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## Subsurface Property Issues in Recent Litigation

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## I. INTRODUCTION

It is a sign of the times that one might dedicate an article like this one to recent litigation in the field of “subsurface property.” References to “subsurface property” in the case law are few and far between before the 1980s. Yet today, several reported cases each year turn on some “subsurface property” issue. Increasing use of the phrase seems to evidence the growing perception that the deep subsurface holds economic value beyond just the mineral substances that are found within it. More and more, the geologic rock structures that contain minerals are seen as independently useful, especially for their storage capacity for purposes unrelated to mineral extraction. Geologic storage capacity is also understood to be finite and, in some places, even scarce.<sup>1</sup> These changing perceptions seem to be exerting a pressure on landowners and leaseholders that compels them to litigate over the use of subsurface geology—in particular the “pore space” within geologic formations—as never before.<sup>2</sup>

Likely lurking behind these evolving perceptions of the value of non-mineral subsurface resources is a technology that has not yet, itself, spawned any reported litigation: carbon dioxide sequestration, or

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<sup>1</sup> See Joseph A. Schremmer, *Pore Space Property*, 2021 UTAH L. REV. 1, 58–61 (2021).

<sup>2</sup> Pore space refers to void spaces within subsurface rock formations that give sedimentary rocks their characteristic porosity. *Id.* at 2.

“storage.” Carbon sequestration is the injection of supercritical carbon dioxide (usually captured from the emissions of a powerplant or other industrial source) into the pore space of deep subsurface strata for permanent retention.<sup>3</sup> Landowners in some states appear eager to preserve their underlying pore space for sale or lease to a sequestration project, or for other purposes perhaps not yet conceived. The possibility of a better deal for their pore space in the future is a powerful incentive for landowners to take issue with a mineral lessee’s occupying the pore space with low-value produced water—especially when the landowner is not compensated for this use.

Regardless of what is motivating the growth in “subsurface property” disputes, there have been several notable cases of late. The issues addressed in the reported opinions tend to coalesce around a handful of related subtopics. Each of these subtopics has also been, to varying degrees, the subject of prior academic scholarship. The first of these subtopics concerns title to various elements of the earth’s subsurface. This is the “who owns the pore space” question but applied more broadly to things like artificially created caverns. Two recent cases on this important issue are taken up in Part II. The second set of issues follows logically from the first: whoever owns title to subsurface resources, what is the scope of the title holder’s property rights and what duties does the holder owe to others with rights in the same resource? Issues about the scope of subsurface property rights often arise in conflicts between neighboring owners over their use of a common reservoir. The most important cases in recent years, however, raise the scope question in the context of regulatory takings challenges to state actions limiting the use of subsurface property. Two such cases are treated in Part III.

The next two sets of issues are closely related. Because title to pore space generally rests with the surface estate (more on this, *infra*, in Part II), surface estate owners increasingly are demanding compensation use and occupation of their pore space by mineral developers under state surface damage acts. The extent to which a landowner enjoys any such remedy for use of its pore space depends on the breadth of the right granted under the relevant state’s statute. Courts in different states have interpreted their states’ surface damage acts for this purpose, as discussed fully in Part IV. The final set of issues pertains to the remedies available to aggrieved subsurface property owners. Part V discusses recent decisions about the remedies for claims brought under a surface damage act, as well as for common law claims of subsurface nuisance and trespass.

Not discussed at any length here are recent decisions in two ongoing class action cases involving claims for compensation based on the unconsented use of pore space for natural gas storage. Both decisions relate to motions for class certification. While both opinions prove interesting and instructive regarding the requirements for class certification, neither deals with the legal merits of the plaintiffs’ claims for compensation for storage of natural gas in their pore space. Consequently,

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<sup>3</sup> INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, WORKING GROUP III CONTRIBUTION TO THE SIXTH ASSESSMENT REPORT OF THE INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE at 11-35 (2022), [https://report.ipcc.ch/ar6wg3/pdf/IPCC\\_AR6\\_WGIII\\_FinalDraft\\_FullReport.pdf](https://report.ipcc.ch/ar6wg3/pdf/IPCC_AR6_WGIII_FinalDraft_FullReport.pdf).

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