

# Guinea Pigs of the Shale: Informed Consent and the Politics of Fracking

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# Summary

- Thank you!
- Whether, where, when, how to frack...**who decides?**  
(more important than what the rules should be)
- Problems with status quo answer and leading alternative answer to question of **who decides**.
- Another way to think through this question, by way of an analogy with human subjects of research?



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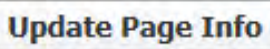






**Frack Free Denton**  
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Community [?]  
Denton DAG has initiated a citizens' petition to ban hydraulic fracturing ('fracking') within Denton city limits.  
<http://frackfreedenton.com/>


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Roughly 200 tanker trucks deliver water for the fracturing process.

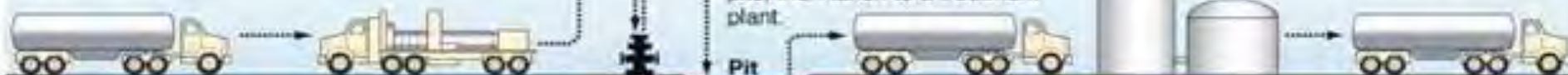
A pumper truck injects a mix of sand, water and chemicals into the well.

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

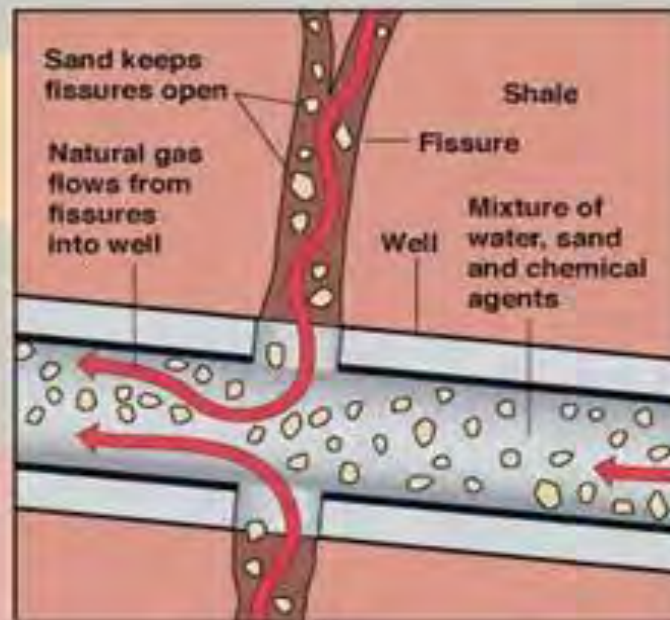
3,000

4,000

5,000

6,000

7,000



Sand keeps fissures open

Natural gas flows from fissures into well

Shale

Fissure

Well

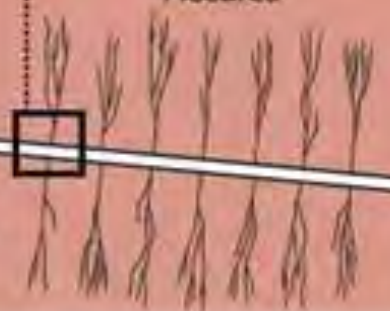
Mixture of water, sand and chemical agents

Well turns horizontal

Marcellus Shale

Fissures

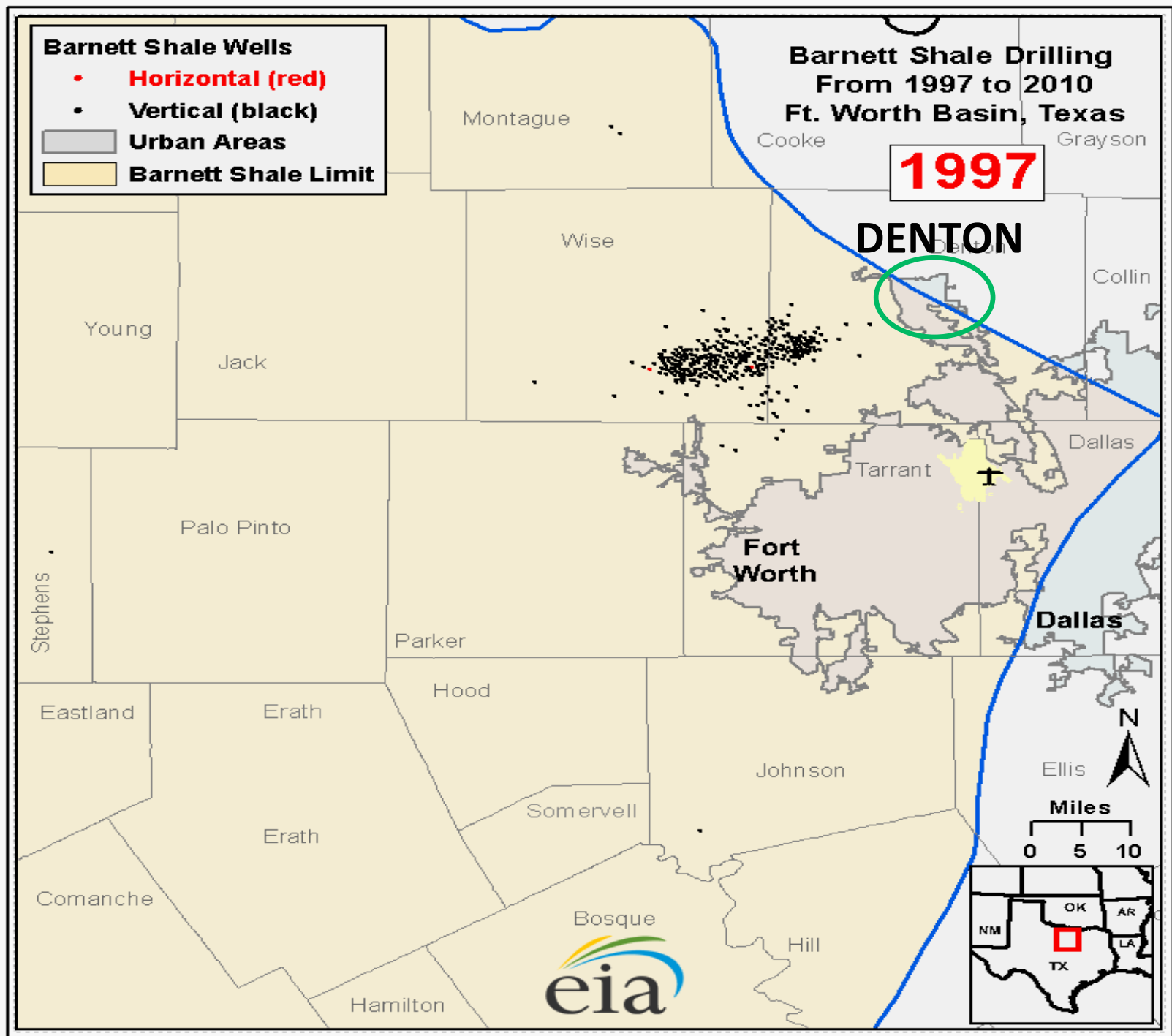
The shale is fractured by the pressure inside the well.



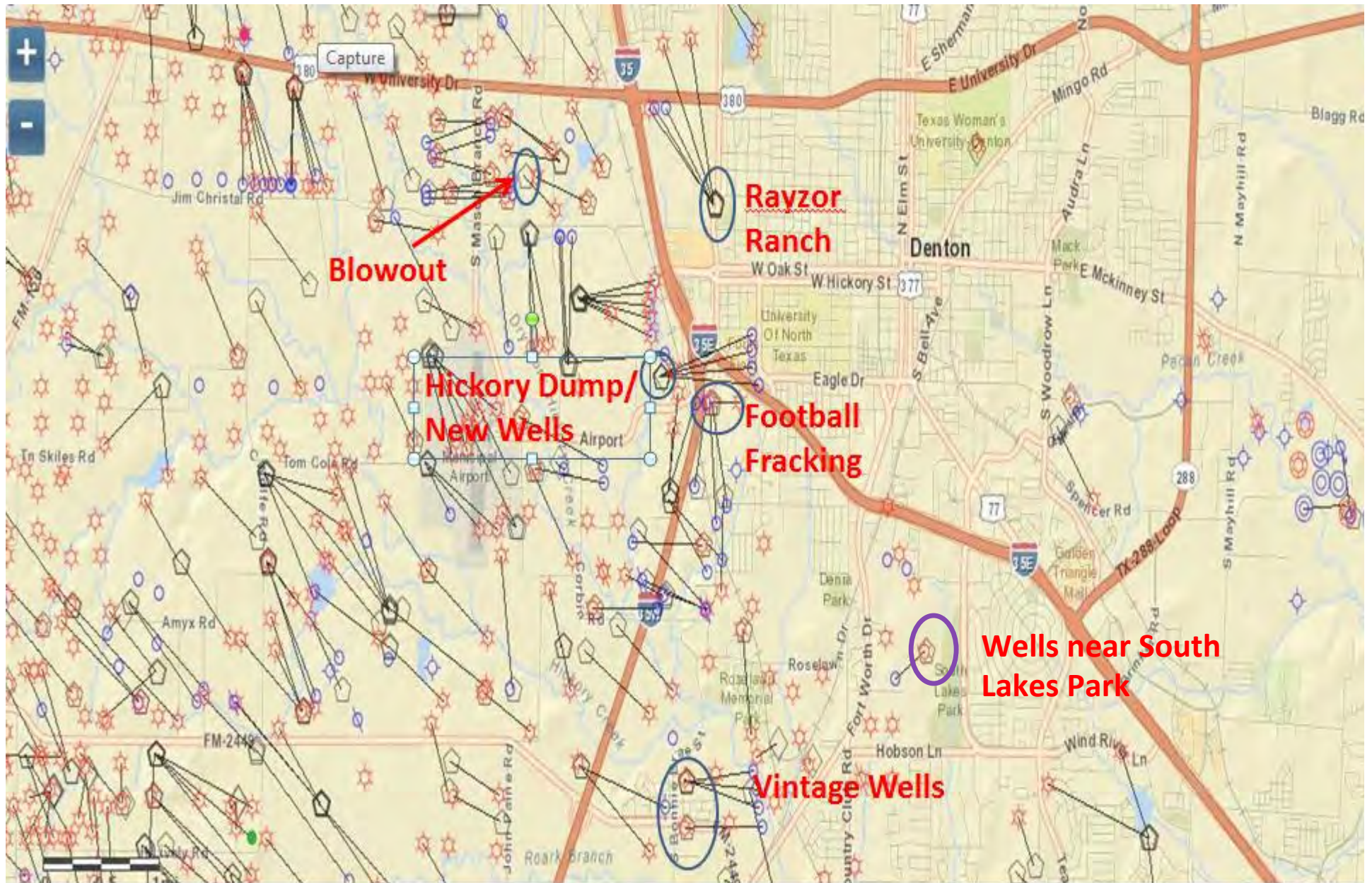


# Shale Gas Plays, Continental U.S.











# The Clash



## Denton homeowners sue energy company over fracking sites



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11

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65



+1



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WFAA

Posted on March 10, 2014 at 10:44 PM

Updated yesterday at 10:44 PM

DENTON -- A battle that has been brewing for months between an energy company and upset residents of one Denton neighborhood has spilled over into the courts.

<http://www.wfaa.com/news/local/denton/Denton-homeowners-sue-energy-company-over-fracking-sites-249375401.html>

# The Status Quo

“Most activities involving technology will have undesired effects as well as desirable ones. Whereas the precautionary principle is often used to take an absolutist stand against an activity, the Proactionary Principle allows for handling mixed effects through **compensation** and remediation instead of prohibition.”

Max More: <http://www.extropy.org/proactionaryprinciple.htm>

- Of course, good luck establishing harms.



- Who decides?
- Status quo = mineral owners and corporations.
- Alternative: The ideal of self-determination or self-governance. (uniting greens and libertarians)

# Self-determination

- Everyone has a right to a say in decisions that will importantly impact their lives.
- An extremely challenging ideal... --  
Nozick's fears of big brother.
- But something right about it when it comes to fracking (or other industrial activities) near where people live, work, and play.

# The 'Self' in Self-determination

- Pro-frack: mineral owners and corporations
- Anti-frack: community *as* municipality
- Neither is satisfying
  - Who decides? Should be those vulnerable to harm



# Anti-frack Self-determination

- Often articulated in terms of community rights.
- But 'community' conflated with municipality.
  - Should someone five miles away have the same political status as someone 250 feet away?
  - What about folks in rural areas?
- 'Industry' rebuttal: this is too idealistic.
- My point today: maybe this is insufficiently idealistic.

- The community rights approach takes the existing political ontology for granted.
- But the morally significant sense of 'community' here does not map atop existing institutions. We need to 'politicize' a new community.
- What if we thought of fracking like experiments with human subjects and of self-determination in terms of informed consent?

# The Analogy with Clinical Trials



~





# In both cases we have...

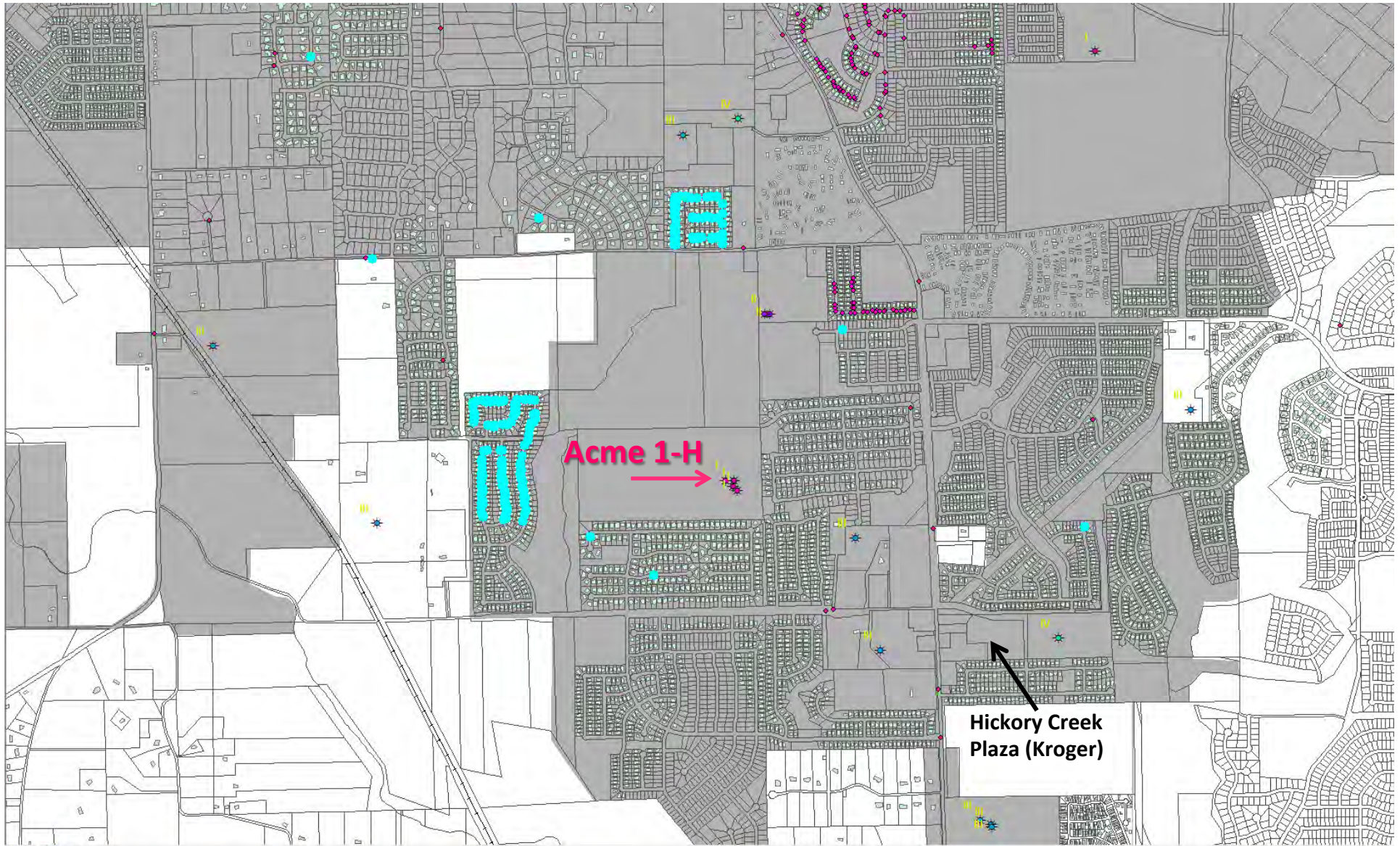
- An experiment: some level of uncertainty
  - Research, not therapy
  - Competing goods: autonomy vs. utility
- The expected goods (for many) can only come about by subjecting some people (the few) to potential and disproportionate harms
  - Who should be first in line to pay the price: scientists and Rex Tillerson!
  - Under what conditions is it acceptable to use people like this...?

# Informed Consent

- Who should decide whether it is worth the risk?
- Those most vulnerable to the potential harms
  - Those enrolled in the trial
  - Those in closest proximity to frack sites
- Grounded in the principle of autonomy – *auto nomos* = self legislating

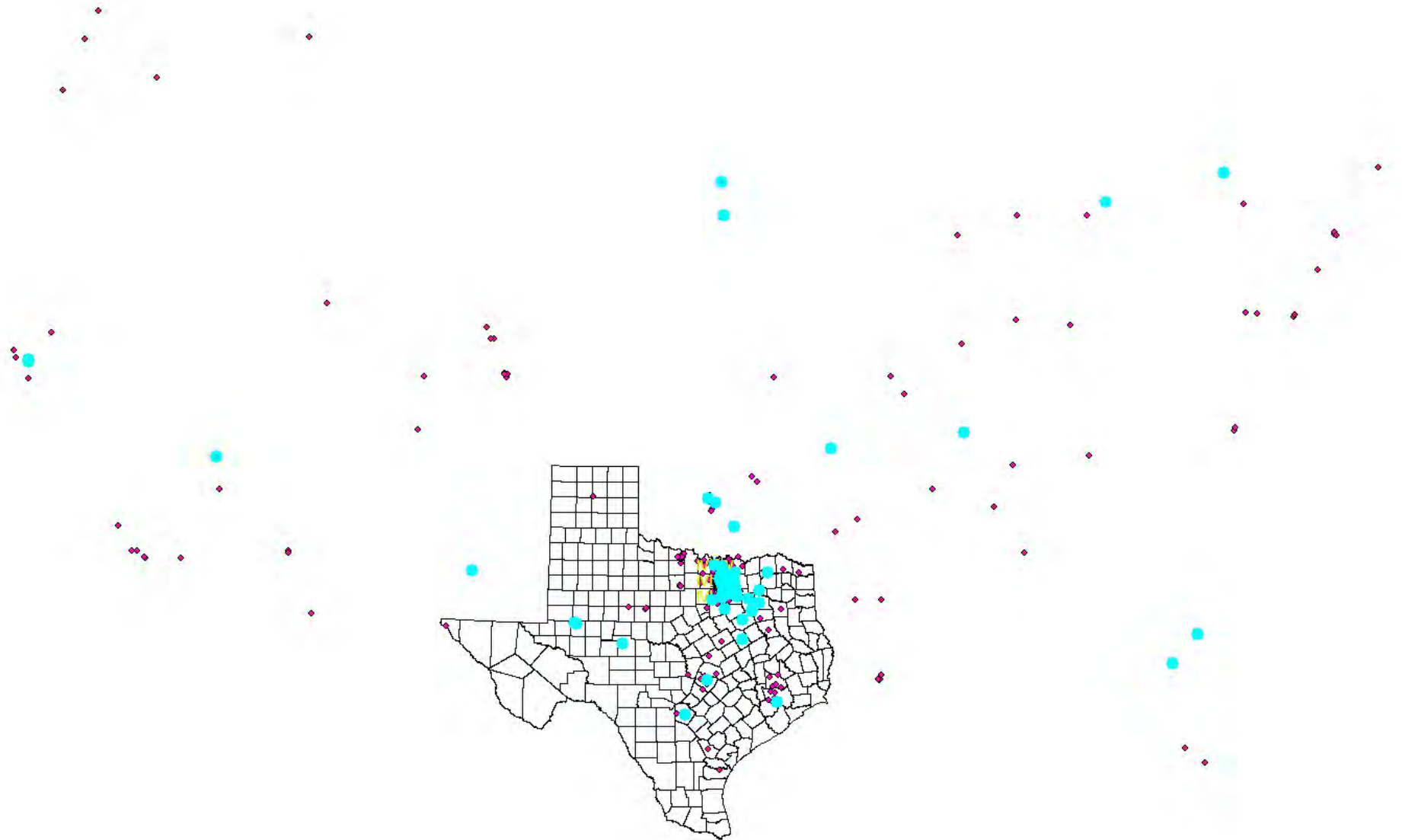
# The Status Quo

- Market (e.g., leasing) decisions
  - The most vulnerable are often marginalized
  - Due in large part to the severance of the surface and mineral estates (and predominance of latter)
- Creates distributive and participatory injustices
- A look at Denton...

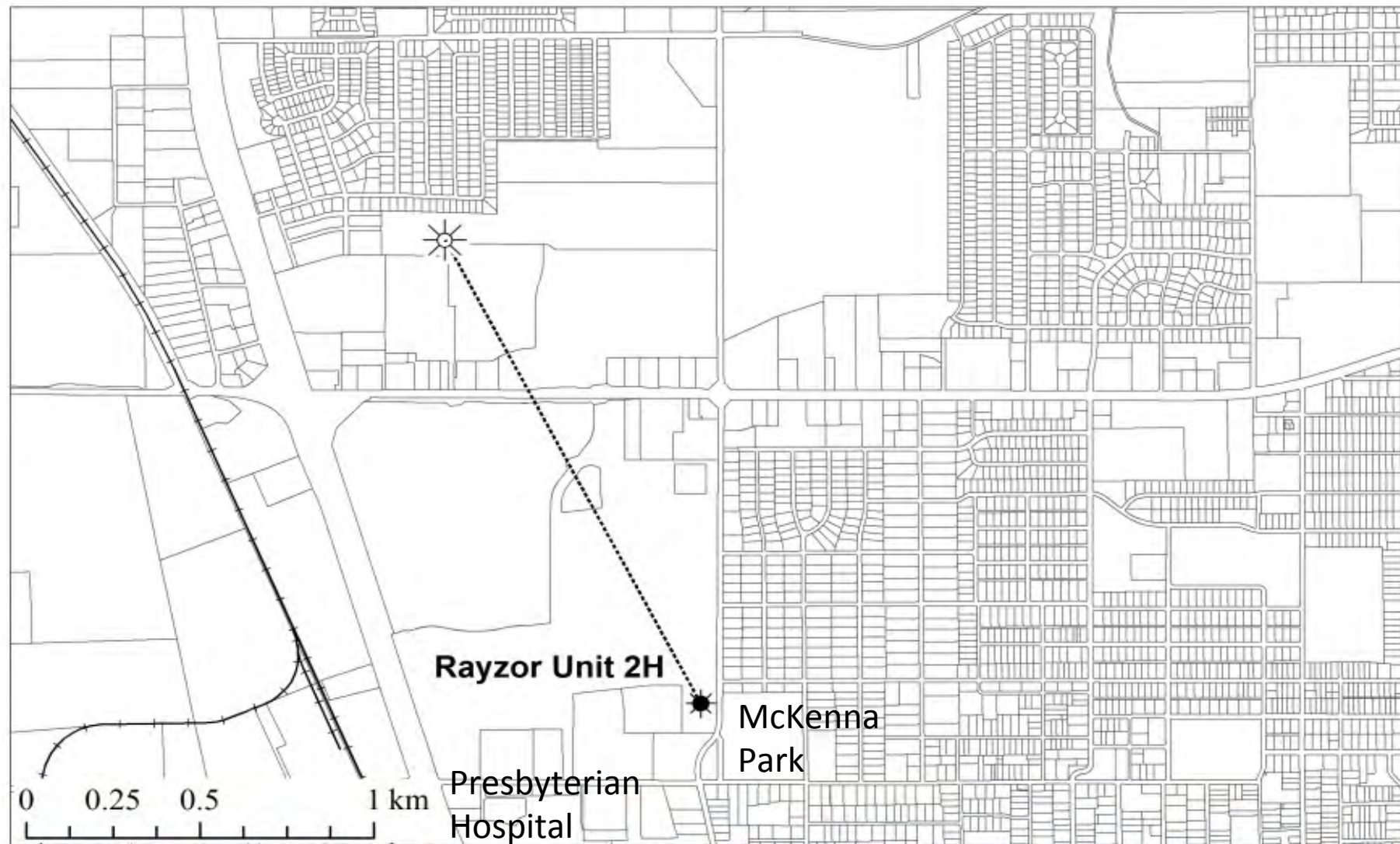


Blue dots = some of the 265 mineral owners who receive royalties from Acme 1-H





Blue dots = all 265 mineral owners who receive royalties from Acme 1-H







P-12 forms can be found  
via a search at  
[http://www.rrc.state.tx.us/  
data/online/gis/index.php](http://www.rrc.state.tx.us/data/online/gis/index.php)

RAILROAD COMMISSION OF TEXAS  
Oil and Gas Division  
PO Box 12967  
Austin, Texas 78711-2967  
[www.rrc.state.tx.us](http://www.rrc.state.tx.us)

## CERTIFICATE OF POOLING AUTHORITY

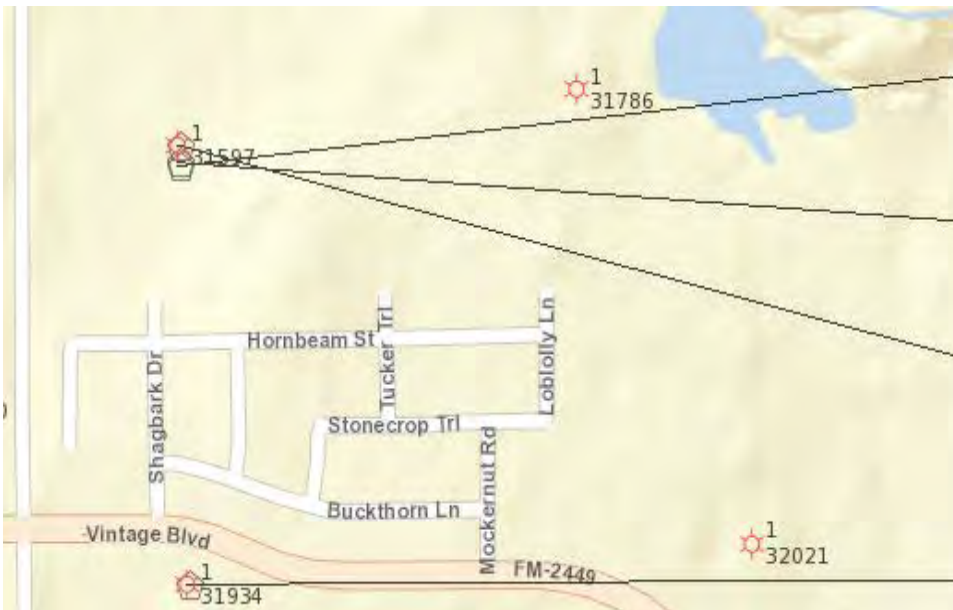
Revised 05/2001

# P-12

1. Field Name(s) <b>Newark, East (Barnett Shale)</b>	2. Lease/ID Number (if assigned) <b>198920</b>	3. RRC District Number <b>09</b>
4. Operator Name <b>EagleRidge Operating, LLC</b>	5. Operator P-5 Number <b>238462</b>	6. Well Number <b>4H</b>
7. Pooled Unit Name <b>Bonnie Brae Unit</b>	8. API Number <b>42-121-31934</b>	9. Purpose of Filing <input checked="" type="checkbox"/> Drilling Permit (W-1) <input type="checkbox"/> Completion Report
10. County <b>Denton</b>	11. Total acres in pooled unit <b>268.1</b>	

### DESCRIPTION OF INDIVIDUAL TRACTS CONTAINED WITHIN THE POOLED UNIT

TRACT/PLAT IDENTIFIER	TRACT NAME	ACRES IN TRACT (See inst. #7 below)	INDICATE UNDIVIDED INTERESTS	
			UNLEASED	NON-POOLED
1	Alfred Horatio Belo Peabody, Tru	70.5	<input type="checkbox"/>	<input type="checkbox"/>
7	Denton Bonnie Brae Joing Venture	95.3	<input type="checkbox"/>	<input type="checkbox"/>
27	JOAB Partners, LP	95.6	<input type="checkbox"/>	<input type="checkbox"/>
28	Gamble Family Trust	6.7	<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>



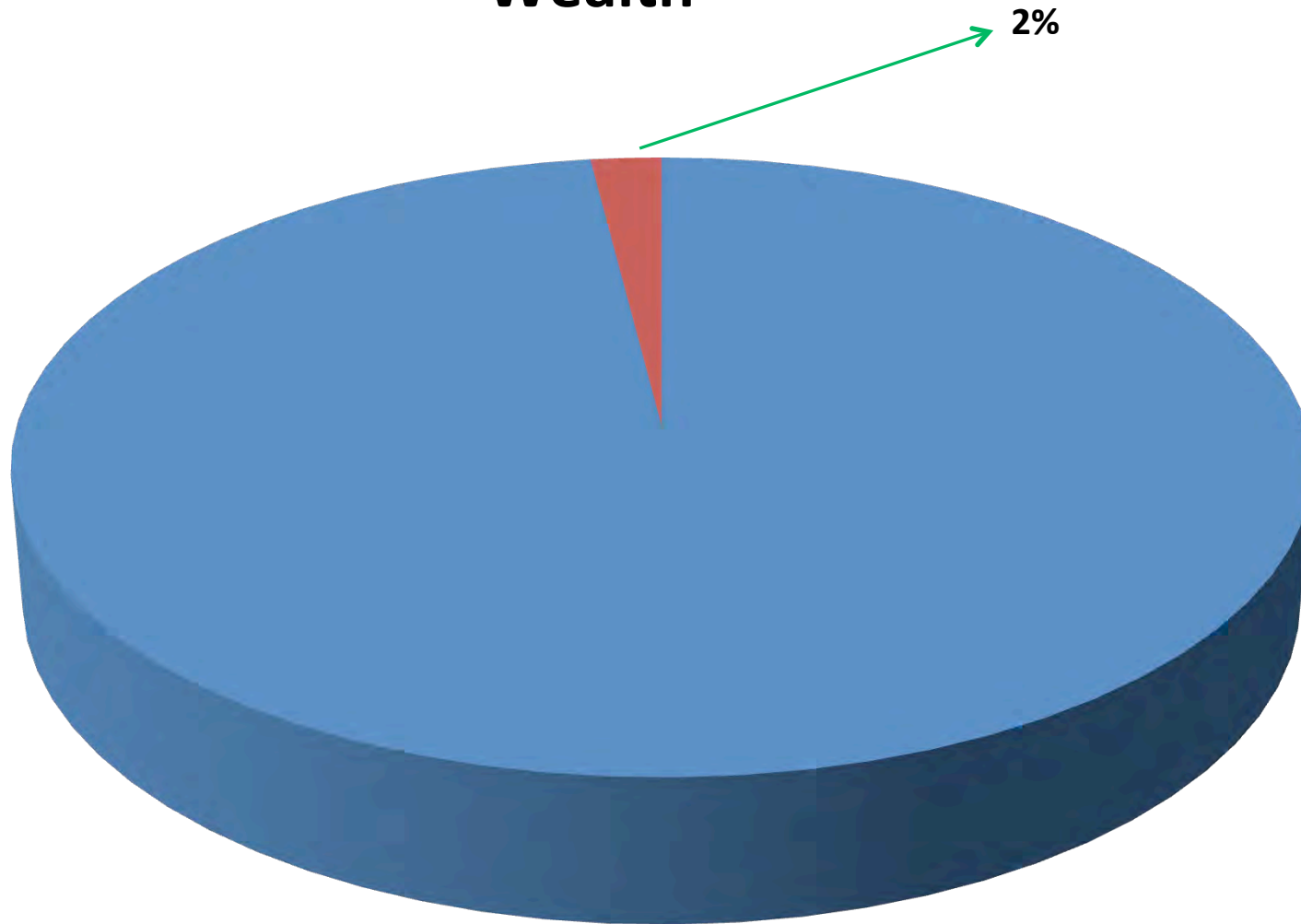
# Distribution of Appraised Values

City of Denton	Denton County	DFW Region	Texas	United States	Total
<b>\$6.5 million</b>	<b>\$1.6 million</b>	<b>\$2.9 million</b>	<b>\$11.9 million</b>	<b>\$1.2 million</b>	<b>\$24.1 million</b>

Columns indicate where the mineral owners reside. So, the first column “City of Denton” captures everyone who owns mineral values under the soils of Denton and has a mailing address with DCAD in the City of Denton. DFW Region is defined here as Dallas and Tarrant Counties.



## Denton Residents' Share of the Wealth

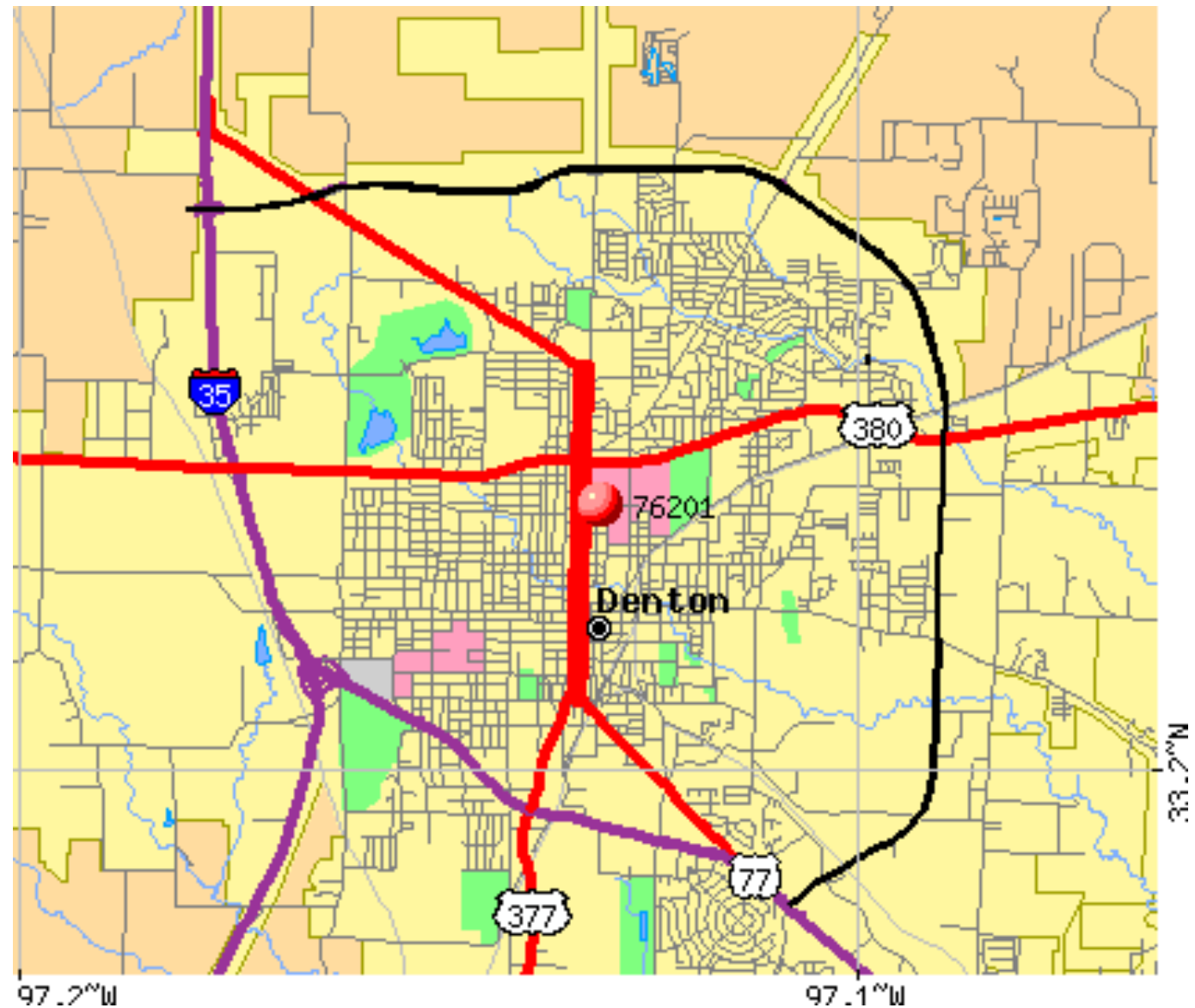


# The Status Quo

- Public (e.g., regulatory) decisions
- Municipal government is the best vehicle for the vulnerable to meaningfully participate in decisions that impact their lives.
- It too is largely marginalized by a top-down, centralized regulatory schema.

- But municipal government is not the ideal institution
- It too can become a machine focused on functionality
- Too exclusive: Not all can participate in it – rural areas do not have the conditions for political empowerment
- Too inclusive: Gives equal say to those exposed to harms and those not exposed...

Municipal bans are blunt instruments, but we don't have any better way to institutionalize the ideal of self-determination.





# A better institution?

- Mineral owner coalitions
- But membership in them is contingent on arbitrary criterion of mineral ownership

# A better institution?

- **Demes**
  - A novel political unit that would emerge upon any proposal to frack
  - Case by case determination
- Give self-determination to those most vulnerable (by virtue of proximity)
  - Not to mineral owners
  - Not to city dwellers

# Demes and Polycentric Governance

- Hyper-local, ephemeral political units coordinating with, or independent from, municipal government
- How to manage common pool resources?
  - Hardin: less freedom via government
  - Simon: more freedom via market
  - Ostrom: diversify institutions so that freedom is more widely distributed and localized = **demes**.
    - Taps into both Green and Libertarian sense of self-determination – localized, sustainable and no Big Government

# Glocalize fracking?

- This isn't ranching or fishing. The shale isn't even a resource to manage without capacities foreign to the deme.
- The necessity of standardized rules, specialized equipment, and centralized control structures.
  - It's not the ownership of the means (capitalists) that is the problem, but the means themselves. It takes a technocracy to frack.
  - If we really want self-governance, we must change not just who is in charge, but what they are in charge of.
- Otherwise, are members of demes anything more than unqualified onlookers to a machine run by outside experts?



# Wrap up

- Communities should have the right to a say in decisions that importantly affect them. And, when it comes to fracking, they often do not have that – they are forced to seek compensation rather than asked to grant permission.
- But what is a community?
- Mineral ownership, ownership of the means of production (corporations), and residence in a city as morally arbitrary or incomplete definitions
- Vulnerability to harm as morally relevant – but there is no existing institution to empower this community
  - Do such communities make sense? How do we create them?