

# OWNERSHIP AND UTILIZATION OF SUBSURFACE PORE SPACES IN NORTH DAKOTA: A COMMENT ON RECENT LEGAL DEVELOPMENTS

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## I. Background

Typically, landowners in North Dakota own the surface, subsurface formations, pore spaces, and everything lying underneath their land, including oil and gas resources or minerals that may be found in such formations. When a landowner grants an oil and gas lease, the lessee receives a mineral estate the right to find and produce the oil and gas specified under the lease as a determinable interest. In “split estate” situations, there are questions about whether the pore spaces (typically beneath the formations that hold the oil and gas or minerals in place) remain with the holder of the mineral estate or the surface owner. These questions also become more intriguing considering that a mineral lessee has, among other things, the implied right to reasonable use of the surface of the land in the process of finding and producing the oil and gas resources pursuant to its lease.

Under North Dakota law, “pore space” refers to a cavity or void, whether natural or artificially created, in a subsurface sedimentary stratum.<sup>1</sup> Furthermore, the title to such pore spaces in all strata underlying the surface of lands and waters is vested in the owner of the overlying surface estate.<sup>2</sup> Thus, it is opined that the conveyance of a mineral estate would ordinarily not include the conveyance of pore space ownership rights. However, it may be argued that a mineral estate owner or lessee has an implied right to reasonably use such pore spaces that otherwise remain with the ownership of the overlaying land. That implied right of reasonable use of the land is generally subject to (1) the notion that a mineral owner or lessee exercising the implied easement for surface use must do so with due regard for the interests of the surface landowner, and (2) the use of the surface of the land by the mineral estate owner must be exclusively to obtain the oil and gas or minerals under the land following a lease and permitted activity.

So, what are pore spaces typically used for? And why is it essential to carefully consider the ownership and potential for utilization of these subsurface spaces in North Dakota or any other jurisdiction that adopts similar split estate principles between landowners and mineral interest holders? In the oil and gas industry context, pore spaces could be used as part of disposal well operations. It is noted that disposing of fluid wastes through injection wells into the subsurface strata is a major aspect of production operations, and salt water produced as a result is typically transported to disposal wells and injected into the subsurface areas. Another related use of pore spaces is during enhanced oil recovery or tertiary oil production operations. Such activities by a mineral estate owner or lessee oil company would fall under operations necessary for the reasonable use of pore space even though the subsurface strata are ordinarily part of a surface estate belonging to the landowner.

A potential use for pore spaces is for carbon sequestration, which generally refers to the process of capturing carbon dioxide (CO<sub>2</sub>) from major sources such as industrial sites that burn

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<sup>1</sup> N.D. Cent. Code §§ 38-11.1-03(7), 47-31-02.

<sup>2</sup> *Id.* § 47-31-03.

carbon-intensive fuels and storing the CO<sub>2</sub> in depleted oil and gas reservoirs, deep saline formations, or coal beds.<sup>3</sup> North Dakota's Project Tundra, built around the Milton R. Young Coal Plant, is one of the world's largest CO<sub>2</sub> sequestration facilities designed to use pore spaces to store captured CO<sub>2</sub>.<sup>4</sup> In January 2022, the North Dakota Industrial Commission (NDIC) approved a Class VI injection well permit, allowing the Minnkota Power Cooperative to safely and permanently store about four million metric tons of CO<sub>2</sub> captured annually from the coal-based power plant. This flagship project is a notable example of developing technology-based approaches for decarbonization, a topic that is increasingly becoming essential in the United States and globally.<sup>5</sup> North Dakota is one of only two states that has received approval from the U.S. Environmental Protection Agency to regulate the geologic storage of CO<sub>2</sub>. This is the second Class VI injection well permit issued in the state as of January 2022. A more recent option for the utilization of pore space is the disposal of technologically enhanced naturally occurring radioactive materials (TENORM).<sup>6</sup> TENORM is a byproduct of oil and gas drilling materials. In 2021, North Dakota approved a slurry injection well that handles the disposal of these radioactive wastes.

## II. Recent Legislative Actions and Court Decision

Given the highlighted uses and benefits accruable to owners of underground pore spaces, as well as the plausibility of existing or future mineral estate holders seeking reasonable use of such subsurface strata, it is worth discussing the recent decision of the North Dakota Supreme Court in *Northwest Landowners Ass'n v. State*<sup>7</sup> and the legislative actions that were the main reason for the action that led to the decision. In 2019, the North Dakota Legislative Assembly enacted SB 2344 to clarify ownership and use of pore spaces and essentially authorize mineral estate owners and lessees to utilize pore spaces in furtherance of their "dominant" mineral estate and production operations without compensation to the surface owner. Further, the law provides that even though the pore spaces are held by the surface owners, it is not "unlawful and, by itself, does not constitute trespass, nuisance, or other tort" if an oil and gas operator or mineral estate owner carries out drilling and well completion operations, or injection or migration of substances into pore space for disposal operations, secondary or tertiary oil recovery operations, or otherwise to facilitate the production of oil, gas, or other minerals.<sup>8</sup>

While the law provides that

[i]t is in the public interest for a person conducting [authorized] operations . . . to use as much of a subsurface geologic formation [(i.e., pore spaces)] as reasonably necessary to allow for unit operations for enhanced oil recovery, utilization of carbon dioxide for enhanced recovery of oil, gas, and other minerals, [or] disposal operations . . . ,<sup>9</sup>

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<sup>3</sup> See Resources for the Future, *Carbon Capture and Storage 101* (May 2020).

<sup>4</sup> See Project Tundra, *Minnkota Receives CO<sub>2</sub> Storage Permit from NDIC* (Jan. 21, 2022).

<sup>5</sup> See Tade Oyewunmi, *Decarbonising Gas and Electricity Systems: An Outlook on Power-to-Gas and Other Technology-Based Solutions*, in *DECARBONISATION AND THE ENERGY INDUSTRY: LAW, POLICY AND REGULATION IN LOW-CARBON ENERGY MARKETS* 97–105 (Tade Oyewunmi et al. eds., Hart Publishing, 2020) (Part VI on "Removing, Storing and Utilizing CO<sub>2</sub>").

<sup>6</sup> See N.D. Admin. Code 33-20-01.1-03.

<sup>7</sup> 2022 ND 150, 978 N.W.2d 679.

<sup>8</sup> N.D. Cent. Code § 47-31-09.

<sup>9</sup> *Id.* § 38-08-25(4).

it also effectively bars landowners from prohibiting and demanding compensation from operators carrying out such activities and utilizing their pore spaces.<sup>10</sup>

Consequently, the Northwest Landowners Association (Association) commenced the action to challenge the constitutionality of the highlighted provisions in SB 2344 as enacted. The district court granted the Association's cross-motion for summary judgment and concluded that the SB 2344 provisions are unconstitutional under the state and federal takings clauses. On appeal, the State and Continental Resources, Inc., argued that SB 2344 does not violate the state or federal takings clauses nor constitutes an unconstitutional gift. Among other things, the supreme court notes that North Dakota's constitution provides overlapping and broader protection against government interference with property rights. The state's constitution provides that "[p]rivate property shall not be taken or damaged for public use without just compensation having been first made to, or paid into court for the owner."<sup>11</sup> Such constitutional protections are designed to secure a property owner's right of possession and the factors that render possession valuable. Generally, the fundamental incidents of owning property include the rights to exclude others, alienate freely, use, and quiet possession.

In this case, the Association argues that SB 2344 strips surface owners of their rights to exclude others from pore space, demand compensation for its use, and bring actions in tort to secure these rights.<sup>12</sup> The supreme court opined that the surface owners have demonstrated they have a constitutionally protected property interest in pore space recognized under state law.<sup>13</sup> As a result, surface owners have a right to compensation for using their pore space for disposal and storage operations. The court held that although an oil and gas operator has the right or reasonable use due to an implied easement and consequently could use surface and pore spaces when necessary, the operator must compensate the surface owner accordingly.<sup>14</sup> To the extent that SB 2344 prohibits the right to compensation for using a surface owner's pore space and eliminates the owner's right to exclude, it removes (i.e., "takes") all rights that make ownership of pore space valuable.

To summarize the court's decision, the following law provisions were held to be unconstitutional. First, the prohibition of surface owners from demanding payment from operators utilizing subsurface geologic formations conflicted with the state and federal takings clauses.<sup>15</sup> Second, the law's definition of "land," which excludes pore space, was found to be unconstitutional as it would result in the elimination of surface owner rights to compensation for the "use of or lost value" of their pore spaces.<sup>16</sup> Third, the court held unconstitutional the provision stating that "[i]njection or migration of substances into pore space for disposal operations . . . by itself, does not constitute trespass, nuisance, or other tort."<sup>17</sup> Thus, (1) surface owners are entitled to compensation for the use of their pore space, (2) pore space has value, and (3) injection or migration into a pore space may be subject to a claim of trespass or nuisance or other applicable tort claims by the landowner. Additionally, the implied easement does not authorize the operator to dispose of waste generated from outside the spacing unit, as this would fall outside the bounds of "reasonably necessary."

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<sup>10</sup> *Id.* § 38-08-25(5).

<sup>11</sup> N.D. Const. art. I, § 16.

<sup>12</sup> *Nw. Landowners*, 2022 ND 150, ¶ 20.

<sup>13</sup> *Id.* ¶ 22; *see also* *Mosser v. Denbury Res., Inc.*, 2017 ND 169, ¶ 13, 898 N.W.2d 406.

<sup>14</sup> *Nw. Landowners*, 2022 ND 150, ¶ 27.

<sup>15</sup> *Id.* ¶ 30.

<sup>16</sup> *Id.* ¶ 35.

<sup>17</sup> *Id.* (quoting N.D. Cent. Code § 47-31-09(1)).

### **III. Implications**

The implications of this decision against the backdrop of growing interest in technology-based solutions for decarbonization, such as carbon capture and storage, or facilitating efficiency in oil and gas operations, such as closed-loop enhanced oil recovery, is worth highlighting. Going forward, landowners and oil and gas lessees would be more mindful of the potential implications when reviewing contractual obligations that govern the rights to use, exclude, alienate, and quietly possess subsurface pore spaces in areas that are subject to the split estate between mineral and surface owners. The typical landowner would probably have existing or future leases for agricultural uses or have an implied or express easement burdening the land in one form or the other. Such easements may include rights-of-way for pipelines or underground gas gathering lines and storage sites. Nevertheless, an oil and gas lessee may still rely on existing rules that permit the use of such subsurface formations whenever it is reasonably necessary, subject to payment of compensation. It is also important to exercise due regard to accommodate the landowner's existing or future use of such subsurface cavity or void belonging to the surface estate.