

so-designated by the departing Clinton administration in midnight decisions) in the Rockies and elsewhere.

And it isn't only Congress doing the obstructing. In California, a state judge ruled in June that the state could unilaterally halt all new exploration, and even development of existing leases, in waters off the central coast. The Ninth Circuit Court of Appeals recently ruled in favor of a ban on exploration on National Forest lands in Montana on account of their "value and spirituality of place." The mere suggestion of studying oil and gas exploration off the Eastern Seaboard brought such vocal opposition from environmentalists and their allies this spring that the Bush administration summarily abandoned plans for research.

This sort of absolute opposition to any form of energy development has gone beyond the well-known phenomenon of NIMBY ("Not In My Back Yard"). The new protests can be characterized as BANANA ("Build Absolutely Nothing Anywhere Near Anyone"), or, the ultimate in obstructionist acronyms,

NOPE ("Not On Planet Earth"). These are comic terms, but the knee-jerk opposition to resource development they describe is no laughing matter for the nation.

America is far from exhausting its native energy resources; enormously valuable reserves of natural gas and oil remain in numerous locations across our continent. Consider the Gulf of Mexico off the coast of Florida. The U.S. Minerals Management Service estimates that the eastern Gulf off the Florida panhandle is home to some 2 billion barrels of oil and 8 trillion cubic feet of natural gas. The Destin Dome, a single reservoir 25 miles offshore from Pensacola that has undergone preliminary exploration by Chevron to the tune of \$100 million, is estimated to contain more than 2.5 trillion cubic feet of natural gas. Reports issued by the EPA and the Interior Department in April concluded that exploring for natural gas in the Dome posed no significant threat to the overall environment or Florida's beaches. Even a theoretical catastrophe at a natural gas rig would simply result in

Gas Pains— How imagined harm to a falcon, a cactus, and a dirt trail has prevented 70 billion cubic feet of natural gas from reaching energy-starved Californians

By Michael Catanzaro

On the surface, the Orogrande Basin, situated just north of the Texas-New Mexico border, is nothing more than desert and grasslands. But beneath the dust and rock lies a potential bonanza of oil and natural gas, which could help California and other states overcome severe energy shortages. For years, the Harvey E. Yates Company (HEYCO) has tried to tap those rich reserves. It has failed, but not for lack of trying.

Experts say the basin potentially holds over a trillion cubic feet of natural gas. HEYCO, based in Roswell, New Mexico, is one of several independent companies exploring the basin's thousands of square miles. After years of study and persistence, HEYCO found gas in a section called the Bennett Ranch Unit. Based on extrapolations from existing wells, company president and CEO George Yates says the area could hold about 70 billion cubic feet of natural gas—a significant find with a possible gross value of around \$300 million.

HEYCO's investment, however, lies beneath federal lands, which are so tightly regulated that drilling became costly and highly impracticable. "I was more than willing to assume the geologic risk involved in this project," says Yates, who estimates that the company initially had about a 3 percent chance of making the discovery. "But I certainly didn't want to take on the government risk." After spending enormous time and overhead finding the resource, Yates must now deal with bureaucrats, allied with environmentalists, who obstinately block his every move. Any disruption, no matter how minor, to the rock- and dirt-strewn plain has been vigorously opposed. That means no drilling for natural gas—even though it is badly needed by the nation, and the hard work of finding it has already been accomplished.

HEYCO's ordeal exemplifies the absurdities of current federal land policy. Strict, reaching, often bizarre enforcement of laws like the Endangered Species Act have essentially created zero tolerance for energy production in many places. The Endangered Species Act in particular has become a weapon of choice for anti-energy types because it is entirely inflexible. Any hint of a rare plant or animal nearby can make

drilling extremely inconvenient and costly. For five years, the Act has been wielded quite effectively to block HEYCO from developing its signed federal gas leases.

The ESA wholly overrides the government's professed commitment to multiple uses of federal lands. The Federal Land Policy and Management Act established multiple use with the clear intent of developing the nation's natural resources. Officially, federal lands are supposed to be leased to companies like HEYCO, in recognition of the country's "need for mineral resources," whenever "a particular parcel will serve the national interest."

But as Yates explains, the Bureau of Land Management (BLM), especially under the Clinton Administration, has applied an entirely new interpretation of the law. It sees "resources" not as valuable hydrocarbons, but as scenic vistas that hikers encounter along dirt trails. Environmentalists insist that "oil and gas development just does not belong" on most stretches of federal land (as a representative of the Chihuahuan Desert Conservation Alliance put it).

Environmentalists and their bureaucratic allies hate the aesthetics of drilling—the lumbering machines, pipelines, trucks, entrepreneurial wildcatters, and workmen in hardhats. So they impose onerous stipulations to obstruct drilling as much as possible. "Oil and gas leases are supposed to give you leeway to get to the natural resources," Yates notes. But when it comes to the feds, "in practice, access to the land is denied, or that right becomes so modified that it's impossible to drill."

HEYCO found out the hard way. In 1996, with federal leases in hand, the company began drilling discovery wells, and soon after, expensive seismic surveys of several areas within the Bennett Ranch Unit. Then they applied for drilling permits for four wells. An initial discovery well contained 3 billion cubic feet of natural gas. Based on geologic extrapolations, HEYCO determined that the surrounding area could hold up to 25 times more.

For over three years since then, HEYCO has fought tooth and nail to

methane bubbling to the surface and mixing into the atmosphere (as it does every day in enormous quantities, via sources ranging from volcanoes to cattle). Yet, the Florida political leadership, of both parties, chose to ignore the research, and insisted somewhat hysterically that drilling would pose an unimaginable threat to the tourist industry.

Another potential energy treasure chest within the continental U.S. is the Great Lakes region. But NIMBY, BANANA, and NOPE forces are mobilizing against a Bush administration suggestion that the deposits be examined. In the face of activist protests, the House of Representatives voted at the end of June to forbid the Army Corps of Engineers from granting leases under the Great Lakes. Politicians in seven of the eight Great Lakes states supported the ban; only Michigan Governor John Engler resisted. A frustrated Rep. Tom DeLay (R-TX) complained of "obstructionism" that is part of "a broader effort to systematically choke off every promising source of domestic energy."

gain access to the gas they found. After numerous consultations, meetings, and exchanges at the local, state, and federal levels, the company received conditional approval for additional drilling. But as George Yates explained, "the conditions attached really made it impossible for us to drill."

Signs of trouble began in July 1998. First, federal officials informed Yates that the Fish and Wildlife Service was conducting a time-consuming environmental assessment searching for potential harm to any endangered species. Russell Jentgen, a Bureau of Land Management geologist, notified HEYCO that work in the stipulated areas could very well disturb the habitat of the Aplomado falcon. HEYCO's vice president, Steve Yates, was immediately suspicious, not least because a geologist was making determinations about endangered wildlife. Moreover, the falcon was not known to be in the area regularly. Yates believes that about "six or seven" falcons had been sighted in the last 50 years. BLM officials offered no documentation or concrete evidence of falcon whereabouts. Mike Howard of the Las Cruces BLM initially said he saw one of the birds, but retracted that statement when challenged by HEYCO. "We asked the BLM to show us where the falcons were spotted, and who spotted them," Yates said. "But they never did."

Two months later, Steve Yates met with Linda Rundell, a BLM field supervisor. Rundell presented Yates with onerous restrictions on HEYCO's future operations. Probably the most egregious was a proposed prohibition on all drilling activities during the raptor breeding season from January to July. "Those [restrictions] essentially come down to a timing issue," said Steve Yates. "It becomes so difficult to comply with them that it's just not worth drilling anymore."

After months of back-and-forth between HEYCO and BLM officials, Tim Sanders, New Mexico's acting BLM director, called Steve Yates and said the drilling permits would be approved only with exceptions. The Fish and Wildlife Service demanded that HEYCO adopt a routine policy of surveying for any migratory bird nests every year from March through August. Upon discovery of a nest, HEYCO was required to remove any equipment within a quarter-mile. And HEYCO's drilling is to cease immediately in the event of any Aplomado falcon sighting.

HEYCO vehemently, but unsuccessfully, objected, pointing out that

"There is no amount of oil under the Great Lakes worth putting one-fifth of the world's fresh water at risk," orated Rep. David Bonior (D-MI). Ignored amidst the emotional rhetoric is the fact that Canada has done extensive drilling on the northern shores of the lakes, in particular around Lake Erie, without a single significant spill. Michigan, too, has had oil wells in operation since 1979 along Lakes Huron and Michigan, with no adverse environmental effects. Moreover, the actual method of extraction proposed for most parts of the Great Lakes doesn't employ off-shore rigs at all. Just as at the Alpine Field, the reserves under the lakes could be accessed from shore by slant drilling, but environmentalists are just as adamantly against this.

And it isn't only drilling under the lakes that stirs up furor. Proposals to lay natural gas pipelines between New York and Canada across the floor of Lake Erie, and between Wisconsin and Indiana along the bed of Lake Michigan, have also been attacked fiercely. Opponents insist that the pipelines will stir up pollutants buried in lake sediment and foul the water.

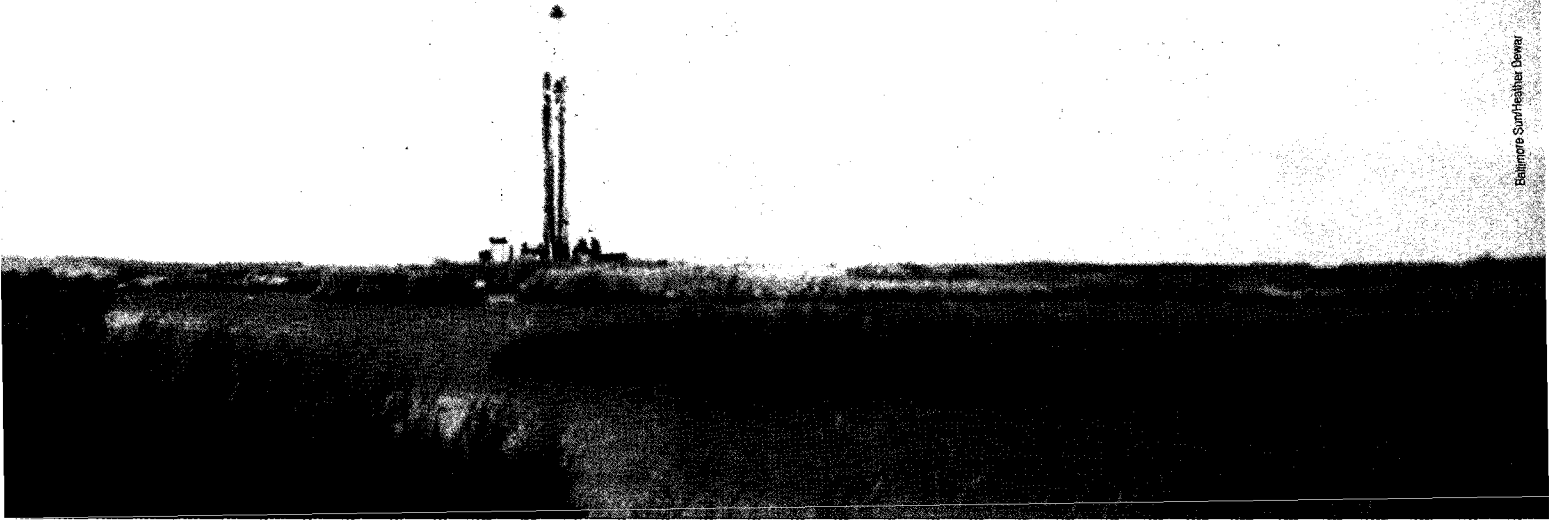
multi-million-dollar investments could not be made when faced with threats of instant shutdown. In November 1998, Sanders said he could attach language to the drilling permits requiring HEYCO to follow the Migratory Bird Treaty. A month later, the BLM changed course again. HEYCO was required to give the agency three weeks' notice before moving any dirt near its work sites. The Fish and Wildlife Service would then check the area for any potential disturbances to the Aplomado habitat. In effect, as BLM officials knew, this provision would have made developing the gas field completely unfeasible.

To make matters worse, HEYCO encountered opposition to the pipeline it needed to bring its gas to market. The BLM complained that HEYCO's proposed pipeline would trample some yucca, and could contribute to "grassland habitat fragmentation." On top of that, HEYCO found that its pipeline would cross the "Butterfield Trail," a 19th-century mail and stagecoach route. The trail extends merely six miles into New Mexico, and much of it is already buried under a ranch road.

To this day, the BLM still has not approved the pipeline. "As we found out," George Yates explains, "an approval to drill does not mean you have permission to produce. Without that pipeline, that is exactly what is happening to us." And happening to other companies all over the American West. As an expert on the Senate Energy and Natural Resources Committee states, Yates' experience "is all too common on federal lands. I hear from independent producers all the time about how bureaucrats use regulations to make oil and gas exploration next to impossible."

President George W. Bush recently implemented an executive order directing federal agencies to speed up energy production. While the move was welcome, it has so far done little for producers such as HEYCO. "Bush has the right idea," said George Yates, "but that order hasn't made much of a difference. Federal bureaucrats in local offices simply take matters into their own hands. They delay and let time go by. In the end, they just don't care what happens."

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Dual Use Thousands of oil rigs have operated in scores of wildlife sanctuaries, without problems, for nearly 60 years. Here, a well is being drilled in the Sabine National Wildlife Refuge in Louisiana.

Ironically, the lake pipeline proposals were advanced specifically to avoid the predictable opposition to overland routes. No such luck. Despite the increasing demand for natural gas in Great Lakes-area states, it seems that anyone actually attempting to provide the needed energy in the future will be forced to run a “damned if you do, damned if you don’t” gauntlet of just this sort.

With over 1 billion barrels of oil and many trillion cubic feet of natural gas sitting off California’s coastline, you might think that development of the Golden State’s offshore resources would be part of any plan to overcome the state’s chronic and now infamous energy shortages. But you’d be wrong. In 1999, the governor’s office, panicked by the Clinton administration’s move to extend existing leases off the central coast to allow

Oil and Gas Supplies Could Be Unlimited

By Thomas Gold

The conventional view among geologists and geophysicists is that petroleum and black coal are fossil residues of ancient forests and swamps that were somehow buried deep below the earth’s surface and then mysteriously transformed, by a process not understood, and never replicated or simulated in a laboratory, into hydrocarbons. This widely accepted view of the biological origins of petroleum is, in my view, utterly mistaken, and I’ve published a book proposing an alternative theory. I believe the Earth’s massive reserves of hydrocarbons are not fossilized byproducts of biology at all, but rather part of the primordial “soup” from which our planet was created. I suggest crude oil and methane gas exist in abundance deep within our planet, and continue to upwell toward the surface.

My reasons for holding this view—first outlined by distinguished Russian scientists more than a century ago—are numerous. First, it has become quite evident that the sheer quantity of black coal and petroleum (especially its natural gas component, methane) is far greater than could be explained by any theory that depends on buried biological debris. Second, petroleum and methane have been found and continue to be found in locations on Earth to which surface biological remains have never had access. The presence of oil and gas at these sites simply cannot be explained by the biogenic theory. Third, one finds at these sites none of the other residues one would expect to find in the presence of biogenic hydrocarbons. Fourth and perhaps most tellingly, it is now generally agreed that there is a profuse supply of hydrocarbons on many other bodies in our solar system, where no origin from surface biology can be suggested.

The use of the term “fossil fuels” for Earth’s supply of hydrocarbons

is so widespread, the impression is given that their origin in surface biology has been scientifically proven. The truth is that an abundance of scientific evidence conflicts with the fossil fuel theory. It seems strange that there is little interest, and even much resistance, to exploring and testing this evidence, especially given the widely held belief that there is a fundamental shortage of these so-called fossil fuels.

For many decades, as we have found more and more petroleum and other hydrocarbons, we have consistently revised our estimates of world reserves upward. Even after intense usage over a century, record levels currently remain in the ground. The conclusion seems inescapable: We are simply not running out of natural gas, oil, and coal. These fuels are much more omnipresent than ever imagined. Even reserves that have already been tapped are actually being renewed (at slow or rapid rates, depending on the location) from below.

It is true that terrestrial hydrocarbons all contain biological molecules. But this does not prove that the hydrocarbon’s *origin* is biological. The alternative explanation, set forth in my book, is that all the petroleum we obtain from the ground has suffered a large amount of biological contamination at levels deeper than our drills can reach. Specifically, I believe microbes living deep beneath the surface of our planet have left their mark, and even helped create, the oil, gas, and black coal that eventually comes to the surface.

Broad evidence I examine in my book suggests that a vast underground biology *has* to exist beneath the earth’s surface. This is a new idea in science, inspired partly by recent discoveries of interesting and previously unknown life forms occupying deep-sea volcanic vents, underground caves, and other locations. Yet even in the past, chemists