



OFFICE OF THE ATTORNEY GENERAL
STATE OF OKLAHOMA

ATTORNEY GENERAL OPINION
2025-14

The Honorable Dave Rader
Oklahoma State Senate, District 39
2300 N. Lincoln Blvd., Room 233
Oklahoma City, OK 73105

October 31, 2025

Dear Senator Rader:

This office has received your request for an Attorney General Opinion in which you ask, in effect, the following questions:

- 1. Did the Osage Allotment Act of 1906, ch. 3572, 34 Stat. 539, transfer title to pore space to individual members of the Osage Nation as part of the surface estate, or is pore space part of the “oil, gas, coal, or other minerals” held in trust by the United States for the benefit of the Osage Nation?**
- 2. Is title to pore space in Osage County currently governed by Oklahoma law or Osage tribal law?**

I.
SUMMARY

Pore space is “any interstitial space not occupied by soil or rock, within the solid material of the earth, and any cavity, hole, hollow or void space within the solid material of the earth.” 60 O.S.2021, § 6(B)(1). Pore space can be used in carbon capture and storage operations, which “remove[] carbon dioxide (CO₂) from emission sources and store[] it in [the] pore space far beneath the land’s surface,” to store water, and for other purposes.¹ This Opinion considers whether the right to use and lease pore space belongs to the surface estate or the mineral estate after the pore space is depleted of any oil, gas, or other substances that are naturally present within the pore space.

When mineral rights are held in trust by the United States for the benefit of an Indian tribe, we must apply “the general rule that statutes passed for the benefit of dependent Indian tribes . . . are

¹ Peggy Kirk Hall, *Carbon Capture and Storage: Legal Issues with “Pore Space,”* OHIO STATE UNIV. COLL. OF FOOD, AGRIC., AND ENV’T SCI.: FARM OFFICE (Oct. 29, 2024), <https://farmoffice.osu.edu/blog/carbon-capture-and-storage-legal-issues-pore-space>.

to be liberally construed [with] doubtful expressions being resolved in favor of the Indians.” *Alaska Pac. Fisheries v. United States*, 248 U.S. 78, 89 (1918). While conflicting state law will be preempted by federal law, *Millsap v. Andrus*, 717 F.2d 1326, 1329 (10th Cir. 1983),² federal courts typically look to state law to determine property issues. *United States v. Hess*, 194 F.3d 1164, 1173 (10th Cir. 1999). Under Oklahoma law, pore space “is [the] property of the person or persons holding title to the land surface above it.” 60 O.S.2021, § 6(B)(2). But the surface estate’s interest in pore space does not include “rights associated with . . . oil or gas.”³ *Id.* § 6(B)(3).

With these principles in mind, you ask whether the Osage Allotment Act (“Osage Act”) transferred ownership of pore space in Osage County⁴ from the United States to individual members of the Osage Nation. As explained in Section III(A), the answer is yes.

You also ask whether ownership of pore space in Osage County is now governed by Oklahoma law or by a recent act of the Osage Nation Congress that purports to make pore space part of the mineral estate. *Compare* 60 O.S.2021, § 6, *with* 22 ONC § 2-104 (2024). As explained in Section III(B), Oklahoma law governs the question of whether pore space is a part of the mineral or surface estate.

II. BACKGROUND

The analysis of these issues must start with the treaties between the Osage Nation and the United States, along with Congressional acts that divided land ownership into a mineral estate held in trust by the United States for the benefit of the tribe and a surface estate granted to individual Osage allottees. *See, e.g.*, Act of June 28, 1906, ch. 3572, 34 Stat. 539 (“Osage Act”); *McGirt v. Oklahoma*, 591 U.S. 894, 932 (2020) (“[e]ach tribe’s treaties must be considered on their own terms”). The Osage Act’s mineral estate comprises “oil, gas, coal, or other minerals covered by the lands,” while the surface estate holds the right to use the land for “any other purpose not otherwise specifically provided for” in that Act. Osage Act, §§ 3, 7. As explained below, the broad grant of control to the surface owners presumptively includes the right to use or lease pore space, which Congress did not include in the Osage mineral estate.

In 1872, Congress formally allowed the Osage Nation to occupy Osage County. Act of June 5, 1872, ch. 310, 17 Stat. 228. Then, on May 2, 1890, Congress made Osage County part of the newly

² *Millsap* rejected a competing Oklahoma state doctrine in applying the federal requirement to liberally construe the Osage Act in favor of the Osage Nation. *Id.*

³ While the general legal presumptions described above apply, determining who owns any specific area of pore space is a fact-specific inquiry, beyond the scope of this Opinion. Ownership of specific areas of pore space is, in most cases, dictated by the relevant property deeds. *Millsap*, 717 F.2d at 1328; *accord* Bureau of Land Mgmt., Instruction Memorandum 2022-041 (June 8, 2022), *available at* <https://www.blm.gov/policy/im-2022-041> (“In determining pore-space ownership, title documents should be reviewed.”). General real property law principles, including adverse possession or easement by prescription, may also be relevant in resolving any dispute over specific pore space rights. *See Ellis v. Ark. La. Gas Co.*, 609 F.2d 436 (10th Cir. 1979).

⁴ For convenience, this Opinion uses “Oklahoma” and “Osage County” to describe the geographic regions comprising modern-day Oklahoma and Osage County, even when describing events occurring before statehood. Similarly, this Opinion uses the term “Osage Nation” to refer to the Osage tribe and its members, even when describing events that predate Congressional recognition of the Osage Nation.

established Oklahoma Territory, separating Osage County from Indian Territory. Act of May 2, 1890, ch. 182, 26 Stat. 6; *Leahy v. Indian Terr. Illuminating Oil Co.*, 1913 OK 559, ¶ 1, 135 P. 416, 417. With Oklahoma’s statehood in 1907, “the Osage reservation was incorporated into the new state as Osage County as provided for in the Oklahoma Enabling Act.” *Osage Nation v. Irby*, 597 F.3d 1117, 1120 (10th Cir. 2010) (citing Act of June 16, 1906, ch. 3335, 34 Stat. 267, §§ 2, 21; OKLA. CONST. art. XVII, § 8).

Only twelve days after the Oklahoma Enabling Act took effect, Congress enacted the Osage Act, which allotted the surface estate in Osage County to the members of the Osage Nation and provided that “oil, gas, coal, or other minerals covered by the lands” would not be alienable by the allottees, but instead “reserved to the use of the tribe.” Osage Act, §§ 2, 3.⁵ And with the allotment of the surface estate, tribal members were granted “the right to manage, control, and dispose of [their] lands the same as any citizen of the United States,” including “the right to use and to lease said lands for farming, grazing, or *any other purpose not otherwise specifically provided for herein.*” *Id.* §§ 2, 7 (emphasis added). Upon satisfying conditions set out in the Osage Act, each allottee was “competent to hold and make any use (except to grant mining leases) of all his lands.” *Choteau v. Burnet*, 283 U.S. 691, 695 (1931).

Recently, the Osage Nation attempted to limit the broad rights granted to surface-estate owners under the Osage Act. Specifically, the Osage Minerals Council passed a Resolution on April 1, 2022, claiming that pore space is part of the mineral estate held by the United States in trust for the tribe. *See* Osage Minerals Council Resolution No. 4-561. Then, at the request of the Minerals Council, the Osage Nation Congress enacted Bill Number ONCA 25-21, which asserts that “[p]ore space in all strata underlying the surface of lands and waters within the Osage Reservation is and always has been an integral part of the Osage Mineral Estate. Title to pore space cannot be and has not been severed from title to the Osage Mineral Estate.” 22 ONC § 2-104 (2024).

This Opinion concludes that the Osage mineral estate does not include pore space. Federal caselaw, federal regulations, and state law all support the conclusion that the Osage Act transferred ownership of pore space from the United States to the individual members of the Osage Nation. Applying these same principles, Oklahoma law governs whether pore space is currently part of the mineral estate or the surface estate. Thus, title 22, section 2-104 of the Osage Nation Code does not divest surface owners in Osage County of the right to use and lease pore space.

III. DISCUSSION

A. The Osage Act Transferred Title to Pore Space from the United States to the Individual Allottees.

“The construction of [land] grants by the United States is a federal, not a state, question and involves the consideration of state questions only in so far as it may be determined as a matter of

⁵ Title to the mineral estate was originally set to transfer to the owners of the surface estate after 25 years, but Congress subsequently extended its reservation of the mineral interests in perpetuity. Act of Oct. 6, 1964, Pub. L. No. 88-632, 78 Stat. 1008.

federal law that the United States has impliedly adopted and assented to a state rule of construction.” *Choctaw & Chickasaw Nations v. Bd. of Cnty. Comm’rs of Love Cnty.*, 361 F.2d 932, 933 (10th Cir. 1966) (cleaned up). “[B]ut whatever incidents or rights attach to the ownership of property conveyed by the government will be determined by the states, subject to the condition that their rules do not impair the efficacy of the grants or the use and enjoyment of the property by the grantee.” *Oneida Indian Nation of N.Y. v. Oneida Cnty.*, 414 U.S. 661, 677 (1974) (quoting *Packer v. Bird*, 137 U.S. 661, 669 (1891)) (emphasis added); accord *United States v. Okla. Gas & Elec. Co.*, 318 U.S. 206, 209-10 (1943) (“It is well settled that a conveyance by the United States of land which it owns beneficially or, as in this case, for the purpose of exercising its guardianship over Indians, is to be construed, in the absence of any contrary indication of intention, according to the law of the State where the land lies.”). Finally, “[i]n interpreting statutory mineral reservations,” we presume that Congress “intended the terms of the reservation to be understood in their ordinary and popular sense.” *BedRoc Ltd., LLC v. United States*, 541 U.S. 176, 184 (2004) (quotation marks omitted); accord *Amoco Prod. Co. v. Southern Ute Indian Tribe*, 526 U.S. 865, 874 (1999).

Here, the question is whether Congress intended to transfer pore space to individual Osage allottees or hold it in trust for the Osage Nation. Two provisions of the Osage Act are particularly relevant to this question. First, the Act reserved “oil, gas, coal, or other minerals” to be held in trust by the United States on behalf of the tribe. See Osage Act, § 3. Second, it transferred all other property rights to allottees, including “the right to use and to lease” allotted lands for “any . . . purpose not otherwise specifically provided” in the Osage Act. *Id.* § 7. That transfer conferred on individual allottees “the right to manage, control, and dispose of [the allottee’s] lands the same as any citizen of the United States.” *Id.* § 2.

Courts have not directly considered whether the Osage Act transferred ownership of pore space to the Osage allottees. Nevertheless, federal and Oklahoma law point to the same conclusion: pore space is not “oil, gas, coal, or other minerals covered by the lands,” but is instead part of the surface estate, particularly given the broad power granted to individual allottees to “use and to lease” the lands for “any . . . purpose not otherwise specifically provided” in the Act. *Id.* §§ 3, 7.

Federal courts have construed the “other minerals” being held in trust for the Osage Nation in a manner that does not encompass empty space. The Tenth Circuit defined “other minerals” as “inorganic substances that can be removed from the soil and used for commercial purposes.” *Millsap*, 717 F.2d at 1329; accord *Watt v. W. Nuclear, Inc.*, 462 U.S. 36, 53 (1983) (interpreting statutory reservation of “all the coal and other minerals” to include “substances that are mineral in character (*i.e.*, that are inorganic), that can be removed from the soil, that can be used for commercial purposes, and that there is no reason to suppose were intended to be included in the surface estate”). But pore space is not a substance at all, nor can it be removed from the soil; pore space is a “void.” 60 O.S.2021, § 6(B)(1). Thus, under the Tenth Circuit’s interpretation of the Osage Act, empty pore space is not within the Act’s reservation of “other minerals.”

This conclusion is further supported by the Tenth Circuit’s more recent decision in *United States v. Osage Wind, LLC*, 871 F.3d 1078 (10th Cir. 2017), which interpreted federal regulations that implement the Osage Act and clarify the nature and extent of the Osage Nation’s rights in the

mineral estate.⁶ In *Osage Wind*, the Tenth Circuit held that “in practice, owners of the surface estate retain *virtually uninhibited use of their lands*.” *Id.* at 1092 (emphasis added). A surface owner holding such expansive property rights does not improperly intrude on the mineral estate by “digging a hole in the ground, displacing rock and soil in the process,” or otherwise “merely encountering or incidentally disrupting mineral materials.” *Id.* at 1091-1092. In fact, surface-estate activities “will not trigger the [Osage Minerals Council’s] right to demand a lease” unless such activities entail the extraction and development of oil and gas, or “more than 5,000 cubic yards of common-variety minerals” in any given year. *Id.* at 1092; *see also* 25 C.F.R. § 211.3. But using pore space does not necessarily entail the extraction and development of oil and gas or other minerals. *See Hall, Carbon Capture and Storage, supra* note 1. Thus, the right to use or lease empty pore space falls within the surface-estate owners’ right to virtually uninhibited use of their land. Any oil or naturally occurring gas in that pore space, however, belongs to the mineral estate, unless separately conveyed. *See* Osage Act, § 3.

Oklahoma law also recognizes that pore space presumptively belongs to the owner of the surface estate. *Ellis*, 450 F. Supp. at 421 (applying Oklahoma law). In *Ellis*, the court noted that the Oklahoma Supreme Court has not directly addressed ownership of pore space. *Id.* But the court recognized that, when dealing with “a closely analogous question” about saltwater disposal wells, the Oklahoma Supreme Court held that the surface owner was entitled to lease underground storage rights. *Id.* (citing *Sunray Oil Co. v. Cortez Oil Co.*, 1941 OK 77, 112 P.2d 792). This rule is built on the “American rule,” which recognizes that “in the absence of language in the severing deed dictating a different construction . . . the cavern is owned by surface owners.” *Id.*⁷ Consistent with that longstanding common-law rule, the Oklahoma Legislature recognized surface owners’ common-law right to pore space by statutory amendment in 2011. *See* 60 O.S.2011, § 6.

Again, under federal law, the “rights attach[ed] to the ownership of property conveyed by the government will be determined by the states” so long as state law does not “impair the efficacy of the grants or the use and enjoyment of the property *by the grantee*.” *Oneida*, 414 U.S. at 677 (emphasis added). Here, Oklahoma law regarding pore space does not impair the right granted to allottees under the Osage Act to use and lease their land for “any . . . purpose not otherwise specifically provided” in the Act. Osage Act, § 7. To the contrary, Oklahoma law unquestionably *supports* the allottees’ rights to use and lease the surface estate, including pore space. And the Osage Act does not disclaim the application of state law. *See generally id.* Thus, federal law dictates that Oklahoma law defines the rights attached to the individual allottees’ ownership of the surface estate under the Osage Act and those broad rights include the right to use and lease pore space.

⁶ These regulations define “minerals” as “hydrocarbons, including oil and gas, coal and lignite of all ranks; geothermal resources; and . . . sand, gravel pumice, cinders, granite, building stone, limestone, clay, silt, or any other energy or non-energy mineral.” 25 C.F.R. § 211.3.

⁷ Of the states that have addressed the issue, the overwhelming majority apply the American rule. *See* Hannah Wiseman, *Defining Pore Space Ownership and Related Issues: A Summary*, Penn State Center for Energy Law and Policy (Dec. 2022), *available at* <http://bit.ly/4h1M9Ft> (observing that Indiana, Kentucky, Michigan, Montana, Nebraska, New York, North Dakota, Oklahoma, Pennsylvania, Texas, Utah, and Wyoming apply the American rule). Alaska is the only state that follows the English rule, which “provides that the mineral owner owns the pore space.” *Id.* at 3.

Finally, because the term “other minerals” unambiguously does not include pore space, the Indian canon of construction does not permit a different conclusion. Under the Indian canon, “statutes passed for the benefit of dependent Indian tribes . . . are to be liberally construed [with] doubtful expression being resolved in favor of the Indians.” *Alaska Pac. Fisheries*, 248 U.S. at 89. But the Indian canon “has force only where a statute is ambiguous,” *El Paso Nat. Gas Co. v. United States*, 632 F.3d 1272, 1278 (D.C. Cir. 2011), and “is not . . . ‘a license to disregard clear expression of . . . congressional intent.’” *South Dakota v. Yankton Sioux Tribe*, 522 U.S. 329, 349 (1998) (quoting *Decoteau v. Dist. Cnty. Ct. for Tenth Jud. Dist.*, 420 U.S. 425, 477 (1975)).⁸ Because pore space is unambiguously not part of the “other minerals” reserved to the tribe, *accord Millsap*, 717 F.2d at 1329, the Indian canon does not override the plain language of the Osage Act.

Based on the foregoing authorities, the Osage Act transferred the right to use and lease pore space in Osage County to individual allottees. Pore space in Osage County presumptively belongs to the owner of the surface estate. But, to be clear, owners of the surface estate, or their predecessors in interest, may have relinquished their rights to use and lease pore space by deed or by operation of general property-law rules, including adverse possession or easement by prescription. *See supra* note 3.

B. Present-Day Transfers of Title to Real Property in Osage County Are Controlled by Oklahoma Law, Not Osage Tribal Law.

The Osage Nation Code asserts that pore space “is and always has been an integral part of the Osage Mineral Estate” and that “[a]ny instrument or arrangement that purports to sever title to pore space from title to the Osage Mineral Estate is void.” 22 ONC § 2-104. But Oklahoma law provides that “until title to the pore space or rights, interests or estates in the pore space are separately transferred, pore space is property of the person or persons holding title to the land surface above it.” 60 O.S.2021, § 6(B)(2). As previously noted, neither state nor tribal law directly controls the disposition of property under the Osage Act; that is a matter of federal law. *Supra* Section III(A). As for transfers of title *subsequent to* the Osage Act, Oklahoma law controls.

In *Montana v. United States*, the Supreme Court held that, as a general rule, “the inherent sovereign powers of an Indian tribe do not extend to the activities of nonmembers of the tribe.” 450 U.S. 544, 565 (1981). But the Court recognized two exceptions to that general rule: (1) “[a] tribe may regulate, through taxation, licensing, or other means, the activities of nonmembers who enter consensual relationships with the tribe or its members, through commercial dealing, contracts, leases, or other arrangements”; and (2) tribes may exercise “civil authority over the conduct of non-Indians on fee lands” when such conduct threatens “the political integrity, the economic security, or the health or welfare of the tribe.” *Id.* at 565–66. Yet, even with those exceptions, the

⁸ Additional caselaw supports this conclusion. *See Thompson v. Cherokee Nation*, 334 F.3d 1075, 1090 n.15 (Fed. Cir. 2003), *aff’d sub nom. Cherokee Nation v. Leavitt*, 541 U.S. 631 (2005) (“Because we conclude that the ‘shall remain available’ language was not ambiguous, we need not address what role, if any, the Indian canon of statutory construction . . . would have here.” (citations omitted)); *Chickasaw Nation v. United States*, 534 U.S. 84, 94 (2001) (declining to apply Indian canon where statute was not “fairly capable of two interpretations”) (citing *Montana v. Blackfeet Tribe*, 471 U.S. 759 (1985)); *Native Vill. of Eklutna v. U.S. Dept. of the Interior*, No. 19-cv-2388-DLF 2021 WL 4306110, at *8 (D.D.C. Sept. 22, 2021) (“And because the statutes at issue are sufficiently clear, there is no need to apply the Indian canon of construction” (citing *El Paso Nat. Gas Co.*, 632 F.3d at 1278)).

Court was careful to note that “[a]fter a State enters the Union, title to the land is governed by state law.” *Id.* at 551; *see also Oklahoma v. Castro-Huerta*, 597 U.S. 629, 636 (2022) (“Since the latter half of the 1800s, the Court has consistently and explicitly held that Indian reservations are ‘part of the surrounding State’ and subject to the State’s jurisdiction ‘except as forbidden by federal law.’” (citation omitted)).

Almost thirty years after *Montana*, the Supreme Court took up the question of “whether land ownership and sale are ‘activities’” that are subject to tribal regulation under the first *Montana* exception. *Plains Commerce Bank v. Long Family Land & Cattle Co.*, 554 U.S. 316, 334 n.1 (2008). In *Plains Commerce Bank*, the Court left no doubt that tribal regulation of ownership or alienation of nonmember fee land is “beyond the tribe’s sovereign power[]” and “runs the risk of subjecting nonmembers to tribal regulatory authority without commensurate consent.” *Id.* at 337. Thus, the Court held that the exceptions to the general rule set forth in *Montana* “do[] not permit Indian tribes to regulate the sale [or ownership] of non-Indian fee land.” *Id.* at 332. The Court emphasized further that “whether or not we have permitted regulation of nonmember activity on non-Indian fee land in a given case, in no case have we found that *Montana* authorized a tribe to regulate the sale [or ownership] of such land.” *Id.* at 334.


Oklahoma law presumptively controls who owns pore space pursuant to transfers of title made after the Osage Act.⁹ Osage tribal law, including title 22, section 2-104 of the Osage Nation Code, does not control title to pore space because tribes lack authority to regulate ownership or alienation of land held by non-Indians. *Plains Com. Bank*, 554 U.S. at 332. Thus, Osage law cannot alter a non-Indian’s title to pore space on fee land, or to otherwise restrict or set aside conveyances authorized by Oklahoma law. Pore space presumptively belongs to the owner of the surface estate unless separately conveyed. *But see supra* note 3.

* * *

⁹ The conclusion that, subsequent to the Osage Act, title to real property in Osage County is controlled by Oklahoma law finds further support in the plain language of that Act. Specifically, the Osage Act guaranteed individual allottees “the right to manage, control, and dispose of [the allottee’s] lands the same as any citizen of the United States.” Osage Act, § 2. And, while not dispositive, the Osage Act provides that the lands “of any deceased member of the Osage tribe shall descend to his or her legal heirs, according to the laws of the Territory of Oklahoma, or of the State in which said reservation may be hereinafter incorporated.” *Id.* § 6.

It is, therefore, the official Opinion of the Attorney General that:

- 1. The Osage Allotment Act of 1906 transferred title to pore space in Osage County from the United States to individual allottees as part of the surface estate. Accordingly, pore space is presumptively a part of the surface estate.**
- 2. Pore space ownership in Osage County is controlled by federal and Oklahoma law, not Osage tribal law.**



AMIE N. ELY
FIRST ASSISTANT ATTORNEY GENERAL¹⁰



SAMUEL BLACK
ASSISTANT SOLICITOR GENERAL



¹⁰ Because the circumstances surrounding this Opinion could “cause a reasonable person with knowledge of the relevant facts to question [the Attorney General’s] impartiality,” the Attorney General recused himself from this Opinion. *See* 74 O.S., ch. 62, app. I, r. 4.7. The First Assistant Attorney General executes this Opinion pursuant to her authority under title 74, section 28 of the Oklahoma Statutes.