If SB 2344 is not adopted, uncertainty will exist as to whether an oil and gas company must compensate the owners of pore space for the disposal of salt water. Current law provides for an oil and gas operator to compensate a surface owner for damages caused as a result of disposal of salt water. This requires that the operator negotiate with the surface owner of the land upon which the operations are being drilled and operated to compensate for damages resulting from the disposal operations. Because of a recent court decision, damages to the owner of the pore space underlying the surface may also be entitled to damages.

This creates uncertainty for oil and gas companies. When water is injected into the ground for disposal purposes, it has the ability to migrate away from the well bore. It is probable that the surface owner whom the operator negotiated with regarding compensation for damages may not be the owner of the pore space where the water will migrate. Further, it is not currently possible for the oil and gas company to accurately predict where such water will migrate. Under this new Court determination that pore space owners may be entitled to compensation, operators must now be concerned with attempting to make a prediction of where the disposal water will migrate, and then negotiate with each and every pore space owner to avoid litigation for failing to compensate the pore space owner for damages.

The following example describes the uncertainty oil and gas companies will face if SB 2344 does not pass.:

Rancher A owns Section 26. Salt Water Disposal Operator plans on drilling a salt water disposal well in Section 26. Operator compensates Rancher A for damages that may result from the injection of the salt water, in compliance with Chapter 38-11.1. However, Section 26 is surrounded by Section 22, owned by Rancher 1; Section 23, owned by Rancher 2; Section 24, owned by Rancher 3; Section 25, owned by Rancher 4; Section 27, owned by Rancher 5; Section 34, owned by Rancher 6; Section 35, owned by Rancher 7; and Section 36, owned by Rancher 8. Salt Water Disposal Operator now must attempt to predict where the disposed water may migrate, between at least eight different Ranchers' pore space. If Operator predicts that the water may migrate into the pore space of Rancher 1, Rancher 2, and Rancher 3, Operator must negotiate and

compensate each of those Ranchers for possible damages to their pore space. If Operator's predictions are incorrect, however, perhaps Rancher 2 was compensated without ever experiencing any water migration, or perhaps the water actually migrates into Rancher 3's pore space, and Rancher 3 was never compensated and now brings litigation against Operator for his failure to comply with the law.

The example set forth above is a real concern that operators will now face under the recent determination that pore space owners should be compensated for disposal of salt water. If SB 2344 is not adopted, it is clear that uncertainty will exist as to whether a salt water disposal operator must compensate all possible owners of pore space of which water may migrate. I urge the House Energy & Natural Resources Committee to adopt SB 2344 to provide clarity and certainty for oil and gas operators and surface land owners alike.

66083132.2

Testimony of Lynn D. Helms
Director, North Dakota Industrial Commission Department of Mineral Resources
March 1, 2019
House Energy and Natural Resources Committee
SB 2344

The North Dakota Industrial Commission (NDIC) supports SB 2344 and urges a do pass vote.

This bill removes uncertainty surrounding the rights of mineral developers to utilize pore space for commission approved recovery processes such as hydraulic fracturing, temporary underground storage of natural gas, use of carbon dioxide for enhanced recovery, unit operations for enhanced oil and gas recovery, and class II waste disposal operations.

The NDIC supports the testimony of others regarding hydraulic fracturing, use of carbon dioxide for enhanced recovery, unit operations for enhanced oil and gas recovery, and class II waste disposal operations. I would like to offer the following regarding temporary underground storage of produced natural gas:

The EERC has studied the potential for produced gas storage and determined that it is technically and economically feasible based on computer simulations:

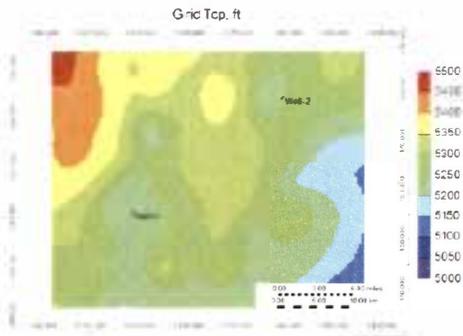


Figure 5. Map view of the simulation model showing the injection well locations and depth of the Broom Creek Formation top. North is toward the top of the image.

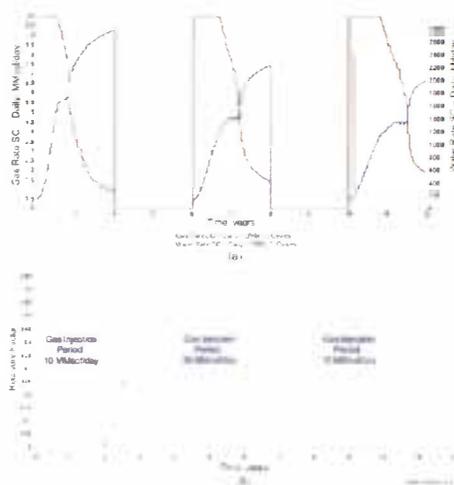


Figure 11. Gas and water production rates following 3 years of gas injection (a) and gas recovery factors (b) for a cyclic gas injection and recovery scenario.

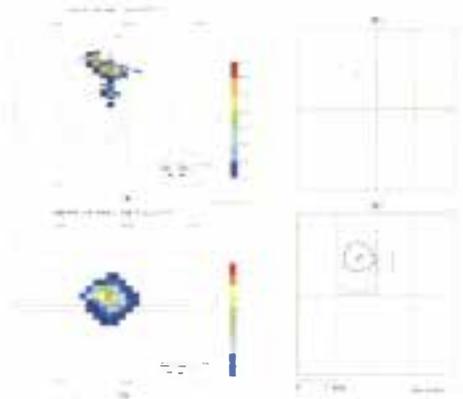


Figure 19. Visual representation of pore space utilization (a) and gas recovery factors (b) for a cyclic gas injection and recovery scenario.

Figure 19. Visual representation of pore space utilization (a) and gas recovery factors (b) for a cyclic gas injection and recovery scenario.

	cycle 1	cycle 2	cycle 3	
MCFD Inj	10,000	10,000	10,000	
Days/Yr	365	365	365	
Years	4	4	4	
MCF Inj	7,300,000	7,300,000	7,300,000	
RF	50%	57%	63%	
MCF Prod	3,650,000	4,161,000	4,599,000	12,410,000
Investment	\$15,700,000			
\$/MCF	\$2.15			
Oper Cost	\$7,000,000	\$7,000,000	\$7,000,000	
Total Cost	\$22,700,000	\$7,000,000	\$7,000,000	\$36,700,000
\$/MCF	\$6.22	\$1.68	\$1.52	\$2.96

A single demonstration project could result in 5 additional well completions, reduce flared volume of 618 million cubic feet, and almost \$28 million in additional GPT+OET revenue:

Five well Bakken pad with potential for 20 wells and Produced Gas Storage

Year	Well Count	Oil Production		Gas Production		Gathering Capacity		Excess Gas		Flared Gas		GPT&OET @ \$50/BO & \$0.07/MCF
		BOPD	Annual	MCFD	Annual	MCFD	Annual	MCFD	Annual	MCFD	Annual	
2019	5	6,300	2,299,500	11,598	4,233,380	10,207	3,725,374	1,392	508,006	1,392	508,006	\$11,498,214
2020	5	2,575	939,875	4,741	1,730,310	10,207	3,725,374					\$4,699,707
2021	10	7,625	2,783,125	14,038	5,123,733	10,207	3,725,374	3,831	1,398,359	1,263	461,136	\$13,916,519
2022	10	3,375	1,231,875	6,213	2,267,882	10,207	3,725,374					\$6,159,810
2023	10	1,850	675,250	3,406	1,243,135	10,207	3,725,374					\$3,376,488
2024	10	1,175	428,875	2,163	789,559	10,207	3,725,374					\$2,144,526
2025	15	7,125	2,600,625	13,117	4,787,751	10,207	3,725,374	2,911	1,062,377	1,181	430,898	\$13,003,961
2026	15	3,175	1,158,875	5,845	2,133,489	10,207	3,725,374					\$5,794,784
2027	15	1,825	666,125	3,360	1,226,336	10,207	3,725,374					\$3,330,860
2028	15	1,225	447,125	2,255	823,157	10,207	3,725,374					\$2,235,783
2029	20	7,200	2,628,000	14,581	5,321,963	10,207	3,725,374	4,374	1,596,589	1,312	478,977	\$13,140,929
2030	20	3,325	1,213,625	7,407	2,703,483	10,207	3,725,374					\$6,068,643
Total			17,072,875		32,384,177						1,879,016	\$85,370,225
Difference			5,572,820		10,415,021						618,315	\$27,865,981

Five well Bakken pad with potential for 20 wells without Produced Gas Storage

Year	Well Count	Oil Production		Gas Production		Gathering Capacity		Excess Gas		Flared Gas		GPT&OET @ \$50/BO & \$0.07/MCF
		BOPD	Annual	MCFD	Annual	MCFD	Annual	MCFD	Annual	MCFD	Annual	
2019	5	6,300	2,299,500	11,598	4,233,380	10,207	3,725,374	1,392	508,006	1,392	508,006	\$11,498,214
2020	5	2,575	939,875	4,741	1,730,310	10,207	3,725,374					\$4,699,707
2021	5	1,325	483,625	2,439	890,354	10,207	3,725,374					\$2,418,296
2022	5	800	292,000	1,473	537,572	10,207	3,725,374					\$1,460,103
2023	5	525	191,625	967	352,782	10,207	3,725,374					\$958,193
2024	10	6,297	2,298,405	11,593	4,231,364	10,207	3,725,374	1,386	505,990	1,043	380,823	\$11,492,762
2025	10	2,360	861,400	4,345	1,585,837	10,207	3,725,374					\$4,307,304
2026	10	1,285	469,025	2,366	863,475	10,207	3,725,374					\$2,345,291
2027	10	840	306,600	1,546	564,451	10,207	3,725,374					\$1,533,108
2028	10	620	226,300	1,141	416,618	10,207	3,725,374					\$1,131,580
2029	15	5,590	2,040,350	11,320	4,131,913	10,207	3,725,374	1,114	406,539	1,019	371,872	\$10,202,470
2030	15	2,990	1,091,350	6,661	2,431,102	10,207	3,725,374					\$5,457,216
Total			11,500,055		21,969,157						1,260,700	\$57,504,244

State wide implementation following a successful demonstration project could result in 100 additional well completions, reduced flare volume of 111 billion cubic feet, and more than \$1 billion in additional GPT+OET revenue:

With 15-20 produced gas storage facilities

Year	Well Count	Oil Production		Gas Production		Gathering Capacity		Excess Gas		Flared Gas		% Annual	GPT&OET @ \$50/BO & \$0.07
		BOPD	Annual	MCFD	Annual	MCFD	Annual	MCFD	Annual	MCFD	Annual		
2019	13500	1,375,000	501,875,000	2,531,375	923,951,875	2,279,500	832,017,500	251,875	91,934,375	251,875	10%	91,934,375	\$2,509,534,565
2020	14500	1,476,852	539,050,926	2,854,828	1,042,012,392	3,114,500	832,017,500	-259,672		-259,672	0%	0	\$2,695,472,645
2021	15500	1,578,704	576,226,852	3,204,299	1,169,569,082	3,359,500	832,017,500	-155,201		-155,201	0%	0	\$2,881,369,424
2022	16500	1,680,556	613,402,778	3,581,579	1,307,276,409	3,359,500	832,017,500	222,079	81,058,909	-377,921	0%	0	\$3,067,291,054
2023	17500	1,782,407	650,578,704	3,988,577	1,455,830,547	3,359,500	832,017,500	629,077	229,613,047	29,077	1%	10,613,047	\$3,253,170,684
2024	18500	1,884,259	687,754,630	4,427,320	1,615,971,907	4,359,500	832,017,500	67,820	24,754,407	-532,180	0%	0	\$3,439,120,313
2025	19500	1,986,111	724,930,556	4,899,967	1,788,487,826	4,759,500	832,017,500	140,467	51,270,326	-459,533	0%	0	\$3,625,027,943
2026	20500	2,087,963	762,106,481	5,408,809	1,974,215,408	5,159,500	832,017,500	249,309	90,997,908	-350,691	0%	0	\$3,810,935,572
2027	20500	2,087,963	762,106,481	5,679,250	2,072,926,179	5,559,500	832,017,500	119,750	43,708,679	-480,250	0%	0	\$3,810,963,572
2028	20500	2,087,963	762,106,481	5,963,212	2,176,572,488	5,959,500	832,017,500	3,712	1,354,988	-596,288	0%	0	\$3,810,991,572
2029	20500	2,087,963	762,106,481	6,261,373	2,285,401,112	5,959,500	832,017,500	301,873	110,183,612	-298,127	0%	0	\$3,810,991,572
2030	20500	2,087,963	762,106,481	6,574,442	2,399,671,168	5,959,500	832,017,500	614,942	224,453,668	14,942	0%	0	\$3,810,991,572
Total			8,104,351,852		20,211,886,393							102,547,422	\$40,525,860,489
Difference	100		215,620,370		529,935,807							-110,852,588	\$1,078,479,852

Without produced gas storage

Year	Well Count	Oil Production		Gas Production		Gathering Capacity		Excess Gas		Flared Gas		% Annual	GPT&OET @ \$50/BO & \$0.07
		BOPD	Annual	MCFD	Annual	MCFD	Annual	MCFD	Annual	MCFD	Annual		
2019	13500	1,375,000	501,875,000	2,531,375	923,951,875	2,279,500	832,017,500	251,875	91,934,375	251,875	10%	91,934,375	\$2,509,534,565
2020	14500	1,476,852	539,050,926	2,854,828	1,042,012,392	3,114,500	832,017,500	-259,672		-259,672	0%	0	\$2,695,472,645
2021	15500	1,578,704	576,226,852	3,204,299	1,169,569,082	3,359,500	832,017,500	-155,201		-155,201	0%	0	\$2,881,369,424
2022	16500	1,680,556	613,402,778	3,581,579	1,307,276,409	3,359,500	832,017,500	222,079	81,058,909	222,079	6%	81,058,909	\$3,067,291,054
2023	16200	1,650,000	602,250,000	3,692,283	1,347,683,135	3,359,500	832,017,500	332,783	121,465,635	332,783	9%	121,465,635	\$3,011,485,165
2024	17200	1,751,852	639,425,926	4,116,211	1,502,417,124	4,359,500	832,017,500	-243,289	-88,800,376	-243,289	-6%	0	\$3,197,434,795
2025	18200	1,853,704	676,601,852	4,573,302	1,669,255,305	4,759,500	832,017,500	-186,198	-67,962,195	-186,198	-4%	0	\$3,383,342,424
2026	19200	1,955,556	713,777,778	5,065,812	1,849,021,261	5,159,500	832,017,500	-93,688	-34,196,239	-93,688	-2%	0	\$3,569,250,054
2027	20200	2,057,407	750,953,704	5,596,139	2,042,590,674	5,559,500	832,017,500	36,639	13,373,174	36,639	1%	13,373,174	\$3,755,157,684
2028	20400	2,077,778	758,388,889	5,934,123	2,165,955,061	5,959,500	832,017,500	-25,377	-9,262,439	-25,377	0%	0	\$3,792,361,609
2029	20400	2,077,778	758,388,889	6,230,830	2,274,252,814	5,959,500	832,017,500	271,330	99,035,314	271,330	4%	99,035,314	\$3,792,361,609
2030	20400	2,077,778	758,388,889	6,542,371	2,387,965,455	5,959,500	832,017,500	582,871	212,747,955	582,871	9%	212,747,955	\$3,792,361,609
Total			7,888,731,481		19,681,950,586							213,400,010	\$39,447,380,637

Senate Bill 2344
Testimony of Ron Ness
House Energy & Natural Resources Committee
March 1, 2019

Chairman Porter and members of the Energy & Natural Resources Committee, my name is Ron Ness, president of the North Dakota Petroleum Council. The North Dakota Petroleum Council represents more than 500 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 Support of Senate Bill 2344.

The 2009 Legislature enacted the provisions of Chapter 47-31 to ensure that carbon dioxide from North Dakota's lignite power plants could be properly sequestered as North Dakota sought federal primacy on geological sequestration. That bill was passed and signed into law, and nearly a decade later the federal government granted North Dakota the authority to regulate geological sequestration. At no time throughout the 2009 legislative discussion was there any reference to Chapter 47 pore space ownership migrating into Chapter 38-08 or Chapter 38-11.1 which deals with Surface Owner Damages and oil and gas exploration and production. A recent court ruling injected Chapter 47 into an issue relating to saltwater disposal and a cloud of uncertainty now exists over essentially all oil and gas operations and surface owners' rights on the land where the activities occur. SB 2344 confirms and clarifies that Chapter 38-11.1 passed by the 1979 Legislature is to protect farmers and ranchers, and ensure that surface owners are compensated for damages to their property. Failure to clarify this action may lead to potential class-action lawsuits. Arguments could be made that adjacent surface owners may

have a claim to share that compensation because of a perceived pore space right established under ~~SB 2344~~ **3.1.19**
reference in a ruling by the ND Supreme Court. **Attachment 5**

This potential uncertainty creates a roadblock for major investment into enhanced oil recovery projects; now is the time to clarify this issue with the passage of SB 2344. At some point in the future, the North Dakota Legislature may ultimately need to deliberate and decide whether a new right of pore space exists and how it would be assessed and compensated for damage. However, in the absence of that granted legislative right, landowners and mineral interests should have the assurance and certainty that their existing rights belong to them, and the damage and crop loss payments as well as agreed upon disposal fees belong to the surface owner who has the impacts. This ensures that the surface owner and the mineral developer are not at risk conducting normal business operations like they have for the past 40 years since the Surface Owner Compensation Act was passed by this body.

The North Dakota Petroleum Council urges a Do Pass on Senate Bill 2344. I would be happy to answer any questions.

Troy Coons
Northwest Landowners Association
House Energy and Natural Resources Committee
Testimony for SB 2344
March 1, 2019



Good morning, Chairman Porter and members of the committee, thank you for taking my testimony into consideration today.

My name is Troy Coons, and I am the Chairman of the Northwest Landowners Association. Northwest Landowners Association represents over 525 farmers, ranchers, and property owners in North Dakota. Northwest Landowners Association is a nonprofit organization, and I am an unpaid lobbyist.

Northwest Landowners Association urges a DO NOT PASS on SB 2344.

Using temporary storage of gas as a way to address the flaring problem, and using CO2 injection to produce oil both sound like good ideas, and we are not opposed to those ideas in principle. We do not know what the actual or original intent of this bill was, but the way in which this bill is attempting to deal with these problems is extremely concerning. Our organization has heard from members, non-members, and numerous law firms in North Dakota who are all upset about this Bill and its **unintended consequences**. Many landowners I have talked to are extremely alarmed that the first solution proposed for these issues is to entirely take away the pore space owners' right to compensation. And people are upset that this has been done without even reaching out to the landowner community to discuss it.

Our understanding is that some of the Bill's supporters have claimed that it is uneconomical to use the temporary gas storage if pore space owners must be compensated. This is not a good reason to simply take the right to compensation away from the surface owner, and take away a pore space owner's right to sue for trespass or other wrongs against him. We have a free market system and private property rights, and the government should not be taking rights away from pore space owners, or interfering with private contracts. This Bill redefines property rights that have been confirmed by legal doctrines for many years. Even more alarming, it changes the very definition of land. Nothing could be more offensive to the landowners of this state.

This is also a very extreme taking of private property rights. This Bill does not even necessarily mean that no one will pay for use of the pore space, based on my conversations with landowner attorneys. Instead of the industry that is benefitting from use of the pore space, the

State of North Dakota may be footing the bill. This is not, in our view, the role of the government.

We see mineral development as a partnership between the surface owners, mineral owners, and the operators. We as landowners have worked very hard over the years to make this partnership work, and I am disheartened that we are even discussing taking away property rights in a way that leaves the owner with nothing, just to benefit the industry.

There are several attorneys testifying after me who will speak to the legal issues related to this Bill, and I will defer any legal questions to them. But I wanted to make sure that this committee understood that the landowners of this state are very upset, and very concerned. I am available for any questions.

Sincerely,



Troy Coons, Chairman
Northwest Landowners Association

2019 SESSION
OUTLINE OF TESTIMONY
OF
DENNIS EDWARD JOHNSON
IN
OPPOSITION OF SB2344

My name is Dennis Edward Johnson. My mailing address is P O Box 1260, Watford City, ND 58854. My house is at 11091 28th Street NW, Watford City, which is the same farm yard where my grandparents lived. I am a lifelong resident of McKenzie County and live on a farm. Four generations of my ancestors are buried in McKenzie County. I am the fifth generation to live and work there and my son is the sixth. I appear before you today as a concerned generational landowner with training and experience in law, especially oil and gas law. I am here opposing SB2344.

GENERAL:

My spoken testimony will vary from this, but this is offered as an outline or summary of what I will have said.

GOOD INTENTIONS BAD RESULTS:

The law as proposed had good intentions of reducing flaring by allowing storage of gas in underground geological formations. And as someone surrounded by flares I am in favor of not wasting that resource. But the actual result of SB2344 does not solve any problems and instead creates them. As written, SB2344 takes away private property from every landowner in the state and gives it to oil companies and others to use for free.

SB2344 redefines what land is by excluding Pore Space:

3. "Land" means the solid material of earth, regardless of ingredients, but excludes pore space.

It provides for a new definition what "pore space" is:

7. "Pore space" means a cavity or void, naturally or artificially created, in a subsurface sedimentary stratum.

And, it takes away the rights and the ability for a farmer or rancher to protect and preserve his or her property by adding this language:

47 - 31 - 09. Injection of substances to facilitate production of oil, gas, or other minerals. This chapter may not be construed to limit the rights or dominance of a mineral estate to drill or recomplete a well under chapter 38 - 08. Injection or migration of substances into pore space for disposal operations, for secondary or tertiary oil recovery operations, or otherwise to facilitate production of oil, gas, or other minerals is not unlawful and, by itself, does not constitute trespass, nuisance, or other tort.

WHAT IS PORE SPACE:

Let me bring this concept to you in very simple terms. I hold in my hand a sponge. The formations that lie below the surface that have tiny pockets of space are formations with pore space. This sponge is like one of those formations. It is capable of holding gas or fluids if they are injected, disposed or soaked up by the sponge. The definition in SB2344 does not explain whether it includes a cavity or void that is filled with air, saltwater, natural gas, or crude oil. That is the first place where the good intentions of the bill and its words do not match. But that does not matter. Assume that the bill is reworded to only include pore space that only contains ancient air trapped in the rock, just like my sponge has air in its pores now.

I bought this sponge. I own this sponge. It is my property. It belongs to me. It does not belong to the state, it does not belong to the Industrial Commission, and it does not belong to the company that wants to use it to store things. As the owner of this sponge, I can decide whether I will allow someone to use my sponge to clean up their spilled fluids or to store their fluids. But if someone uses my sponge without my permission, it is an illegal trespass on my property. It is my sponge and I have the property right to decide who can use it and on what terms.

As a landowner I also own that formation of rock that has sponge-like qualities. The patent for my farmland includes everything underneath my land unless it was reserved in the patent. The formation is a container, like a sponge, capable of holding fluids and gases. Like my sponge, the formation with pore space lying under my land belongs to me. If someone wants to use that sponge-like formation in my land to sop up and dispose of their waste fluids or to store their gases, they need to have my permission to do that. Otherwise, they are trespassing on my property rights.

The formation with pore space is like this sponge with pore space. It is empty, but it is a container that belongs to me and, as the owner of that container, it should be up to me whether I am going to allow someone to use it.

THIS LEGISLATURE HAS ALREADY DEFINED AND DETERMINED WHO OWNS PORE SPACE:

Chapter 47-31 NDCC had determined who owns pore space:

Subsurface Pore Space Policy:

47-31-01. Policy. Undivided estates in land and clarity in land titles reduce litigation, enhance comprehensive management, and promote the security and stability useful for economic development, environmental protection, and government operations.

47-31-02. Pore space defined. In this chapter "pore space" means a cavity or void, whether natural or artificially created, in a subsurface sedimentary stratum.

47-31-03. Title to pore space. **Title to pore space in all strata underlying the surface of lands and waters is vested in the owner of the overlying surface estate.** (emphasis added)

47-31-04. Conveyance of real property conveys pore space. A conveyance of title to the surface of real property conveys the pore space in all strata underlying the surface of the real property.

47-31-05. Severing pore space prohibited. Title to pore space may not be severed from title to the surface of the real property overlying the pore space. An instrument or arrangement that seeks to sever title to pore space from title to the surface is void as to the severance of the pore space from the surface interest.

47-31-06. Transactions allowed. Leasing pore space is not a severance prohibited by this chapter.

47-31-07. Application. This chapter does not affect transactions before April 9, 2009, that severed pore space from title to the surface estate.

47-31-08. Mineral and pore space estates - Relationship. In the relationship between a severed mineral owner and a pore space estate, this chapter does not change or alter the common law as of April 9, 2009, as it relates to the rights belonging to, or the dominance of, the mineral estate.

Chapter 47-31 NDCC was merely a recital of what the law has long been. The surface owner has always owned the subsurface formations lying under his or her land that have not been previously conveyed or reserved in the past.

THE COURTS HAVE ALREADY RULED THAT PORE SPACE IN A FORMATION IS OWNED BY THE SURFACE OWNER:

The North Dakota Supreme Court has already ruled that pore space belongs to the landowner as part of his property rights.

Mosser v Denbury, 2017 ND 169, 898 N.W.2d 406:

[¶14] The first certified question involves ownership of pore space beneath a surface estate, a predicate to potential liability in this case, and provides: 1. In North Dakota, does the owner of the surface estate own the pore space deep below the surface, absent some conveyance of the pore space to a third party and even when the mineral estate has been severed from the surface estate?

[¶15] Chapter 47-31, N.D.C.C., describes subsurface pore space policy in North Dakota and says “‘pore space’ means a cavity or void, whether natural or artificially created, in a subsurface sedimentary stratum.” N.D.C.C. § 47-31-02. See also N.D.C.C. § 38-22-02(5) (defining pore space for carbon dioxide underground storage). Under N.D.C.C. § 47-31-03, the “[t]itle to pore space in all strata underlying the surface of lands and waters is vested in the owner of the overlying surface estate.” *The conveyance of title to the surface of real property conveys the pore space in all strata underlying the surface and pore space may not be severed from the title of the overlying surface of real property except by transactions before April 9, 2009.* See N.D.C.C. §§ 47-31-04, 47-31-05, and 47-31-07. (emphasis added).

The federal court agrees as well:

Mosser v. Denbury Res., Inc., No. 1:13-CV-148, 2014 WL 11531329, at *3 (D.N.D. Feb. 12, 2014):

In North Dakota, property rights extend to the sky and to the depths. See N.D.C.C. § 47-01-12. Title to subsurface pore space is vested in the owner of surface estate. N.D.C.C. § 47-31-03. Severance of the pore space from the surface estate is prohibited, but leasing of the pore

space is permitted. N.D.C.C. §§ 47-31-05 and 47-31-06. Chapter 47-31 of the North Dakota Century Code has an effective date of April 9, 2009, a date subsequent to the issuance of the fluid injection permit for the Mosser 1-26 well. Chapter 47-31 does not address damages for trespass to pore space. Interestingly, North Dakota's laws relating to the underground storage of carbon dioxide do address compensation for the pore space owner. See N.D.C.C. §§ 38-22-08(5) and 38-22-08(14).

* * *

The Plaintiffs [Mosser] also rely upon Buchholz v. Burlington Resources Oil & Gas Co. LP, 755 N.W.2d 914 (N.D. 2008) to support their contention that Denbury must compensate them for the use of the pore space underneath their property. In Buchholz, two sets of surface owners brought actions against an oil and gas company for breach of their respective salt water disposal agreements. Id. at 915. The actions were consolidated. The oil and gas company took the position that a unitization order from the North Dakota Industrial Commission, which created a large spacing unit, nullified or modified the salt water disposal agreements and relieved the oil and gas company of its obligation to pay the per barrel fee required by the salt water disposal agreement. Id. at 916. The North Dakota Supreme Court upheld the trial court's determination that the salt water disposal agreements had not been modified or nullified by unitization. The North Dakota Supreme Court found the oil and gas company had misconstrued the authority granted it by the Industrial Commission's order, and rejected the notion that a unit operator has a general right to use the land and existing wells within the unit for salt water disposal. Id. at 917, 919.

Also informative is the federal court's reasoning as shown by two footnotes in the court decision:

At footnote 10 in Mosser v. Denbury Res., Inc., 112 F. Supp. 3d 906, 919 (D.N.D. 2015):

Even in the absence of a governing statute, the prevailing view in most jurisdictions appears to be that the subsurface pore space belongs to the surface owner. *See, e.g., Ellis v. Arkansas Louisiana Gas Co.*, 450 F.Supp. 412, 420 (E.D.Okla.1978); *Emeny v. United States*, 412 F.2d 1319, 1321–22 (Ct.Cl.1969) (applying Texas law); *Cassinovs v. Union Oil Co. of California*, 14 Cal.App.4th 1770, 1782–83, 18 Cal.Rptr.2d 574 (Cal.Ct.App.2d Dist.1993); *Humble Oil & Refining Co. v. West*, 508 S.W.2d 812, 815 (Tex.1974); *cf. Dick Properties, LLC*, 221 P.3d at 620–22; *see generally* 1–2 *Williams & Meyers* at § 218; Owen L. Anderson,

Kay Bailey Hutchison, & R. Lee Gresham, *Legal and Commercial Models for Pore-space Access and Use for Geologic Co2 Sequestration*, 2015 NO. 4 RMMLF-INST PAPER NO. 9 at * * 9-7-9-12 & n. 48 (May 2015).

At footnote 15 in Mosser v. Denbury Res., Inc., 112 F. Supp. 3d 906, 922 (D.N.D. 2015):

Pore space is not the only subsurface that may be utilized by the mineral developer. For example, the mineral developer might use the sand, gravel, scoria or clay underlying the surface, which ordinarily belongs to the surface owner unless they are the subject of a specific prior reservation or grant. *See, e.g., George v. Veeder*, 2012 ND 186, ¶ 10, 820 N.W.2d 731. And, if used by the mineral developer, the court is confident that the North Dakota Supreme Court would conclude that such use was compensable under ch. 38-11.1.

It has long been the law in this country and in this state that an owner of land owns everything under his land and above his land that has not been conveyed away or reserved prior to gaining title. This proposed law turns that concept upside down by taking away part of the land that has been part of the land from time immemorial, as recognized in our statutes and by our courts.

SB2344 IS UNCONSTITUTIONAL:

The Fifth Amendment to the United States Constitution states among many things that private property shall not be taken for public use, without just compensation.

Changing the definition of “Land” to exclude pore space is a taking of private property. The proposed law is unconstitutional and will face challenges in court at great expense to the state and to the farmers, ranchers, and other landowners who are forced by SB2344 to fight to keep their property rights intact from this unconstitutional taking.

SB2344 RESULTS IN CONDEMNATION:

Like many laws, the result is often more than what the written language says, or the law intended. By changing the definition of “Land” to exclude pore space, the legislature and the state will take private property away from landowners without just compensation.

North Dakota has long recognized that property acquired by patent cannot be acquired by the State without just compensation paid to the owner.

By changing the definition of land to exclude pore space, the state of North Dakota will be taking a longstanding and legally recognized property right away from the landowners of this state. When the state takes private property, it must pay for it.

This law as written will result in a deluge of litigation for inverse condemnation, a type of lawsuit where aggrieved property owners seek compensation for what the state has taken away from them. So, instead of preventing litigation, the state will create litigation that will result in the state paying millions of dollars to every farmer, rancher, and other landowner in this state of taking their property without just compensation.

If one of the intentions of this proposed law was to prevent litigation, it is going to do just the opposite. SB2344 will open the flood gates of litigation on this issue and the State will be a party to all of the litigation.

SB2344 TAKES AWAY THE RIGHTS AND ABILITY FOR A FARMER OR RANCHER TO PROTECT HIS PRIVATE PROPERTY RIGHTS:

The proposed law states in part:

Injection or migration of substances into pore space for disposal operations, for secondary or tertiary oil recovery operations, or otherwise to facilitate production of oil, gas, or other minerals *is not unlawful and, by itself, does not constitute trespass, nuisance, or other tort.* (emphasis added)

Not only does the law as proposed steal private property rights, as written it would assure that a farmer or rancher could not use the court system to seek redress for the use of his private property by another private entity. In other words, an oil company that has salt water to dispose of can do it and there will be no claim allowed in court for “trespass, nuisance, or other tort”.

It is fundamentally unfair to strip a citizen of his right to complain of a wrong by preventing him from seeking redress for the wrong in court. SB2344 not only seeks to legalize the theft of private property rights, but to prevent anyone from asking the court to right the wrong done to him. This is morally wrong and an affront to the rights of the landowners of our state. There is no moral difference between SB2344 and a law that allows strangers to stay in your house without your consent while you are on vacation or to drive your car without your consent while you are at work.

SOCIALISM BY LEGISLATION:

North Dakota has long recognized and respected the property rights of its citizens. North Dakotans do not agree on everything, but I have never met one who believes

that the State should take away private property and give it to corporations. This proposed law flies in the face of tradition of respecting property ownership and protecting private property rights. The definition of socialism is the political theory that the government should own the means of production and distribution. SB2344 socializes the pore space by taking it away from the landowners and allowing the government to decide who can use it and what they can use it for, without any compensation to the landowner from whom it was taken.

Under SB2344, the State can decide to allow an oil company to dispose of saltwater or radioactive slurry underneath your land without your consent and without compensation. The companies that dispose of saltwater and slurry are paid to do so, and normally they have to work with private landowners to get permission to use their land to do it. SB2344 takes the private landowner out of the equation. As long as the company can find a surface location to drill from, it can drill under your land to dispose of these substances.

THE PROPOSED LAW UNDER SB2344 IS UNNECESSARY:

I have it from a reliable source that there are, as of February 28, 2019, 461 active salt water disposal wells in North Dakota, disposing of approximately 1,800,000 barrels of saltwater per day. The landowners and the industry have a system that is working. It is not broken. It has been this way for over 60 years.

The proposed law will have the effect of allowing one private industry to dispose of its saltwater, for which it is responsible, without paying just and reasonable compensation to the owner of the resource it uses to dispose of that saltwater, namely the pore space that the landowners will have owned from their patents until the passage of SB2344.

The current system is based on capitalism. The owner of the resource decides who can use it and on what terms. That system works. SB2344 will replace it with a form of socialism that redistributes wealth from the landowners with pore space to the oil companies who need the pore space. Socialism and redistribution of formerly private property is a system that does not work anywhere in the world and certainly is not right for North Dakota.

THE STATE AND THE OIL INDUSTRY HAVE ANOTHER OPTION IF THEY BELIEVE THAT PRIVATE LANDOWNERS ARE INTERFERING WITH OIL PRODUCTION BY PROTECTING THEIR PORE SPACE:

According to a report that I read this week on the website of the state Board of University and School Lands, the State has over 700,000 surface acres under lease. The State already owns the pore space in the formations under those acres. If there is an actual problem that SB2344 is trying to address, the State should first use its

existing 700,000 acres of pore space to capacity before it starts to take away the pore space from private landowners.

The State can do with its land holdings as it sees fit. If it believes that oil companies should be allowed to dispose of saltwater and store gases in pore space free of charge, then the Legislature can pass a law allowing that to happen in the State's pore space. I do not believe the State should do that for free, but at least doing so would not forcibly deprive me of the land that I and my family have owned and lived on for generations and give part of that land to the oil companies to use without my consent. That is what SB2344 will do, and it is both wrong and unnecessary.

REQUEST:

I respectfully request this Committee to take one of two actions:

1. To respect private property rights and the right to defend private property rights by recommending a DO NOT PASS on SB2344;

Or, if the Committee believes that there is a real problem that needs to be addressed:

2. To recommend a legislative study of the issue of salt water disposal, private property rights, and state regulation of those rights, which the next legislative session can address if the study concludes that legislation is necessary.

Thank you for your time and consideration. I will now take my sponge that I own and leave others to state their opinions on this proposed law.

Dennis Edward Johnson

PORE SPACE TESTIMONY

It is my belief that the 'surface owner' owns everything located under the surface, clear to the 'center' of the earth. (Also the air above the surface, as defined by 'Common' law.)

NDCC 47-31-03; 05, says the 'surface owner', owns everything below the surface. This is re-enforced by the fact Mineral ownership can be severed from the surface. These minerals stop at the property line, except when ND Oil & Gas makes rules to the contrary. For everything else, compensation is made for the use of the property of the owner of the surface.

If the oil companies want to store the gas, &/or 'saltwater', we can come to an agreement that is beneficial to both parties. The companies also need to pay the 'ROYALTY INTEREST to the Mineral Owners.

Currently, research shows that 50% of the 'gas' injected into the ground is not recovered. It has been 'produced' from the well, therefore the Royalty should be paid. The NDCC has conflicting rules regarding the production of gas. One rule says the 'Company' can 'flare' said gas for one year. (It was assumed it would take 'time' to build the infrastructure to take the product to market.)

A second rule allows the Company to continue to 'flare', if the Company applies for a 'special' permit to extend the period. There is a need for clarification on these points, before SB 2344 is enacted.

Gary Satterthwaite
8951 47th St NW
New Town, ND 58763
701-627-3794

CHAPTER 47-31 SUBSURFACE PORE SPACE POLICY

47-31-01. Policy.

Undivided estates in land and clarity in land titles reduce litigation, enhance comprehensive management, and promote the security and stability useful for economic development, environmental protection, and government operations.

47-31-02. Pore space defined.

In this chapter "pore space" means a cavity or void, whether natural or artificially created, in a subsurface sedimentary stratum.

47-31-03. Title to pore space.

Title to pore space in all strata underlying the surface of lands and waters is vested in the owner of the overlying surface estate.

47-31-04. Conveyance of real property conveys pore space.

A conveyance of title to the surface of real property conveys the pore space in all strata underlying the surface of the real property.

47-31-05. Severing pore space prohibited.

Title to pore space may not be severed from title to the surface of the real property overlying the pore space. An instrument or arrangement that seeks to sever title to pore space from title to the surface is void as to the severance of the pore space from the surface interest.

47-31-06. Transactions allowed.

Leasing pore space is not a severance prohibited by this chapter.

47-31-07. Application.

This chapter does not affect transactions before April 9, 2009, that severed pore space from title to the surface estate.

47-31-08. Mineral and pore space estates - Relationship.

In the relationship between a severed mineral owner and a pore space estate, this chapter does not change or alter the common law as of April 9, 2009, as it relates to the rights belonging to, or the dominance of, the mineral estate.

TESTIMONY OF CONNIE TRIPLETT
BEFORE THE NORTH DAKOTA HOUSE
ENERGY AND NATURAL RESOURCES COMMITTEE

Regarding Senate Bill 2344

Chairman Porter and Members of the committee:

My name is Connie Triplett; I reside in Grand Forks. I am opposed to SB 2344 in its current form, specifically at page 2, lines 18 - 23; the definitions of 'land' and 'surface estate'; and page 4, lines 13 - 16.

Some of you will remember that I served on the Senate Natural Resources Committee (re-named Energy and Natural Resources Committee at some point) for five legislative sessions (2007, 2009, 2011, 2013, and 2015), including 2009 when the legislature first defined 'pore space.'

We considered two companion bills in the same hearing, SB 2095 which set up a regulatory structure for permitting the temporary or permanent storage of carbon dioxide (CO₂) in the subsurface of the earth. The second bill, SB 2139, defined 'pore space' and clarified that it belongs to the surface owner.

Please note that, in passing SB 2139, which clearly vested ownership of pore space in the surface owner (now codified as Chapter 47-31, N.D.C.C.), the 2009 legislature ***did not give anything to surface owners which they did not already have.*** We only codified existing common law. Charles Carvell of the ND Attorney General's office testified that the consensus of lawyers around the country who were considering this issue was that the pore space was indeed already owned by the surface owner.

We did, however, take something away from surface owners in SB 2139: we took away their ability to sever the pore space beneath their land from the surface. We did that because there was so much confusion sown by the decades-long practice of severing

mineral interests. Our committee, and yours, agreed that it was a good idea to prohibit severing yet another part of the subsurface. The bill, however, did include the right of the surface owner to lease pore space. Now, generally, when an individual or other entity who owns a thing of value chooses to lease that thing to another individual or entity, the party of the first part would like to be compensated by the party of the second part for the leased premises.

We took something else from surface owners in 2009. We took away their right to refuse to cooperate in a carbon sequestration operation. SB 2095 provided that the NDIC can issue a permit for a carbon sequestration project if 60% of the affected landowners consent, so long as “the storage operator has made a good-faith effort to get the consent of all persons who own the storage reservoir’s pore space.” (Now codified at N.D.C.C. Section 38-02-08 (4).) Yes, all non-consenting pore space owners have to be equitably compensated for long-term storage of carbon dioxide (N.D.C.C. section 38-02-08 (14)), but the surface owners can not refuse to participate.

Now, SB 2344 proposes to slide into the space between oil and gas production, at one end of the spectrum, and long-term storage of CO₂, on the other end of the spectrum, and create a third space for short-term, temporary storage of natural gas and for the use of CO₂ for enhanced oil recovery (EOR). And for that middle ground, they do not want to acknowledge the legal rights of the surface owner to control and lease the pore space.

One interesting aspect of setting out separate rules for CO₂ usage in EOR versus long-term storage of CO₂ is that there may be no clear way to completely differentiate between the two. My understanding is that each time CO₂ is injected into the subsurface for use in EOR, that some portion of the CO₂ stays behind in the subsurface, essentially being stored permanently. I do not know if all of it can reliably be returned to the surface, should anyone want to do so. If not, then current law requires equitable compensation to any non-consenting surface owner for that portion remaining in the subsurface.

The oil and gas industry and the coal industry together asked for the two bills that I have described in 2009. They formed a ‘CO₂ Work Group’ to write these two bills. They

started with model legislation drafted by the Interstate Oil & Gas Compact Commission. The group went to the ND Industrial Commission prior to the beginning of the 2009 legislative session to get the blessing of the NDIC. The bills were formally introduced as agency bills at the behest of the NDIC.

Industry collectively indicated that it wanted clarity. We gave them clarity. They were at the table for the discussion of these two bills. They helped to draft the amendments. Industry has known about this issue since the end of the 2009 session. 2009 was fairly early in the development of the Bakken. A lot of the mineral acres were leased by that time, but a large portion of the leases were not yet held by production. 2009 would have been an opportune time for companies to plan for the eventual need to lease the pore space whose ownership we were clarifying.

Oil companies operating in North Dakota certainly could have incorporated leases of pore space from surface owners into their regular operating procedures and their cost projections at that time. I expect that some companies may have done so. Those who haven't will have to deal with it. The free market will decide what the value of pore space is. This bill is neither necessary nor appropriate.

Collectively, as a legislature, we have taken enough rights away from North Dakota landowners. I was certainly complicit in that during my time in the legislature. I urge the committee not to take any more rights away from private landowners. It is past time that we find some balance.

I will stand for questions.

Chair and members of the committee, my name is Liz Anderson and I am here on behalf of Dakota Resource Council. I stand here today in opposition of SB 2344.

Dakota Resource Council has been in existence for over 40 years working with members and North Dakotans for a prosperous state. SB 2344 removes the landowner's rights to their pore space, and therefore, be properly compensated from oil and gas companies for the use of their land. According to Stefanie L. Burt , an energy and natural resource attorney, in Who Owns the Right to Store Gas: A Survey of Pore Space Ownership in US Jurisdictions, "The majority of the case law on the subject of pore space ownership supports the premise that the surface owner, not the mineral, owns the rights to the pore space." It goes on to say "Montana, Wyoming, and North Dakota have enacted legislation that the pore space is owned by the surface owner." and, "much of the state legislation is patterned after the Interstate Oil and Gas Compact Commission Model Regulations, which appear to agree with the prevailing rule and suggest that pore space rights should be vested in the surface owner. Current literature suggests that carbon sequestration will become a very large industry in the future, and the pore space owner will be the beneficiary of that industry." In 2011 the Supreme Court of Montana ruled the pore space does indeed belong to the surface owner. It is therefore our belief that this bill is unwise and would not stand up to legal challenge should a surface owner choose to do so.

If this body enacts these changes this bill doesn't impose a limit in the amount of area of the subsurface formations that can be used for enhanced oil recovery and temporary natural gas storage. Landowners, surface and subsurface, would be unable to deny or request payment for the use of their pore space for all operations in this bill. This is against North Dakotans' values of

independence, fairness, and predominant case law. If there was injection or migration related to enhanced oil recovery and temporary gas storage, the landowners would find it difficult to file a lawsuit since the bill deems this as lawful.

SB 2344 defines land as “the solid material of earth, regardless of ingredients, but excludes pore space.” This is a significant issue because landowners will not be properly compensated for the use of their land if this bill passes. It is unacceptable to take away rights of North Dakotans in favor of oil, gas, and mineral production. Farmers and ranchers deserve to be protected and should also have a choice in what their land is used for.

SB 2344 leaves it up to the discretion of the “person conducting operations” to determine how much subsurface formation is “reasonably necessary”. “Reasonably necessary” is a vague term to use for such significant operations. How much is “reasonable” is subjective.

Finally, if migration of a substance from oil and gas disposal or production was to occur on a North Dakotan’s land they should have the right to view it as a nuisance. This bill would make landowners unable to have any voice even if migration was affecting their land.

Because we believe that North Dakotans are the owners of their pore space, should be properly compensated for the use of their land, and have a voice in what their land is used for, we oppose Senate Bill 2344 and urge a DO NOT PASS from the members of this committee.

Randy Mosser's Testimony on SB 2344

I live 15 miles north of Medora and our ranch borders the north boundary of the Theodore Roosevelt National Park for 6.5 miles. We have several oil wells and disposal wells on our property as part of the TR oilfield. When Denbury bought out Enron, they converted an older oil well into a salt water disposal well. When we approached them on paying us for the injection of salt water, Denbury's agents said they don't pay in a unitized field.

My brother and two sisters and I decided to take them to court. Being Denbury was an out of state company, they moved the trial to Federal court. The Federal judge didn't want to interpret ND law so he sent 7 certified questions to the ND Supreme Court. The first question asked was, "Does the owner of the surface own the pore space deep below the surface?" and the answer was yes.

In SB 2344, under Definitions, no. 3 separates the pore space from the surface. The Oil Companies are wanting free use of the pore space for whatever use they want.

Because the Pore space is the property right of the surface owner, and this bill takes that away, I urge you to vote no on Senate Bill 2344.

Senate Bill 2344
Testimony of Lawrence Bender
House Energy & Natural Resources Committee
March 1, 2019

Chairman Porter and distinguished members of the House Energy & Natural Resources Committee. I am Lawrence Bender. I am here today to briefly discuss the need for Senate Bill 2344 ("SB 2344").

The North Dakota Oil and Gas Production Damage Compensation Act (the "Damage Compensation Act"), codified as Chapter 38-11.1 of the North Dakota Century Code, was adopted by the North Dakota Legislative Assembly in 1979 with the recognition that oil and gas operations cause interference with farming and ranching operations, and that farmers and ranchers should be compensated for that interference. The Damage Compensation Act's sole purpose was to provide protection for farmers and ranchers from the adverse effects of oil and gas development. The Damage Compensation Act has served this purpose for over 40 years and has become the model for surface owner protection statutes in other states, such as Montana, South Dakota, and Wyoming. The Pore Space Act, codified as Chapter 47-31 of the North Dakota Century Code, was adopted by the North Dakota Legislative Assembly in 2009 to provide generators of CO₂ within the State the opportunity to enter into long term contracts with pore space owners for storage of CO₂.

When the Legislature enacted the Damage Compensation Act and the Pore Space Act, it is unlikely that it contemplated that the two Acts, separate or combined, would result in the

Chapter 38-11.1 being applicable to pore space. However, in a recent Supreme Court decision, Mosser v. Denbury, the court has determined that by reading the two Acts together, a pore space owner is afforded the protections of the Chapter 38-11.1. The Court reached this decision, not by determining that it was good policy to apply Chapter 38-11.1 to pore space, but rather, by interpreting the language of Chapter 38-11.1 and Chapter 47-31. This Legislature, unlike the Supreme Court, does have the opportunity to look at the policy of applying Chapter 38-11.1 to pore space owners. In fact, the Supreme Court seemed to invite the Legislature to change the provisions of Chapter 38-11.1 and Chapter 47-31 if the Legislature determined that the Court's ruling was not good policy. The purpose of SB 2344 is for the Legislature to accept the Supreme Court's apparent invitation and consider if it is good policy for the Damage Compensation Act to apply to pore space.

SB 2344 amends Chapter 38-11.1 to restore the original purpose of the Damage Compensation Act as it was adopted by the Legislation in 1979. SB 2344 does so by providing definitions for the terms "land" and "pore space" as used in Chapter 38-11.1. With the amendments to Chapter 38-11.1 and Chapter 47-31 as proposed by SB 2344, farmers and ranchers will have the same right to recover damages for the adverse effects of oil and gas development as they have had for the past 40 years. At the same time, SB 2344 guarantees pore space owners cannot recover damages merely because a drill bit passes through their subsurface, fracking takes place in their pore space, and/or CO₂ or water is injected into the producing formation to enhance oil and gas recovery operations.

If SB 2344 is not adopted to correct the determination that the term land does not include pore space, many uncertainties will exist, including, but not limited to, whether an oil and gas

operator must compensate an owner of the pore space for drilling through the pore space with a horizontal well two miles from the surface location, whether an oil and gas operator must compensate the owner of the pore space for fracking into the pore space with a horizontal well two miles from the surface location, whether an oil and gas operator must compensate the owners of the pore space for the injection of water into an oil producing formation to enhance oil and gas recovery operations. If SB 2344 is not adopted, enough uncertainty will exist that operators may decide that oil and gas operations in other states are more attractive and less risky than oil and gas operations in North Dakota.

If SB 2344 is adopted, it will restore some certainty with respect to drilling operations and who should be compensated for those drilling operations. The Legislature was very clear in 1979 when it enacted the Damage Compensation Act that farmers and ranchers should be compensated for the adverse effects of oil and gas drilling operations on their land. The fact that the Legislature 30 years later enacted the Pore Space Act, which did nothing more than confirm that the pore space is owned by the surface owner, should not be allowed to undo good policy regarding how operators, and farmers and ranchers alike, have handled surface damage payments for more than 40 years.

66079290.3

SB 2344

PROBLEM / ISSUE / OBJECTIVES

1. Reduce flaring – reduce greenhouse gas emissions
2. Potentially store a commodity
3. Enhance oil production
4. Ensure the viability of the coal and power industries
5. If compensation occurs – the surface owner receives this benefit

ISSUES:

1. Definition of “temporary underground storage”
2. Conservation of natural gas
 - a. For how long
 - b. Degree of conservation
 - c. Recoverable?
3. What subsurface geologic formations are impacted
4. Determining compensation – if it occurs
5. Porosity
 - a. Definition
 - b. Measurement
 - c. Impact of injection
6. Trespass
7. Nuisance
8. “Surface Damage Act”
9. Relationship between salt water and CO₂ injections
10. Legislative policy vs. policy determined by the courts

House Energy and Natural Resources Committee

March 7, 2019

Charles Gorecki
Director of Subsurface R&D
Energy & Environmental Research Center at the University of North Dakota

Chairman Porter and members of the committee, my name is Charles Gorecki, and I am the Director of Subsurface R&D at the University of North Dakota's Energy & Environmental Research Center. Thank you for the invitation to provide brief commentary today regarding SB 2344.

I want to begin by stating that, as a research institution, the EERC serves as a technical resource for the state. As such, my thoughts today come from a purely technical, and not a legal, standpoint. Having said that, my perspective on SB 2344 is that it seeks to protect the continued exploration and utilization of our state's oil and gas resources. Without this bill or similar action, the ability of operators to produce and conserve our mineral resources may be impeded. This bill addresses three areas of operation that are critical to the health and sustainability of our oil and gas resources. First, it allows the continued use of pore space for saltwater disposal activities in hydrocarbon bearing and non-hydrocarbon-bearing horizons. This is important because oil and gas operators need effective and safe options to manage saltwater that is co-produced with oil and gas in North Dakota. Second, this bill allows for the injection of fluids (including CO₂) into hydrocarbon-bearing horizons for enhanced oil and gas recovery. North Dakota's conventional oilfields have more than 1 billion barrels of oil left in them, and the injection of fluids to improve and enhance oil production in these conventional

fields is becoming increasingly important. In addition, much research is being done to increase production from North Dakota's unconventional resources namely the Bakken petroleum system. Enhanced recovery using CO₂ and other gases will likely be a key piece of this increased production. Finally, SB 2344 creates the option of using pore space for temporary gas storage. This technique may provide a way for oil and gas operators to continue producing oil and gas, while at the same time reducing flaring and preserving North Dakota's natural gas resources.

In summary, I believe that from a technical standpoint, the ability to do these three things will serve to protect the continued conservation and use of North Dakota's oil and gas resources.



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Issues and concerns with SB 2344

- Page 2, lines 6-11 (Section 1, subsection 5)
 - This policy statement is an expansion of existing law, and refers to the implied easement as recognized by the North Dakota case *Hunt Oil Co. v. Kerbaugh*. In that case, the ND Supreme Court said that “the rights of the owner of the mineral estate are limited to so much of the surface and such use thereof as are reasonably necessary to explore, develop, and transport the minerals. *Hunt Oil Co. v. Kerbaugh*, 283 N.W.2d 131, 135 (N.D. 1979)
 - The problem with the language is that the implied easement applies to the surface of the land being developed, or lands pooled with those lands. In other words, an operator can use so much of the surface as is reasonably necessary to produce the minerals underneath that land. Pooling and unitization expand this to the relevant pool or unitized field. The language in lines 6-11 encourages the expansion of this right beyond any given spacing unit or pool, so that an Operator could drill a disposal well or store gas in pore space belonging to a surface owner on land that is 100 miles away from the minerals actually being produced. It is fair to burden to the surface of the land on top of the minerals being produced, but not to burden totally unrelated lands that could be miles away and more importantly owned by entirely different people.
- Page 2, lines 12-23 (Section 1, subsection 6)
 - The problem with the first and last sentence of this subsection (lines 12-17 and 22-23) is the same as explained above.
 - One of the most significant issues with the Bill is the following sentence: “Any other provision of law may not be construed to entitle the owner of a subsurface geologic formation to prohibit or demand payment for the use of the formation for temporary storage of natural gas, unit operations for enhanced oil recovery, utilization of carbon dioxide for enhanced recovery of oil, gas, and other minerals, or any other operation conducted under this chapter.”
 - First, in certain circumstances such as off-unit disposals, or for e.g., if an operator were going to store gas in an area miles away from the wells from which the gas is produced, the surface owner *could* say no to this use of his pore space. The Bill is taking this right away, and this is an impermissible taking of his private property.
 - Second, if a surface owner allowed such a use of pore space, he could require compensation. This takes away the ability to demand payment for use of the pore space for any purpose if it is related to operations under NDCC 38-08. That is a taking of private property in violation of the Constitution.
 - The taking of these rights is significant enough to give rise to an inverse condemnation claim under the North Dakota Constitution, and would open the State of North Dakota up to lawsuits for these uses. In other words, this Bill might save the Operators from some lawsuits, but the lawsuits would not go away, they would simply be brought against the State of North Dakota instead.
- Page 3, lines 1-6 (Section 2, subsection 1)
 - This additional language is unnecessary even for the stated purposes of the Bill’s supporters. NDCC ch. 38-11.1 is a statute passed to ensure that surface owners are compensated for oil and gas development, and it was passed to protect surface owners.

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It is completely unnecessary to add this language in and it only muddies the waters. NDCC ch. 38-08 is the chapter of the Century Code aimed at promoting oil and gas development, and this language belongs there. It is only being added here in order to dilute the legislative intent of the law protecting surface owners.

- Page 3, lines 24-25 & page 4, lines 1-2
 - The federal court in one of the *Mosser v. Denbury* cases referred to the language being proposed for the definition of land, and said that the phrase “solid material of the earth” is “clearly a relative description in that all soil and gravel, as well as many rock formations, have some interstitial space, and there is no reason to believe that the reference to soil, rock, or other substance in Section 47–01–04 was meant to exclude the space encapsulated within that material. See *Mosser v. Denbury Res., Inc.*, 2017 ND 169, ¶ 23, 898 N.W.2d 406. Two federal judges and the North Dakota Supreme Court disagree with the attorneys making this argument, so they are now attempting to convince the ND Legislative Assembly to simply change the law because they were wrong.
 - And this issue is not new, as the Bill’s backers claim. In 2011, the Montana Supreme Court has recently come to the same conclusion regarding its own law, which is very similar to North Dakota’s, and it “acknowledged that the SODDCA provision authorizing compensation for ‘lost land value’ could encompass damage sustained by a surface estate owner for use of pore space.” *Burlington Res. Oil & Gas Co., LP v. Lang and Sons Inc.*, 361 Mont. 407, 259 P.3d 766 (2011). Montana has one of the largest CO2 secondary recovery fields in the Bell Creek Unit which is operated currently by Denbury, and it also has a large gas storage project in the Cedar Creek Anticline. These projects are successful under laws almost identical to current ND law, so the current law is not actually a barrier to this kind of project at all.
- Page 4, line 6
 - This is another attempt to limit surface owners from recovering for migration into their pore space, but again it goes way too far. If operations are not conducted on a surface owners land, but a spill leaves an adjacent site and damages their crops, this language would prevent them from recovering damages. That is not the intent of the law nor is it fair to that surface owners.
- Page 4, lines 12-15
 - There *are* times when injection and migration can constitute trespass, nuisance, or other tort. Pore space is not limited to deep formations. This part of the Bill is saying that if a well on adjacent property has a spill and enters the neighbor’s property, he cannot bring an action for trespass or nuisance. This is clearly not the intent, but it is poorly written. Additionally, as explained above, there *are* times when a surface owner has a right to say no to off-unit operations, and this section attempts to remove those rights and is therefore a taking.

For more information contact Troy Coons at 701-721-4258 or troy.coons22@gmail.com.

County	WellName	Field	Operator	Pool Nm	Top	Bot	PH	TDS_m	K mgL	Li m	OH m	NaCL mg	em	Cr mgL	NO3 m	Res Oh	ResT	H2S	Ba	Ca mgL	Mg_mgL	Na mgL	Fe mg	CO3	HCO3	SO4 m	CL_mgL	SpGrav
BOTTINEAU	NEWBURG-SPEARFISH-CHARLES UNIT N-706	NEWBURG	COBRA OIL & GAS CORPORATION	DAKOTA	2192	2203	8.3					2874	60			1.45	68			24	5	1695			965	498	1743	1.01
BOTTINEAU	NEWBURG-SPEARFISH-CHARLES UNIT N-706	NEWBURG	COBRA OIL & GAS CORPORATION	DAKOTA	2192	2203	8.6					2305	60			1.8	68			9	2	1411		96	575	477	1398	1
BOTTINEAU	ERICKSON 1	NORTHEAST LANDA	J. L. MCLAUGHLIN	DAKOTA																			14	212	290	2450		
BOTTINEAU	ERICKSON 1	NORTHEAST LANDA	J. L. MCLAUGHLIN	DAKOTA																	22	10	1615	29	660	254	1950	
BOTTINEAU	ERICKSON 1	NORTHEAST LANDA	J. L. MCLAUGHLIN	DAKOTA												0.01	1			18	4	1760	58	918	343	1900		
BOTTINEAU	I. EVENSON 1	WAYNE	HUMBLE OIL & REFINING CO.	DAKOTA	2454	2495	6.3					3300				1.39	68			3	3	1536			227	342	2000	1
BOTTINEAU	AO ERICKSON 2-14	WILEY	SCOUT ENERGY MANAGEMENT LLC	DAKOTA	2520	2580	6.8					72				0.9	77			52	41	2489			1074	440	3096	1
BOTTINEAU	M. E. OCONNELL 1	GLENBURN	KERR-MCGEE CORP.	DAKOTA	2688	2750	6.4					72				1.07	77			24	107	1921			1025	268	2521	1
DICKEY	HAROLD BILLEY 1	WILDCAT	H. HANSON OIL SYNDICATE	DAKOTA	1492	1532	8.4									0.22	68			63	13	1143	24	205	1565	610		
DIVIDE	FRALEY 1	NOONAN	GOFOR OIL, INC.	DAKOTA	4615	4625	7.7					6045	60			0.84	68			21	2	3296			2125	306	3666	1.01
DUNN	MAYNARD DAHLEN 1	WILDCAT	CARDINAL PETROLEUM CO.	DAKOTA	4613	4710	6.8									0.08	77			7182	413	36698			281	481	70000	
DUNN	KLATT 3-19-4B	LITTLE KNIFE	WILLIAM HERBERT HUNT TRUST ESTATE	DAKOTA	5827	5921	8.2					10531				0.62	68 NEG			19	6	4342		72	1391	925	5200	
DUNN	8902 JV-P LKNMU 1	LITTLE KNIFE	BTA OIL PRODUCERS, LLC	DAKOTA	5380	5430	8.64		108			7422	77	0	0	0.623	77 NEG		0	60	9	3710	0.1	36	1257	589	4501	1.005
DUNN	8902 JV-P LKNMU 1	LITTLE KNIFE	BTA OIL PRODUCERS, LLC	DAKOTA	5380	5430	7.81		23			7745	77	0	0	0.613	77 NEG		0.1	25	2	3830	3.6	0	1355	838	4697	1.01
MCKENZIE	SILURIAN SW FRESH WATER SUPPLY 1	CHARLSON	TEXACO EXPLORATION & PRODUCTION INC.	DAKOTA	4623		8.7					4461	60			0.9	68			14	2	3014		133	1730	1099	2705	1
RENVILLE	MARTHA THOMPSON 1-A	GLENBURN	BERENERGY CORPORATION	DAKOTA	2730	2785	8.5									0.16	68			8	4	1624		108	964	329	1600	
RENVILLE	EINAR CHRISTIANSON 1	GLENBURN	EARL SCHWARTZ CO.	DAKOTA	2700		8.2					4296				1.49	68			11		1847		48	1122	351	1900	
RENVILLE	EINAR CHRISTIANSON A 1	GLENBURN	TENNECO OIL CO.	DAKOTA	2700		8.2					4296				1.49	68			11		1847		48	1122	351	1900	
WILLIAMS	BEAVER LODGE-MADISON UNIT Z-31-D	BEAVER LODGE	AMERADA HESS CORPORATION	DAKOTA			8.55													18	6	4055	16	106	1492	557	4900	
WILLIAMS	BEAVER LODGE-MADISON UNIT L-5	BEAVER LODGE	AMERADA HESS CORPORATION	DAKOTA	4590	4998	8.9					5961	60			0.78	68			27	1	3418		146	1560	852	3615	1.01
WILLIAMS	BEAVER LODGE-MADISON UNIT G-11	BEAVER LODGE	AMERADA HESS CORPORATION	DAKOTA	4599	4647	7.6									0.73	68			53		3670			994	1000	4439	
WILLIAMS	BEAVER LODGE-MADISON UNIT G-11	BEAVER LODGE	AMERADA HESS CORPORATION	DAKOTA	4599	4647														19	8	3620		240	1500	522	4050	
WILLIAMS	BEAVER LODGE-MADISON UNIT G-11	BEAVER LODGE	AMERADA HESS CORPORATION	DAKOTA	5173	5273														405	55	4840			989	2005	6250	
WILLIAMS	BEAVER LODGE-MADISON UNIT NO-28D	BEAVER LODGE	HESS BAKKEN INVESTMENTS II, LLC	DAKOTA	4825	5105	8.4					5642	60			0.85	68			21	3	3235		37	1880	650	3420	1.01
WILLIAMS	BEAVER LODGE-MADISON UNIT B-4	BEAVER LODGE	AMERADA HESS CORPORATION	DAKOTA	4502	4920	8.9					5598	60			0.85	68			19	9	3331		43	1990	807	3395	1.01
WILLIAMS	BEAVER LODGE-DEVONIAN UNIT B-308I	BEAVER LODGE	HESS BAKKEN INVESTMENTS II, LLC	DAKOTA			7.66		48			8243	77			0.32	77 NEG			76	5	4100			1739	859	4999	1
WILLIAMS	BEAVER LODGE-DEVONIAN UNIT B-308I	BEAVER LODGE	HESS BAKKEN INVESTMENTS II, LLC	DAKOTA			7.85		20			6924	77			0.33	77 NEG			38	6	3690			1818	968	4199	1
WILLIAMS	BEAVER LODGE-DEVONIAN UNIT B-308I	BEAVER LODGE	HESS BAKKEN INVESTMENTS II, LLC	DAKOTA			7.88		24			7254	77			0.32	77 NEG			54	9	3780			1733	1005	4399	1
WILLIAMS	BEAVER LODGE-DEVONIAN UNIT B-308I	BEAVER LODGE	HESS BAKKEN INVESTMENTS II, LLC	DAKOTA			7.9		22			10984	77			0.33	77 NEG			40	7	3840	1		1806	968	4299	1

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County	WellName	Field	Operator	Pool_Nm	Top	Bot	PH	TDS_m g/L	K_mgL	Li_m g/L	OH_m g/L	NaCL_mg M	em	Cr_mgL	NO3_m g/L	Res_Oh mMete	ResT emp_F	H2S	Ba	Ca_mgL	Mg_mgL	Na_mgL	Fe_mg L	CO3_m mg/L	HCO3_m mg/L	SO4_m g/L	CL_mgL	SpGrav
DUNN	RICE 2 SWD	CORRAL CREEK	MISSOURI BASIN WELL SERVICE, INC.	MINNELUSA			6.4	5180				284000	68	0.0793	289	0.043	77			1420	718	112000	3.57		342	3500	199000	1.25
MCKENZIE	BEAR DEN UNIT 1	BEAR DEN	FLYING J OIL & GAS, INC.	MINNELUS.	7770	7843	6.4					312123	60			0.05	68			706	742	122537			512	3852	189280	1.21
MCKENZIE	BLUE BUTTES-MADISON UNIT M-409	BLUE BUTTES	AMERADA HESS CORPORATION	MINNELUS.	7315	7374	5					315127	60			0.05	68			568	566	125866			315	7473	191102	1.13
MCKENZIE	BLUE BUTTES-MADISON UNIT M-305	BLUE BUTTES	HESS BAKKEN INVESTMENTS II, LLC	MINNELUS.	7285	7317	6.1	2790				311600	77		288	0.04	77 NEG			1182	146	125800	18		494	5400	189000	1.21
MCKENZIE	BLUE BUTTES-MADISON UNIT M-305	BLUE BUTTES	HESS BAKKEN INVESTMENTS II, LLC	MINNELUS.	7285	7317	6.13	2940				313700	77		252	0.04	77 NEG			1453	73	125600	10		476	5200	190300	1.21
MCKENZIE	BLUE BUTTES-MADISON UNIT M-305	BLUE BUTTES	HESS BAKKEN INVESTMENTS II, LLC	MINNELUS.	7285	7317	6.14	2940				313700	77		318	0.04	77 NEG			1531	171	127800	20		549	5400	190300	1.21
MCKENZIE	BLUE BUTTES-MADISON UNIT M-305	BLUE BUTTES	HESS BAKKEN INVESTMENTS II, LLC	MINNELUS.	7285	7317	6.22	3460				322000	77	4	103	0.04	77 NEG			14920	609	113600	1		287	4700	195300	1.21
MORTON	JAMES MEYER 1	WILDCAT	AMERADA HESS CORPORATION	MINNELUS.	4615	4634	6.3					178422	60			0.06	68			2360	1200	66493			60	2714	108200	1.12
MORTON	JOHN GANGL 1	WILDCAT	ANSCHUTZ CORPORATION	MINNELUS.	3902	3918	6.4					14923	60			0.38	68			824	210	6086			49	3225	9050	1.02

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County	WellName	Field	Operator	Pool_Nm	Top	Bot	PH	TDS_m g/L	K mg/L	Li_m g/L	OH_m g/L	NaCL_mg M em	Cr mg/L	NO3_m g/L	Res_Oh mMete r	ResT emp F	H2S	Ba	Ca mg/L	Mg mg/L	Na mg/L	Fe mg L	CO3 mg/L	HCO3 mg/L	SO4_m g/L	CL mg/L	SpGrav	
DUNN	SIGNALNESS FEDERAL 2-10	LOST BRIDGE	DEEP CREEK ADVENTURES, CO.	BAKKEN	10600	10705	6.82					269453	77		0.04	77	NEG		4008	486	105200	11		292	4300	163452	1.2	
DUNN	PACKINEAU BIA 12-17	MANDAREE	SHELL OIL CO.	BAKKEN	10795	10805	4.72					258200	77	1	0.04	77	NEG		17830	1215	74500	44		61	770	156600	1.17	
DUNN	DSEC CLEMETS-OLSON 41-8	WILDCAT	DIAMOND SHAMROCK EXPLORATION CO.	BAKKEN	11040	11160	5.04	3300				330355	77		25	0.04	77	NEG		16192	784	107200	230		92	485	200340	1.22
DUNN	DSEC CLEMETS-OLSON 41-8	WILDCAT	DIAMOND SHAMROCK EXPLORATION CO.	BAKKEN	11040	11160	6.4	3190				325115	77	1	75	0.04	77	NEG		16928	1120	104100	20		232	610	197160	1.22
DUNN	DSEC CLEMETS-OLSON 41-8	WILDCAT	DIAMOND SHAMROCK EXPLORATION CO.	BAKKEN	11040	11160	6.49	2830				298895	77		60	0.04	77	NEG		14904	1232	97000	29		244	730	181260	1.2
DUNN	TWO CROW 1-5	WILDCAT	EP OPERATING CO.	BAKKEN	10918	10770	6.06	3000				296600	77		87	0.04	77	NEG		10620	735	98000	63		122	964	179900	1.21
DUNN	TWO CROW 1-5	WILDCAT	EP OPERATING CO.	BAKKEN	10918	10770	6.32	3100				286700	77		133	0.04	77	NEG		11220	367	94000	12		146	1344	173900	1.2
DUNN	TWO CROW 1-5	WILDCAT	EP OPERATING CO.	BAKKEN	10918	10770	6.94	3400				304800	77		116	0.04	77	NEG		11220	367	106000	7		403	1156	184900	1.21
DUNN	ROCKET 1 SWD	RATTLESNAKE POINT	CONTINENTAL RESOURCES, INC.	BAKKEN	11083	11186	5.69	2650				290000	77	1	129	0.04	77	NEG		12424	1360	95400	150		122	1010	175900	1.21
MCKENZIE	USA 42-24A	BICENTENNIAL	SLAWSON EXPLORATION COMPANY, INC.	BAKKEN	10700	10890	10.19					284706	77	6		0.04	77	NEG		6814	122	99500	2	2296	3051	2200	172704	1.17
MCKENZIE	USA 43-27A	SQUAW GAP	PRIDE ENERGY, AN OKLAHOMA GENERAL PARTI	BAKKEN	10692	10708	5.19					237600	77	1		0.04	77	NEG		13020	850	78000	58			620	144100	1.16
MCKENZIE	11-146-103 BURLINGTON NORTHERN 1	POKER JIM	HILLIARD OIL & GAS, INC.	BAKKEN	10695	10761	5.82					284720	77			0.05	77	NEG		12826	1702	95000	37		110	180	172712	1.21
MCKENZIE	MPI 43-1	PIERRE CREEK	BURLINGTON RESOURCES OIL & GAS COMPANY	BAKKEN	10600	10825		3210				320100					77	NEG		14900	1941	105200	1				194200	
MCKENZIE	MPI 43-1	PIERRE CREEK	BURLINGTON RESOURCES OIL & GAS COMPANY	BAKKEN	10600	10825	4.72	2600				295700		1	169		77	NEG		14900	1456	94700	192		366	761	179400	
MCKENZIE	MPI 43-1	PIERRE CREEK	BURLINGTON RESOURCES OIL & GAS COMPANY	BAKKEN	10600	10825	6.39	1190				144100	77		5	0.06	77	NEG		7450	970	47600	51		464	3506	87400	1.1
MCKENZIE	MPI 43-1	PIERRE CREEK	BURLINGTON RESOURCES OIL & GAS COMPANY	BAKKEN	10670	10725		2730				307800			105		77	NEG		16270	606	100000	4				186700	
MCKENZIE	MPI 43-1	PIERRE CREEK	BURLINGTON RESOURCES OIL & GAS COMPANY	BAKKEN	10670	10725	5.94	2670				293600		1	224		77	NEG		16470	849	92900	14		244	800	178100	
MCKENZIE	MPI 43-1	PIERRE CREEK	BURLINGTON RESOURCES OIL & GAS COMPANY	BAKKEN	10670	10725	6.41	2760				295400		1	272		77	NEG		17060	849	94400	8		366	1251	179200	
MCKENZIE	MPI 43-1	PIERRE CREEK	BURLINGTON RESOURCES OIL & GAS COMPANY	BAKKEN	10670	10725	6.76	2770				303200	77		194	0.04	77	NEG		15680	606	97300	35		366	780	183900	1.21
MCKENZIE	SLAATEN 26-1	CHARLSON	XTO ENERGY INC.	BAKKEN	10300	10347	6.07	2100				286660	77		109	0.04	77	NEG		8832	336	102800	1		140	1700	173840	1.2
MCKENZIE	SLAATEN 26-1	CHARLSON	XTO ENERGY INC.	BAKKEN	10300	10347	6.22	2290				276171	77		92	0.04	77	NEG		8538	291	98200	9		116	1180	167480	1.2
MCKENZIE	MOI 43-17	ROUGH RIDER	MERIDIAN OIL, INC.	BAKKEN	10973	11164	5.25	4050				347315	77			0.05	77	NEG		22567	1282	100300	530		104	362	210624	1.22
MCKENZIE	MOI 43-17	ROUGH RIDER	MERIDIAN OIL, INC.	BAKKEN	10973	11164	9.24	3780				328502	77		214	0.05	77	NEG		22380	466	90800	2	4201	4882	45	199215	1.2
MCKENZIE	PIERRE CREEK 14-5	PIERRE CREEK	COBRA OIL & GAS CORPORATION	BAKKEN	10809	10857	6.43	4070				312592	77	1	530	0.05	77	NEG		21222	204	100800	1		61	459	189567	1.2
MCKENZIE	PIERRE CREEK 14-5	PIERRE CREEK	COBRA OIL & GAS CORPORATION	BAKKEN	10809	10857	6.89	3870				317890	77	1	791	0.05	77	NEG		22008	102	100200	1		182	459	192780	1.21
MCKENZIE	SHAIDE ET AL 32-1	CARTWRIGHT	HEADINGTON OIL COMPANY LLC	BAKKEN	10400	10500	5.43	1650				236019	77		110	0.05	77	NEG		13169	949	69800	32		116	338	143130	1.22
MCKENZIE	MULE CREEK FEDERAL 1X-18	RANDOLPH	WHITE ROCK OIL & GAS, LLC	BAKKEN	10725	10775	4.92	1000				294932	77			0.05	77	NEG		11309	1310	96400	67		226	661	178857	1.21
MCKENZIE	MULE CREEK FEDERAL 1X-18	RANDOLPH	WHITE ROCK OIL & GAS, LLC	BAKKEN	10725	10775	5.01	1140				312592	77			0.05	77	NEG		11507	1786	107100	92		232	715	189567	1.21
MCKENZIE	MULE CREEK FEDERAL 1X-18	RANDOLPH	WHITE ROCK OIL & GAS, LLC	BAKKEN	10725	10775	5.07	1070				310826	77			0.05	77	NEG		10912	1667	106900	86		220	679	188496	1.21
MCKENZIE	MULE CREEK FEDERAL 1X-18	RANDOLPH	WHITE ROCK OIL & GAS, LLC	BAKKEN	10725	10775	5.14	106				301996	77	1		0.05	77	NEG		10714	1429	102600	151		299	715	183141	1.21
MOUNTRAIL	STROBECK 1-35	WILDCAT	SUN EXPLORATION & PRODUCTION CO.	BAKKEN	9920	10000	8.85					276000	77		320	0.04	77	NEG		4130	368	102500	2	1260	2783	3100	167400	1.19
MOUNTRAIL	STROBECK 1-35	WILDCAT	SUN EXPLORATION & PRODUCTION CO.	BAKKEN	9920	10000	9.19					276000	77		281	0.04	77	NEG		3940	245	97500	2	3301	5980	2300	167400	1.18
MOUNTRAIL	SUN MARATHON SHOBE 1	WILDCAT	ORYX ENERGY CO.	BAKKEN	10558	10679	5.69	416				314973	77		133	0.05	77	NEG		1646	605	122000	17		488	5370	191011	1.21
MOUNTRAIL	SUN MARATHON SHOBE 1	WILDCAT	ORYX ENERGY CO.	BAKKEN	10558	10679	5.77	410				312459	77		187	0.05	77	NEG		1646	762	124400	15		488	6785	189486	1.21
WILLIAMS	BRATLIEN 1 41-33	LAST CHANCE	CONTINENTAL RESOURCES, INC.	BAKKEN	10782	10890	9.39					286000	77		64	0.04	77	NEG		1850	1196	111600	2	141	1220	11300	173500	1.19
WILLIAMS	IRGENS 1-27	EAST FORK	WILLISTON INDUSTRIAL SUPPLY CORPORATION	BAKKEN	10519	10577	6.08	2310				270900	77		233	0.04	77	NEG		24040	483	74400	5		98	490	164300	1.22
WILLIAMS	IRGENS 1-27	EAST FORK	WILLISTON INDUSTRIAL SUPPLY CORPORATION	BAKKEN	10519	10577	9.35	1580				185500	77		144	0.05	77	NEG		14120	241	53000	2	2401	6102	380	112500	1.14
WILLIAMS	MARTIN-FEDERAL 15-1	TRENTON	WHITE ROCK OIL & GAS, LLC	BAKKEN	10335	10402		3960				320100	77	1	158		77	NEG		30340	959	84400	227		659	194200		
WILLIAMS	MARTIN-FEDERAL 15-1	TRENTON	WHITE ROCK OIL & GAS, LLC	BAKKEN	10335	10402	6.87	2610				200500	77	2	213	0.05	77	NEG		18280	1199	53000	10		110	1311	121600	1.12
WILLIAMS	MARTIN-FEDERAL 15-1	TRENTON	WHITE ROCK OIL & GAS, LLC	BAKKEN	10335	10402	7.31	3160				253200	77	2	42	0.05	77	NEG		23730	1199	67600	4		391	947	153600	1.16

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**TITLE 61
WATERS**

**CHAPTER 61-01
GENERAL PROVISIONS**

61-01-01. Waters of the state - Public waters.

All waters within the limits of the state from the following sources of water supply belong to the public and are subject to appropriation for beneficial use and the right to the use of these waters for such use must be acquired pursuant to chapter 61-04:

1. Waters on the surface of the earth, excluding diffused surface waters but including surface waters whether flowing in well-defined channels or flowing through lakes, ponds, or marshes which constitute integral parts of a stream system, or waters in lakes;
2. Waters under the surface of the earth whether such waters flow in defined subterranean channels or are diffused percolating underground water;
3. All residual waters resulting from beneficial use, and all waters artificially drained; and
4. All waters, excluding privately owned waters, in areas determined by the state engineer to be noncontributing drainage areas. A noncontributing drainage area is any area that does not contribute natural flowing surface water to a natural stream or watercourse at an average frequency more often than once in three years over the latest thirty-year period.

61-01-01.1. Reciprocal rights of riparian owners.

Repealed by S.L. 1977, ch. 569, § 27.

61-01-01.2. Findings and declaration of policy - Use of ground water for irrigation.

The legislative assembly finds that the use of ground water for irrigation purposes is vitally important to the economic future of this state. The reliance on processing plants for the consistent quality resulting from irrigation is an important factor in preserving this state's reputation for quality agricultural production. Therefore, it is declared necessary and in the public interest that the state by and through the state water commission strongly discourages the conversion of agricultural water permits to any other use. Further, the legislative assembly declares that any feasible or reasonable alternative supply of water be made available for municipal or domestic use to enable the continued use of ground water for irrigated agriculture and agricultural processing.

61-01-02. Right to use water - Basis - Waters appropriated for irrigation purposes - Priority in time.

Repealed by S.L. 1977, ch. 569, § 27.

61-01-03. Claims to the use of water initiated prior to and after March 1, 1905.

In all cases of claims to the use of water initiated prior to March 1, 1905, the right shall relate back to the initiation of the claim, upon the diligent prosecution to completion of the necessary surveys and construction for the application of the water to a beneficial use. All claims to the use of water initiated after March 1, 1905, shall relate back to the date of receipt of an application therefor in the office of the state engineer, subject to compliance with the applicable provisions of law, and the rules and regulations established thereunder.

61-01-04. Eminent domain - Who may exercise.

The United States, or any person, corporation, limited liability company, or association may exercise the right of eminent domain to acquire for a public use any property or rights existing when found necessary for the application of water to beneficial uses, including the right to enlarge existing structures and use the same in common with the former owner. Any canal right of way so acquired shall be located so as to do the least damage to private or public property,

**ARTICLE 89-03
WATER APPROPRIATIONS**

Chapter	
89-03-01	Water Permits
89-03-02	Modification of a Water Permit
89-03-03	Definitions

**CHAPTER 89-03-01
WATER PERMITS**

Section	
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89-03-01-05.1	Notice of Decision on Water Permit Application [Repealed]
89-03-01-06	Filing Proof of Publication and Mailing [Repealed]
89-03-01-06.1	Consideration of Evidence Not Contained in the State Engineer's Record [Repealed]
89-03-01-06.2	Notice of Continuance - Responsibility [Repealed]
89-03-01-06.3	Record - Official Notice
89-03-01-07	Necessity of Works and Construction of Works for a Conditional Water Permit
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89-03-01-09	Appropriation Not Requiring Water Permit
89-03-01-10	Emergency or Temporary Authorization
89-03-01-10.1	Temporary Water Transfer for Irrigation
89-03-01-10.2	Temporary Permit Fees
89-03-01-11	Competing Applications
89-03-01-12	Extensions and Cancellations
89-03-01-13	Report of Water Usage
89-03-01-13.1	Fines - Water Use Reporting
89-03-01-14	Notice

89-03-01-01. Submission of application for conditional water permit.

An application for a conditional water permit must be submitted to the state engineer on the form provided by the state engineer. A map containing the information prescribed by the state engineer must accompany the application. Unless the state engineer first approves another type of map, the map must be prepared from a survey, aerial photograph, or topographic map, and must be certified by a surveyor licensed in the state of North Dakota. The state engineer may require information not requested in the application.

History: Amended effective April 1, 1989; February 1, 1994; July 1, 2014.

General Authority: NDCC 28-32-02, 61-03-13

Law Implemented: NDCC 61-04-03

89-03-01-01.1. Priority date.

The date of receipt by the state engineer of a properly completed application must be noted on the application. Except for water applied to domestic, livestock, or fish, wildlife, and other recreational uses where a water permit is not required, this date of filing establishes the original priority date of an application, subject to final acceptance of the application and issuance of a perfected water permit by the state engineer. For water applied to domestic, livestock, or fish, wildlife, and other recreational uses where a water permit is not required, the priority date is the date the quantity of water was first used.

History: Effective April 1, 1989; amended effective August 1, 1994; July 1, 2014.

General Authority: NDCC 28-32-02, 61-03-13

Law Implemented: NDCC 61-04-04, 61-04-06.3

89-03-01-01.2. Land, property, or other interest requirement for conditional water permit.

An applicant for a conditional water permit must have an interest or intent and ability to acquire an interest in the land where the point of diversion and conveyance system will be located. The applicant must demonstrate to the satisfaction of the state engineer that the applicant has the capability to put the water to beneficial use. If the applicant is seeking a permit for irrigation, the applicant must also have an interest or intent and ability to acquire an interest in the land to be irrigated. If the applicant is seeking a permit to impound water, the applicant must have an interest or intent and ability to acquire an interest in the land or other property inundated by the impounded water. The state engineer may require the applicant to submit evidence of such an interest. At any time the state engineer may require additional verification of land or property interest or other interest demonstrating the capability to put the water to beneficial use.

History: Effective April 1, 1989; amended effective August 1, 1994; April 1, 2004; July 1, 2014.

General Authority: NDCC 28-32-02, 61-03-13

Law Implemented: NDCC 61-04-03, 61-04-06

89-03-01-01.3. When a water permit for stored water must be obtained.

A water permit may authorize the storage of water for flood control or other reasons deemed necessary by the state engineer. However, authorization to store water for flood control or other reasons does not create a water right. If stored water will be put to beneficial use, a water permit must be obtained.

History: Effective November 1, 1989; amended effective August 1, 1994; July 1, 2014; January 1, 2015.

General Authority: NDCC 28-32-02, 61-03-13

Law Implemented: NDCC 61-04-01.1, 61-04-01.2, 61-04-02

89-03-01-01.4. Amount of water that may be held in storage under a water permit.

Unless otherwise authorized by the state engineer, any person authorized to store water, except for flood control, may only fill the reservoir to the amount authorized in the permit once each year. The reservoir will be filled during the first runoff following February first of each year. A consumptive use authorized in the water permit must be taken from the stored water. Unless otherwise authorized by the state engineer and with the exception of water stored for flood control, any inflows to the reservoir after the reservoir has been filled for the year must be allowed to pass through the reservoir and downstream.

History: Effective November 1, 1989; amended effective July 1, 2014.

General Authority: NDCC 28-32-02, 61-03-13

Law Implemented: NDCC 61-04-01.2, 61-04-02

(1) Which are brought to the surface in connection with conventional oil or natural gas production and may be commingled with waste waters from gas plants which are an integral part of production operations, unless those waters are classified as a hazardous waste at the time of injection.

(2) For enhanced recovery of oil or natural gas; and

(3) For storage of hydrocarbons which are liquid at standard temperature and pressure.

(c) *Class III.* Wells which inject for extraction of minerals including:

(1) Mining of sulfur by the Frasch process;

(2) In situ production of uranium or other metals. This category includes only in-situ production from ore bodies which have not been conventionally mined. Solution mining of conventional mines such as stopes leaching is included in Class V.

(3) Solution mining of salts or potash.

(d) *Class IV.* (1) Wells used by generators of hazardous waste or of radioactive waste, by owners or operators of hazardous waste management facilities, or by owners or operators of radioactive waste disposal sites to dispose of hazardous waste or radioactive waste into a formation which within one quarter (1/4) mile of the well contains an underground source of drinking water.

(2) Wells used by generators of hazardous waste or of radioactive waste, by owners or operators of hazardous waste management facilities, or by owners or operators of radioactive waste disposal sites to dispose of hazardous waste or radioactive waste above a formation which within one quarter (1/4) mile of the well contains an underground source of drinking water.

(3) Wells used by generators of hazardous waste or owners or operators of hazardous waste management facilities to dispose of hazardous waste, which cannot be classified under § 146.05(a)(1) or § 146.05(d) (1) and (2) (e.g., wells used to dispose of hazardous wastes into or above a formation which contains an aquifer which has been exempted pursuant to § 146.04).

(e) *Class V.* Injection wells not included in Class I, II, III, IV or VI. Specific types of Class V injection wells are also described in 40 CFR 144.81. Class V wells include:

(1) Air conditioning return flow wells used to return to the supply aquifer the water used for heating or cooling in a heat pump;

(2) Cesspools including multiple dwelling, community or regional cesspools, or other devices that receive wastes which have an open bottom and sometimes have perforated sides. The UIC requirements do not apply to single family residential cesspools nor to non-residential cesspools which receive solely sanitary wastes and have the capacity to serve fewer than 20 persons a day.

(3) Cooling water return flow wells used to inject water previously used for cooling;

(4) Drainage wells used to drain surface fluid, primarily storm runoff, into a subsurface formation;

(5) Dry wells used for the injection of wastes into a subsurface formation;

(6) Recharge wells used to replenish the water in an aquifer;

(7) Salt water intrusion barrier wells used to inject water into a fresh water aquifer to prevent the intrusion of salt water into the fresh water;

(8) Sand backfill and other backfill wells used to inject a mixture of water and sand, mill tailings or other solids into mined out portions of subsurface mines whether what is injected is a radioactive waste or not.

(9) Septic system wells used to inject the waste or effluent from a multiple dwelling, business establishment, community or regional business establishment septic tank. The UIC requirements do not apply to single family residential septic system wells, nor to non-residential septic system wells which are used solely for the disposal of sanitary waste and have the capacity to serve fewer than 20 persons a day.

(10) Subsidence control wells (not used for the purpose of oil or natural gas production) used to inject fluids into a non-oil or gas producing zone to reduce or eliminate subsidence associated with the overdraft of fresh water;

(11) Radioactive waste disposal wells other than Class IV;

(12) Injection wells associated with the recovery of geothermal energy for heating, aquaculture and production of electric power.

(13) Wells used for solution mining of conventional mines such as stopes leaching;

(14) Wells used to inject spent brine into the same formation from which it was withdrawn after extraction of halogens or their salts;

(15) Injection wells used in experimental technologies.

(6) Injection wells used for in situ recovery of lignite, coal, tar sands, and oil shale.

(f) *Class VI.* Wells that are not experimental in nature that are used for geologic sequestration of carbon dioxide beneath the lowermost formation containing a USDW; or, wells used for geologic sequestration of carbon dioxide that have received an expansion to the areal extent of an existing Class II enhanced oil recovery or enhanced gas recovery aquifer exemption pursuant to §§ 146.4 and 144.7(d) of this chapter.

[45 FR 42500, June 24, 1980, as amended at 46 FR 43161, Aug. 27, 1981; 47 FR 4999, Feb. 3, 1982; 64 FR 68573, Dec. 7, 1999; 75 FR 77291, Dec. 10, 2010]

§ 146.6

Area of review.

The area of review for each injection well or each field, project or area of the State shall be determined according to either paragraph (a) or (b) of this section. The Director may solicit input from the owners or operators of injection wells within the State as to which method is most appropriate for each geographic area or field.

(a) *Zone of endangering influence.* (1) The zone of endangering influence shall be:

(i) In the case of application(s) for well permit(s) under § 122.38 that area the radius of which is the lateral distance in which the pressures in the injection zone may cause the migration of the injection and/or formation fluid into an underground source of drinking water; or

(ii) In the case of an application for an area permit under § 122.39, the project area plus a circumscribing area the width of which is the lateral distance from the perimeter of the project area, in which the pressures in the injection zone may cause the migration of the injection and/or formation fluid into an underground source of drinking water.

(2) Computation of the zone of endangering influence may be based upon the parameters listed below and should be calculated for an injection time period equal to the expected life of the injection well or pattern. The following modified Theis equation illustrates one form which the mathematical model may take.

[Please see PDF for Formula: EC15NO91.140]

WHERE:

[PLEASE SEE PDF FOR FORMULA: EC15NO91.141]

R=RADIUS OF ENDANGERING INFLUENCE FROM INJECTION WELL (LENGTH)

K=HYDRAULIC CONDUCTIVITY OF THE INJECTION ZONE (LENGTH/TIME)

H=THICKNESS OF THE INJECTION ZONE (LENGTH)

T=TIME OF INJECTION (TIME)

S=STORAGE COEFFICIENT (DIMENSIONLESS)

Q=INJECTION RATE (VOLUME/TIME)

H₃₀=OBSERVED ORIGINAL HYDROSTATIC HEAD OF INJECTION ZONE (LENGTH) MEASURED FROM THE BASE OF THE LOWERMOST UNDERGROUND SOURCE OF DRINKING WATER

H_w=HYDROSTATIC HEAD OF UNDERGROUND SOURCE OF DRINKING WATER (LENGTH) MEASURED FROM THE BASE OF THE LOWEST UNDERGROUND SOURCE OF DRINKING WATER

S_p G_s=SPECIFIC GRAVITY OF FLUID IN THE INJECTION ZONE (DIMENSIONLESS)

π=3.142 (DIMENSIONLESS)

The above equation is based on the following assumptions:

(i) The injection zone is homogenous and isotropic;

(ii) The injection zone has infinite area extent;

(iii) The injection well penetrates the entire thickness of the injection zone;

(iv) The well diameter is infinitesimal compared to "r" when injection time is longer than a few minutes; and

(v) The emplacement of fluid into the injection zone creates instantaneous increase in pressure.

(b) *Fixed radius.* (1) In the case of application(s) for well permit(s) under § 122.38 a fixed radius around the well of not less than one-fourth (1/4) mile may be used.

(2) In the case of an application for an area permit under § 122.39 a fixed width of not less than one-fourth (1/4) mile for the circumscribing area may be used.

In determining the fixed radius, the following factors shall be taken into consideration: Chemistry of injected and formation fluids; hydrogeology; population and ground-water use and dependence; and historical practices in the area.

(c) If the area of review is determined by a mathematical model pursuant to paragraph (a) of this section, the permissible radius is the result of such calculation even if it is less than one-fourth (1/4) mile.

[45 FR 42500, June 24, 1980, as amended at 46 FR 43161, Aug. 27, 1981; 47 FR 4999, Feb. 3, 1982]

§ 146.7 Corrective action.

In determining the adequacy of corrective action proposed by the applicant under 40 CFR 144.55 and in determining the additional steps needed to prevent fluid movement into underground sources of drinking water, the following criteria and factors shall be considered by the Director:

- (a) Nature and volume of injected fluid;
 - (b) Nature of native fluids or by-products of injection;
 - (c) Potentially affected population;
 - (d) Geology;
 - (e) Hydrology;
 - (f) History of the injection operation;
 - (g) Completion and plugging records;
 - (h) Abandonment procedures in effect at the time the well was abandoned; and
 - (i) Hydraulic connections with underground sources of drinking water.
- (Clean Water Act, Safe Drinking Water Act, Clean Air Act, Resource Conservation and Recovery Act: 42 U.S.C. 6905, 6912, 6925, 6927, 6974)

[45 FR 42500, June 24, 1980, as amended at 46 FR 43162, Aug. 27, 1981; 48 FR 14293, Apr. 1, 1983]

§ 146.8 Mechanical integrity.

- (a) An injection well has mechanical integrity if:
 - (1) There is no significant leak in the casing, tubing or packer; and
 - (2) There is no significant fluid movement into an underground source of drinking water through vertical channels adjacent to the injection well bore.
- (b) One of the following methods must be used to evaluate the absence of significant leaks under paragraph (a)(1) of this section:
 - (1) Following an initial pressure test, monitoring of the tubing-casing annulus pressure with sufficient frequency to be representative, as determined by the Director, while maintaining an annulus pressure different from atmospheric pressure measured at the surface;
 - (2) Pressure test with liquid or gas; or
 - (3) Records of monitoring showing the absence of significant changes in the relationship between injection pressure and injection flow rate for the following Class II enhanced recovery wells:
 - (i) Existing wells completed without a packer provided that a pressure test has been performed and the data is available and provided further that one pressure test shall be performed at a time when the well is shut down and if the running of such a test will not cause further loss of significant amounts of oil or gas; or
 - (ii) Existing wells constructed without a long string casing, but with surface casing which terminates at the base of fresh water provided that local geological and hydrological features allow such construction and provided further that the annular space shall be visually inspected. For these wells, the Director shall prescribe a monitoring program which will verify the absence of significant fluid movement from the injection zone into an USDW.
- (c) One of the following methods must be used to determine the absence of significant fluid movement under paragraph (a)(2) of this section:
 - (1) The results of a temperature or noise log; or
 - (2) For Class II only, cementing records demonstrating the presence of adequate cement to prevent such migration; or
 - (3) For Class III wells where the nature of the casing precludes the use of the logging techniques prescribed at paragraph (c)(1) of this section, cementing records demonstrating the presence of adequate cement to prevent such migration;
 - (4) For Class III wells where the Director elects to rely on cementing records to demonstrate the absence of significant fluid movement, the monitoring program prescribed by § 146.33(b) shall be designed to verify the absence of significant fluid movement.
- (d) The Director may allow the use of a test to demonstrate mechanical integrity other than those listed in paragraphs (b) and (c)(2) of this section with the written approval of the Administrator. To obtain approval, the Director shall submit a written request to the Administrator, which shall set forth the proposed test and all technical data supporting its use. The Administrator shall approve the request if it will reliably demonstrate the mechanical integrity of wells for which its use is proposed. Any alternate method approved by the Administrator shall be published in the **Federal Register** and may be used in all States unless its use is restricted at the time of approval by the Administrator.
- (e) In conducting and evaluating the tests enumerated in this section or others to be allowed by the Director, the owner or operator and the Director shall apply methods and standards generally accepted in the industry. When the owner or operator reports the results of mechanical integrity tests to the Director, he shall include a description of the test(s) and the method(s) used. In making his/her evaluation, the Director shall review monitoring and other test data submitted since the previous evaluation.
- (f) The Director may require additional or alternative tests if the results presented by the owner or operator under § 146.8(e) are not satisfactory to the Director to demonstrate that there is no movement of fluid into or between USDWs resulting from the injection activity.

[45 FR 42500, June 24, 1980, as amended at 46 FR 43162, Aug. 27, 1981; 47 FR 4999, Feb. 3, 1982; 58 FR 63898, Dec. 3, 1993]

§ 146.9 Criteria for establishing permitting priorities.

In determining priorities for setting times for owners or operators to submit applications for authorization to inject under the procedures of § 144.31 (a), (c), (g) or § 144.22(f), the Director shall base these priorities upon consideration of the following factors:

- (a) Injection wells known or suspected to be contaminating underground sources of drinking water;
 - (b) Injection wells known to be injecting fluids containing hazardous contaminants;
 - (c) Likelihood of contamination of underground sources of drinking water;
 - (d) Potentially affected population;
 - (e) Injection wells violating existing State requirements;
 - (f) Coordination with the issuance of permits required by other State or Federal permit programs;
 - (g) Age and depth of the injection well; and
 - (h) Expiration dates of existing State permits, if any.
- (Clean Water Act, Safe Drinking Water Act, Clean Air Act, Resource Conservation and Recovery Act: 42 U.S.C. 6905, 6912, 6925, 6927, 6974)

[45 FR 42500, June 24, 1980, as amended at 48 FR 14293, Apr. 1, 1983]

§ 146.10 Plugging and abandoning Class I, II, III, IV, and V wells.

(a) Requirements for Class I, II and III wells. (1) Prior to abandoning Class I, II and III wells, the well shall be plugged with cement in a manner which will not allow the movement of fluids either into or between underground sources of drinking water. The Director may allow Class III wells to use other plugging materials if the Director is satisfied that such materials will prevent movement of fluids into or between underground sources of drinking water.

- e. Equipped with other value-added processes as approved by the industrial commission which reduce the volume or intensity of the flare by more than sixty percent.
3. An electrical generator and its attachment units to produce electricity from gas and a collection system described in subdivision d of subsection 2 must be considered to be personal property for all purposes.
4. For a well operated in violation of this section, the producer shall pay royalties to royalty owners upon the value of the flared gas and shall also pay gross production tax on the flared gas at the rate imposed under section 57-51-02.2.
5. The industrial commission may enforce this section and, for each well operator found to be in violation of this section, may determine the value of flared gas for purposes of payment of royalties under this section and its determination is final.
6. A producer may obtain an exemption from this section from the industrial commission upon application that shows to the satisfaction of the industrial commission that connection of the well to a natural gas gathering line is economically infeasible at the time of the application or in the foreseeable future or that a market for the gas is not available and that equipping the well with an electrical generator to produce electricity from gas or employing a collection system described in subdivision d of subsection 2 is economically infeasible.

Source: N.D. Century Code.

38-08-07. COMMISSION SHALL SET SPACING UNITS. The commission shall set spacing units as follows:

1. When necessary to prevent waste, to avoid the drilling of unnecessary wells, or to protect correlative rights, the commission shall establish spacing units for a pool. Spacing units when established must be of uniform size and shape for the entire pool, except that when found to be necessary for any of the purposes above mentioned, the commission is authorized to divide any pool into zones and establish spacing units for each zone, which units may differ in size and shape from those established in any other zone.
2. The size and shape of spacing units are to be such as will result in the efficient and economical development of the pool as a whole.
3. An order establishing spacing units for a pool must specify the size and shape of each unit and the location of the permitted well thereon in accordance with a reasonably uniform spacing plan. Upon application, if the commission finds that a well drilled at the prescribed location would not produce in paying quantities, that surface conditions would substantially add to the burden or hazard of drilling such well, or that the drilling of such well at a location other than the prescribed location is otherwise necessary either to protect correlative rights, to prevent waste, or to effect greater ultimate recovery of oil and gas, the commission is authorized to enter an order permitting the well to be drilled at a location other than that prescribed by such spacing order; however, the commission shall include in the order suitable provisions to prevent the production from the spacing unit of more than its just and equitable share of the oil and gas in the pool.

4. An order establishing units for a pool must cover all lands determined or believed to be underlaid by such pool, and may be modified by the commission from time to time to include additional areas determined to be underlaid by such pool. When found necessary for the prevention of waste, or to avoid the drilling of unnecessary wells, or to protect correlative rights, an order establishing spacing units in a pool may be modified by the commission to increase or decrease the size of spacing units in the pool or any zone thereof, or to permit the drilling of additional wells on a reasonably uniform plan in the pool, or any zone thereof, or an additional well on any spacing unit thereof.

Source: N.D. Century Code.

38-08-08. INTEGRATION OF FRACTIONAL TRACTS.

1. When two or more separately owned tracts are embraced within a spacing unit, or when there are separately owned interests in all or a part of the spacing unit, then the owners and royalty owners thereof may pool their interests for the development and operation of the spacing unit. In the absence of voluntary pooling, the commission upon the application of any interested person shall enter an order pooling all interests in the spacing unit for the development and operations thereof. Each such pooling order must be made after notice and hearing, and must be upon terms and conditions that are just and reasonable, and that afford to the owner of each tract or interest in the spacing unit the opportunity to recover or receive, without unnecessary expense, his just and equitable share. Operations incident to the drilling of a well upon any portion of a spacing unit covered by a pooling order must be deemed, for all purposes, the conduct of such operations upon each separately owned tract in the drilling unit by the several owners thereof. That portion of the production allocated to each tract included in a spacing unit covered by a pooling order must, when produced, be deemed for all purposes to have been produced from such tract by a well drilled thereon. For the purposes of this section and section 38-08-10, any unleased mineral interest pooled by virtue of this section before August 1, 2009, is entitled to a cost-free royalty interest equal to the acreage weighted average royalty interest of the leased tracts within the spacing unit, but in no event may the royalty interest of an unleased tract be less than a one-eighth interest. An unleased mineral interest pooled after July 31, 2009, is entitled to a cost-free royalty interest equal to the acreage weighted average royalty interest of the leased tracts within the spacing unit or, at the operator's election, a cost-free royalty interest of sixteen percent. The remainder of the unleased interest must be treated as a lessee or cost-bearing interest.
2. Each such pooling order must make provision for the drilling and operation of a well on the spacing unit, and for the payment of the reasonable actual cost thereof by the owners of interests in the spacing unit, plus a reasonable charge for supervision. In the event of any dispute as to such costs the commission shall determine the proper costs. If one or more of the owners shall drill and operate, or pay the expenses of drilling and operating the well for the benefit of others, then, the owner or owners so drilling or operating shall, upon complying with the terms of section 38-08-10, have a lien on the share of production from the spacing unit accruing to the interest of each of the other owners for the payment of his proportionate share of such expenses. All

HOUSE ENERGY AND NATURAL
RESOURCES SUBCOMMITTEE|

ON HOUSE BILL 2344

COMPARISONS OF NORTH DAKOTA
PORE SPACE LAW TO
OTHER OIL AND GAS PRODUCING STATES
AND NEED FOR CLARIFICATION

NORTH DAKOTA PETROLEUM COUNCIL

BY LAWRENCE BENDER
ONE OF ITS MEMBERS

MARCH 11, 2019

COMPARISON OF MONTANA AND NORTH DAKOTA PORE SPACE STATUTES

Montana Statutes and Case Law Regarding Pore Space	North Dakota Statutes Regarding Pore Space
<p>MCA § 70-16-101. Rights of owner in fee – above and below surface – “The owner of land in fee has the right to the surface and to everything permanently situated beneath or above it.”</p> <ul style="list-style-type: none">• Cited by <i>Burlington Resources Oil and Gas Co., LP v. Lang and Sons Inc.</i>, 259 P.3d 766, 361 Mont. 407 (2011) (finding that pore space found beneath real property belongs to the surface estate)	<p>Chapter 47-31. Subsurface Space Policy</p> <p>§ 47-31-03. Title to pore space Title to pore space in all strata underlying the surface of lands and waters is vested in the owner of the overlying surface estate.</p>

COMPARISON OF MONTANA AND NORTH DAKOTA
 SURFACE DAMAGE ACTS

<p>Montana’s Surface Owner Damage and Disruption Compensation Act (MCA § 82-10-504)</p>	<p>North Dakota’s Oil and Gas Production Damage Compensation Act (N.D.C.C. § 38-11.1-04)</p>
<ul style="list-style-type: none"> • The oil and gas developer or operator shall pay the surface owner a sum of money or other compensation equal to the amount of damages sustained by the surface owner for loss of agricultural production and income, lost land value, and lost value of improvements caused by oil and gas operations. • The amount of damages may be determined by any formula mutually agreeable between the surface owner and the oil and gas developer or operator. When determining damages, consideration must be given to the period of time during which the loss occurs. • The surface owner may elect to receive annual damage payments over a period of time, except that the surface owner must be compensated by a single sum payment for harm caused by exploration only. • The payments under this subsection (1) may cover only land directly affected by oil and gas operations and production • Payments under this subsection (1) are intended to compensate the surface owner for damage and disruption. • A person may not reserve or assign damage and disruption compensation apart from the surface estate except to a tenant of the surface estate. 	<ul style="list-style-type: none"> • The mineral developer shall pay the surface owner a sum of money equal to the amount of damages sustained by the surface owner and the surface owner's tenant, if any, for lost land value, lost use of and access to the surface owner's land, and lost value of improvements caused by drilling operations. • The amount of damages may be determined by any formula mutually agreeable between the surface owner and the mineral developer. When determining damage and disruption payments, consideration must be given to the period of time during which the loss occurs. • The surface owner must be compensated for harm caused by exploration only by a single sum payment. • The payments contemplated by this section only cover land directly affected by drilling operations. • Payments under this section are intended to compensate the surface owner for damage and disruption. • Any reservation or assignment of such compensation apart from the surface estate except to a tenant of the surface estate is prohibited.

COMPARISON OF MONTANA AND NORTH DAKOTA
 RECENT SURFACE DAMAGE LITIGATION

<p><i>Burlington Resources Oil & Gas Co., LP v. Lang and Sons, Inc.</i> 361 Mont. 407 (2011)</p>	<p><i>Mosser v. Denbury Resources, Inc.</i> 898 N.W.2d 406, 2017 ND 169</p>
<p><u>RELEVANT FACTS:</u></p>	
<ul style="list-style-type: none"> • Lang owns a surface estate subject to an oil and gas lease granted by Lang’s predecessor in interest. • Burlington, the operator of a secondary recovery unit encompassing Lang’s property, is the operator of a well drilled on Lang’s property that was previously operated as an oil and gas well. Well was converted into a saltwater disposal well. 	<ul style="list-style-type: none"> • Mossers own a surface estate subject to an oil and gas lease granted by Mossers’ predecessor in interest. • Denbury, the operator of a secondary recovery unit encompassing Mossers’ property and the operator of a well drilled on Mossers’ property that was previously operated as an oil and gas well. Well was converted into a saltwater disposal well.
<p><u>CLAIMS:</u></p>	
<ul style="list-style-type: none"> • Burlington filed suit to determine its right to use the well as a saltwater disposal well. • Long countersued Burlington alleging claims for trespass and for damages under Montana’s Surface Owner Damage and Disruption Compensation Act (“Mt. Damage Act”). 	<ul style="list-style-type: none"> • Mossers sued Denbury alleging claims for nuisance, trespass, and for damages under North Dakota’s Oil and Gas Production Damage Compensation Act (“ND Damage Act”).
<p><u>ISSUES:</u></p>	
<p>Whether Mt. Damage Act applies to pore space:</p> <ul style="list-style-type: none"> • Mt. Court determined the pore space beneath Lang’s property belongs to Lang. • Montana law permits the owner of a mineral estate to use the surface estate in the production of oil and gas, subject to compensation to the surface owner under Mt. Damage Act. 	<p>Whether ND Damage Act applies to pore space:</p> <ul style="list-style-type: none"> • ND Court determined the pore space beneath Mossers’ property belongs to Mossers. • North Dakota law permits the owner of a mineral estate to use the surface estate in the production of oil and gas, subject to compensation to the surface owner under the ND Damage Act.

ISSUES (CONT'D):

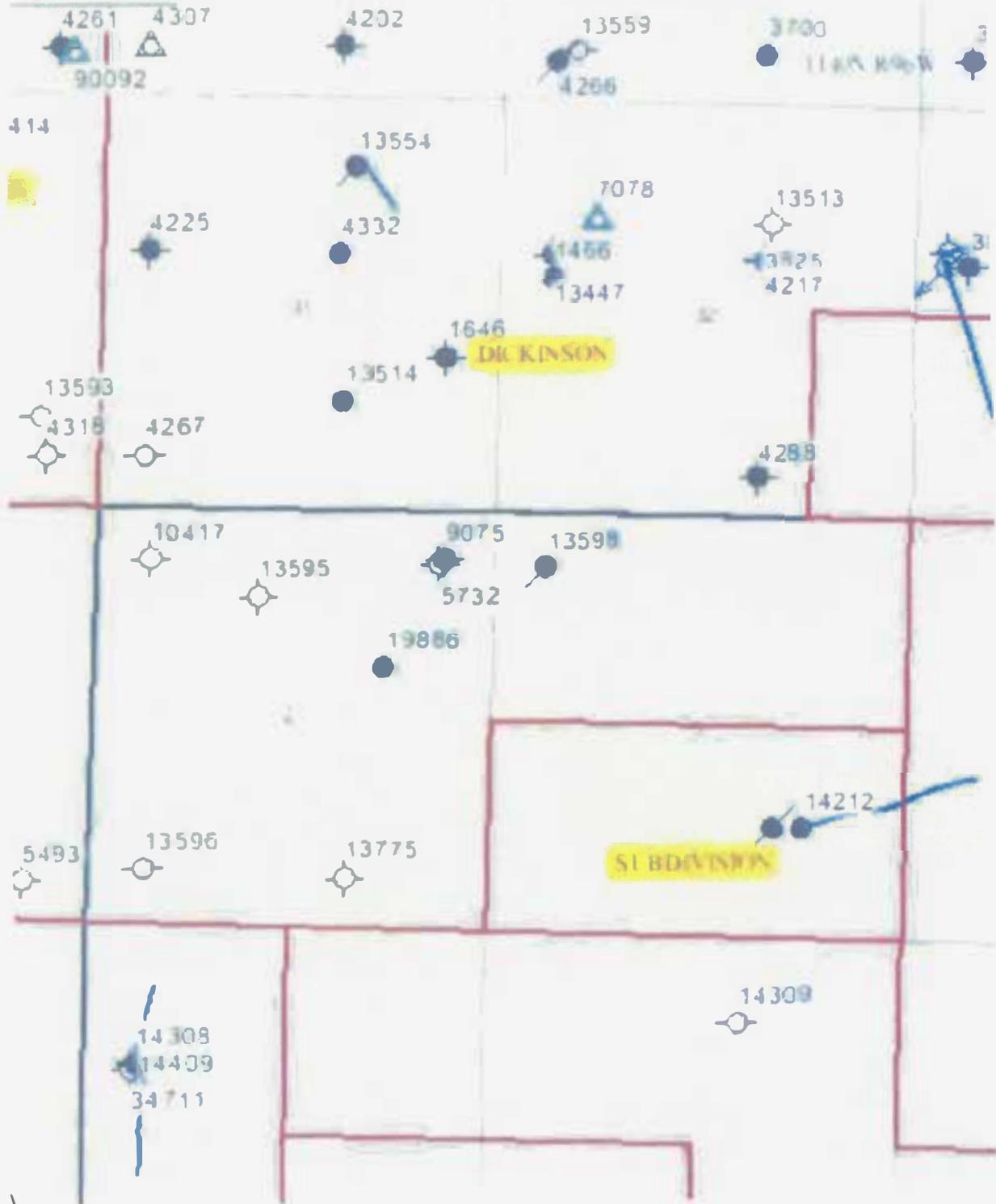
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|---|---|
| <ul style="list-style-type: none">• Mt. Damage Act requires payment for “loss of agricultural production and income, lost land value, and lost value of improvements.”• Lang conceded that he had suffered no loss to agricultural production and income, no lost land value, and no lost value of improvements.• The Montana Supreme Court ruled that the Mt. Damage Act sets forth no element of compensation to landowners for the use of pore space according to industry custom. | <ul style="list-style-type: none">• ND Damage Act requires payment for “lost land value, lost use of and access to the surface owner’s land, and lost value of improvements caused by drilling operations.”• Mossers provided no evidence showing specific damages to their pore space. The court noted, however, that the ND Damage Act is not limited to whether the owner of a surface estate is currently using or planning to use the pore space in the near future.• The N.D. Supreme Court ruled that the ND Damage Act read in conjunction with provisions with the pore space statute, Chapter 47-31, NDCC, the term “land” encompasses “pore space” for purposes of statutory claims involving disposal of saltwater. |
|---|---|

CONCLUSION:

- | | |
|---|---|
| <ul style="list-style-type: none">• The Mt. Surface Damage Act sets forth no element of compensation to landowners for the use of pore space. | <ul style="list-style-type: none">• Although the ND Damage Act contains no element of compensation to landowners for the use of pore space, the Court concluded that the term “land” includes the pore space and therefore damage to the pore space is compensable under the ND Damage Act. |
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3:12 PM Sat Mar 9

dmr.nd.gov







March 11, 2019

IMPACT OF SB 2344

Denbury bears significant financial risk in developing CO₂ EOR projects. Our Cedar Hills South Unit CO₂ EOR project in Bowman county is the first of its kind of any scale in North Dakota. This project inherently carries higher risk than many other projects that we have in our portfolio.

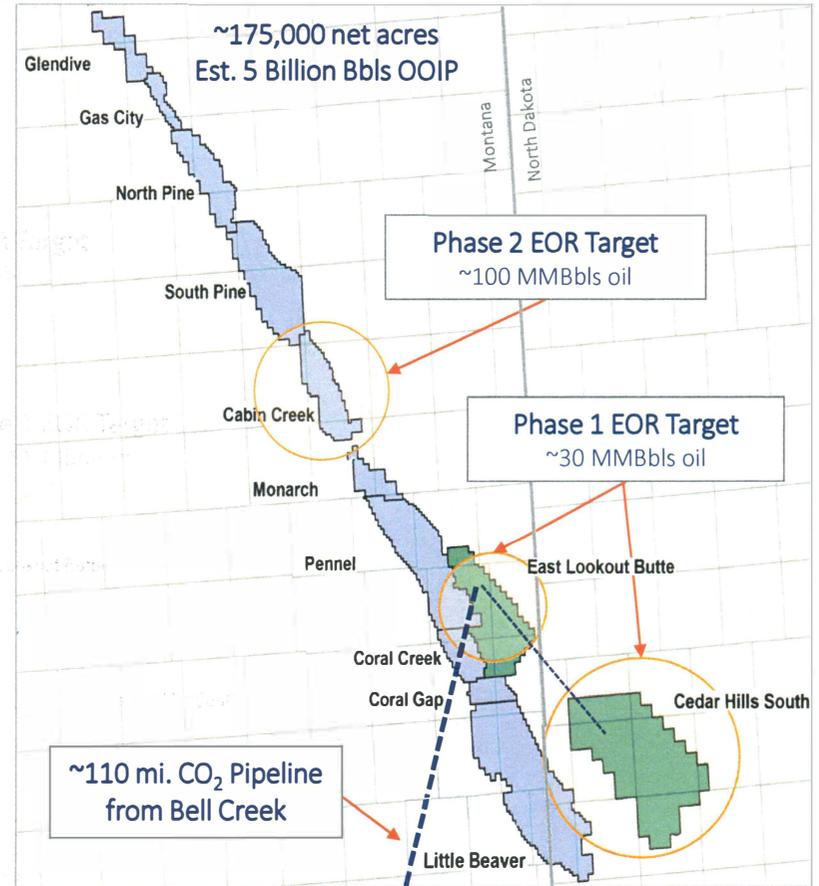
Without preserving the protections for landowners and for CO₂ and produced water reinjection operations necessary for EOR approved within the Senate-passed version of SB 2344, significant legal and cost risk would be created – risk that was not contemplated or reasonably expected in the original project investment decision. This increased risk could either put the entire Cedar Hills South Unit CO₂ project in jeopardy or push the project to a lower priority compared to Denbury's other investment opportunities.

The State of North Dakota has done a tremendous job in working to advance secondary and tertiary oil recovery projects in the state. It would be highly unfortunate if those efforts were derailed by failing to clarify the statute to meet its original intent.

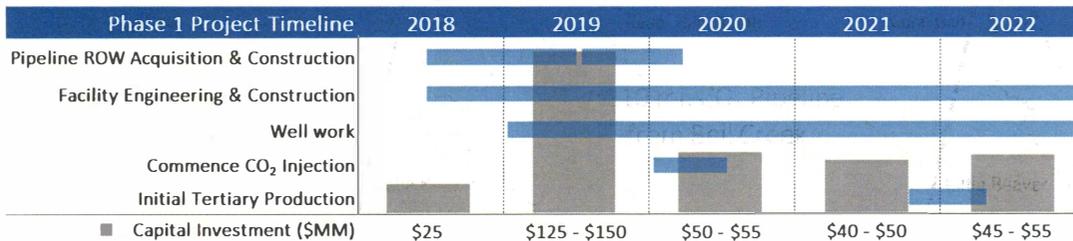
EOR Potential >400 MMBBL at Cedar Creek Anticline

Planned Development Summary

- Phase 1 – Red River formation development at East Lookout Butte and Cedar Hills South
 - Targets ~30 MMBbls of recoverable oil; first tertiary production expected late 2021/early 2022
 - Excluding CO₂ pipeline, ~\$100 MM development capital to initial tertiary production; ~\$400 MM total capital over 15-year period
 - Requires \$150 MM CO₂ pipeline that will service all future CCA EOR development
 - Pipeline cost represents <\$0.50/Bbl across total CCA EOR potential
 - Expect to internally fund development using available cash flow, will also evaluate external capital sources for pipeline
- Phase 2 - Cabin Creek development in Interlake, Stony Mountain and Red River formations
 - Targets ~100 MMBbls of recoverable oil
 - Development estimated to begin in 2022; fully funded from Phase 1 cash flow
 - Estimated total capital of \$500 – \$600 MM over multiple decades
- Future Phases – Remainder of CCA
 - > 300 MMBbl EOR potential in multiple formations



Note: See "Note" on slide 10 related to the forward-looking information included on this slide.



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PROPOSED AMENDMENTS TO ENGROSSED SENATE BILL NO. 2344

Page 1, line 2, after "space" insert "and contract obligations"

Page 2, line 19, replace the underscored comma with an underscored semicolon

Page 2, line 20, replace the underscored comma with an underscored semicolon

Page 2, line 21, replace the third underscored comma with " ; disposal operations; "

Page 3, after line 11, insert:

"4. This chapter may not be construed to alter, amend, repeal, or modify the law concerning title to pore space under section 47-31-03."

Page 4, line 10, after "**minerals**" insert "**- Contracts**"

Page 4, line 15, after the underscored period insert "This section and chapter 38-08 may not be construed to impair the obligations in a contract between parties who have entered an agreement for the use of the surface estate for disposal operations."

Renumber accordingly

Troy Coons
Northwest Landowners Association
House Energy and Natural Resources Committee
Statement to subcommittee for SB 2344
March 21, 2019

SB 2344
3.21.19



Good morning, Chairman Keiser and members of the subcommittee, thank you for taking my statement into consideration today. As you know, my name is Troy Coons, and I am the Chairman and an unpaid lobbyist for the Northwest Landowners Association. Although we appreciate the time this subcommittee has taken to work on this bill, Northwest Landowners Association still urges a DO NOT PASS on SB 2344.

Our organization has spoken to numerous attorneys in several different law firms, and in several states, and they have all agreed that this bill is a serious taking of private property rights and will have alarming consequences for landowners. They have also concluded that amendments cannot fix what is wrong with this bill. We have spoken to landowners, both members and non-members, and they agree that the amendments proposed do not address their concerns. Even if existing contracts are carved out, there is nothing to stop a company from simply drilling or converting a new disposal well rather than pay a landowner who has an existing contract. Even if this does not happen, existing contracts will mostly have fixed terms, and no company is going to renew a contract when it can use pore space for free. And even putting all this aside, there is still a massive taking of private property rights from landowners who do not have an existing contract.

We as landowners are not opposed to the storage of gas or to CO2 injection. Almost all of the saltwater disposals in this state are operated through voluntary contracts *with* landowners. As an organization we have always tried to work *with* industry and regulators to address our concerns. Unfortunately, we were not at the table when this bill was drafted, and we are opposed to this unprecedented taking of private property rights. We remain committed to working cooperatively with industry, and our invitation to sit down and address the concerns raised by this bill is an open offer. But this bill remains offensive to what we stand for, and we urge a do not pass on SB 2344, regardless of any proposed amendments.

Sincerely,

A handwritten signature in black ink, appearing to be "Troy Coons", written in a cursive style.

Troy Coons, Chairman
Northwest Landowners Association

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3.21.19

19.1141.02003

FIRST ENGROSSMENT

Sixty-sixth
Legislative Assembly
of North Dakota

ENGROSSED SENATE BILL NO. 2344

Introduced by

Senators Unruh, Cook, Schaible

Representatives Kempenich, Porter

1 A BILL for an Act to create and enact section 47-31-09 of the North Dakota Century Code,
2 relating to injection or migration of substances into pore space and contract obligations; and to
3 amend and reenact sections 38-08-25, 38-11.1-01, and 38-11.1-03 of the North Dakota Century
4 Code, relating to pore space and oil and gas production.

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

6 **SECTION 1. AMENDMENT.** Section 38-08-25 of the North Dakota Century Code is
7 amended and reenacted as follows:

8 **38-08-25. Hydraulic fracturing - Temporary storage of natural gas - Use of carbon**
9 **dioxide - Designated as acceptable recovery ~~process~~processes.**

- 10 1. Notwithstanding any other provision of law, the legislative assembly designates
11 hydraulic fracturing, a mechanical method of increasing the permeability of rock to
12 increase the amount of oil and gas produced from the ~~rock, an~~ the temporary
13 underground storage of natural gas; and the use of carbon dioxide for enhanced
14 recovery of oil, gas, and other minerals acceptable recovery ~~process~~processes in this
15 state.
- 16 2. It is a valid exercise of the state's police powers to discourage the flaring of natural
17 gas without hindering the continued exploration and production of oil and gas
18 resources in the state. The temporary underground storage of natural gas is in the
19 public interest because underground storage promotes conservation of natural gas.
- 20 3. It is in the public interest to promote the use of carbon dioxide to benefit the state and
21 the global environment by reducing greenhouse gas emissions, to help ensure the
22 viability of the state's coal and power industries, and to benefit the state economy.
23 Carbon dioxide is a potentially valuable commodity, and increasing its availability is

1 important for commercial, industrial, or other uses, including enhanced recovery of oil,
2 gas, and other minerals.

3 4. It is in the public interest to encourage and authorize cycling, recycling, pressure
4 maintenance, secondary recovery operations, and enhanced recovery operations
5 utilizing carbon dioxide for the greatest possible economic recovery of oil and gas.

6 5. It is in the public interest a person conducting operations authorized by the
7 commission under this chapter to use as much of a subsurface geologic formation as
8 reasonably necessary to allow for the temporary storage of natural gas, unit
9 operations for enhanced oil recovery, utilization of carbon dioxide for enhanced
10 recovery of oil, gas, and other minerals, disposal operations, or any other operation
11 authorized by this chapter.

12 6. Notwithstanding any other provision of law, a person conducting operations for
13 temporary storage of natural gas, unit operations for enhanced oil recovery, utilization
14 of carbon dioxide for enhanced recovery of oil, gas, and other minerals, disposal
15 operations, or any other operation authorized by the commission under this chapter
16 may utilize subsurface geologic formations in the state for such operations or any
17 other permissible purpose under this chapter. Any other provision of law may not be
18 construed to entitle the owner of a subsurface geologic formation to prohibit or
19 demand payment for the use of the formation for temporary storage of natural gas;
20 unit operations for enhanced oil recovery; utilization of carbon dioxide for enhanced
21 recovery of oil, gas, and other minerals; disposal operations; or any other operation
22 conducted under this chapter. As used in this section, "subsurface geologic formation"
23 means any cavity or void, whether natural or artificially created, in a subsurface
24 sedimentary stratum.

25 7. The commission may adopt and enforce rules and orders to effectuate the purposes of
26 this section.

27 **SECTION 2. AMENDMENT.** Section 38-11.1-01 of the North Dakota Century Code is
28 amended and reenacted as follows:

29 **38-11.1-01. Legislative findings.**

30 The legislative assembly finds the following:

- 1 1. It is necessary to exercise the police power of the state to protect the public welfare of
2 North Dakota which is largely dependent on agriculture and to protect the economic
3 well-being of individuals engaged in agricultural production, while at the same time
4 preserving and facilitating exploration for, and development of, oil and gas reserves in
5 this state so the greatest possible economic recovery of oil and gas might be obtained
6 including through the utilization of subsurface pore space in accordance with an
7 approved unitization or similar agreement, an oil and gas lease, or as otherwise
8 permitted by law.
- 9 2. Exploration for and development of oil and gas reserves in this state interferes with the
10 use, agricultural or otherwise, of the surface of certain land.
- 11 3. Owners of the surface estate and other persons should be justly compensated for
12 injury to their persons or property and interference with the use of their property
13 occasioned by oil and gas development.
- 14 4. This chapter may not be construed to alter, amend, repeal, or modify the law
15 concerning title to pore space under section 47-31-03.

16 **SECTION 3. AMENDMENT.** Section 38-11.1-03 of the North Dakota Century Code is
17 amended and reenacted as follows:

18 **38-11.1-03. Definitions.**

19 In this chapter, unless the context or subject matter otherwise requires:

- 20 1. "Agricultural production" means the production of any growing grass or crop attached
21 to the surface of the land, whether or not the grass or crop is to be sold commercially,
22 and the production of any farm animals, including farmed elk, whether or not the
23 animals are to be sold commercially.
- 24 2. "Drilling operations" means the drilling of an oil and gas well and the production and
25 completion operations ensuing from the drilling which require entry upon the surface
26 estate and which were commenced after June 30, 1979, and oil and gas geophysical
27 and seismograph exploration activities commenced after June 30, 1983.
- 28 3. "Land" means the solid material of earth, regardless of ingredients, but excludes pore
29 space.
- 30 4. "Mineral developer" means the person who acquires the mineral estate or lease for the
31 purpose of extracting or using the minerals for nonagricultural purposes.

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SB 2344

1 4-5. "Mineral estate" means an estate in or ownership of all or part of the minerals
2 underlying a specified tract of land.

3 5-6. "Minerals" means oil and gas.

4 7. "Pore space" means a cavity or void, naturally or artificially created, in a subsurface
5 sedimentary stratum.

6 6-8. "Surface estate" means an estate in or ownership of the surface of a particular tract of
7 land.

8 7-9. "Surface owner" means any person who holds record title to the surface of the land as
9 an owner estate on which a drilling operation occurs or is conducted.

10 **SECTION 4.** Section 47-31-09 of the North Dakota Century Code is created and enacted as
11 follows:

12 **47-31-09. Injection of substances to facilitate production of oil, gas, or other**
13 **minerals - Contracts.**

14 This chapter may not be construed to limit the rights or dominance of a mineral estate to
15 drill or recomplete a well under chapter 38-08. Injection or migration of substances into pore
16 space for disposal operations, for secondary or tertiary oil recovery operations, or otherwise to
17 facilitate production of oil, gas, or other minerals is not unlawful and, by itself, does not
18 constitute trespass, nuisance, or other tort. This section and chapter 38-08 may not be
19 construed to impair the obligations in a contract between parties who have entered an
20 agreement for the use of the surface estate for disposal operations.

SB 2344
4.10.19
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19.1141.02009

FIRST ENGROSSMENT

Sixty-sixth
Legislative Assembly
of North Dakota

ENGROSSED SENATE BILL NO. 2344

Introduced by

Senators Unruh, Cook, Schaible

Representatives Kempenich, Porter

1 A BILL for an Act to create and enact section 47-31-09 of the North Dakota Century Code,
2 relating to injection or migration of substances into pore space; and to amend and reenact
3 sections 38-08-25, 38-11.1-01, and 38-11.1-03 of the North Dakota Century Code, relating to
4 pore space and oil and gas production.

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

6 **SECTION 1. AMENDMENT.** Section 38-08-25 of the North Dakota Century Code is
7 amended and reenacted as follows:

8 **38-08-25. Hydraulic fracturing - ~~Temporary storage of natural gas - Use of carbon~~**
9 **~~dioxide - Designated as acceptable recovery processprocesses.~~**

- 10 1. Notwithstanding any other provision of law, the legislative assembly designates
11 hydraulic fracturing, a mechanical method of increasing the permeability of rock to
12 increase the amount of oil and gas produced from the ~~rock, an;~~ the temporary
13 underground storage of natural gas; and the use of carbon dioxide for enhanced
14 recovery of oil, gas, and other minerals acceptable recovery processprocesses in this
15 state.
- 16 2. It is a valid exercise of the state's police powers to discourage the flaring of natural
17 gas without hindering the continued exploration and production of oil and gas
18 resources in the state. The temporary underground storage of natural gas is in the
19 public interest because underground storage promotes conservation of natural gas.
- 20 ~~3.~~ It is in the public interest to promote the use of carbon dioxide to benefit the state and
21 the global environment by reducing greenhouse gas emissions, to help ensure the
22 viability of the state's coal and power industries, and to benefit the state economy.
23 Carbon dioxide is a potentially valuable commodity, and increasing its availability is

1 important for commercial, industrial, or other uses, including enhanced recovery of oil,
2 gas, and other minerals.

3 4.3. It is in the public interest to encourage and authorize cycling, recycling, pressure
4 maintenance, secondary recovery operations, and enhanced recovery operations
5 utilizing carbon dioxide for the greatest possible economic recovery of oil and gas.

6 5.4. It is in the public interest a person conducting operations authorized by the
7 commission under this chapter to use as much of a subsurface geologic formation as
8 reasonably necessary to allow for the temporary storage of natural gas, unit
9 operations for enhanced oil recovery, utilization of carbon dioxide for enhanced
10 recovery of oil, gas, and other minerals, disposal operations, or any other operation
11 authorized by this chapter.

12 6.5. Notwithstanding any other provision of law, a person conducting operations for
13 temporary storage of natural gas, unit operations for enhanced oil recovery, utilization
14 of carbon dioxide for enhanced recovery of oil, gas, and other minerals, disposal
15 operations, or any other operation authorized by the commission under this chapter
16 may utilize subsurface geologic formations in the state for such operations or any
17 other permissible purpose under this chapter. Any other provision of law may not be
18 construed to entitle the owner of a subsurface geologic formation to prohibit or
19 demand payment for the use of the formation for temporary storage of natural gas, unit
20 operations for enhanced oil recovery, utilization of carbon dioxide for enhanced
21 recovery of oil, gas, and other minerals, or any other operation conducted under this
22 chapter. As used in this section, "subsurface geologic formation" means any cavity or
23 void, whether natural or artificially created, in a subsurface sedimentary stratum.

24 7.6. The commission may adopt and enforce rules and orders to effectuate the purposes of
25 this section.

26 **SECTION 2. AMENDMENT.** Section 38-11.1-01 of the North Dakota Century Code is
27 amended and reenacted as follows:

28 **38-11.1-01. Legislative findings.**

29 The legislative assembly finds the following:

- 30 1. It is necessary to exercise the police power of the state to protect the public welfare of
31 North Dakota which is largely dependent on agriculture and to protect the economic

1 well-being of individuals engaged in agricultural production, while at the same time
2 preserving and facilitating exploration for, and development of, oil and gas reserves in
3 this state so the greatest possible economic recovery of oil and gas might be obtained
4 including through the utilization of subsurface pore space in accordance with an
5 approved unitization or similar agreement, an oil and gas lease, or as otherwise
6 permitted by law.

7 2. Exploration for and development of oil and gas reserves in this state interferes with the
8 use, agricultural or otherwise, of the surface of certain land.

9 3. Owners of the surface estate and other persons should be justly compensated for
10 injury to their persons or property and interference with the use of their property
11 occasioned by oil and gas development.

12 4. This chapter may not be construed to alter, amend, repeal, or modify the law
13 concerning title to pore space under section 47-31-03.

14 **SECTION 3. AMENDMENT.** Section 38-11.1-03 of the North Dakota Century Code is
15 amended and reenacted as follows:

16 **38-11.1-03. Definitions.**

17 In this chapter, unless the context or subject matter otherwise requires:

18 1. "Agricultural production" means the production of any growing grass or crop attached
19 to the surface of the land, whether or not the grass or crop is to be sold commercially,
20 and the production of any farm animals, including farmed elk, whether or not the
21 animals are to be sold commercially.

22 2. "Drilling operations" means the drilling of an oil and gas well and the production and
23 completion operations ensuing from the drilling which require entry upon the surface
24 estate and which were commenced after June 30, 1979, and oil and gas geophysical
25 and seismograph exploration activities commenced after June 30, 1983.

26 3. "Land" means the solid material of earth, regardless of ingredients, but excludes pore
27 space.

28 4. "Mineral developer" means the person who acquires the mineral estate or lease for the
29 purpose of extracting or using the minerals for nonagricultural purposes.

30 ~~4.5.~~ "Mineral estate" means an estate in or ownership of all or part of the minerals
31 underlying a specified tract of land.

1 ~~5.6.~~ "Minerals" means oil and gas.

2 7. "Pore space" means a cavity or void, naturally or artificially created, in a subsurface
3 sedimentary stratum.

4 ~~6.8.~~ "Surface estate" means an estate in or ownership of the surface of a particular tract of
5 land.

6 ~~7.9.~~ "Surface owner" means any person who holds record title to the surface of the land as
7 an ownerestate on which a drilling operation occurs or is conducted.

8 **SECTION 4.** Section 47-31-09 of the North Dakota Century Code is created and enacted as
9 follows:

10 **47-31-09. Injection of substances to facilitate production of oil, gas, or other**
11 **minerals.**

12 1. This chapter may not be construed to limit the rights or dominance of a mineral estate
13 to drill or recomplete a well under chapter 38-08. Injection or migration of substances
14 into pore space for disposal operations, for secondary or tertiary oil recovery
15 operations, or otherwise to facilitate production of oil, gas, or other minerals is not
16 unlawful and, by itself, does not constitute trespass, nuisance, or other tort.

17 2. This section and chapter 38-08 may not be construed to impair the obligations of any
18 contract for use of the surface estate for disposal operations, provided the contract
19 was entered before the effective date of the unit approved by the commission pursuant
20 to sections 38-08-09 through 38-08-09.17, and provided the disposal well is located
21 within the unit area of the approved unit.

22 3. This section and chapter 38-08 may not be construed to allow the operator of a
23 disposal well where the contract has expired after the effective date of the unit
24 approved by the commission pursuant to sections 38-08-09 through 38-08-09.17 to
25 claim the surface owner should not be compensated as if the new contract for the
26 disposal well on which the contract has expired had been entered after the effective
27 date of the approved unit.

28 4. The owner of the surface estate upon which the surface location of a disposal well is
29 located does not lose, and may not be deemed to have lost, a claim for trespass,
30 nuisance, or other tort if the operator of the disposal well commences or continues
31 operations of the disposal well in violation of subsections 2 and 3.

April 8, 2019

SB 2344
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4.10.19

PROPOSED AMENDMENTS TO ENGROSSED SENATE BILL NO. 2344

That the House recede from its amendments as printed on page 1167 of the Senate Journal and page 1330 of the House Journal and that Engrossed Senate Bill No. 2344 be amended as follows:

Page 1, line 8, remove "Temporary storage of natural gas -"

Page 1, line 12, remove "the temporary"

Page 1, line 13, remove "underground storage of natural gas,"

Page 1, line 16, remove "It is a valid exercise of the state's police powers to discourage the flaring of natural"

Page 1, remove lines 17 through 19

Page 1, line 20, remove "3."

Page 2, line 3, replace "4." with "3."

Page 2, line 6, replace "5." with "4."

Page 2, line 8, remove "the temporary storage of natural gas,"

Page 2, line 12, replace "6." with "5."

Page 2, line 12, remove "operations for"

Page 2, line 13, remove "temporary storage of natural gas,"

Page 2, line 19, remove "temporary storage of natural gas,"

Page 2, line 24, replace "7." with "6."

Page 3, line 2, remove "for, and development of, oil and gas reserves in"

Page 3, remove line 3

Page 3, line 4, remove "including"

Page 3, after line 11, insert:

"4. This chapter may not be construed to alter, amend, repeal, or modify the law concerning title to pore space under section 47-31-03."

Page 4, after line 10, insert:

"1."

Page 4, after line 15, insert:

"2. This section and chapter 38-08 may not be construed to impair the obligations of any contract for use of the surface estate for disposal operations, provided the contract was entered before the effective date of the unit approved by the commission pursuant to sections 38-08-09"

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through 38-08-09.17, and provided the disposal well is located within the unit area of the approved unit.

3. This section and chapter 38-08 may not be construed to allow the operator of a disposal well where the contract has expired after the effective date of the unit approved by the commission pursuant to sections 38-08-09 through 38-08-09.17 to claim the surface owner should not be compensated as if the new contract for the disposal well on which the contract has expired had been entered after the effective date of the approved unit.
4. The owner of the surface estate upon which the surface location of a disposal well is located does not lose, and may not be deemed to have lost, a claim for trespass, nuisance, or other tort if the operator of the disposal well commences or continues operations of the disposal well in violation of subsections 2 and 3."

Renumber accordingly

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FIRST ENGROSSMENT

Sixty-sixth
Legislative Assembly
of North Dakota

ENGROSSED SENATE BILL NO. 2344

Introduced by

Senators Unruh, Cook, Schaible

Representatives Kempenich, Porter

1 A BILL for an Act to create and enact section 47-31-09 of the North Dakota Century Code,
2 relating to injection or migration of substances into pore space; and to amend and reenact
3 sections 38-08-25, 38-11.1-01, and 38-11.1-03 of the North Dakota Century Code, relating to
4 pore space and oil and gas production.

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

6 **SECTION 1. AMENDMENT.** Section 38-08-25 of the North Dakota Century Code is
7 amended and reenacted as follows:

8 **38-08-25. Hydraulic fracturing - Temporary storage of natural gas - Use of carbon**
9 **dioxide - Designated as acceptable recovery processprocesses.**

10 1. Notwithstanding any other provision of law, the legislative assembly designates
11 hydraulic fracturing, a mechanical method of increasing the permeability of rock to
12 increase the amount of oil and gas produced from the ~~rock, an;~~ the temporary
13 underground storage of natural gas; and the use of carbon dioxide for enhanced
14 recovery of oil, gas, and other minerals acceptable recovery ~~processprocesses~~ in this
15 state.

16 2. ~~It is a valid exercise of the state's police powers to discourage the flaring of natural~~
17 ~~gas without hindering the continued exploration and production of oil and gas~~
18 ~~resources in the state. The temporary underground storage of natural gas is in the~~
19 ~~public interest because underground storage promotes conservation of natural gas.~~

20 ~~3. It is in the public interest to promote the use of carbon dioxide to benefit the state and~~
21 ~~the global environment by reducing greenhouse gas emissions,~~ to help ensure the
22 viability of the state's coal and power industries, and to benefit the state economy.
23 Carbon dioxide is a potentially valuable commodity, and increasing its availability is

1 important for commercial, industrial, or other uses, including enhanced recovery of oil,
2 gas, and other minerals.

3 4.3. It is in the public interest to encourage and authorize cycling, recycling, pressure
4 maintenance, secondary recovery operations, and enhanced recovery operations
5 utilizing carbon dioxide for the greatest possible economic recovery of oil and gas.

6 5.4. It is in the public interest for a person conducting operations authorized by the
7 commission under this chapter to use as much of a subsurface geologic formation as
8 reasonably necessary to allow for the temporary storage of natural gas, unit
9 operations for enhanced oil recovery, utilization of carbon dioxide for enhanced
10 recovery of oil, gas, and other minerals, disposal operations, or any other operation
11 authorized by this chapter.

12 6.5. Notwithstanding any other provision of law, a person conducting operations for
13 temporary storage of natural gas, unit operations for enhanced oil recovery, utilization
14 of carbon dioxide for enhanced recovery of oil, gas, and other minerals, disposal
15 operations, or any other operation authorized by the commission under this chapter
16 may utilize subsurface geologic formations in the state for such operations or any
17 other permissible purpose under this chapter. Any other provision of law may not be
18 construed to entitle the owner of a subsurface geologic formation to prohibit or
19 demand payment for the use of the subsurface geologic formation for temporary
20 storage of natural gas, unit operations for enhanced oil recovery, utilization of carbon
21 dioxide for enhanced recovery of oil, gas, and other minerals, or any other operation
22 conducted under this chapter. As used in this section, "subsurface geologic formation"
23 means any cavity or void, whether natural or artificially created, in a subsurface
24 sedimentary stratum.

25 7.6. The commission may adopt and enforce rules and orders to effectuate the purposes of
26 this section.

27 **SECTION 2. AMENDMENT.** Section 38-11.1-01 of the North Dakota Century Code is
28 amended and reenacted as follows:

29 **38-11.1-01. Legislative findings.**

30 The legislative assembly finds the following:

- 1 1. It is ~~necessary to exercise the police power of~~ incumbent on the state to protect the
2 public welfare of North Dakota which is largely dependent on agriculture and to protect
3 the economic well-being of individuals engaged in agricultural production, while at the
4 same time preserving and facilitating exploration for, and development of, oil and gas
5 reserves in this state so the greatest possible economic recovery of oil and gas might
6 be obtained including through the utilization of subsurface pore space in accordance
7 with an approved unitization or similar agreement, an oil and gas lease, or as
8 otherwise permitted by law.
- 9 2. Exploration for and development of oil and gas reserves in this state interferes with the
10 use, agricultural or otherwise, of the surface of certain land.
- 11 3. Owners of the surface estate and other persons should be justly compensated for
12 injury to their persons or property and interference with the use of their property
13 occasioned by oil and gas development.
- 14 4. This chapter may not be construed to alter, amend, repeal, or modify the law
15 concerning title to pore space under section 47-31-03.

16 **SECTION 3. AMENDMENT.** Section 38-11.1-03 of the North Dakota Century Code is
17 amended and reenacted as follows:

18 **38-11.1-03. Definitions.**

19 In this chapter, unless the context or subject matter otherwise requires:

- 20 1. "Agricultural production" means the production of any growing grass or crop attached
21 to the surface of the land, whether or not the grass or crop is to be sold commercially,
22 and the production of any farm animals, including farmed elk, whether or not the
23 animals are to be sold commercially.
- 24 2. "Drilling operations" means the drilling of an oil and gas well and the production and
25 completion operations ensuing from the drilling which require entry upon the surface
26 estate and which were commenced after June 30, 1979, and oil and gas geophysical
27 and seismograph exploration activities commenced after June 30, 1983.
- 28 3. "Land" means the solid material of earth, regardless of ingredients, but excludes pore
29 space.
- 30 4. "Mineral developer" means the person who acquires the mineral estate or lease for the
31 purpose of extracting or using the minerals for nonagricultural purposes.

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1 4.5. "Mineral estate" means an estate in or ownership of all or part of the minerals
2 underlying a specified tract of land.

3 5.6. "Minerals" means oil and gas.

4 7. "Pore space" means a cavity or void, naturally or artificially created, in a subsurface
5 sedimentary stratum.

6 6.8. "Surface estate" means an estate in or ownership of the surface of a particular tract of
7 land.

8 7.9. "Surface owner" means any person who holds record title to the surface of the land as
9 an owner estate on which a drilling operation occurs or is conducted.

10 **SECTION 4.** Section 47-31-09 of the North Dakota Century Code is created and enacted as
11 follows:

12 **47-31-09. Injection of substances to facilitate production of oil, gas, or other**
13 **minerals.**

14 1. This chapter may not be construed to limit the rights or dominance of a mineral estate
15 to drill or recomplete a well under chapter 38-08. Injection or migration of substances
16 into pore space for disposal operations, for secondary or tertiary oil recovery
17 operations, or otherwise to facilitate production of oil, gas, or other minerals is not
18 unlawful and, by itself, does not constitute trespass, nuisance, or other tort.

19 2. This section and chapter 38-08 may not be construed to impair the obligations of any
20 contract for use of the surface estate for disposal operations, provided the contract
21 was entered before the effective date of the unit approved by the commission pursuant
22 to sections 38-08-09 through 38-08-09.17, and provided the disposal well is located
23 within the unit area of the approved unit.

24 3. This section and chapter 38-08 may not be construed to allow the operator of a
25 disposal well where the contract has expired after the effective date of the unit
26 approved by the commission pursuant to sections 38-08-09 through 38-08-09.17 to
27 claim the surface owner should not be compensated as if the new contract for the
28 disposal well on which the contract has expired had been entered after the effective
29 date of the approved unit.

30 4. The owner of the surface estate upon which the surface location of a disposal well is
31 located does not lose, and may not be deemed to have lost, a claim for trespass,

- 1 nuisance, or other tort if the operator of the disposal well commences or continues
- 2 operations of the disposal well in violation of subsections 2 and 3.

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Keiser, George J.

From: Derrick Braaten <derrick@braatenlawfirm.com>
Sent: Thursday, April 11, 2019 7:49 AM
To: Keiser, George J.
Subject: SB 2344 Amendment Explanation

CAUTION: This email originated from an outside source. Do not click links or open attachments unless you know they are safe.

Representative Keiser:

I'm providing a short reference to the location of the policy language that was removed from this bill, and some additional explanation of the reason or this amendment.

Present location of removed policy language

With respect to the amendment to the policy language in Section 2, the reason for removing some of the language that was there previously is that it is already covered in NDCC 38-08 (Control of Oil and Gas Resources), and the concern I raised with Rep. Mitskog (who originally proposed this amendment) is that it muddied the waters by having it in NDCC 38-11.1. The regulation of oil and gas development is covered in NDCC 38-08, and that Chapter begins with this policy statement:

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.

Additional explanation

NDCC 38-11.1 is focused on providing compensation to surface owners, and the policy statement there is as follows:

38-11.1-01. Legislative findings. The legislative assembly finds the following: 1. It is necessary to exercise the police power of the state to protect the public welfare of North Dakota which is largely dependent on agriculture and to protect the economic well-being of individuals engaged in agricultural production. 2. Exploration for and development of oil and gas reserves in this state interferes with the use, agricultural or otherwise, of the surface of certain land. 3. Owners of the surface estate and other persons should be justly compensated for injury to their persons or property and interference with the use of their property occasioned by oil and gas development.

38-11.1-02. Purpose and interpretation. It is the purpose of this chapter to provide the maximum amount of constitutionally permissible protection to surface owners and other persons from the undesirable effects of development of minerals. This chapter is to be interpreted in light of the legislative intent expressed herein. Sections 38-11.1-04 and 38-11.1-04.1 must be interpreted to benefit surface owners, regardless of whether the mineral estate was separated from the surface estate and regardless of who executed the document which gave the mineral developer the right to conduct drilling operations on the land. Sections 38-11.1-06 through 38-11.1-10 must be interpreted to benefit all persons.

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While it made sense to include a statement to explain the changes regarding pore space and its applicability, I had concerns about including the more general policy language that was more appropriate to NDCC 38-08 in NDCC 38-11.1 because it could have created unintended implications for courts attempting to construe and interpret 38-11.1 on issues completely unrelated to pore space use.

Lawrence Bender, the attorney for the Petroleum Council working on this bill, worked out this language change with me and we were both in agreement that this was acceptable and still accomplished his goal. If you'd like to discuss it with him his email is lbender@fredlaw.com and phone is 701.221.8700. I am happy to discuss if you would like as well, and my cell is 701-400-0162.

Sincerely,

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