

Fracking leads new energy boom in U.S.

U.S. is slated to surpass Saudi Arabia in oil production by 2015

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MIDLAND, Texas All along the highway that leads into this city in West Texas, the rows of black pump jacks seem endless, bobbing up and down as they pull crude oil from beneath the parched scrub desert.

The pump jacks have long been here, in good times and bad – a symbol of this city's long status as the heart of America's petroleum industry. Even when U.S. oil production was dropping and many feared the Permian Basin, which feeds Midland's oil economy, was all but exhausted, the pump jacks continued their work.

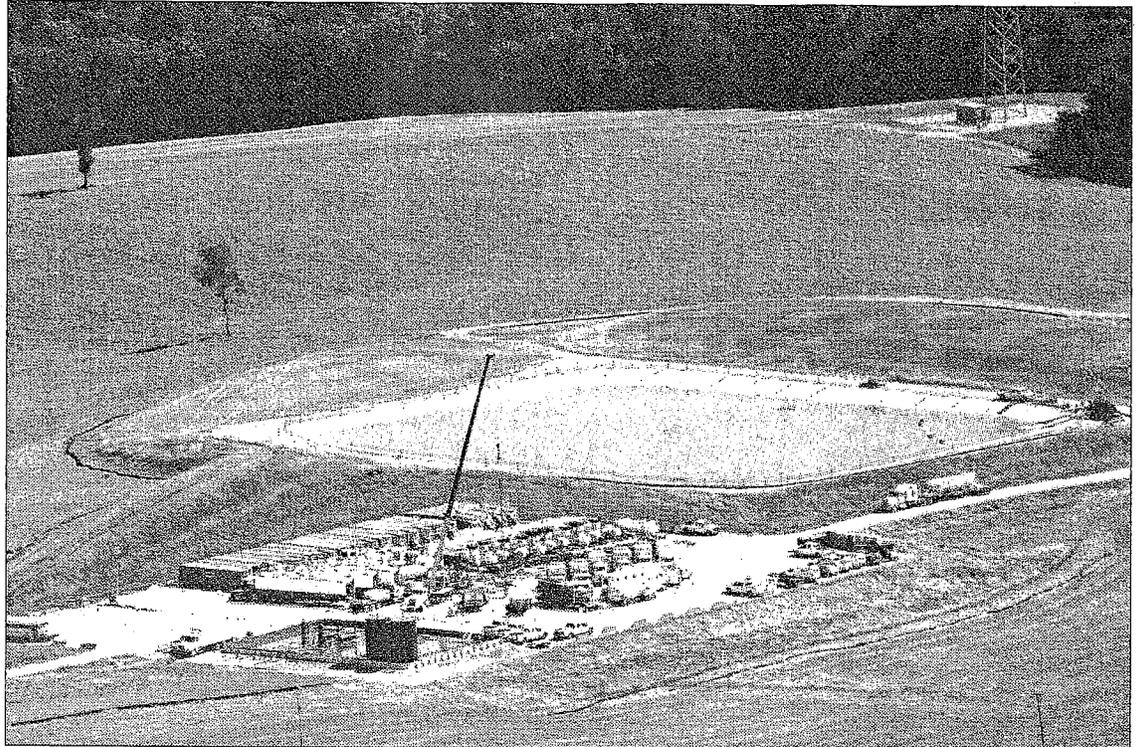
Now, their up and down motion seems all but unstoppable, a symbol of an energy revolution that seems likely to transform the globe.

"Everything has changed," said Jim Henry, 78, who's worked in the oil fields of Texas most of his life.

A surge in U.S. oil production has in just a few short years propelled the United States from a country largely dependent on oil imports to one that soon could become the world's top oil producer. The goal of North American energy self-sufficiency, the holy grail of American politics since the Arab oil boycott of 1973, seems to be within grasp.

The revolution has taken place almost unnoticed – and in a way that few foresaw less than a decade ago, when the emphasis on breaking America's foreign oil dependence relied almost entirely on persuading Americans to drive less, turn the thermostat up in the summer and down in the winter, and open protected areas to oil exploration.

No one, it seemed, predicted what actually happened – a production revolution that in the past five years has seen the amount of crude oil produced in the United States shoot up 40 percent after declining every year for the previous 20. The



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A pit containing fresh water or fresh water with chemicals for fracking sits next to a drilling site in Butler County, Pa. Fracking only became a viable option in the last decade.

'New and unanticipated energy abundance is within our reach.'

JAMES JONES

FORMER NATIONAL SECURITY ADVISER
TO PRESIDENT BARACK OBAMA

International Energy Agency predicts the United States will overtake Saudi Arabia as the world's top oil producer by the year 2015. America already has become the largest producer of natural gas.

In October, the United States started producing more oil than it imports for the first time since 1995.

And the American energy turnaround isn't expected to stop there.

Citigroup's head of global commodity research predicts that by the end of the current decade the only foreign oil the U.S. might need

will flow from Canada. Other analysts agree the potential is vast.

"New and unanticipated energy abundance is within our reach, and it provides a historic opportunity to solve some of our country's most difficult economic challenges," James Jones, a former national security adviser to President Barack Obama, declared at this year's Deloitte Energy Conference in Washington.

Boom owed to fracking

Questions remain about how quickly the U.S. fields will decline

and whether the boom can last. The production surge is owed in large part to use of a controversial drilling process known as fracking – hydraulic fracturing – in which high-pressure water and chemicals are pumped underground to break up shale rock and release the oil and gas trapped inside. Environmental groups argue it poses a threat to air and water.

Deep disposal of fracking waste has been linked in some studies to small earthquakes. Four cities in Colorado voted to ban fracking earlier this month. New York and North Carolina don't permit the technique, and other states are still debating the subject.

The drilling is also under attack from those who fear that the expansion of oil and gas supplies will simply increase the world's dependence on fossil fuels, speeding global warming and cutting the incen-

U.S. energy boom's impact

The shale oil and gas boom has benefited businesses far and wide; some examples:

Energy jobs

Oil and gas extraction

'03 102,200
'12 186,800

Oil and gas support

'03 121,200
'12 282,000

Freight rail

Carloads of crude oil moved

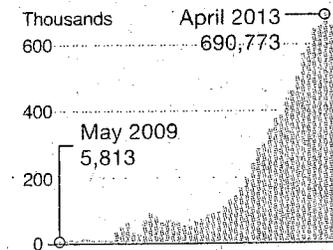
'09 9,500
'12 234,000

Carloads of industrial sand used in fracking moved

'09 112,000
'12 293,000

North Dakota rail oil exports

Barrels per day each month transported by rail from Bakken oil field



Source: McClatchy Washington Bureau, North Dakota Pipeline Authority

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tive to find renewable energy alternatives. Cheap natural gas increases the challenge of attracting investment to develop solar and wind energy.

“Those who might have relied on the fact that we would run out of this resource and therefore be forced by lack of available resource to switch to something cleaner – this is not going to happen. Not in

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