

Drilling for natural gas in Marcellus Shale to require sacrifice



By **RUTH HEIL**
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Northern California is an obscure place. I know this because I spent a week wandering from Sacramento to San Francisco on my honeymoon years ago.

I remember swimming in the Trinity River near Burnt Ranch. Flecks of gold sparkled from the river bottom, but every time I reached to pick up a piece, it disappeared. From one perspective, there was gold; from another, there was just dirt.

All around me was undeniable beauty, but underneath laid deep scars cut by a quest for riches. The 1850s gold rush for-

ever altered California's landscape and culture, and man is repeating history as prospectors come to Pennsylvania, this time for natural gas.

For 75 years geologists have known about a fortress below our landscape called the Marcellus Shale. This multi-state, geological formation runs under almost all of Pennsylvania and holds a

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bounty of natural gas. By 2007, the shale shifted from an energy-development nuisance to a sweet spot when the industry giant, Halliburton, learned how to crack the fortress at a profit. The number of

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resulting mineral-rights leases signed, permits awarded and wells dug is now in the thousands.

The trouble with the quest for new wealth is that man will destroy his most important treasures to get it. California gold rush pioneers uprooted their wives, crippled their horses and sometimes orphaned their children for mere financial prospect. Earth's mineral bounty simply cannot be had without significant sacrifice. Gold must be washed out of the mountainside, sacrificing both water and mountain, and in our coalmines, workers are still dying.

What lies under the Marcellus can only be had by sucking 4 million gallons of water from our streams, rivers and aquifers, mixing it with sand and chemicals, and violently shooting it into the earth every day for 28 days without rest until the gas is reached 7,000 feet down. Before the bounty flows, 580 trucks will carry water from the source to the well; forests will give way to access roads; water that does not stay underground will be hauled away in another 230 trucks for treatment as radioactive flowback waste; freshwater aquifers penetrated; and internal combustion engines fired up to power the drill and pressurize the gas. All for just one well.

The Marcellus formation is not under Lehigh, Berks or Northampton counties; its boundary lies just north in Carbon, Monroe and Schuylkill counties — the places filled with our treasured forests, streams, parks and game lands. Uncontrolled drilling now threatens our state's environmental health, economy, water quality and tourism image.

Pennsylvania is no stranger to mineral extraction. This was the first place to give up oil when Edwin Drake completed his well in 1859, and Western Pennsylvania has been mining natural gas since the beginning of the 20th century. We know about sacrifice, too. A coal fire under the Columbia County town of Centralia, once populated by 1000 people, burned the place right off the post office map.

Shale drilling's true impact on Pennsylvania is still unknown, and everywhere questions remain:

- Will boring through the water table

permanently degrade our water supply?

- How many new roads must be cut through our wilderness forests to access the wellheads?

• What happens when a duck lands on a flowback containment pond filled with methane, gelling agents, surfactants and chlorides?

- What will remain when the tycoons take their equipment back home?

Big business will tell you that we need the gas beneath the shale to get off foreign oil and to fix Pennsylvania's economic troubles, but their story is shortsighted. They disregard our local businesses that have been inventing and improving small-scale solutions for homegrown, onsite energy production. They forget the third-generation farmer who supplies healthy food. They don't see your Dad's face when he is in his favorite trout fish-

ing hole or your Mom at her cherished mountain retreat. They're not there when you escape to the woods with your children.

We must demand that Marcellus Shale be drilled only when:

- Clean-water laws are applied and enforced;
- Restoration to pre-drill conditions is guaranteed;
- Well placement is logical;
- Water recycling technology is improved;
- Safer chemical alternatives are employed;
- All potential accidents are addressed and emergency personal equipped;
- Access-road impact is reduced;
- Potential lessors are educated on the true market value and environmental risks;

• Prevention exists for spills and failures;

• Enforcement agencies are armed to protect us; and

• Pennsylvania will get as rich as the industry claims.

Our old energy-development scars are healing. Ask the anglers, hunters, kayakers, hikers, bicyclists, birdwatchers and stargazers who come here to use our aboveground resources without destroying them for the next visitor. The gold dust lying at the bottom of the Trinity River is as elusive as the gold still hiding in the California hills. Just because it's there doesn't mean it's worth sacrificing everything to get to it.

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