

# The Fresno Bee



## Fracking probe expands in Central Valley

By Mark Grossi  
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Near almond orchards and the city of Shafter, state water authorities tested suspicious fluid in an oilfield sump — at a well named for the 1930s cartoon character Betty Boop.

They found the fluid laced with boron, salts and a cocktail of notorious chemicals related to gasoline and diesel. It came from hydraulic fracturing, or fracking, for oil.

The Betty Boop investigation in Kern County this year is the state's first hard look at water contamination linked to this hotly debated form of oil extraction.

The Central Valley Regional Water Quality Control Board now is investigating all operations in this part of the state where the advanced technology has been used hundreds of times over the last three years.

Modern-day fracking — injecting chemical-laden water into shale formations



Fracking's footprint is hard to miss around Shafter, a farm town of 17,000 people northwest of Bakersfield. A facility with working wells serves as a backdrop to farmworkers picking potatoes in a farm field on Madera Avenue near Mannel Avenue.

JOSE LUIS VILLEGAS — The Sacramento Bee

to loosen and extract oil — is not new, nor is it limited to California. It happens in North Dakota, Texas, Pennsylvania and other states. In many places, people argue over regulation, air and water quality as well as the possibility of triggering earthquakes.

With a potential 15.4 billion barrels — a lot of it beneath the San Joaquin Valley — California has the biggest share of this

oil. Debate here is fierce, spilling into courtrooms, the Legislature and even street demonstrations.

Yet it was a lone Shafter community activist who stirred state action on water quality related to fracking in Kern, the state's highest-producing oil county.

Shafter resident Tom Frantz last year videotaped the fluid discharge and alerted the Central Valley Regional

Water Quality Control Board. The agency issued a notice of violation after investigating.

“I hope they get a big fine,” said Frantz, a Shafter-area farmer and president of the activist group Association of Irrigated Residents. “This is right in the middle of prime farmland with the city of Shafter nearby. With all the new wells around here, you have to assume they’ve been discharging to open sumps for a while.”

### **Fracking regulation, economic promise**

The oil industry already is regulated in California, but the groundwork has begun to give the public and state agencies more access to hydraulic fracturing details, state leaders say.

Currently, the state’s Division of Oil, Gas and Geothermal Resources does not differentiate oil production involving the advanced methods of extracting from the Monterey shale.

On Jan. 1, the state will begin asking for more details from oil companies.

Senate Bill 4, signed by Gov. Jerry Brown in September, will require permitting for fracking wells, notification of

neighbors living near drilling, groundwater testing and a study of fracking’s impact on the environment.

The oil industry opposed the law as too big of a burden, but leaders say the industry will comply.

Environmentalists didn’t like the law, saying it was gutted at the last minute.

Months before the law passed, environmentalists sued to stop California fracking until more research on possible dangers.

“I don’t think California will stand still for this,” said senior lawyer Kassie Siegel of the Center for Biological Diversity, which filed legal action this year. “There will be a cost to the people and natural resources here.”

Money issues have been prominent. A University of Southern California study early this year suggested California would add up to 2.8 million jobs by 2030, fueling a tax bonanza and an economic boom.

But California’s stricter environmental regulation and geological complexity may be an obstacle to aggressive fracking here, say other economists.

Hinting at a more conservative projection, a new study by California State University, Fresno, looks only at the San Joaquin Valley, which produces 75% of California’s oil.

The Fresno State study — sponsored by the oil industry — estimates fracking would add 2,151 to 195,683 jobs for the Valley, emphasizing the possibility that oil companies might have trouble being as aggressive here as they are in other states.

The Valley might see benefits from fracking, particularly in Kern, said Fresno State economist Antonio Avalos, who worked on the analysis with colleague and fellow economist David Vera. But he does not see a boom.

Avalos said: “We think an economic miracle is unlikely in the San Joaquin Valley.”

### **Debating safety for water, air**

It can take weeks to drill a well 8,000 feet or more into California’s Monterey shale. But blasting the shale with fracking fluid and removing oil takes only three to five days.

Fracking has been going on since the late 1940s,

but drilling technology has advanced to include horizontal exploration within the shale formations. The approach allows crews to drill down, then horizontally for thousands of feet, exposing more shale for fracking.

Industry standards for groundwater safety include concrete casing to seal the well as it passes through underground water fields. The casing is pressure tested to be sure it doesn't leak, industry leaders say.

The fracturing is done thousands of feet below the groundwater, says Tupper Hull of the Western States Petroleum Association, representing oil companies that produce 80% of California's oil. Nobody has found groundwater contamination from fracking, he said.

"It's a myth that we don't know much about hydraulic fracturing," he said. "This is one of the most researched methods you'll ever find."

But nobody knows for sure about the groundwater contamination, say environmental groups such as the Sierra Club and Earthjustice.

Because the Valley's groundwater is a main

source for farms and cities, environmentalists say it's risky to allow this drilling without proof of the safety.

They also point to the possible release of carbon in methane, a potent climate-warming gas. California is at the forefront nationally to clean up carbon emissions — which presents a puzzling conflict if fracking is allowed to continue, environmentalists say.

Local groups have sprung up all over California to voice opposition. Fresno's Against Fracking held a rally in October, seeking public support for a moratorium on the practice. Gary Lasky, a local Sierra Club official, leads the group.

"This is about protecting community health and our farming in the San Joaquin Valley," he said.

### **The Kern violation**

Kern County oilfields have 42,000 of the state's 54,000 active oil wells, according to the California Department of Conservation. Hundreds of new wells are drilled each year. Not all are fracking wells.

It's difficult to know how many fracking wells are drilled in Kern County, but

there were more than 500 new jobs in 2012, according to FracFocus, a hydraulic fracturing chemical registry, a website where companies voluntarily list details about fracking.

Shafter activist Frantz says there are several dozen new wells within two miles of his city, which has a population of about 17,000.

Worried about water for people and crops, Frantz shot video of discharges at a Shafter-area well last year. He posted it on YouTube and notified regional water board authorities.

The well belongs to Vintage Production California, a subsidiary of Occidental Petroleum. Vintage agreed the fluid going into the sump in the video was from the fracking well, according to the regional water board.

But the sump was closed down before regional board staffers could test it early this year. Nearby, another Vintage fracking well offered authorities a chance to test a similar sump — Betty Boop.

The company, which declined comment, had permission to discharge only drilling muds and boring wastes, according to the regional board. The board issued a notice of

violation July 23, identifying several chemicals found in the fluid, such as benzene, a carcinogen linked to anemia, leukemia and bone marrow abnormalities.

The amount of fluid discharged into the sump was three or four barrels — 126 to 168 gallons, said Clay Rodgers assistant executive officer of the regional water board. It is not considered a big discharge of fluid.

Rodgers said the board is negotiating a settlement with Vintage, and an announcement is expected soon. Such settlements often include cleanup requirements, inspections, documentation and money.

Meanwhile, a broader, long-term investigation of wells drilled by 70 companies in the Valley will continue, said supervising engineer Doug Patteson of the regional board's Fresno office.