

“The meek shall inherit the Earth, but not its mineral rights.”

J. Paul Getty

What is a split estate?

Property ownership is often likened to a “bundle of sticks,” where each stick represents one aspect or degree of ownership. The oldest, most simply understood, and complete form of real property (land) ownership is the “fee simple absolute,” giving a landowner exclusive possession and enjoyment of the land, among other rights. It is the maximum quantum of land ownership that can be possessed by an individual. The property rights extend “from the center of the earth to the heavens” (although more recent doctrines impose limits, such as to limit ownership of the sky). This principle is probably Roman in origin (“*Cuius est solum, eius est usque ad coelom et ad inferos*” or *he who owns the soil also owns from the heavens down to hell*), but it was first stated in [English common law](#) by Edward Coke in *Bury v. Pope* (1587).

If *fee simple absolute* is the entire bundle, there are an almost infinite number of ways the bundle may be divided – with different “sticks” belonging to different persons or entities. One way the sticks can be divided is by severing the ownership of the mineral rights, or “mineral estate,” from the “surface estate” – the aboveground portion of the land. This is known as a “split estate.” This doctrine is ancient, and possibly dates back at least as far as Roman times. Since then it has been common for governments to claim ownership of all valuable minerals or all sub-surface rights, and the U.S. is somewhat of an [anomaly](#) in allowing private ownership of mineral rights.

The mineral estate is “dominant” over the surface estate. The consequence of the dominance of the mineral estate is that surface owners must allow “reasonable use” of as much use the surface property as necessary to access the minerals. Many states have subsequently developed common law or statutes requiring mineral owners to “accommodate” surface owners and their uses. For a thorough

Case of Mines

In the earliest English split-estate case, the Case of Mines, it was stated that the King had absolute ownership of gold and silver ore “with liberty to dig, and lay the same upon the land of the subject, and carry it away from thence” and “other such incidents thereto as are necessary to be used for the getting of the ore.” *Queen Elizabeth v. The Earl of Northumberland; The Case of Mines*, 75 Eng. Rep. 472 (Exch. Div. 1567).

¹ Colorado Environmental Law, Ltd., 1434 Spruce St., Suite 223 ★ Boulder, CO ★ (720) 965-0854.

exploration of the common law as it relates to mineral rights and oil and gas development, see [here](#). The split estate is also of importance to private landowners overlying a federal mineral estate where there are potentially “locatable” minerals under the 1872 Mining Law. That law holds federal mineral estate “free and open” to mining, meaning that private landowners [may be vulnerable](#) to mineral prospecting.

How is a split estate created?

A split estate can be formed when an original sovereign makes a land grant, but reserves the mineral estate. This occurred in the United States under several land grant or homesteading acts, when the federal government sold or gave away vast quantities of land to encourage western migration. In particular the Stock Raising Homestead Act of 1916 devised over 70 million acres in the west, reserving the minerals for the federal government. A split estate may also be created when a landowner sells her mineral rights, or sells the surface estate while retaining the minerals. There are many forms of split estate, where the surface/mineral split may be private/federal, private/state, private/private (different owners), state/federal, state/private, federal/state, or federal/federal (where different federal agencies control). For a thorough primer on mineral deeds, reservations, and conveyances see [here](#).

How does someone find out who owns the mineral rights?

Ownership of the mineral estate is determined by performing a mineral rights title search, which typically involves searching the title records at the county clerk’s office in the county where the land is located. Because these searches can be complicated, it is generally advised that professional title searchers should be employed. See [here](#) for a primer. Many states do not require realtors or sellers to inform potential real estate buyers of the ownership of the mineral estate; therefore buyers should always perform their own title search prior to purchase. Caveat emptor.

What are the rights and responsibilities of the mineral owner or lessee?

Reasonable use is the common law doctrine that limits a surface owner’s right to compensation for use or damage caused by mineral development. In Colorado, the “reasonable use” doctrine was thoroughly explored in *Gerrity Oil & Gas Corp. v. Mangess*, 946 P.2d 913, 926–28 (Colo. 1997). In *Gerrity*, the Court explained that:

[s]evered mineral rights lack value unless they can be developed. For this reason, the owner of a severed mineral estate or lessee is privileged to access the surface and "use that portion of the surface estate that is reasonably necessary to develop the severed mineral interest." *Notch Mountain Corp. v.*

Elliott, 898 P.2d 550, 556 (Colo.1995); see also *Rocky Mountain Fuel Co. v. Heflin*, 148 Colo. 415, 422, 366 P.2d 577, 580 (1961) (the severed mineral owner's right of access includes the "rights of ingress, egress, exploration, and surface usage as are reasonably necessary to the successful exploitation of [the mineral] interest."). The right to use the surface as is reasonably necessary, known as the rule of reasonable surface use, does not include the right to destroy, interfere with or damage the surface owner's correlative rights to the surface.

In the absence of statutes, regulations, or lease provisions to the contrary, unless the conduct of an operator in accessing, exploring, drilling, and using the surface is reasonable and necessary to the development of the mineral interest, the conduct is a trespass. In this sense, the right of access to the mineral estate is in the nature of an implied easement, since it entitles the holder to a limited right to use the land in order to reach and extract the minerals. As the owner of property subject to the easement, the surface owner "continues to enjoy all the rights and benefits of proprietorship consistent with the burden of the easement." The surface owner thus continues to enjoy the right to use the entire surface of the land as long as such use does not preclude exercise of the lessee's privilege.

The fact that neither the surface owner nor the severed mineral rights holder has any absolute right to exclude the other from the surface may create tension between competing surface uses. "The broad principle by which these tensions are to be resolved is that each owner must have due regard for the rights of the other in making use of the estate in question." *Grynberg v. City of Northglenn*, 739 P.2d 230, 234 (Colo.1987). This "due regard" concept requires mineral rights holders to accommodate surface owners to the fullest extent possible consistent with their right to develop the mineral estate. How much accommodation is necessary will, of course, vary depending on surface uses and on the alternatives available to the mineral rights holder for exploitation of the underlying mineral estate. However, when the operations of a lessee or other holder of mineral rights would preclude or impair uses by the surface owner, and when reasonable alternatives are available to the lessee, the doctrine of reasonable surface use requires the lessee to adopt an alternative means.

Because a mineral rights holder is legally privileged to make such use of the surface as is reasonable and necessary to develop underlying minerals, a trespass occurs at the point when the holder exceeds the scope of that implied easement and thereby exceeds the legal authorization permitting mineral development activities. In determining whether the scope of an easement or privilege has been exceeded, a court must look to its nature and purpose.

[Some internal citations omitted.]

New Mexico's Supreme Court addressed reasonable use in *McNeil v. Burlington Resources Oil & Gas Co.*, 182 P.3d 121, 143 N.M. 740 (2008):

[W]e again decline to recognize an implied contractual duty for all mineral lessees to completely restore the surface estate following drilling operations in the absence of negligence or an express contractual provision otherwise. See *Amoco Production Co. v. Carter Farms Co.*, 103 N.M. 117,120, 703 P.2d 894, 897 (1985). *Carter Farms* reaffirmed the fundamental tenet of oil and gas law that a mineral lease carries with it the right to use as much of the surface area as is

reasonably necessary to extract the minerals below. *Id.* at 119, 703 P.2d at 896; *see also Kysar v. Amoco Prod. Co.*, 2004 -NMSC- 025, ¶ 24, 135 N.M. 767, 93 P.3d 1272 ("[W]hen a thing is granted[,] all the means to obtain it and all the fruits and effects of it are also granted."). The surface estate is subservient to the mineral estate. . Because the mineral lessee is entitled to use as much of the surface area as is reasonably necessary for extraction, it is not liable for damages resulting from such reasonable use. The owner of the mineral estate need not return the surface to its pre-drilling condition.

Thus, in order to prevail on a negligence claim, "[d]amage to the surface estate by the owner of the mineral estate [must be] founded upon the unreasonable, excessive or negligent use of the surface estate." *Id.*; *cf. Dean v. Paladin Exploration Co., Inc.*, 2003 -NMCA- 049, ¶ 14, 133 N.M. 491, 64 P.3d 518 (holding that, where contract expressly provides for lessee's liability for all damage to surface estate, negligence is not required for plaintiff to recover for damages). We emphasize the paramount significance of the essence of *Carter Farms*: damage to the surface estate caused by a lessee's reasonable use is not actionable.

[Some internal citations omitted.]

The Wyoming Supreme Court has likewise weighed in on the doctrine, in *Sanford v. Arjay Oil Co.*, 686 P.2d 566 (Wyo. 1984):

Under the rule of reasonable necessity, a mineral lessee is entitled to possess that portion of the surface estate "reasonably necessary" to the production and storage of the mineral:

" * * * 'The true rule is that under the ordinary oil and gas lease, the lessee, in developing the premises in the production of oil and gas, is entitled to the possession and use of all that part of the leased premises which is reasonably necessary in producing and saving the oil and gas. This extends to space required upon which to erect tanks or dig pits necessary to store or confine such refuse matter as may come from the wells on the leased premises in the course of ordinary prudent operations. * * * ' " *Pure Oil Co. v. Gear*, 183 Okl. 489, 83 P.2d 389, 392 (1938), quoting from *Magnolia Petroleum Co. v. Howard*, 182 Okl. 101, 77 P.2d 18, 20 (1938).

Finally, the Supreme Court of Utah addressed the doctrine in *Flying Diamond Oil Corp. v. Newton Sheep Co.*, 776 P.2d 618, 626 (Utah 1989), noting that parties are free to contract lease terms that govern specific questions of surface usage rather than relying on the rather fuzzy and often litigated "reasonable use" doctrine, which is generally considered an implied easement.

The general rule which is approved by all jurisdictions that have considered the matter is that the ownership (or rights of a lessee) of mineral rights in land is dominant over the rights of the owner of the fee to the extent reasonably necessary to extract the minerals therefrom. [* * *] However, an easement implied by law is rather strictly limited to that which is "reasonably necessary" for extracting minerals. [. . .] Certainly the availability of an implied easement [does] not preclude [parties] from seeking broader, more accommodating surface rights than the law gives by implication.

[Some internal citations omitted.]

This is by no means an exhaustive case summary. As noted by the Supreme Court of Utah in *Flying Diamond Oil*, the conflicts that arise between the dominant and servient estates in implied easements (easements guided by common law rather than specified by contract) naturally leads to litigation.

One limitation on the “reasonable use” doctrine is the doctrine of [“reasonable accommodation.”](#) (or its antecedent, “due regard”). This doctrine was first noticed in *Chartiers Block Coal Co. v. Mellon*, 152 Pa. 286, 25 A. 597 (1893), held that the mineral owner's reasonable right of access to the surface must be "exercised with due regard to the owners of the surface." This doctrine requires mineral owners to make reasonable accommodations so as not to disrupt the surface owner’s interests and activities. In *Getty Oil Company v. Jones*, 470 S.W.2d 618 (Tex. 1971), the surface owner wanted the mineral owner to lower the height of the well pumps so as not to interfere with an agricultural sprinkler system that was in place. The *Getty Oil* court observed that “the rights implied in favor of the mineral estate are to be exercised with due regard for the rights of the owner of the servient estate.” *Id.* at 621. The court developed a test for when accommodations must be made; if, i) there is an existing use of the surface; ii) the mineral owner’s proposed use of the surface precludes or impairs the existing use; and iii) under current industry practices, there are alternatives available to recover the minerals. *Id.* at 622. With the advent of directional drilling techniques Texas has recently held that reasonable accommodation may involve moving a drill site, showing the legal effect of the evolution of industry practices. *Valence Operating Co. v. Texas Genco, LP*, 255 S.W.3d 210 (Tex.App.-Waco 2008). Not all states have adopted this common law doctrine.

In order to clarify the rights and responsibilities of the mineral rights owners vis-à-vis the surface estate, several states have [enacted legislation](#).

Montana	
	Surface Owner Damage and Disruption Compensation, MONT. CODE ANN. §§ 82-10-501 to -511
	Key Provisions:
	<ul style="list-style-type: none"> • Act explicitly intended to protect surface users, finds oil and gas development an injurious use requiring compensation
	<ul style="list-style-type: none"> • defines land value as the ‘value of the highest and best reasonably available use of the land’
	<ul style="list-style-type: none"> • predevelopment notice of entry for surface disturbing activities
	<ul style="list-style-type: none"> • requires good faith damage negotiations
	<ul style="list-style-type: none"> • compensable damages include loss of crops and income, loss of value to existing improvements, and loss of land value
	<ul style="list-style-type: none"> • developers and operators are liable for all damages to real or personal property from lack of ordinary care, or from operations and production
	<ul style="list-style-type: none"> • does not foreclose common law tort actions or contract rights

Utah	
	Use of surface land by owner or operator, UTAH CODE ANN. § 40-6-20, <i>see also</i> -2, -5, -20, -21
	Key Provisions:
	<ul style="list-style-type: none"> • codifies reasonable use and accommodation • requires mitigation, minimization, and compensation for unreasonable damage • compensable damages include loss of crops, loss of value to existing improvements, and permanent land damage • does not require horizontal drilling as a minimization technique unless feasible, practicable, and reasonably available • does not foreclose common law tort actions or contract rights
Colorado	
	Reasonable Accommodation, COLO. REV. STAT. § 34-60-127
	Key Provisions:
	<ul style="list-style-type: none"> • codifies reasonable use and accommodation • allows compensatory damages and equitable relief • does not foreclose common law tort actions or contract rights
	Note: Colorado's statutory law on reasonable use and accommodation is sparse and not well defined, however the state agency responsible for regulating oil and gas development, the COGCC, has numerous regulations that speak on the issue. This makes the COGCC's administrative procedure unusually relevant to surface owners seeking surface use agreements, contract enforcement, damages, or other remedies.
Wyoming	
	Entry to Conduct Oil and Gas Operation, WYO. STAT. ANN. §§ 30-5-401 to -410
	Key Provisions:
	<ul style="list-style-type: none"> • codifies reasonable use and accommodation • predevelopment notice of entry • good faith negotiations for surface use agreement • damage bond required if no SUA reached • two year statute of limitations for damages to surface (from discovery) • compensable damages include loss of production, income, land value, and improvements for land directly affected • does not foreclose common law tort actions or contract rights • regulatory violation is <i>per se</i> negligence under the Act
New Mexico	
	Surface Owners Protection Act, N.M. STAT. ANN. §§ 70-12-1 to -10
	Key Provisions:
	<ul style="list-style-type: none"> • predevelopment notice of entry, except in emergencies • damage bond required if no SUA reached • compensable damages include loss of production, income, land value, use and access, and improvements for land directly affected • treble damages available for some willful violations • does not foreclose common law tort actions

The federal government has also enacted a form of surface owner protection, in the form of the Department of the Interior's [Onshore Order No. 1](#) (2007).

Federal Government	
	Onshore Order No. 1
	Key Provisions:
	<ul style="list-style-type: none"> • predevelopment notice of entry • good faith effort to negotiate surface use agreement • damage bond required if no SUA reached

There has been [some debate](#) over whether or not the federal government could claim that this Order preempts all state surface owner protection acts. However the federal government has shown no apparent interest in attempting to assert a preemption theory.

Federal mineral rights

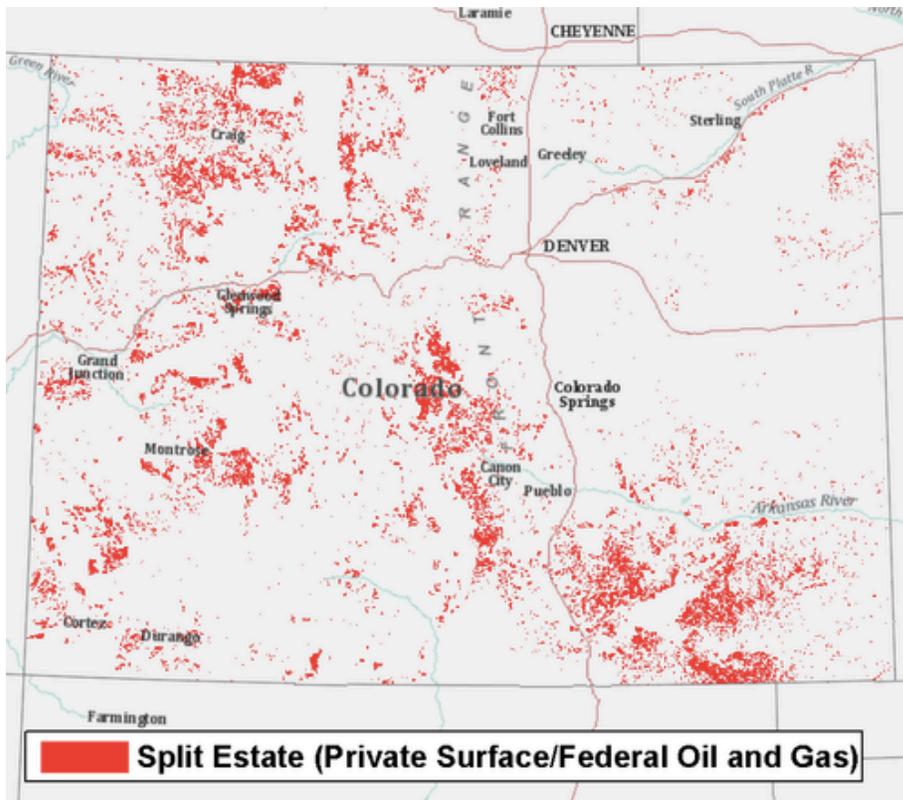


Fig. 1 – Private/federal split estate: Colorado. Figure courtesy of the NRDC.

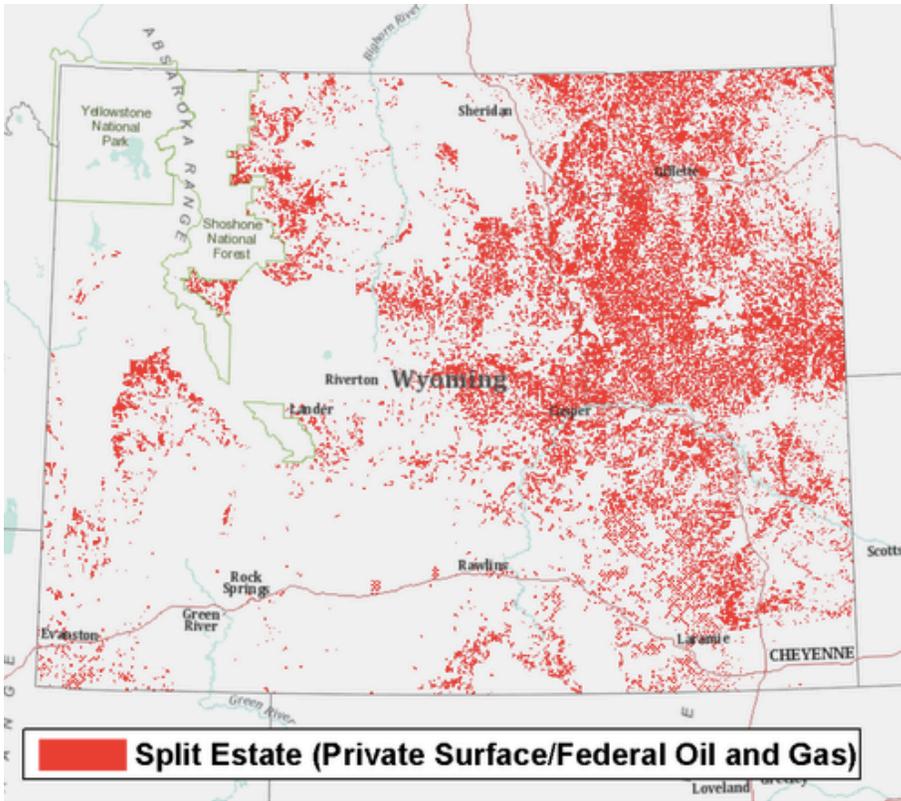


Fig. 2 – Private/federal split estate: Wyoming. Figure courtesy of the NRDC.

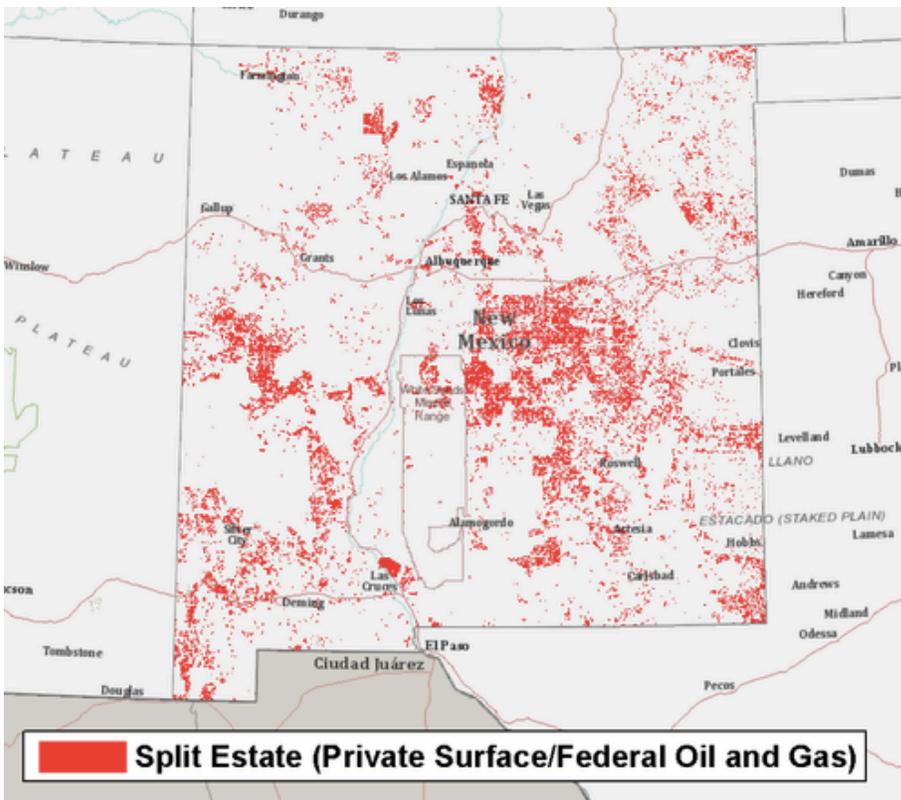


Fig. 3 – Private/federal split estate: New Mexico. Figure courtesy of the NRDC.

The federal government owns between 635-40 million acres, or 28% of land in the U.S, and over 700 million acres of mineral estate. Most of this land occurs in the west, with 47% of the eleven western states under federal ownership. In the U.S., the Bureau of Land Management retains control over federal mineral rights. The BLM estimates that it controls 57.2 million acres of mineral estate under privately owned surface estate, with 90% of those acres in the West. For a comprehensive view of federal land ownership, [see here](#). Regionally, the BLM periodically auctions lease parcels several times a year. Developers nominate parcels for the auction, and the BLM decides if the parcel is suitable based on its regularly updated regional land use resource management plan. The BLM regulations allow for conveyance of mineral interests owned by the United States where the surface is or will be in non-Federal ownership, under section 209 of the Federal Land Policy and Management Act of 1976. The objective is to allow consolidation of surface and subsurface or mineral ownership where there are no "known mineral values" or in those instances where the reservation interferes with or precludes appropriate non-mineral development and such development is a more beneficial use of the land than the mineral development.

Notices of upcoming lease sales:

[Colorado](#)

[Wyoming](#)

[Montana](#)

[New Mexico](#)

[Utah](#)

Oil and gas development on BLM mineral estate is regulated primarily by the state within which the public land is found, however the BLM does encourage best management practices for all federal mineral development. For more information on BLM BMPs, see [here](#).

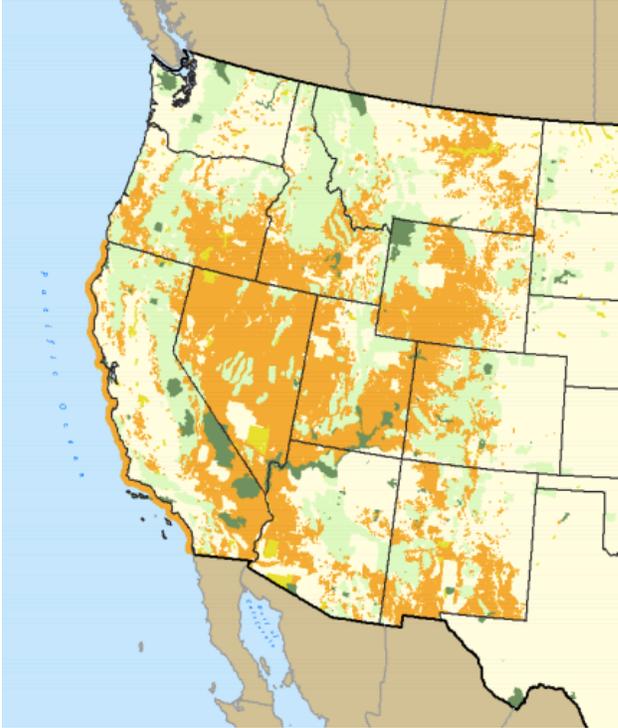


Fig. 4. Western federal lands (courtesy of the Congressional Research Service and Nicholas Jackson, Cartographer, Library of Congress). Land controlled by the Bureau of Land Management (orange), Forest Service (light green), Fish and Wildlife Service (yellow), and National Park Service (dark green).

	Colorado	Montana	New Mexico	Utah	Wyoming
Total federal acres (current)	24 million	27 million	27 million	35 million	30 million
% of state landmass	36.2%	28.9%	34.7%	66.5%	48.2%

State mineral rights

[State trust lands](#) were given to each state by the federal government upon admittance to the Union. As their name implies, they were given to the state to hold in trust for the benefit of the state’s public institutions, principally its public schools. The [General Land Ordinance](#) (1785) and the [Northwest Ordinance](#) (1787) governed the rapid westward expansion and provided for the establishment of new states. The laws devised a system, the [Public Land Survey System](#), to create a grid that mapped the total land area of the western U.S. Within each surveyed “township” (a parcel comprised of 36 numbered one-mile square sections) section number sixteen would be reserved for the territory, and once the territory became a state, the state would receive title to these reserved parcels (as well as land grants to support other public institutions). Ohio was the first state to receive trust land, in 1803. By 1850, with the admission of California, Congress was awarding two sections per township, and by 1896 (Utah) it was four sections. Arizona and New Mexico received four parcels as well, likely owing

to their relatively meager share of agriculturally productive land or timber. Later grants (post-1859) also allowed some states to select “[in lieu lands](#)” where the number sections granted by statute were already homesteaded, granted by railroad, or otherwise unsuitable. For some period of time states were allowed to sell off their trust lands, although abuses led to what is now essentially a ban on such sales. The history of state land grants and trust lands is a fascinating, scandalous, and politically fraught historical tale that has continued into the [present day](#).

	Colorado	Montana	New Mexico	Utah	Wyoming
Total land trust acres (current)	3 million	5.1 million	9 million	3.4 million	3.6 million
% of state landmass	4.5%	19%	17%	6%	6.2%
Mineral acres	4 million	6.2 million	12.7 million	1.1 million	4.2 million
Managing agency	State Land Board	Department of Natural Resources and Conservation	State Land Office	Utah School & Institutional Trust Lands Administration	Office of State Land and Investments
Trust revenue (2012-13)	\$125 million	\$109.9 million	\$652 million	\$106.4 million	\$223 million
Mineral revenue (2012-13)	\$107 million	\$38.9 million	\$620 million	Not broken down in report	\$194 million

Because of the complicated evolution of the state trust lands in each state, the state’s ownership of the mineral rights is often split estate with a private or federal surface owner, or vice versa. State agencies responsible for managing trust lands have a fiduciary obligation to the trust beneficiaries to use the land productively to create revenue for the trust. Each state leases its mineral rights to develop oil and gas resources on state trust land, among other land use activities.

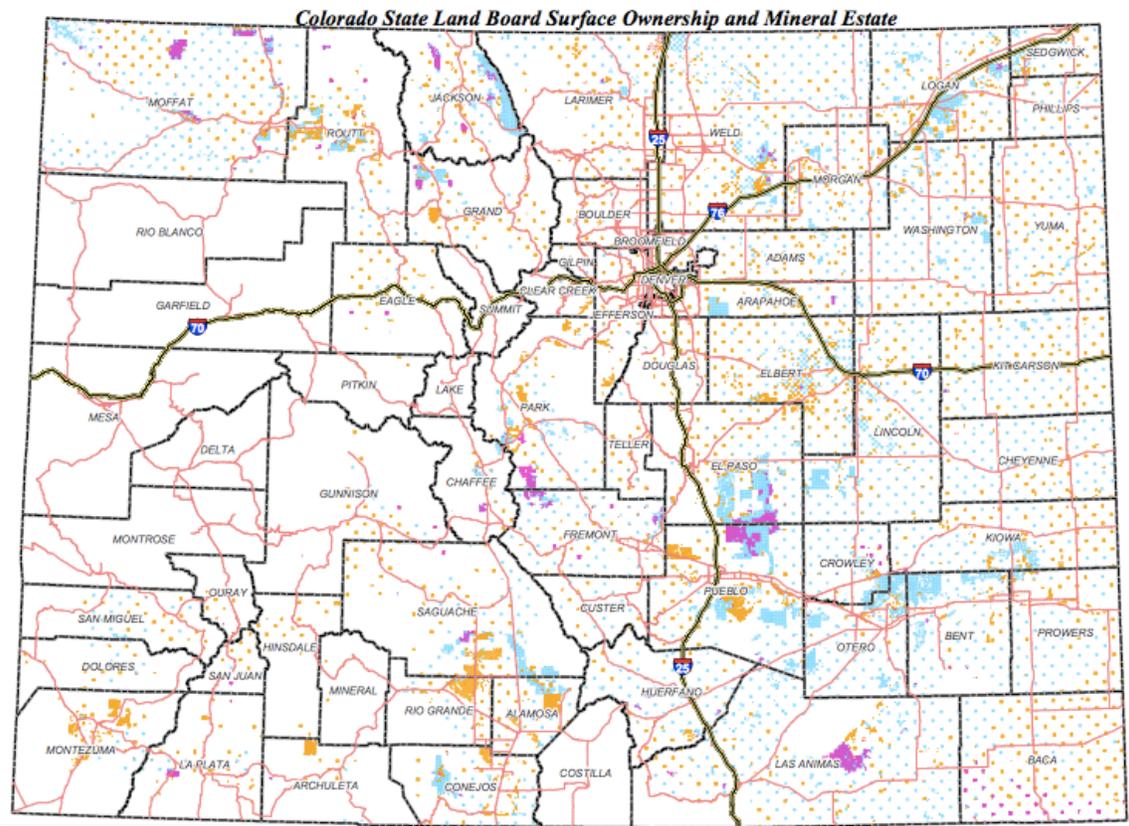


Fig. 5. Colorado state trust lands, includes surface only (pink), mineral only (orange), and surface + mineral (blue). Figure courtesy of the Colorado Dept. of Treasury

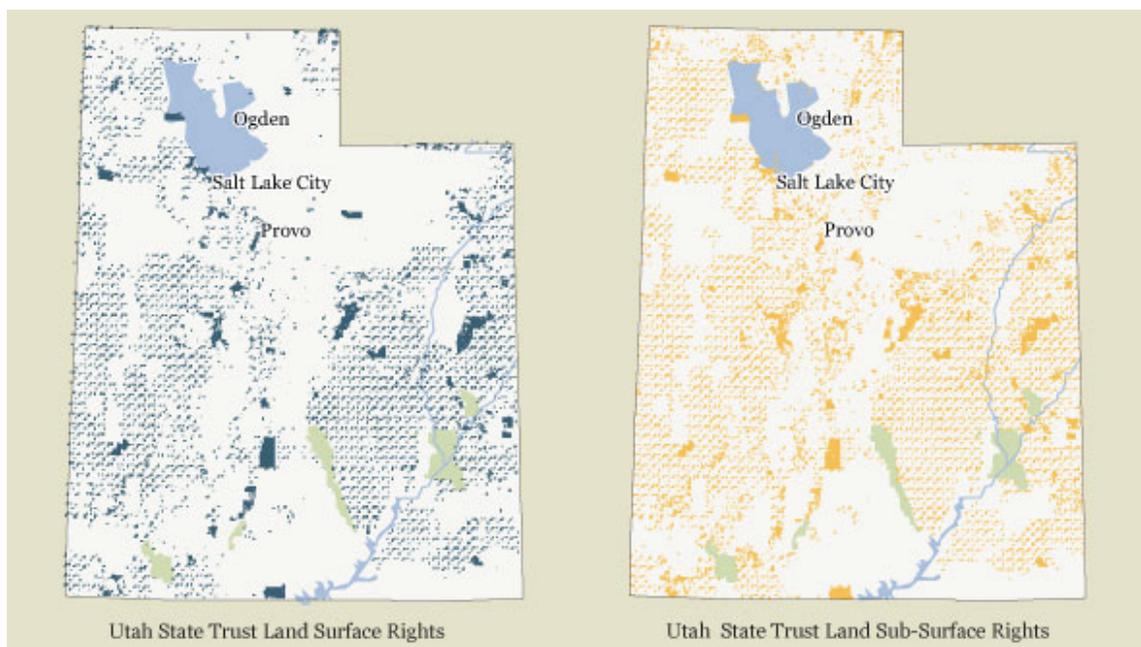


Fig. 6. Utah state trust lands, includes surface only (blue), and mineral only (orange), National Parks land is in green. Figure courtesy of the Colorado Dept. of Treasury

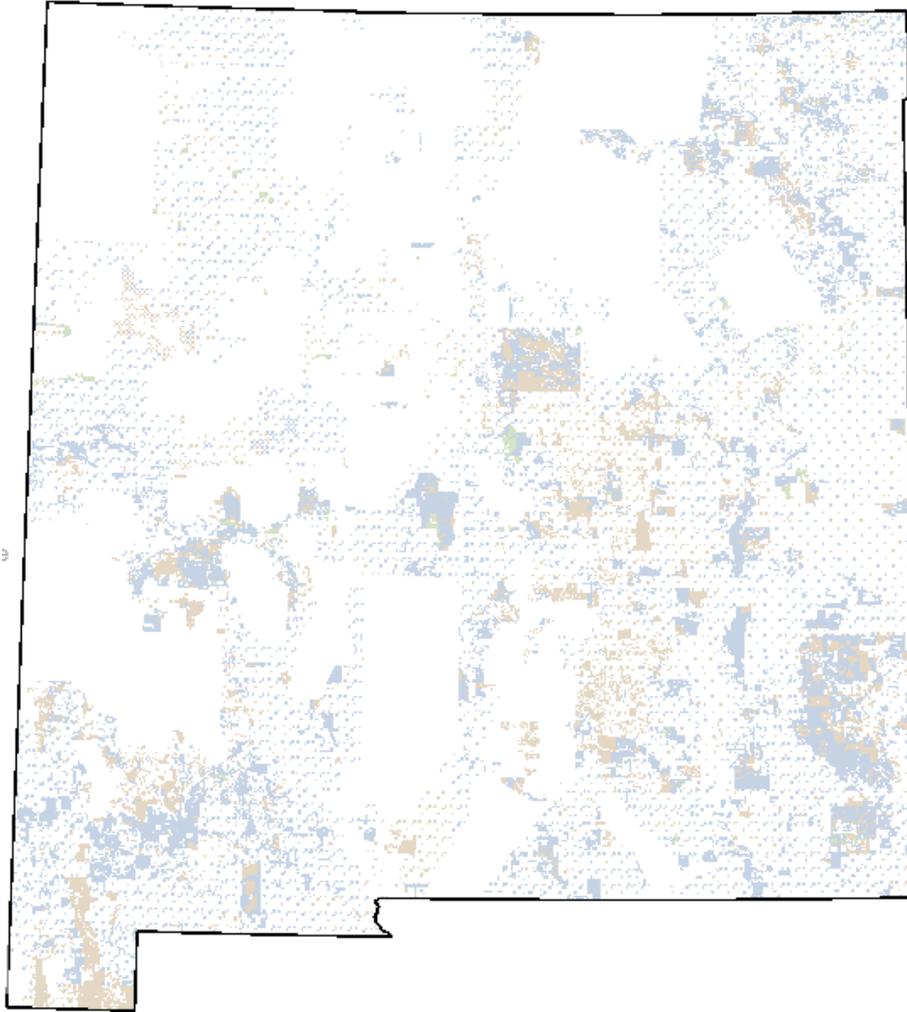


Fig. 7. New Mexico state trust lands, includes surface only (green), and mineral only (taupe), and surface + mineral (blue). Figure courtesy of the New Mexico State Land Office, interactive maps

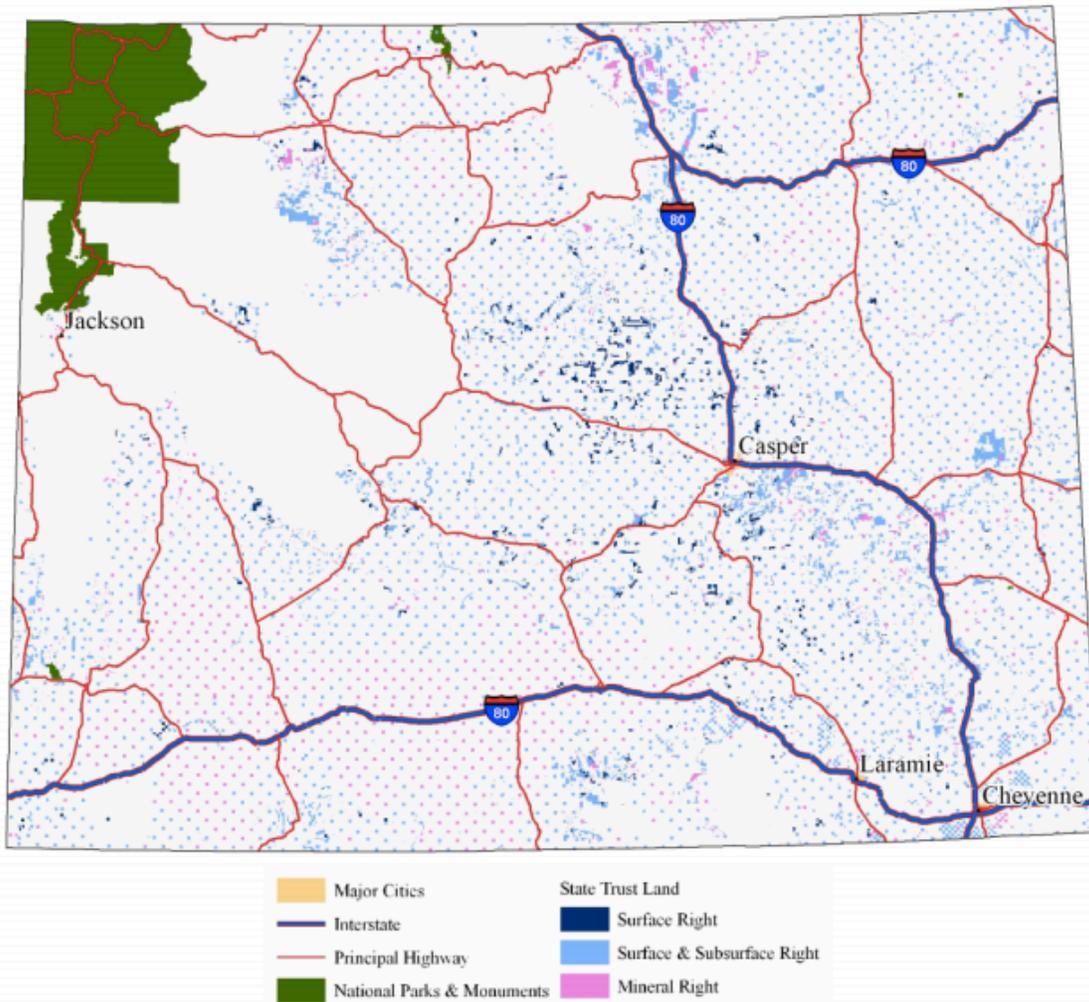


Fig. 8. Wyoming state trust lands. Figure courtesy of the Sonoran Institute.



Fig. 9. Montana state trust lands. Figure courtesy of StateTrustLands.org.

Private Lands and the Split Estate

The history of western land grants, settlement, and other factors has led to the current patchwork of land and mineral ownership. The split estate has ramifications for private landowners whose rights to exclude others does not include the right to exclude owners (or their lessees) of the mineral estate. The dominance of the mineral estate means that landowners must allow “reasonable” use of the surface property to allow the mineral owners to access their property interests. For landowners not in a split estate situation, the question of selling or leasing mineral rights is one that should be discussed with a competent attorney.

For landowners who are in a split estate situation, in some cases it may be possible to purchase those mineral rights from the current owner. In the case of the federal government, there is a process to reunite the estates under the [Federal Land Management Policy Act, § 209](#), but only in [some situations](#), including where there is no currently known mineral interest, there is a more beneficial use (such as residential use) than mineral development, and the landowner pays the fair market value for the estate. Unless facing imminent mineral development many private surface owners have not bothered to worry about federal mineral ownership. However, because technology is advancing all the time, land that might be considered valueless for mineral development might later become valuable and ineligible for repurchase of the mineral estate.

Finally, there can be no [adverse possession](#) of the mineral estate by merely occupying the surface estate. However, the language used by the courts suggest that it [may be possible](#) to adversely possess the mineral estate by an actual intrusion on the mineral interest such as physical removal of minerals.