Common Law Aspects of Hydraulic Fracturing

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Development from Orbit
A Matter of Spatial Relationships

• Surface Ownership vs. Mineral Ownership
  – Dominance of the mineral estate
  – Water use
  – Litigation & Administrative challenges

• Neighboring mineral owners
  – Trespass

• Separate mineral owners over same tract
  – Questions of ownership of natural gas
Dominance of the Mineral Estate

- Mineral estate dominant. Curtailed only by:
  - “Reasonableness,” non-negligent, non-excessive
  - Statutes and regulations
- Accommodation Doctrine: If operations...
  ...substantially interfere with surface owner’s use...
  ...mineral interest owner must “accommodate” surface owner’s (existing) use...
  ...if mineral interest owner has reasonable alternatives.
- Surface Damage Acts
Water Use

• In many states, mineral owner has the right to use the estate’s water to develop
  – Must not be negligent use
  – Must serve only tract in question or pooled tracts

• Questions:
  – What water law regime does state have?
  – Which agency permits? (Surface vs. groundwater)
  – Can agency curtail water use during drought? How?
  – Can agency not permit water use? Is that a taking?
Surface Owner Administrative Challenges—Can Permits Be Challenged?

• WV: surface owner “appeals” drilling permit

• WVDEP and operator sought dismissal of the “appeal” because no right to appeal is found in the WVDEP regulations or in West Virginia law
  – Argue surface owners already have right to file comments regarding drilling permit applications

• CoA reverses, citing a 2002 West Virginia case where such a court challenge was allowed.

• WV Supreme Court of Appeals reverses again.

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Legal Action

• Lessor Suits
  – Contamination—air, water, and soil
  – Nuisance—foul smells, noises, rumble of operations
  – Breach of Contract—breach of terms of leases and surface use agreements
  – Fraud—violation of the covenant of further development—especially common in Marcellus
  – Personal Injury Lawsuits—everything from sickness to fracing turning somebody’s hair orange. No appellate opinion has yet found a connection between fracing and personal injury, however.
Neighboring Mineral Estates

*Coastal Oil & Gas Corp. v. Garza Energy Trust*¹

- Question—when fracing is conducted, does the neighboring tract have a cause of action? (Trespass, conversion, etc.)?
- Texas Supreme Court held in *Garza*:
  - Rule of Capture precluded damages for “trespass on the case” (which requires a showing of damage)
  - Did not go so far as to say fracing was not a trespass, but rather was not an *actionable* trespass.
  - Concurrence: trespass is altogether discounted for fracing
  - Dissent: Drainage made possible by fracing is not “natural” drainage as envisioned by the law of capture

¹ 268 S.W.3d 1 (Tex. 2008)
Coastal Oil & Gas Corp. v. Garza Energy Trust
The court recognizes limitations...

• TRESPASS QUARE CLAUSUM FREGIT: remedy which lies to recover damages when the defendant has unlawfully and wrongfully trespassed upon the real property of the plaintiff.
  – “...we are talking about fissures of immeasurable length and uncontrollable direction”
  – “...testimony in this case reveals that although the fracture length of an operation can be estimated...the effective length—the length of the fracture through which gas will flow—cannot.”
**Coastal Oil & Gas Corp. v. Garza Energy Trust**
...that may no longer exist—enter *microseismicity*

- Omnidirectional geophones placed in a monitoring well offset from the treatment well
- Maps micro-seismic events arising in the treatment well in “real time” by picking up vibrations from the fracing
- Velocity models can be constructed from sonic logs, and event location is calculated at point in space that “matches” the observed arrival times of waves from geophones
- Can determine direction, azimuth, height, length and asymmetry of fractures associated with hydraulic stimulation.
- This information can be interposed over property lines to determine when and where fractures cross over a boundary
What this shows lawyers is...

• We can pretty much determine the length, extent and direction of fractures caused by fracing
• We can certainly determine whether the fractures cross a property boundary
• Is that a trespass?
  – A plethora of industry groups, agencies, academics and such think not.
  – My thought: fracing is not a “natural” draining process exactly akin to drainage caused by reservoir pressure...
  – ...but should certainly not be considered trespass until the extent of fracturing can be controlled so as to make avoidance of property boundaries a measurable certainty
Ownership of Natural Gas

• Does a conveyance of “minerals” include oil and natural gas? Not in some states, perhaps!
  – *Dunham & Shortt v. Kirkpatrick:*\(^1\) reserving or conveying “minerals” without references to oil or gas creates rebuttable presumption that grantor did not intend for “minerals” to include oil or gas.

• Who owns natural gas found in coal?
  – Depends on state. For CBM in PA, it’s coal owner.\(^2\)

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\(^1\) 101 Pa. 36 (1882); \(^2\) *U.S. Steel Corp. v. Hoge* 468 A.2d 1380 (Pa. 1983); \(^3\) 29 A.3d 35 (Pa. 2011)
Thank you!

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