OIL SHALE: A CENTURY OF FAILURE

A look at a century of failed attempts at oil shale development in the West

a report by

THE CHECKS AND BALANCES PROJECT

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For nearly 100 years, the oil industry has tried to melt rock-solid formations in Colorado, Utah and Wyoming and turn it into oil.

Since 1917, when a government official persuaded a Nevada parole board to release a prisoner so the inmate could develop his oil shale extraction idea, experts, insiders, executives and the federal government have dumped billions into efforts to tap oil shale, leaving nothing but failed projects behind. The oil industry has had plenty of help. The federal government crafted oil shale policies that have effectively transferred thousands of acres of public land to oil companies and have created a leasing structure that could potentially transfer billions of dollars of public wealth to the oil companies. Never before have we given this much to an industry that has yet to show commercial success.

Not one single oil shale project since the first attempts in the late 1920s has ever produced commercial fuel from shale rocks. In fact, one of the few direct results of the federal support has been premature oil shale booms that have ultimately busted.

For all the efforts the American taxpayers have made toward developing oil shale for the oil industry, every effort to sustain commercial production of the resource in the last century has failed.
BLACK SUNDAY

Late Saturday, May 1, 1982, thousands of people worked at the Colony Oil Shale project on the Western Slope of Colorado. Another 7,500 support workers helped with the effort to melt mined rocks to produce synthetic oil. By the next morning, all of that changed.

Amid falling oil prices and rising costs, Exxon announced early Sunday morning, May 2, 1982, that it would abandon its involvement in the Colony project near Parachute in northwest Colorado. Suddenly, about 2,200 employees and thousands of others who had moved to the state to support a burgeoning oil shale industry were out of a job.

Many workers, unaware of Exxon’s announcement Sunday morning, found locked gates when they went to work Monday. Others found out about their pink slips from the evening news.

Today, local residents remember the day as “Black Sunday.”

“The resentment over Exxon’s decision was palpable among local residents and those who traveled thousands of miles for an oil shale job. Some created bumper stickers saying, “Jesus came to Parachute but Exxon laid him off.” Graffiti appeared in local bars, with markings saying “Exxon: The Sign of the Double Cross” and “Welcome to Colorado’s Newest Ghost Town, Compliments of Exxon.”

Exxon’s decision shattered local communities and sent thousands of people away. Within four days of Exxon’s decision, all rental trucks within 90 miles of Parachute were leased. Within one week, 1,000 residents had left Parachute and Garfield County. From 1983 to 1985, 24,000 people left Garfield and Mesa Counties.

Major oil corporations would soon follow Exxon’s example, which ultimately cost western Colorado $85 million in annual payroll, and abandoned their oil shale projects. Thousands more were laid off, leading to a regional economic malaise that lasted for years.
Shale Will Yield Gasoline Supply  
*April 30, 1916, New York Times*

Oil Shale to Furnish Fuel  
*October 17, 1946, The Associated Press*

First Oil Output From Shale  
*Lands in West Due in ’70*  
*April 27, 1966, New York Times*

Shale Oil is Coming of Age  
*November 6, 1981, New York Times*

And the optimism for oil shale is here again, especially amid rising oil prices.

Yet oil companies that obtained research oil shale leases atop rich deposits in northwest Colorado still say it might be another decade before commercial oil shale production ever begins, echoing those headlines from the past 100 years.
In 1917, A.H. Crane – a prisoner serving time for burglary in a Nevada state prison – received a pardon after the warden reported Crane’s claim to the federal government. A federal expert testified at the state’s parole board that “Crane’s method for extracting oil from shale will be of almost incalculable value to the government.”

In the late 1920s, the Bureau of Mines spent taxpayer money at a research site in western Colorado. They abandoned those efforts when new oil supplies were found in the United States.

The Bureau of Mines continued research in 1945 and 1948, and conducted additional work in 1956. Despite promises that commercial oil shale production was near, government-sponsored research in western Colorado would end in the 1950s with little oil produced. Eventually, the Bureau of Land Management in 2008 approved a $15.4-million contract to clean up the government’s contaminated oil shale research site in western Colorado.

In the 1940s, Congress passed the U.S. Synthetic Fuels Act, which authorized taxpayer money to be spent on oil shale experiments at a research station near Rifle, Colo. About $18 million – nearly $220 million today – was spent on oil shale research between 1949 and 1955. The research at the site ultimately failed to sustain a commercial oil shale industry despite numerous promises that it would (see these articles from Time and the Wall Street Journal).

Union Oil’s first oil shale project, Colorado: In the 1950s, Union Oil Company of California operated an oil shale plant for three...
years, according to a Bureau of Land Management (BLM) analysis of previous oil shale projects. However, commercial production of oil was never sustained.

**Project Bronco, Colorado:** In 1966, the Atomic Energy Commission proposed detonating a 50-kiloton weapon in western Colorado to recover oil from shale – a plan known as “Project Bronco.” The detonation button was never pushed.

**The Colony Oil Shale project, Colorado:** Exxon famously closed this Colorado project in 1982 (see “Black Sunday” sidebar, page 3), but it actually began in 1963 as a joint venture among four companies. In 1981, Exxon’s partner received a $1.1 billion loan guarantee for its costs in the project.

**Paraho-Ute, Colorado:** The Paraho Development Corp., which tested oil shale extraction techniques in Colorado, acquired leases along the White River near the Colorado-Utah border. The firm’s research in Colorado during the 1970s spurred the DOE to agree to a contract with the firm for it to produce 100,000 barrels of oil. However, the company never built any oil shale extraction facilities on its Utah properties.

**Prototype C-a oil shale lease, Colorado:** Gulf Oil Company and Standard Oil Company acquired a 5,120-acre federal “prototype” oil shale lease in 1974 and built facilities to burn oil shale rock and produce oil. They were “prematurely flooded in 1984 because of pump failure and the company was unable to resume operations.”

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**1974**
Three companies partner to acquire a federal lease in UT

**1977-81**
TOSCO acquires 29 state leases in UT; project is cancelled

**1980**
Magic Circle acquires UT state leases; no mine or construction ever takes place

**1981**
The New York Times reports that oil shale “is coming of age”

**1981**
Chevron and Conoco begin work on Clear Creek project in CO

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Prototype C-b oil shale lease, Colorado: Four companies acquired this federal “prototype” oil shale lease in the 1970s, but it was suspended in 1987 and pumping on the production on the lease was stopped in 1991.  

Prototype U-a, U-b leases, Utah: In the 1970s, three companies partnered to secure a 5,120-acre federal “prototype” oil shale lease in Utah, along with an adjacent 5,120-acre lease. While several tons of oil shale were extracted to test mining conditions and technology, projects on the leases were abandoned in the mid-1980s.

TOSCO Development Corporation, Utah: The company acquired 29 state leases in Utah to tap oil shale and performed initial development work on them from 1977 to 1981. However, TOSCO then abandoned the project before final permitting and construction began.

Magic Circle Energy Company, Utah: Magic Circle acquired about 76,000 acres of state Utah leases in 1980 and would later spend $1 million to perform tests and feasibility studies for potential oil shale extraction. No mine or plant construction took place on the leases.

Chevron Shale Oil Company work, Colorado: In 1981, Chevron and Conoco Shale oil began work on their Clear Creek project, located on a private 25,000-acre site north of De Beque. Construction at the site was halted in 1984.
Union Oil’s Parachute Creek project, Colorado: Union Oil Company of California (later Unocal) constructed the first phase of an oil shale project in 1980. In 1981, it received a $400 million price guarantee that fixed the price of oil at its shale project. Unocal called it quits in 1991. Even when annual production peaked at 1.5 million barrels, Unocal lost $7 million.

In February 2012, Chevron abandoned its lease for oil shale resources in Western Colorado and became the latest in a growing list of companies unable to turn a profit by melting so-called oil shale rocks into fuel.

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**ENDNOTES**

2. Ibid., 160
3. Ibid., 168
4. Ibid., 167
5. Ibid., 157
6. Ibid., 157
10. Ibid.
18. Ibid., 8.
24. Ibid. A-20
25. Ibid. A-20
26. Ibid. A-16
27. Ibid. A-14.
29. Ibid. A-21
30. Ibid. A-22
32. Ibid. A-20.
33. Ibid. A-19.
34. Ibid. A-15.

All photos courtesy of the United States Geological Survey and the Bureau of Land Management.