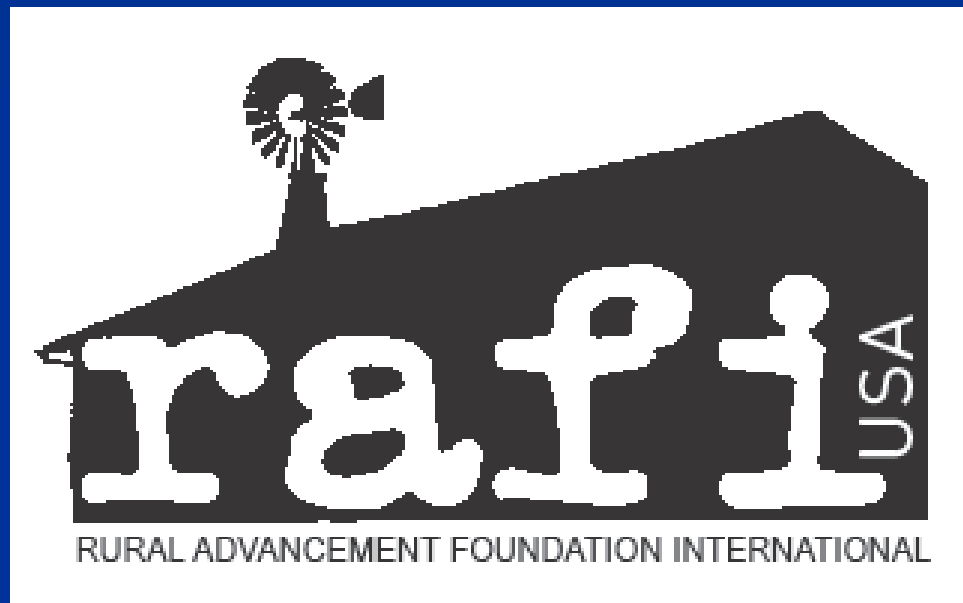


Mineral Rights Leasing in North Carolina



Jordan Treakle - Mineral Rights Project Coordinator

The Rural Advancement Foundation International (RAFI-USA)

What is Hydraulic Fracturing?

Roughly 200 tanker trucks deliver water for the fracturing process.

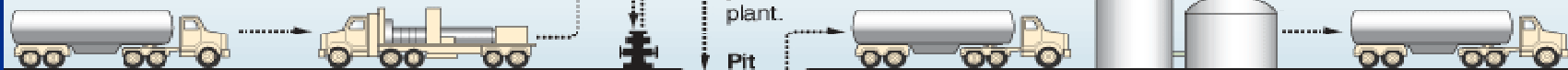
A pumper truck injects a mix of sand, water and chemicals into the well.

Natural gas flows out of well.

Recovered water is stored in open pits, then taken to a treatment plant.

Storage tanks

Natural gas is trucked to a pipeline for delivery.



0 Feet

Water table

Well

1,000

Hydraulic Fracturing

Hydraulic fracturing, or "fracing," involves the injection of more than a million gallons of water, sand and chemicals at high pressure down and across into horizontally drilled wells as far as 10,000 feet below the surface. The pressurized mixture causes the rock layer, in this case the Marcellus Shale, to crack. These fissures are held open by the sand particles so that natural gas from the shale can flow up the well.

2,000

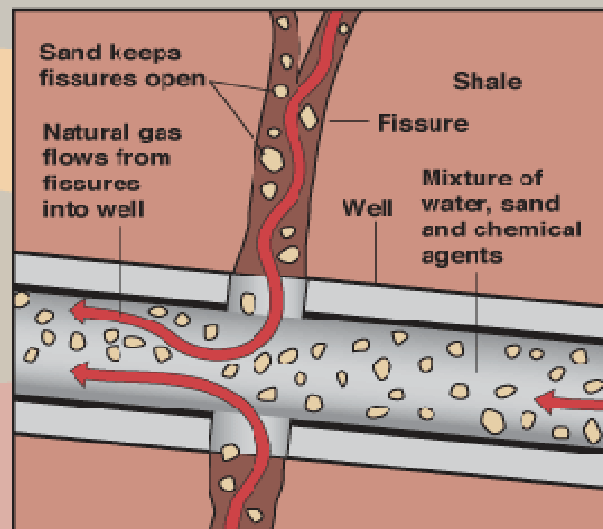
3,000

4,000

5,000

6,000

7,000



Well turns horizontal

Marcellus Shale

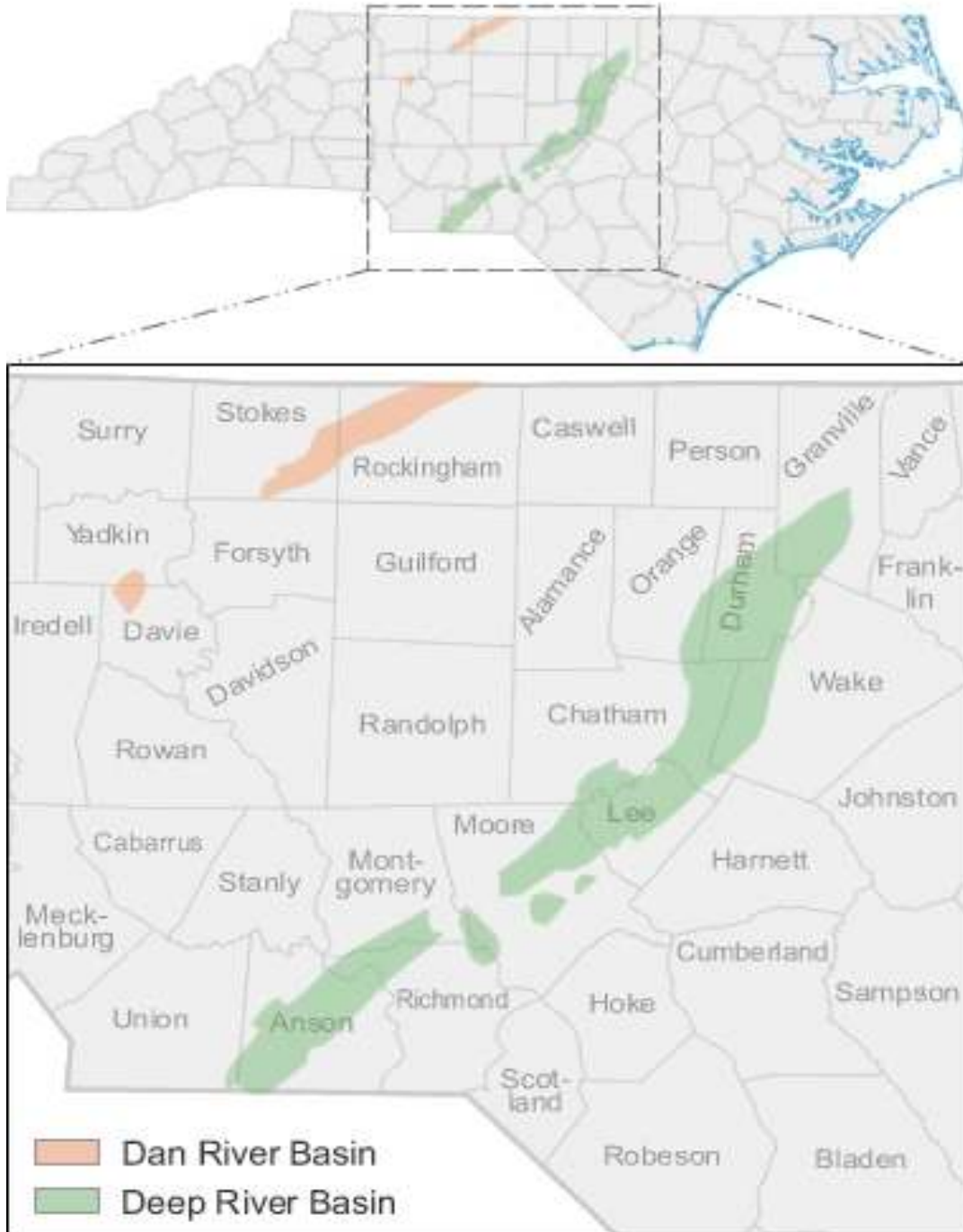
Fissures

The shale is fractured by the pressure inside the well.

What is a Mineral Rights Lease?

- Legal contract that defines the relationship between the landowner and the drilling company
- Determines all payment terms, drilling phases, & activities of gas companies on landowner's property
- Only terms in writing have legal standing
- Mineral Rights Leases can and should be negotiated to protect personal property
- Access to Mineral Rights can impact Surface Rights

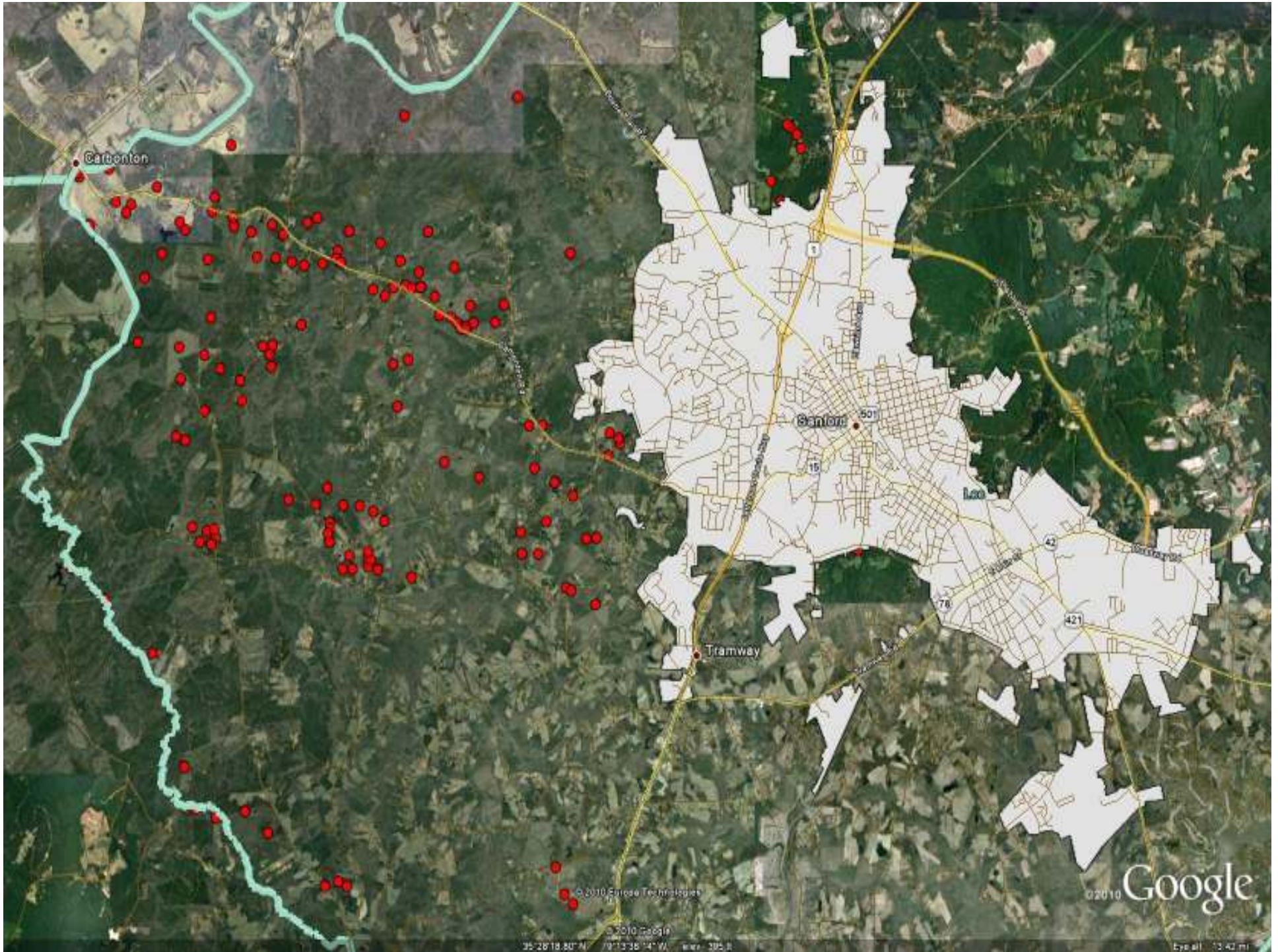
Triassic Basins of North Carolina



- 14 counties could be affected by fracking
- Over 9,000 farms on over 1.3 million acres of farmland
- Over 9,400 acres of land are known to have been leased to three companies in Lee County since March 2010
- Gas companies are targeting Lee, Moore, & Chatham Counties

Concerns over Predatory Mineral Rights Leases

- RAFI has worked closely with lawyers, NC St. Cooperative Extension Specialists and the Wake Forest School of Law to analyze the Mineral Rights Leases
- Concern that Leases are taking advantage of landowners' lack of knowledge of property rights & experience with mineral extraction
- RAFI's goal is to improve public understanding of the potential impacts of fracking and provide legal and risk management resources to landowners



Terms of Lease Agreement

- Length of lease agreement
 - Primary & Secondary drilling phases
- Payment terms
 - Bonus payment & Royalty payment
- Rights granted by landowner to energy company & limitations on those rights

Predatory Mineral Rights Leases: Compensation

- Give landowners little compensation for resource
 - \$2,000 - \$15,000 per acre bonus payments in other regions
 - \$1 - \$25 bonus payments in North Carolina
- Minimum Royalty Payments of 12.5%
- Unreasonably long drilling phases
 - Typical Primary drilling phase 3-5 years
 - Primary drilling phases in NC leases 15-20 years
 - Delays landowner compensation and limits ability to renegotiate lease with different company

Predatory Mineral Rights Leases: Liability & Impacts

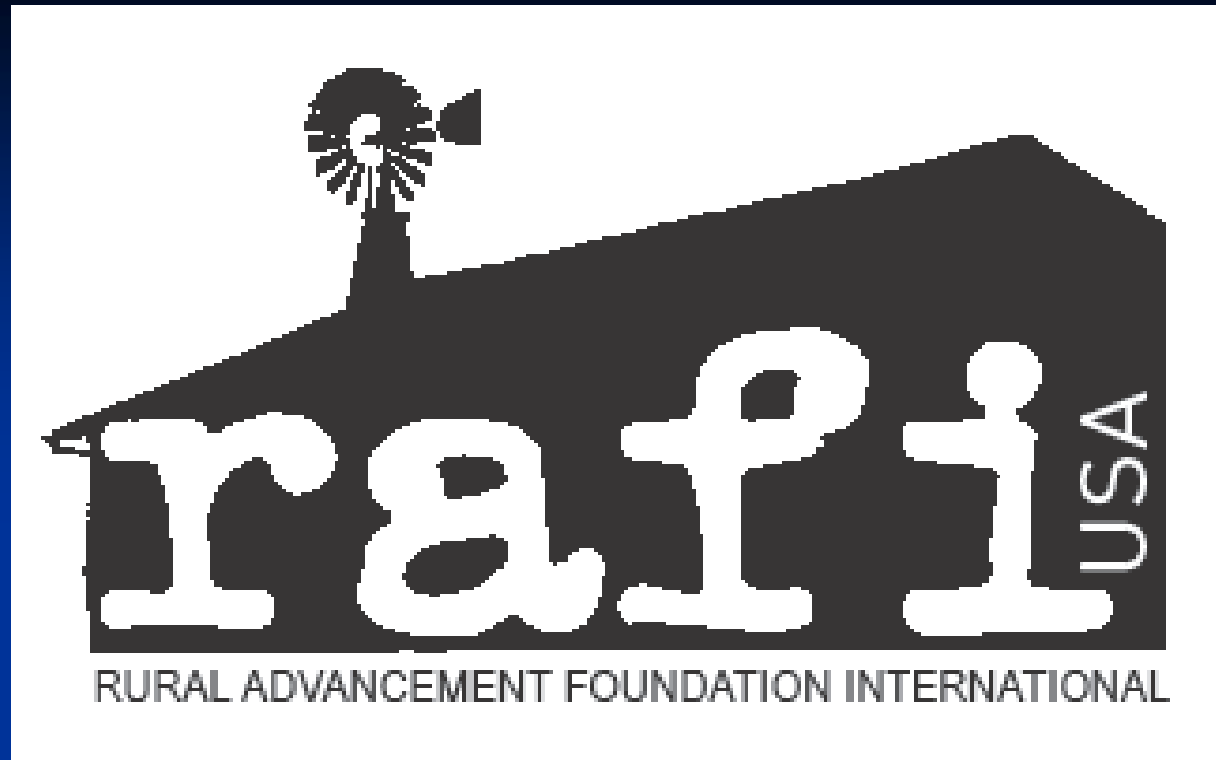
- Lease terms burden landowner with unreasonable financial risk
 - Potential environmental damages
 - Impacts on crops & livestock
 - Impacts on neighbors' property
- No compensation for significant property impacts such as impoundment ponds, compression stations, or pipelines
- Force landowners to pay for development costs
 - Well pad construction
 - Water withdrawals for drilling
 - Access roads

Potential Impacts on Farms

- Development of access roads and pipelines through crop fields, timber resources, or livestock pasture
- Spillage of fracking fluids or toxic waste water on agricultural lands
- Increased erosion from well-pad development, access roads, and increased truck traffic
- Soil compression affects crops for 3-5 years
- Top soil removal and top soil/sub soil mixing
- Damage to water drainage systems
- Potential impacts on water resources used for irrigation
- Possible affects on Farm Plan and Organic certification
- Disqualification from USDA/State cost-share/CREP/Farmland Preservation Programs & possible fund payback

Resources

- NCSU Department of Agricultural and Resource Economics
 - www.ag-econ.ncsu.edu/gasleasing.html
- Cornell Natural Gas Resource Center
 - <http://cce.cornell.edu/EnergyClimateChange/NaturalGasDev/Pages/default.aspx>
- National Agricultural Law Center
 - Renewable Energy Reading Room:
 - www.nationalaglawcenter.org
- Water wiki
 - http://sogweb.sog.unc.edu/Water/index.php/Main_Page
- Penn State Agricultural Law Resource and Reference Center
 - http://law.psu.edu/academics/research_centers/agricultural_law_center/resource_areas/natural_gas_exploration
- NC Department of Justice, consumer complaints
 - www.ncdoj.gov/Consumer/2-2-12-File-a-Complaint.aspx



RAFI's Mineral Rights Lease Webpage:
<http://www.rafiusa.org/gaslease.html>

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