

# The Intersection Between Property Rights and Carbon Capture and Storage

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# Carbon Capture and Storage

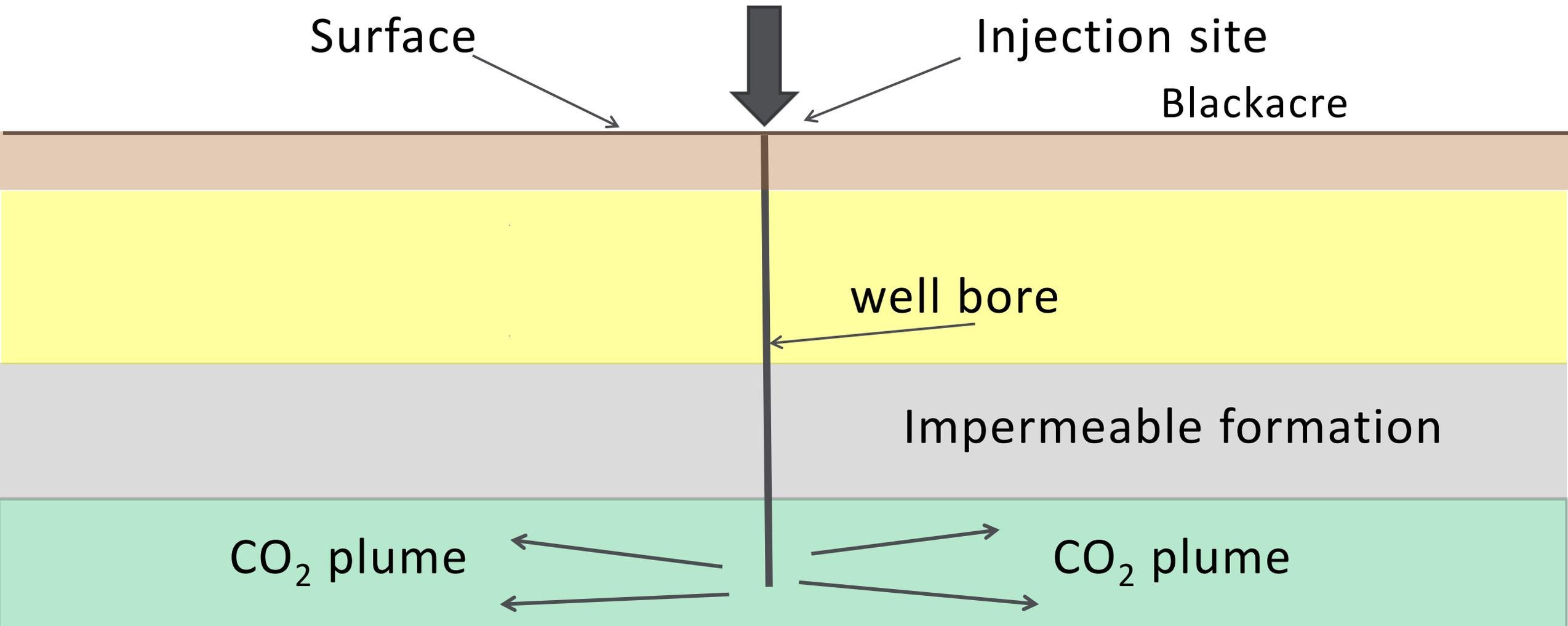
Carbon capture and storage involves

- **Capture** of **carbon** dioxide (CO<sub>2</sub>) by separating it from other compounds in a source of gaseous industrial emissions or the atmosphere
- **Storage** of the captured CO<sub>2</sub> by injecting it into an underground for permanent sequestration

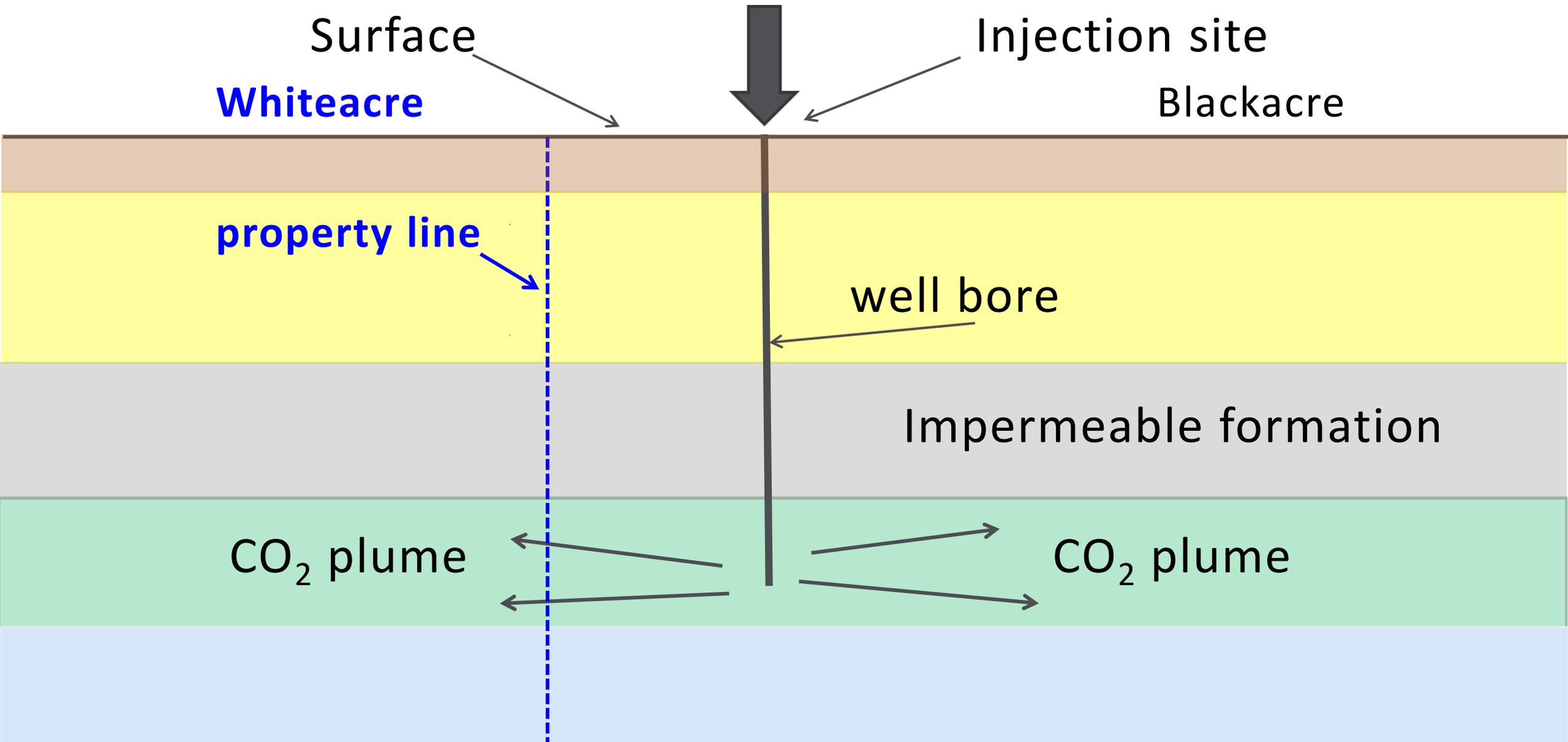
# IPCC and other authorities

- Intergovernmental Panel on Climate Change describes CCS as “a critical mitigation option” for addressing CO<sub>2</sub> emissions
- International Energy Agency says CCS “will be crucial”
- U.S. government has supported CCS across multiple Presidential administrations
- Several states are encouraging CCS

# CO<sub>2</sub> injected into subsurface



# Plume spreads in the subsurface



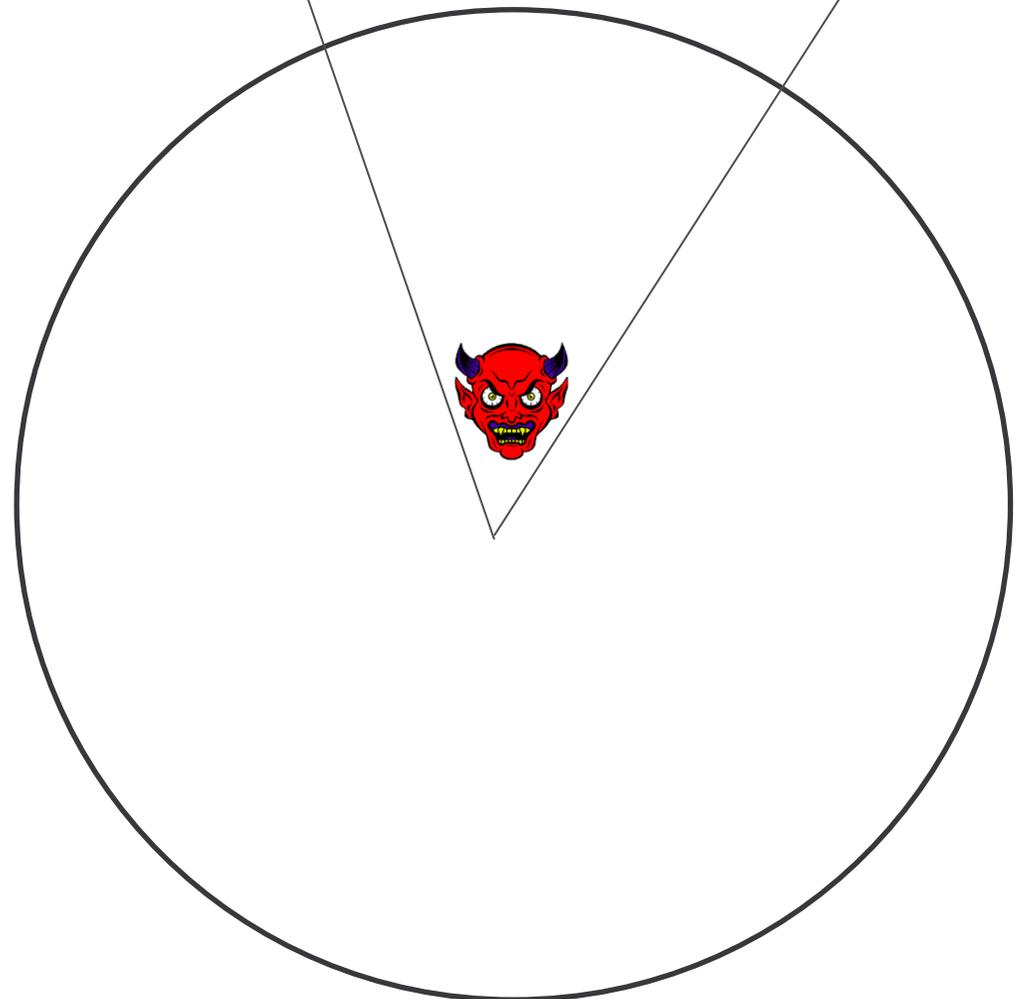
## La. Civ. Code art. 490

Unless otherwise provided by law, the ownership of a tract of land carries with it the ownership of everything that is directly above or under it.

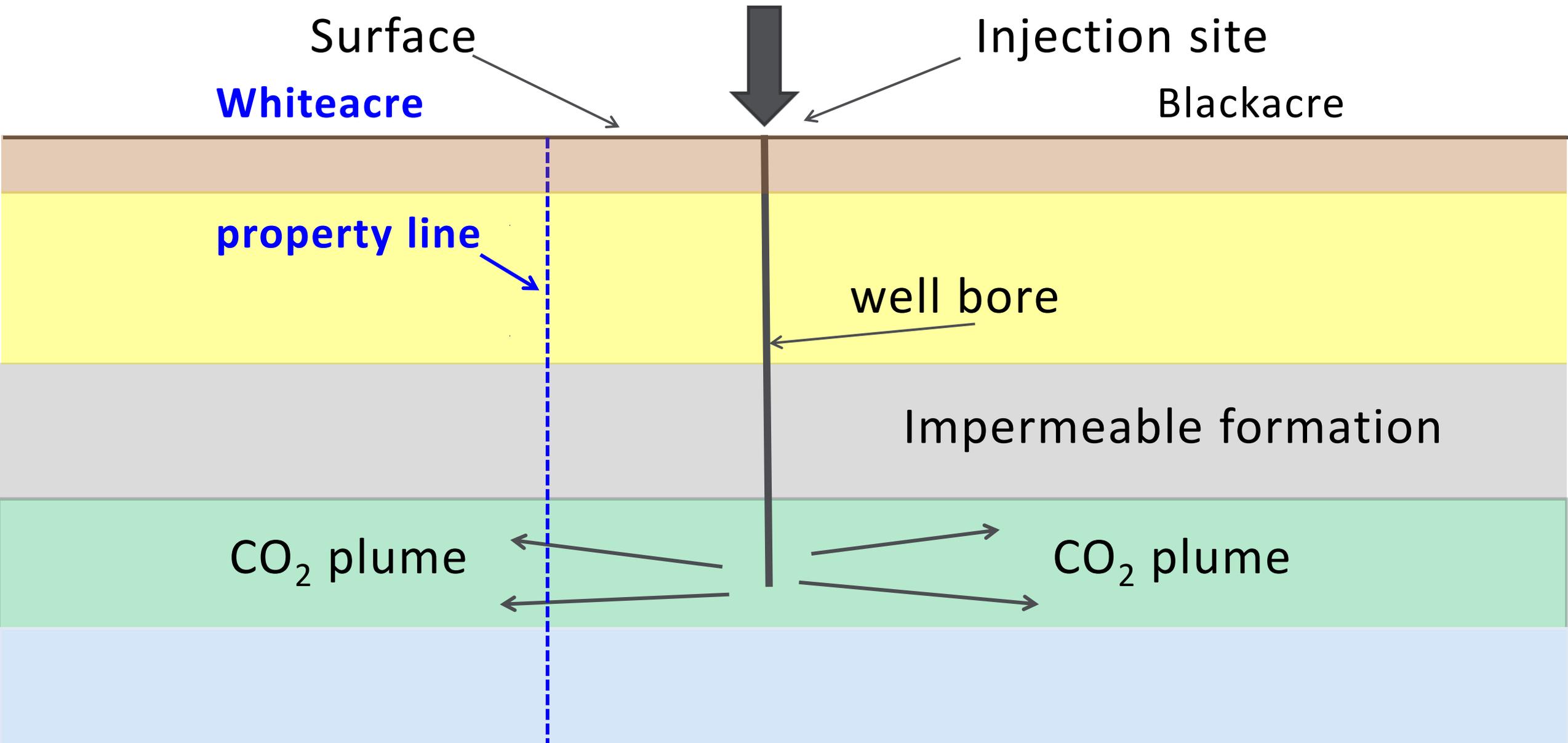
The owner may make works on, above, or below the land as he pleases, and draw all the advantages that accrue from them, unless he is restrained by law or by rights of others.

## The *ad coelum* doctrine

- “*cujus est solum ejus est usque ad coelum et ad inferos*”
- “For whoever owns the soil, it is theirs up to Heaven and down to Hell.”



# Does owner of Whiteacre have redress?



# Ownership and the right to exclude

- Ownership includes several benefits
- One is the right to exclusive possession
- This means that the landowner generally has the right to exclude others
- A “trespass” is an unauthorized entry onto the land of another

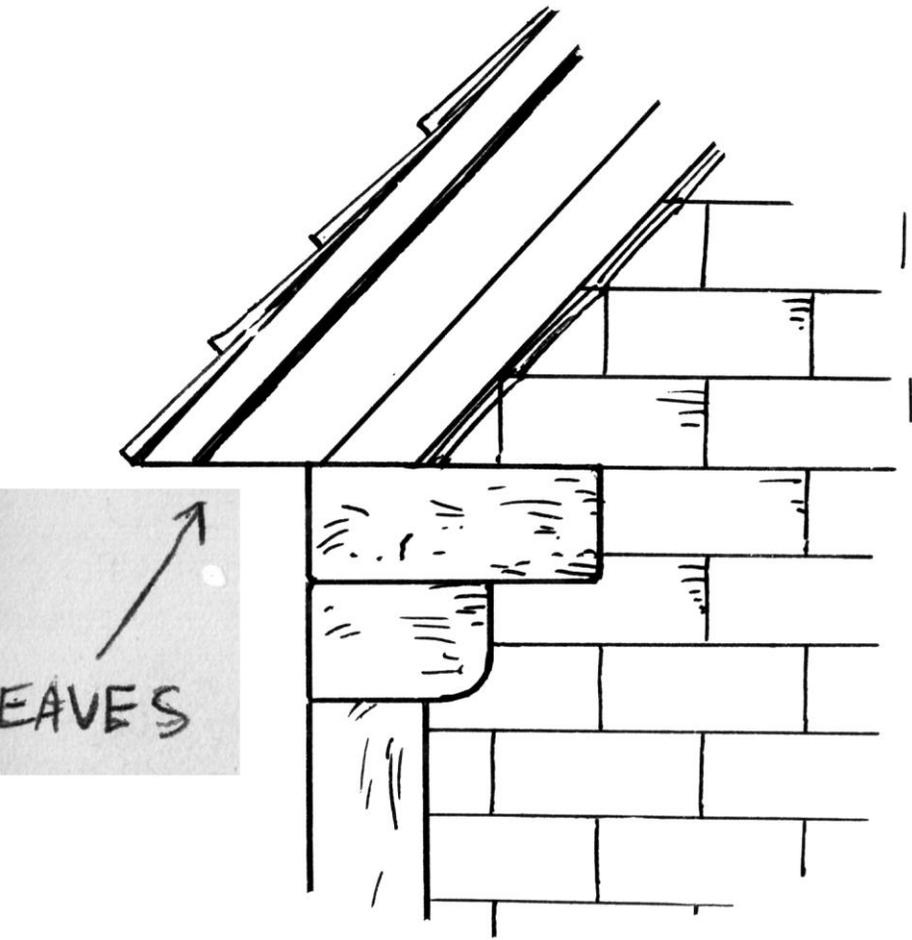


## Relief for trespass

- Monetary damages for any harm to the land
- Nominal damages if no harm
- Fair rent value for continuing trespass or diminution in value of land if there is a permanent trespass
- Potentially injunctive relief for a continuing or repeated trespass

Several court decisions have upheld airspace and subsurface trespass claims.

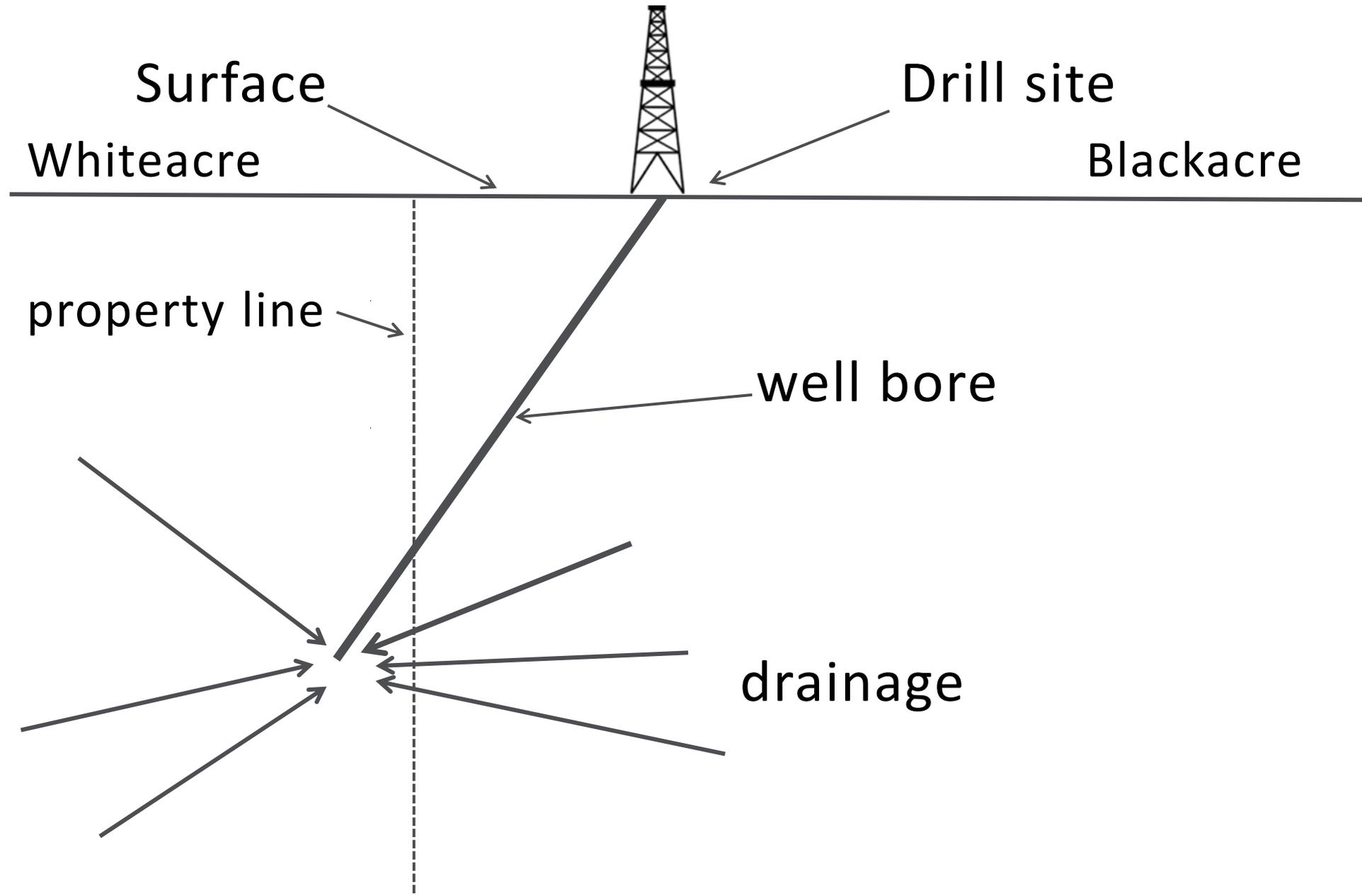
# Airspace



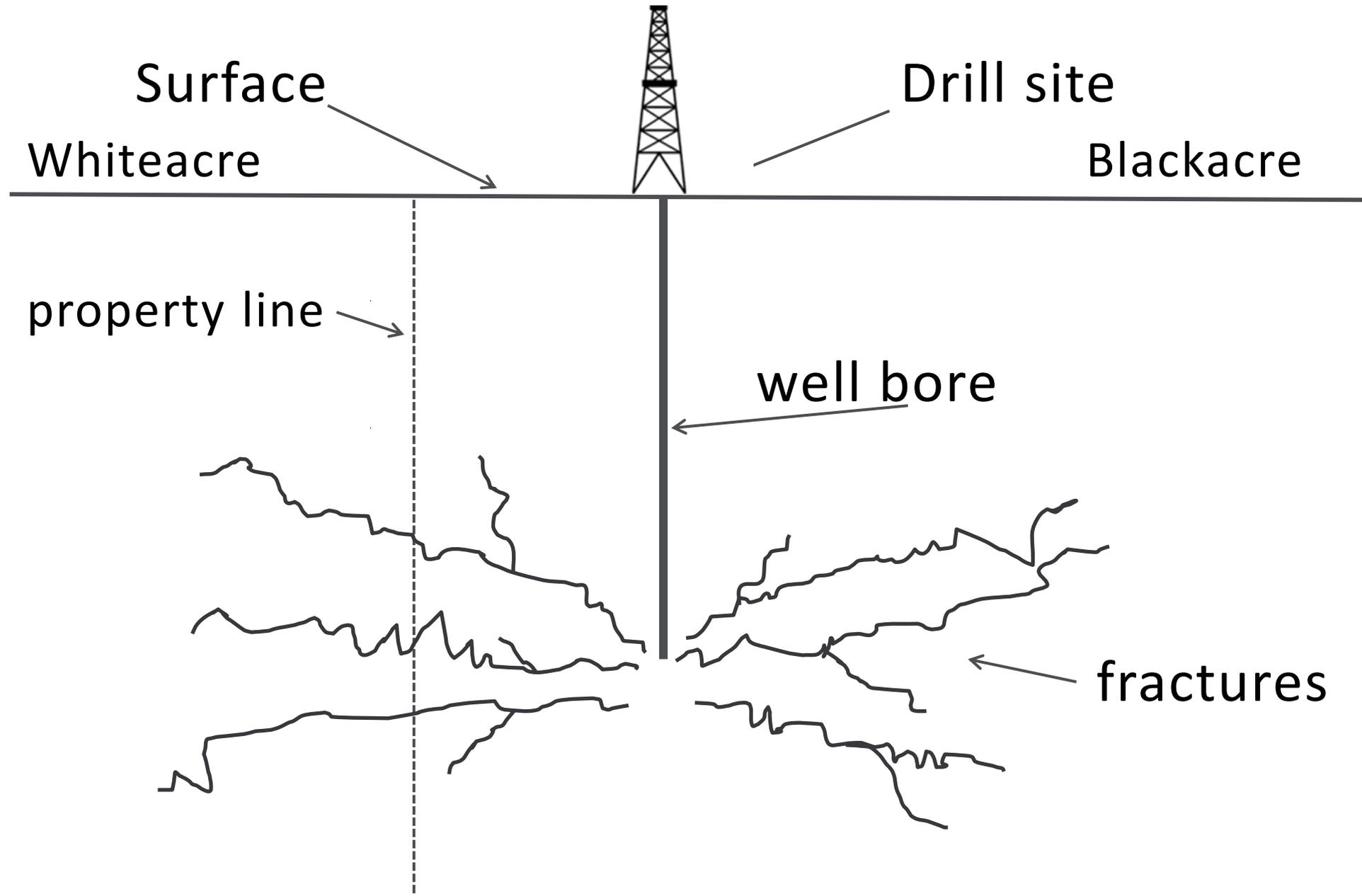
# Underground cave



# This is a subsurface trespass

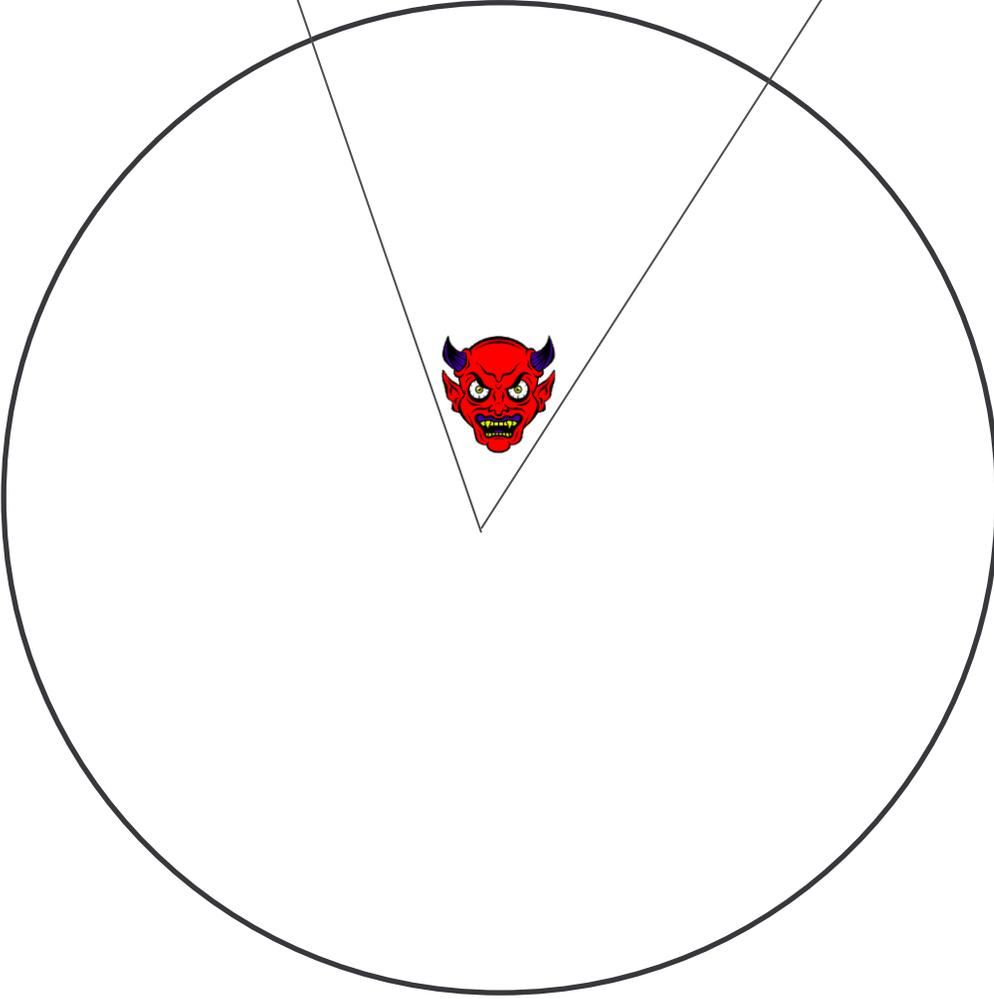


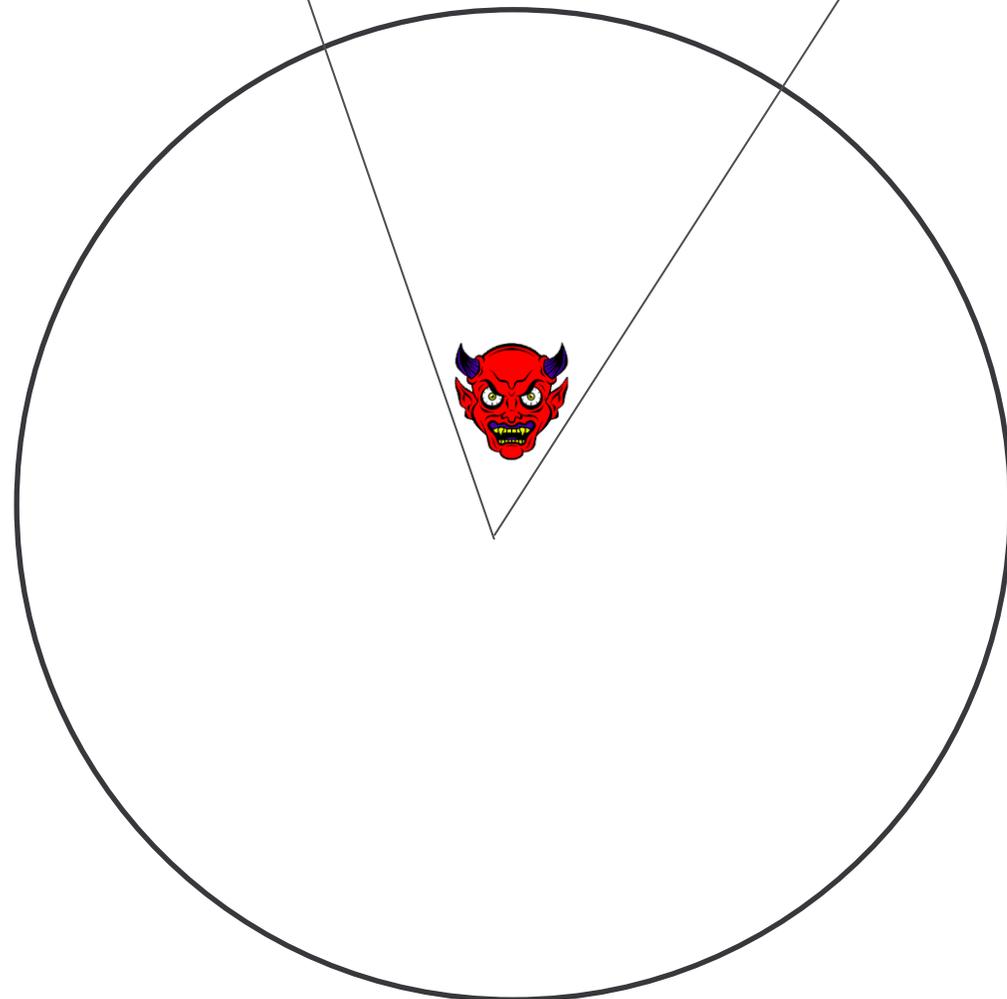
# Subsurface Trespass or Not?



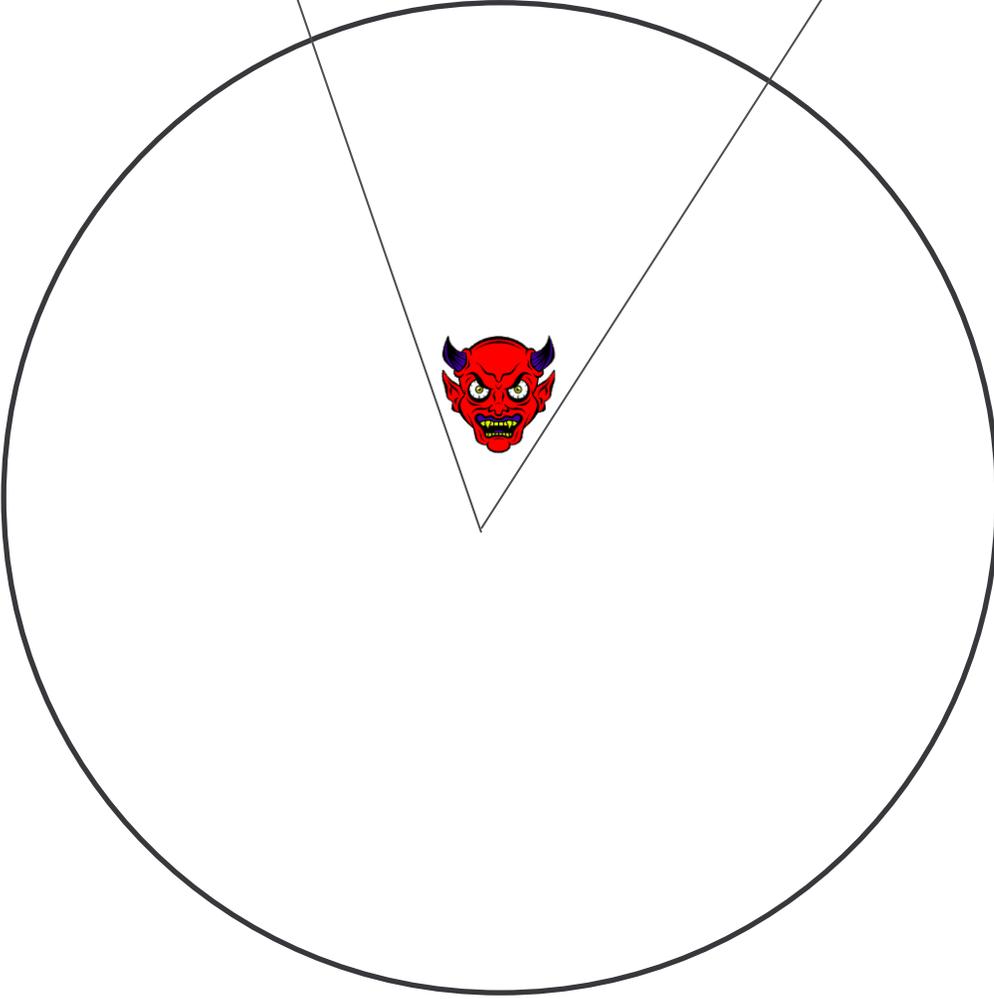
But in other circumstances courts have rejected airspace and subsurface trespass claims.

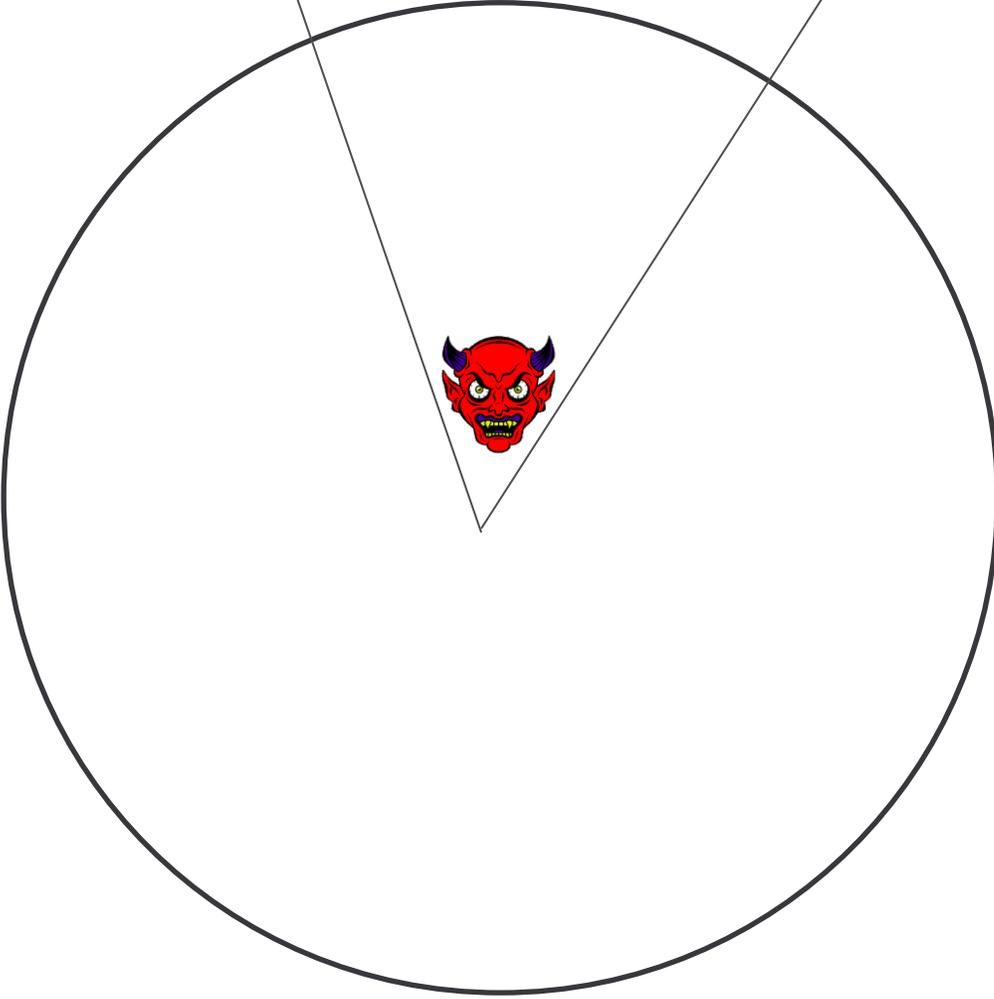
Might the *ad coelum* doctrine be in part dicta?

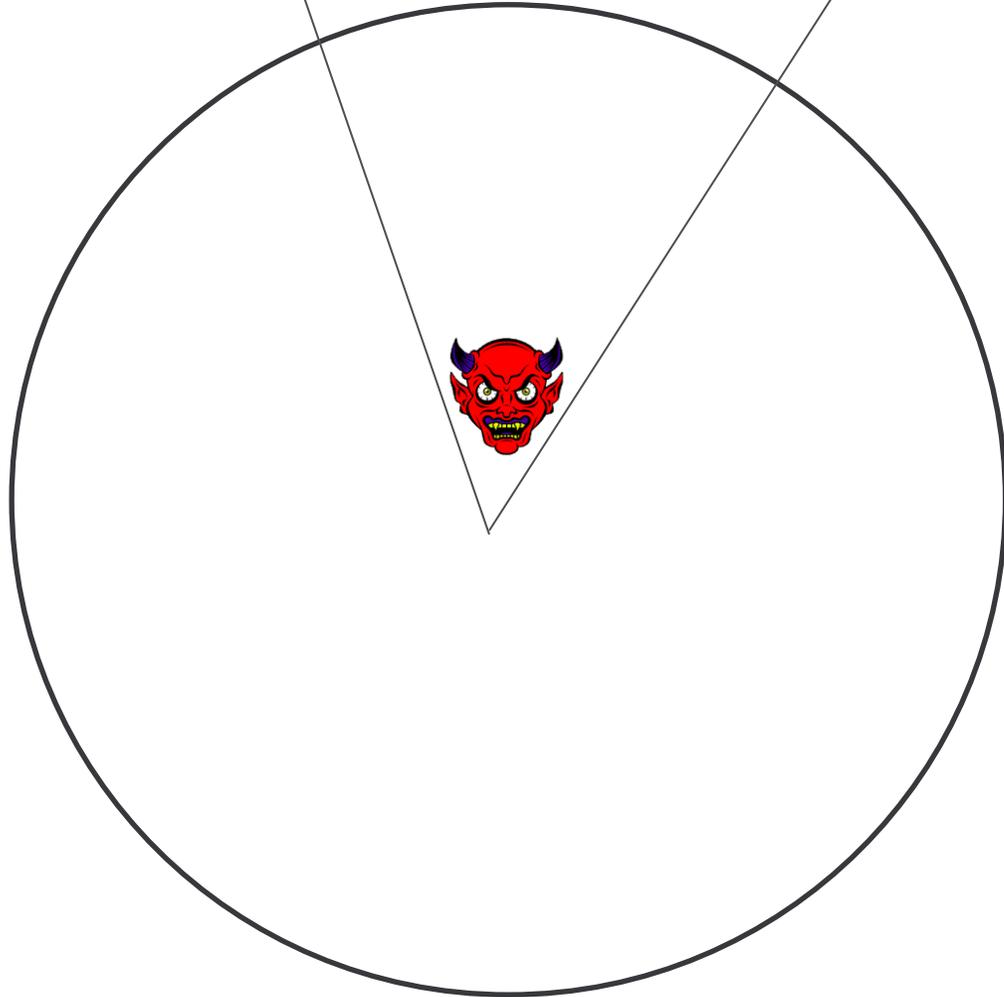


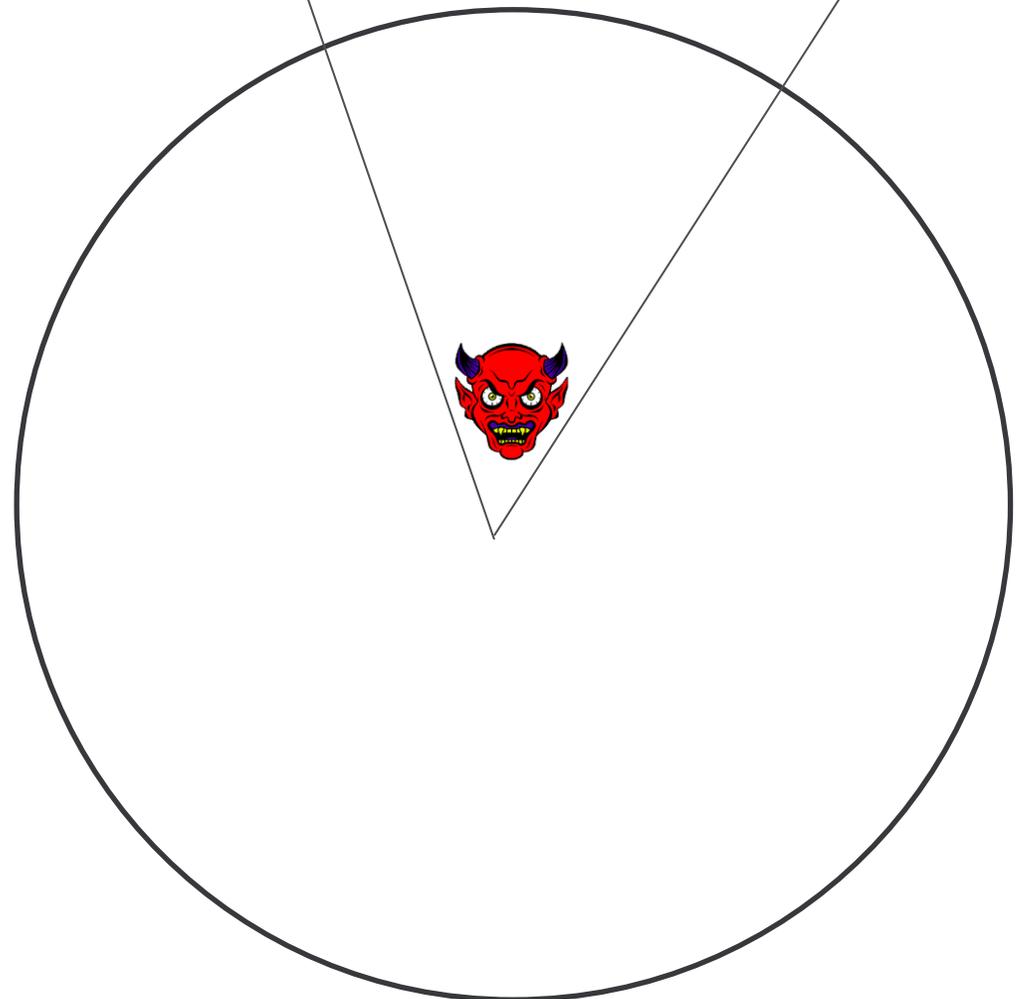




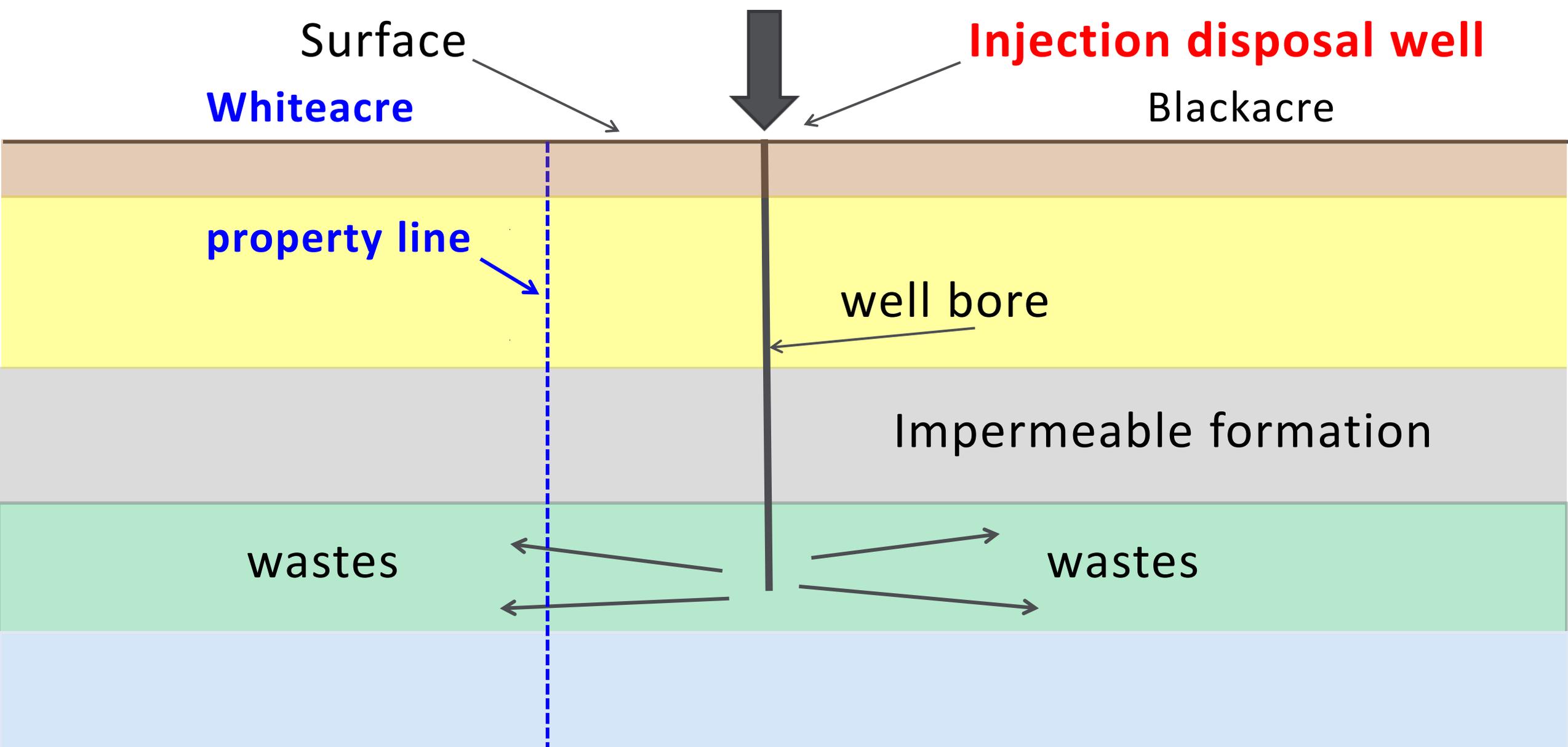








# Most courts have said this is “not a trespass”



# Might the ad coelum doctrine be dicta?

- Louisiana injection disposal cases
- BP v. Chance

## Need for certainty regarding pore space rights

- It is not clear that courts would hold that migration of CO<sub>2</sub> from CCS operations creates trespass liability.
- But investors are not likely to invest in CCS unless they know that a prospective CCS project has all the pore space rights it needs.

# Acquiring Subsurface Rights By Agreement

# Potential Methods

1. Purchase land
2. Purchase subsurface
3. Obtain servitude or easement
4. Lease subsurface

# Purchasing land

## Prospective CCS operators

- may seek to acquire ownership of the land where the wellhead of injection well will be located
- likely will not seek to purchase ownership of the land throughout the area where the CO<sub>2</sub> plume will spread
- probably need the right to operate some monitoring wells in area where plume will spread, but do not need ownership of entire area.

## Purchasing subsurface

- Probably cannot purchase just the subsurface in Louisiana. Louisiana does not seem to allow that sort of divided ownership.

*See Wemple v. Nabors Oil & Gas Co.*, 97 So. 666, 667 (La. 1923); *Iberville Land Co. v. Texas Co.*, 128 So. 304, 305 (La. App. 1st Cir. 1930).; La. Rev. Stat. 31:5.

- May be able to do so in common law states.

# Cal. Pub. Res. Code § 71462

- (a) Title to any geologic storage reservoir is vested in the owner of the overlying surface estate unless it has been severed and separately conveyed.

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# Obtaining servitude or easement

- Some companies apparently are acquiring subsurface pore space rights this way.
- In Louisiana, prescription of nonuse may be an issue.
- What will constitute “use”?

# Leasing subsurface pore space rights

- Some companies are acquiring subsurface pore space rights this way.
- Louisiana has granted four “operating agreements” that are essentially leases for subsurface pore space rights beneath certain state lands.
- Texas has granted offshore lease in Texas state waters in Gulf of Mexico (to Talos)

Acquiring Subsurface Rights  
Without Agreement and  
Compensation of  
Nonconsenting Landowners

# Three Potential Models

1. Eminent domain
2. Oil & gas pooling
3. Oil & gas unitization

## Eminent domain

- Eminent domain is power of government to take privately owned property for a public use, subject to the requirement that the government pay reasonable compensation for the property taken.
- In various contexts, this authority is delegated to private companies. E.g.,
  - Electric companies
  - Pipeline companies

## Existing use of eminent domain as basis for acquiring subsurface storage rights

- Natural Gas Act authorizes use of eminent domain to acquire subsurface storage rights for natural gas
- A majority of states have their own statutes authoring use of eminent domain to acquire subsurface storage rights for natural gas
- Some states authorize use of eminent domain to acquire subsurface storage rights for other fluids

**Eminent domain.** At least two states have authorized a prospective CCS operator to acquire subsurface rights by eminent domain

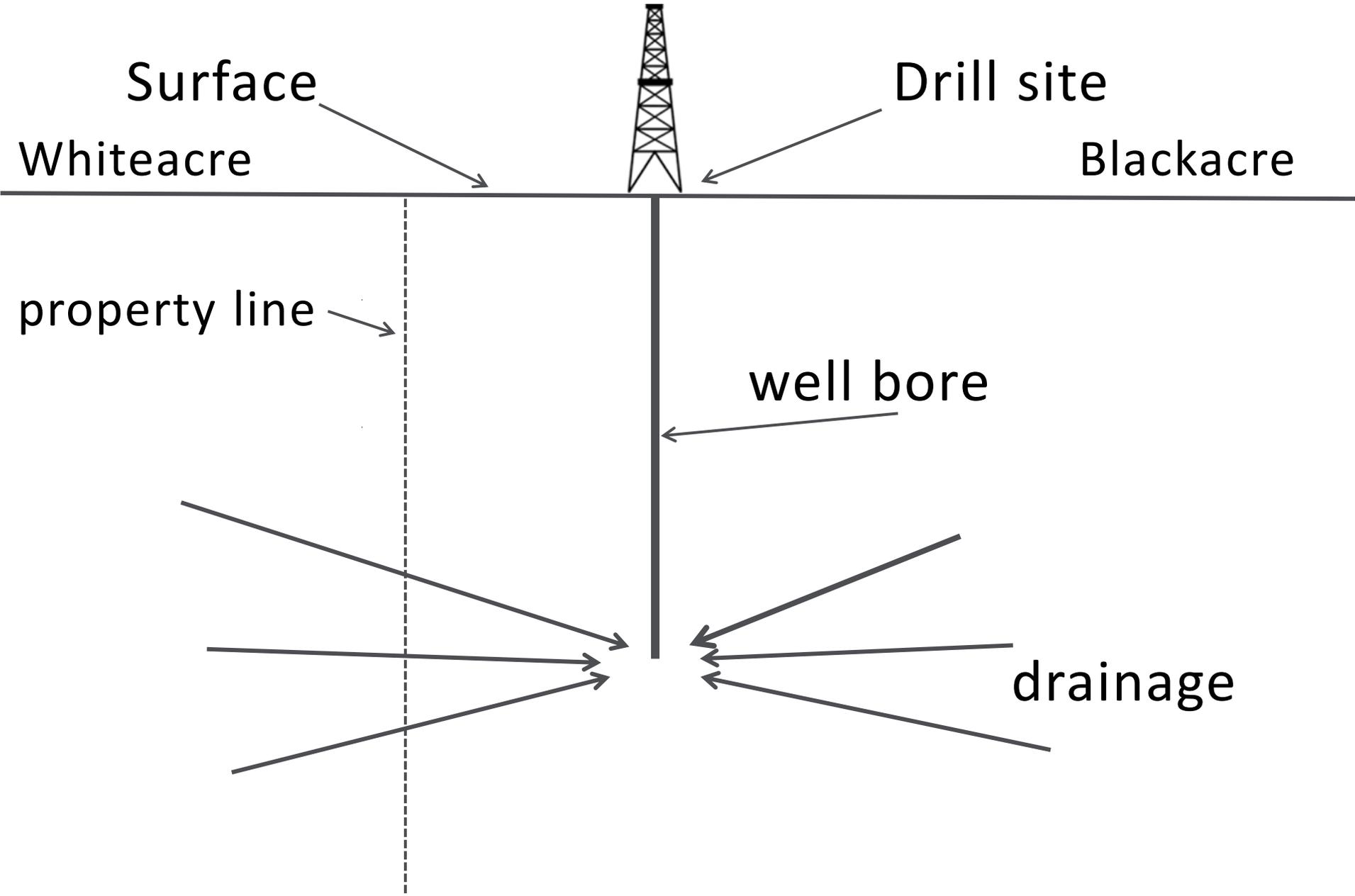
- Ala. Code § 9-17-154
- La. Rev. Stat. 31:1108; *see also* La. Rev. Stat. 19:2.

## Pooling

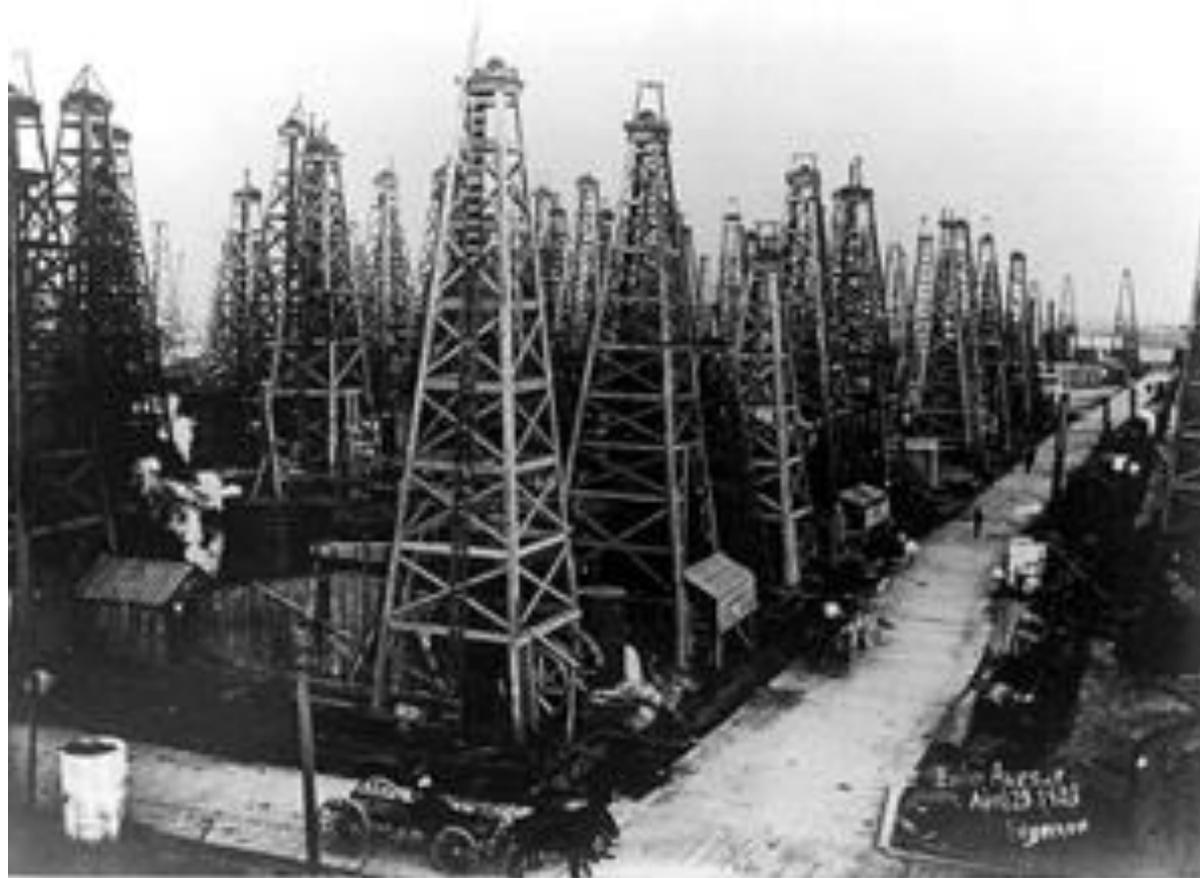
- An oil & gas treatise describes “pooling” as “the bringing together of small tracts sufficient for the granting of a well permit under applicable spacing rules.”
- Can be implemented by regulatory order.
- One party is named “operator,” with exclusive authority to conduct operations in defined area.
- Revenue from operations is shared amongst owners of tracts in that area.

## Authority for pooling in oil & gas context

- Almost all oil & gas producing states (and some non-producing states) have statutes authorizing the regulator to issue an order for unitization.
- An exception is Kansas. Also, in some states, the pooling statutes are difficult to use and are seldom used.
- However, in states without statutory pooling (or where statutory pooling is seldom used), parties sometimes enter agreements for pooling.



# Spindletop



- Spindletop's Boiler Avenue in 1903.

# Unitization

- An oil and gas treatise describes unitization as the joint operation of all or some portion of a producing reservoir.
- Can be implemented by regulatory order.
- One party is named “operator,” with exclusive authority to conduct operations in defined area.
- Revenue from operations is shared amongst owners of tracts in that area.

## Authority for unitization in oil & gas context

- Almost all oil & gas producing states (and some non-producing states) have statutes authorizing the regulator to issue an order for unitization.
- An exception is Texas, but the regulator sometimes takes action to encourage implementation of unitization by agreement.

**Unitization.** Some states have authorized prospective CCS operators to acquire subsurface rights by a process similar to fieldwide unitization.

- Cal. Pub. Res. Code § 71460
- Ken. Rev. Stat. 353.808
- Miss. Code § 53-11-9
- Mon. Code § 82-11-204
- Neb. Rev. Stat. 57-1612
- N.D. Cent. Code § 38-22-10
- Utah § 40-11-10
- W. Va. Code § 22-11B-19
- Wyo. Stat. § 35-11-315



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