

August 20, 2008

Dear Santa Barbara County Supervisors,

We are founders of the non-profit organization, SOS CALIFORNIA, a state-wide organization that has now reached national media interest, established several years ago in response to our concern regarding the pollution caused by the natural oil seeps off our coast.

On July 1, 2008, SOS California presented a binder of supporting information which was distributed to each Supervisor. SOS's new binder expands on information of the original binder. Aside from containing a considerable amount of additional material, today's introductory letter references the identical issues as follows:

“The wording of the motion that was presented by Supervisor Carbajal for the July 1, 2008 Board of Supervisors meeting contained information that was seriously flawed with misinformation that can have significant adverse fiscal impacts for our County.

We asked that you review the materials enclosed in our packet, and seek further details so that you could make an educated and informed decision about this crucial matter of the oil drilling moratoria. Below are just a few examples of the errors and misstatements of facts in the information that were before you in the motion:

(1) The motion stated that “it could take up to 15 years for new leasing to produce additional oil and gas”. This was untrue. This materially misstated the facts regarding the potential for new offshore drilling in federal waters to produce oil and gas; oil and gas in many cases could be produced in as little as 3 years and certainly in a timeframe far earlier than 15 years.

(2) The motion referenced “consistent impacts” from existing offshore oil production. We believe that the motion was misleading and did not acknowledge that by far the largest oil related impacts to the Santa Barbara coast have been the natural oil seeps which produce approximately 50,000 barrels or more of oil seepage each year and that UCSB peer reviewed published research and other research has shown that existing offshore oil production has lead to reductions in seepage pollution. This combined with the time-tested modern safety record of the offshore oil industry is not acknowledged by the motion. The research and peer reviewed published scientific journals state that if offshore oil production were increased, it would likely lead to additional reductions in existing offshore oil seepage water pollution and reductions in air ROC emissions.

(3) We believe that the motion materially misstated that “potential new leasing would have an adverse effect on our local economy”. The safety record of the offshore oil industry in the last 38 years, combined with new offshore oil slant drilling technology, allowing drilling from land or requiring fewer new platforms, has demonstrated there is little risk from additional oil production drilling in comparison to the much larger environmental impacts we face daily due to natural oil seepage pollution. In fact, there would be large positive effects on the local economy from expanding offshore oil production.

The County benefit from increased oil and gas production and from the potential accompanying increased County revenues from a negotiated agreement between the State of California and the Federal Government may be enormous, estimated potentially to be hundreds of millions of dollars per year.

Due to recent changes in the federal policy regarding State retention of new royalties from federal OCS oil and gas production, the County cannot afford to ignore this potential income source and should exercise a fiduciary duty to determine the potential for royalty and tax revenue sharing agreements with the State of California regarding new or re-negotiated leases in the federal OCS for oil and gas production. These revenues for the County may change the entire makeup of the County Budget in future years and insure the citizens of Santa Barbara County will no longer have to settle for cutbacks in needed services as in the past.

Additionally these potentially increased County revenues could provide significant revenues to fund solar and other renewable energy and electric vehicle/plug-in hybrid vehicle funding to permanently move Santa Barbara County to renewable energy sources. The County currently lacks the economic resources to fund these programs. We also believe that potential future revenues derived from offshore oil production to the County could positively impact future County general funds, additional environmental programs and allow reductions in taxes to County taxpayers.

(4) U.S. Minerals and Management Service (MMS) estimates for oil and gas equivalent resources in the Federal OCS offshore Santa Barbara County exceeds 2 billion barrels of oil in easily accessible locations (estimates were based on \$55 per barrel oil). Under recent indicated federal policy for encouraging States to negotiate

retaining federal MMS production royalties of up to 18% for new leases, potential royalties to California exceed \$ 50 billion. Since a substantial share of these royalty revenues could be directed to electric and plug-in hybrid vehicle rebates, the savings to local and statewide drivers would be substantial, since the cost for electric and plug-in hybrid electricity is approximately \$0.70 per equivalent gallon. Additionally, new oil production from an additional 2 billion barrel or more of offshore resource could reduce California's oil imports by greater than 50% (200,000 barrels). We also believe these oil production increases would lower California gas and diesel prices and substantially reduce foreign oil tanker traffic in California waters.

Our Governor's office is examining this matter and revisiting these issues frequently in view of rising oil and gas prices and to presuppose that Governor Schwarzenegger will always support a no drilling position is premature and should not be assumed."

We, therefore, ask that the County Board of Supervisors craft and submit a request to the appropriate government bodies to lift the Federal Offshore oil moratoria.

Respectfully,

Bruce Allen
Lad Handelman
Co-founders

SOS California
Stop Oil Seeps California

**These False Claims and Out of Context
References will be Corrected with
Undisputable Facts and/or Testimony from
Expert Witnesses at the
August 26, 2008 Public Hearing**

- “Even the newest technology cannot protect Santa Barbara from another 1969 level catastrophe.”
- “Any economic benefit from new drilling will be only nominal and temporary.”
- “It will be at least 10-15 years before oil can be produced and the amount will be nominal anyway.”
- “Drilling will cause natural seepage rates to increase.”
- “There is no evidence that the seep reduction adjacent to Platform Holly can be replicated by drilling in other seep areas.”
- “Oil from offshore Santa Barbara is heavy oil and useful only for asphalt.”

BOARD OF SUPERVISORS

SUPPLEMENTAL INFORMATION for PUBLIC HEARING ON THE ENERGY CRISIS

August 26, 2008

This binder contains a collection of survey information, scientific references, published support letters from the community, news articles and various media editorials supporting offshore oil drilling as a means of environmental and economic benefits for Santa Barbara County resident.

MORE RECENT SURVEYS

A recent poll by the Public Policy Institute of California found that 51% of voters favor more offshore drilling; 45% are opposed. Pollster Mark Baldassare says his past surveys always have found more people opposed than in favor.

Nationally, a recent CNN/Opinion Research poll showed that 69% of Americans want more offshore drilling.

SOURCE: LOS ANGELES TIMES
George Skelton, Capitol Journal
August 18, 2008

FOR IMMEDIATE RELEASE

July 17, 2008

Poll: Californians Support Offshore Drilling Support Particularly Strong in Santa Barbara County

SANTA BARBARA, CA. By a margin of 52% to 36%, California voters support increasing offshore oil drilling to help the state meet its energy needs. **Vaquero Energy Company**, a California independent oil and gas producing company, today announced the results of a statistically valid statewide poll it commissioned during the past three weeks regarding California citizen's attitudes on a number of issues, particularly those dealing with the current energy crisis. The results of the poll, conducted by the firm **Chariot Research**, can be found at www.chariotresearch.com/energysurvey/. The margin of error was +/- 2.72 %.

California registered voters support offshore drilling off the California coastline. (52% support □ 39% oppose)

Santa Barbara County registered voters are the most likely to see offshore oil drilling as heavily regulated and safer (64% agree – 13% disagree), and so are among the top supporters of offshore oil drilling (61% □ 21%) in almost every attitude studied in the survey.

FOR IMMEDIATE RELEASE
July 17, 2008

Poll: Californians Support Offshore Drilling Support Particularly Strong in Santa Barbara County

SANTA BARBARA, CA. By a margin of 52% to 36%, California voters support increasing offshore oil drilling to help the state meet its energy needs. **Vaquero Energy Company**, a California independent oil and gas producing company, today announced the results of a statistically valid statewide poll it commissioned during the past three weeks regarding California citizen's attitudes on a number of issues, particularly those dealing with the current energy crisis. The results of the poll, conducted by the firm **Chariot Research**, can be found at www.chariotresearch.com/energysurvey/. The margin of error was +/- 2.72 %.

The results mirror other national polls done recently on the issue of offshore exploration. A recent **Rasmussen Reports** poll shows 67% of Americans support oil drilling off the nation's coasts while a **Gallup Poll** says that 57% of Americans support drilling in U.S. coastal and wilderness areas now off limits. **In the Chariot Research poll announced today, support was strongest in Santa Barbara County where 61% of residents favor increasing offshore oil exploration. An oversampling of 100 additional interviews was taken with Santa Barbara County residents, home of several offshore platforms.**

Chariot LLC of San Francisco (www.chariotresearch.com) conducted the survey for Vaquero Energy. For purposes of the study, a random selection of 1246 registered California voters were interviewed from June 24 through July 1, 2008. The sample was weighted proportionately by gender, county, and party registration (weighted to 45% Democrat, 33% Republican and 22% Decline to State/other party). An additional 100 interviews were conducted as part of an oversampling of Santa Barbara County registered voters, bringing the total Santa Barbara County cell size to 122. The margin of error for statewide results is +/- 2.72% at 95% confidence and the margin of error for Santa Barbara County oversample results is +/- 7.44% at 90% confidence.

"The results of the survey are strong evidence that Californians are ready for a new, self-reliant strategy for meeting our energy needs – a strategy which includes offshore oil drilling," said James Fisfis, President of Chariot LLC.

Joe Nahama of Vaquero Energy, stated "this poll highlights the fact that California voters want to be more energy independent by developing all forms of domestic energy, including offshore oil and gas. Voters see no reason to ship our money to foreign countries when we have billions of barrels of oil sitting right off our coast."

Currently, 26 platforms operating off the California coast produce 40 million barrels of crude and 40 million mcf of natural gas annually. Roughly 50 to 100 offshore wells are drilled each year. While there is a moratorium on drilling into new, untapped leases, companies are allowed to drill into any leases currently under production. In the 1980s, oil was discovered on many additional tracts off of the Santa Barbara County Coast but those have not been developed due to state and federal moratoriums

against drilling. This week, President Bush lifted the Executive Order that prohibits offshore drilling in federal waters, in place since 1992. However, a Congressional prohibition must expire or be overturned before exploration will be allowed. The federal Minerals Management Service estimates that there are 10 BILLION barrels of oil off the coast of California.

“California voters, particularly those in Santa Barbara County, understand that companies have been drilling offshore in California in a safe manner for decades,” Mr. Nahama said. “I hope our state and federal elected officials wake up to the fact that California voters support harnessing our own energy supplies now instead of relying on increasing imports of foreign oil. For the past 20 years, we have not paid attention to the importance of encouraging ‘home grown’ energy and we are now suffering the consequences of not prioritizing energy production, including renewable projects. We need legislation to fast track new energy projects to prevent further painful price increases at the pump. This poll shows that voters want real action now, not half measures, by the California State legislature and Congress to get relief from this energy crisis.”

Some significant conclusions of the poll are:

- California registered voters believe both the United States and California are headed in the wrong direction, and *oil, energy and gas price issues are among the top issues cited* when they are asked to explain their opinion.
- California registered voters support offshore drilling off the California coastline. (52% support □ 39% oppose)
- The top issue driving support for offshore oil drilling is energy independence. (65% support – 27% oppose drilling to reduce dependence on foreign oil)
- Support for offshore oil drilling is strong despite the survey findings that offshore oil drilling is seen as a long□term solution rather than a short□term solution.
- **Santa Barbara County registered voters are the most likely to see offshore oil drilling as heavily regulated and safer (64% agree – 13% disagree), and so are among the top supporters of offshore oil drilling (61% □ 21%) in almost every attitude studied in the survey.**
- Support for a ballot measure that would increase offshore oil drilling off California’s coast is 51% □ 39% *among all registered voters.*

CONTACTS:

Joe Nahama, Vaquero Energy. 661-616-0600

James Fisfis, Chariot Research. 916□213□8179

SOS California

California Nonprofit Corporation
IRS Exempt Status - 501(c) (3)

Board of Directors and Advisory Board

| | |
|---------------|-----------------|
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| | |
|---------------|-------------|
| Lad Handelman | Bruce Allen |
|---------------|-------------|

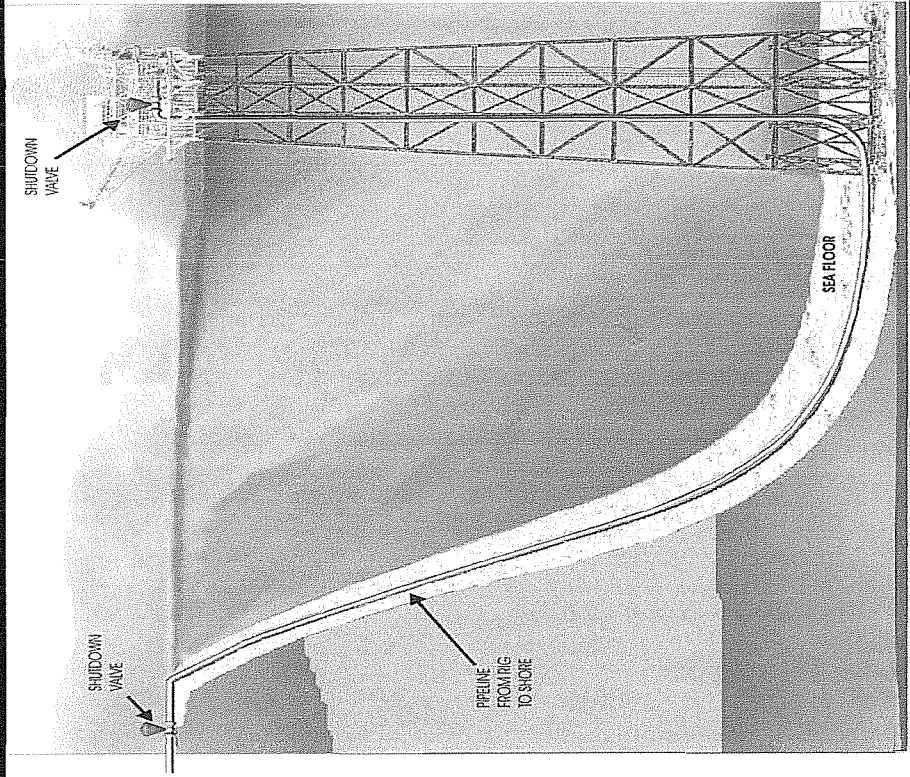
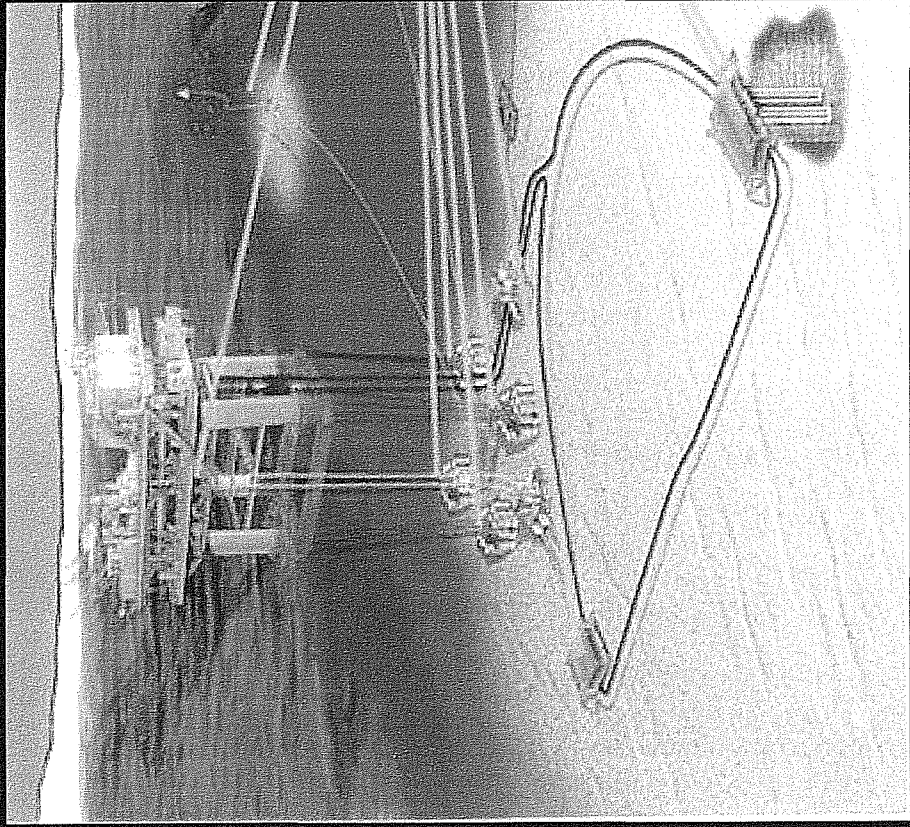
This List below credits SOS's first group of "encouragers". Also shown is a small portion of the many that have contributed their time and/or made donations.

| | |
|---------------------------|-------------------------|
| <i>Matthew R. Simmons</i> | <i>Karl Hutterer</i> |
| <i>Silvio Di Loreto</i> | <i>Tobe Plough</i> |
| <i>Nina Terzian</i> | <i>Rusty Fairly</i> |
| <i>Don Barthelmess</i> | <i>Michael Granados</i> |
| <i>Mark Schneidman</i> | <i>Bob Evans</i> |
| <i>George Bliss</i> | <i>Don Radon</i> |
| <i>Ted Roche</i> | <i>Arlie Skov</i> |
| <i>Bob Mangus</i> | <i>Tariq Kadri</i> |
| <i>Robert Bonilla</i> | <i>Linda Seals</i> |
| <i>Chuck Ebner</i> | <i>Alice Green</i> |
| <i>Rudy Mangué</i> | <i>Mick Mankowski</i> |
| <i>Bob Luvgren</i> | <i>Rick Sawyer</i> |
| <i>Carol Marsch</i> | <i>Jeff Rayner</i> |
| <i>Ozzie Da Ros</i> | <i>Si Jenkins</i> |
| <i>Jim McCoy</i> | <i>Ben Short</i> |

Direct Santa Barbara County Economic Revenue Potential

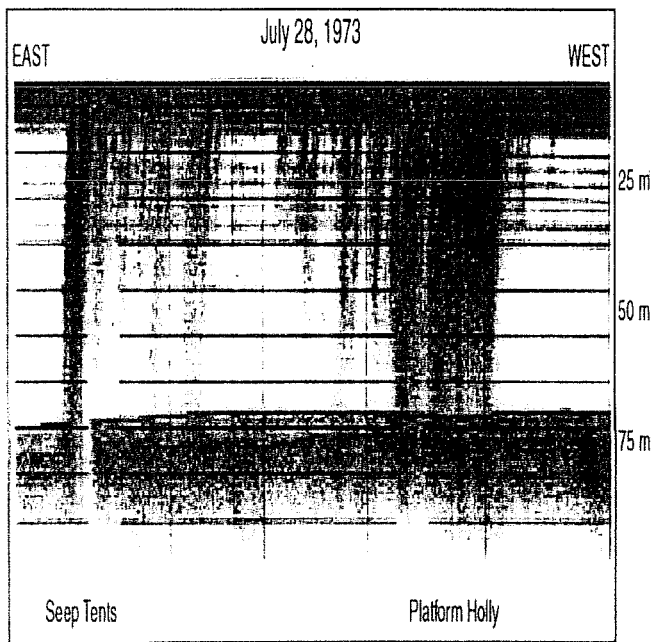
- **Approximately 2.0 Billion BOE Potential From Already Discovered But Undeveloped Offshore Santa Barbara Fields. Discovered Fields Could Be Placed Safely into Early Production if Moratorium Lifted**
- **If Previous Discovered 1.8 Billion Barrel Oil Fields Placed Into Production- Would Cut California Oil Imports by 50%**
- **If OCS Royalty Applied to New Oil and Gas Production, and CA Obtains 15% Royalty and SB County Were to Obtain 3% Royalty**
 - *2 billion barrels oil equivalent over 25 year production @ \$120/barrel provides \$1.4 billion for CA and \$288 million per year to SB County*

OFFSHORE FAIL-SAFE MECHANISMS



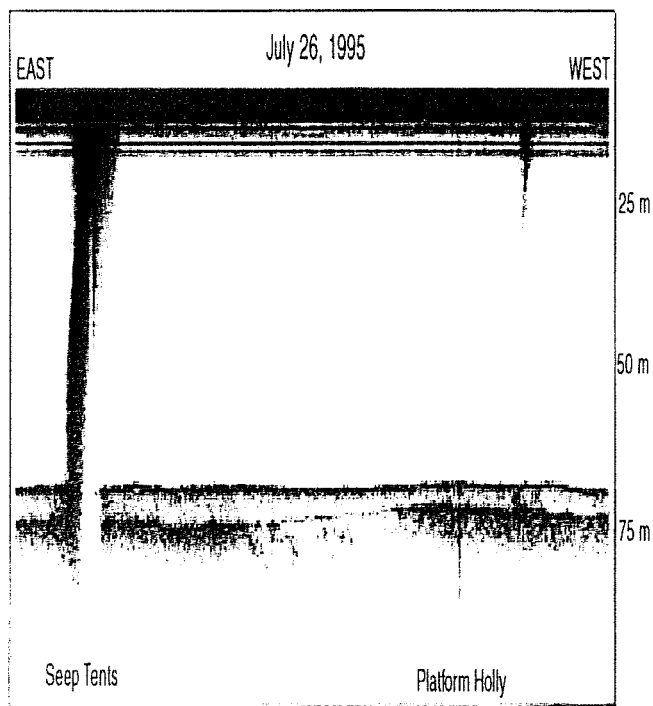
Sonar Profiles of Seepage along sea floor at and near Platform Holly

Sonar Profile from
July 28th, 1973



"Both oil and gas are coming out," explained Ira Leifer, a scientist with UCSB's Marine Science Institute. "We can measure the amount of gas with sonar because the sonar's sound bounces off the bubbles. We also measure how much oil is escaping with the gas. UCSB Study, Jan. 2005

0 km July 26th, 1995 – after 20 years
of pressure extraction



80% Seep Reduction

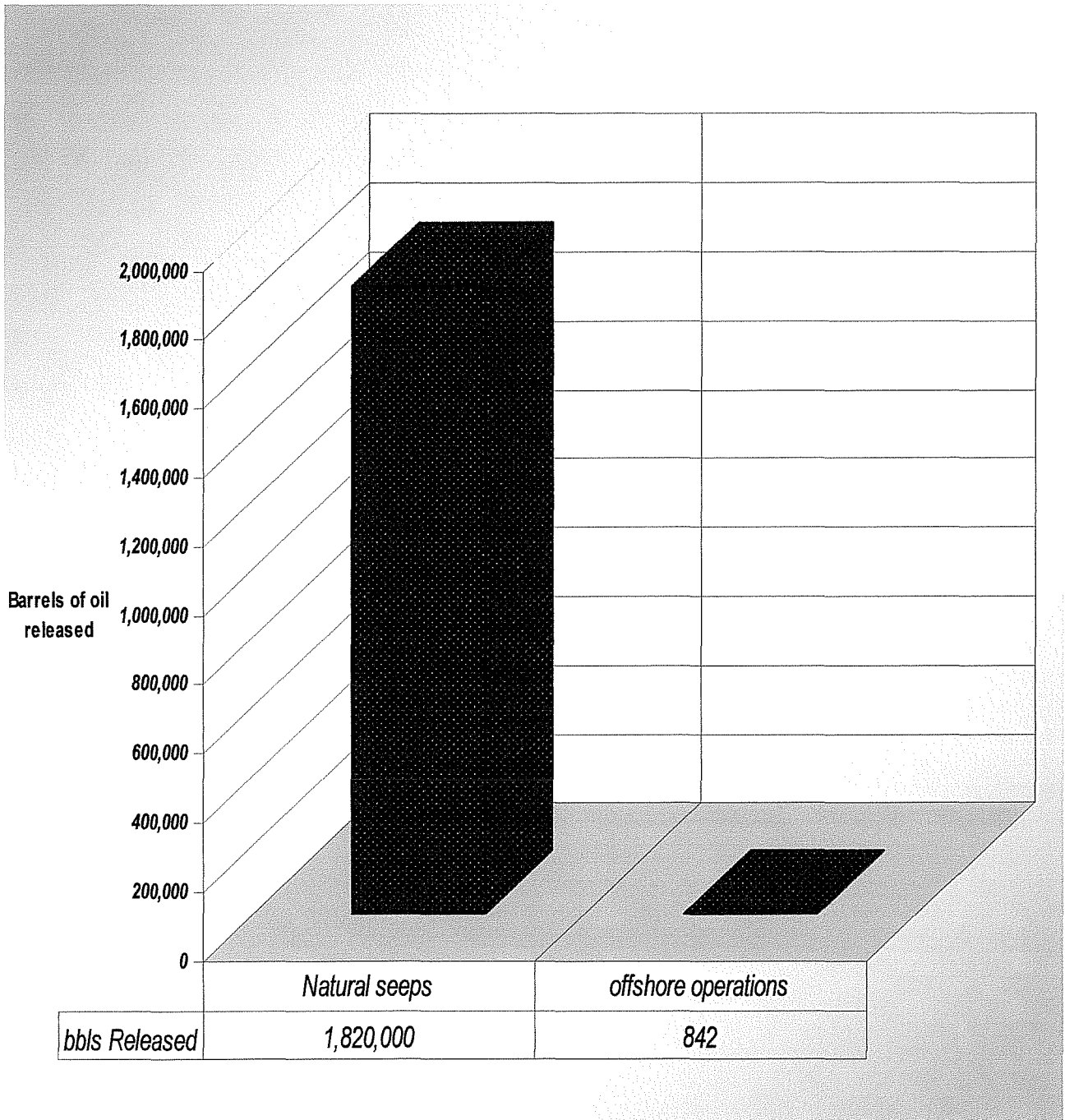
0 km 2.5 km

Source: *Geology*, November 1999;
v. 27; no. 11; p. 1047–50

OIL POLLUTION SOURCES

NATURAL SEEPS VS OFFSHORE OPERATIONS

1970 - 2000



An aerial photograph of a coastline, showing a mix of dark land and light water. A white rectangular box is centered on the image, containing text. The text is arranged vertically from top to bottom: 'SOS California', 'Stop Oil Seeps', 'soscalifornia.org', and 'August 2008'.

SOS California

Stop Oil Seeps

soscalifornia.org

August 2008

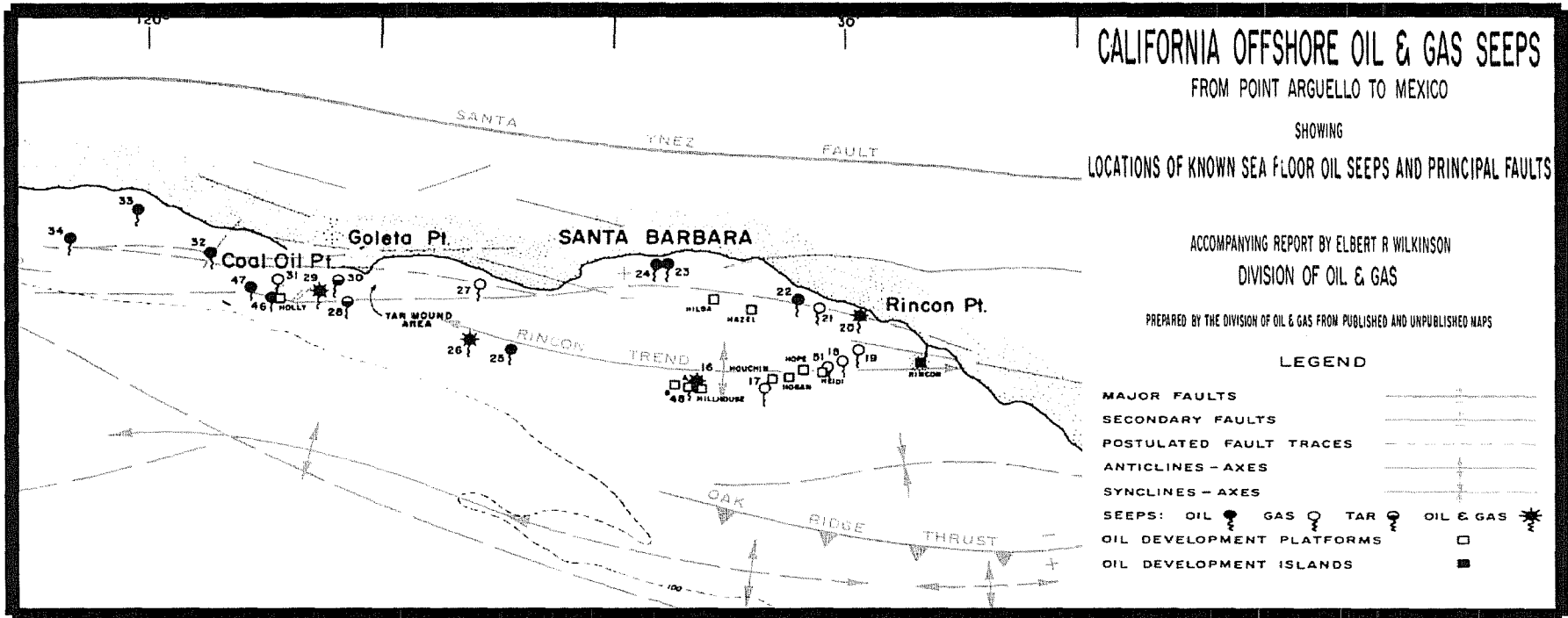
OUR MISSION

Conservation California is a

nonprofit organization dedicated to reducing the environmental impact of natural gas and oil seep pollution upon our ocean, our beaches and our air quality.

**THE PUBLIC IS
UNAWARE
OF THE MAGNITUDE
OF NATURAL SEEP
POLLUTION**

SB SEEPS + FAULT LINES

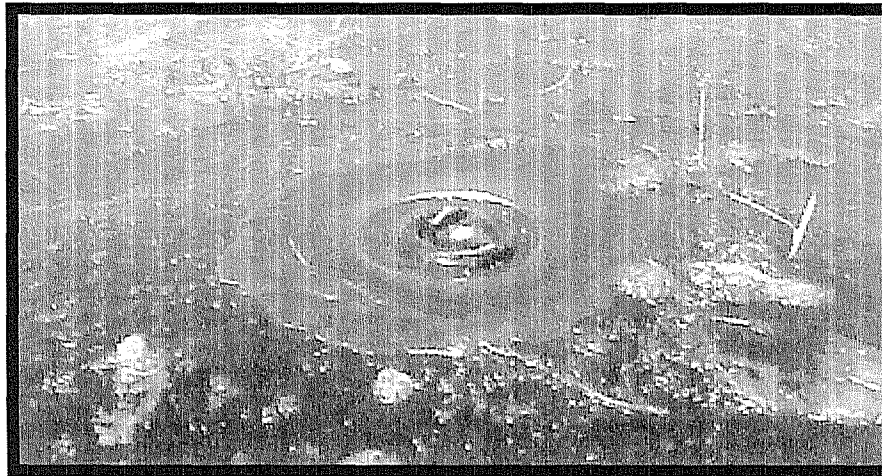


2,000 active natural seeps lie below fault lines along California Coast. Seeps occur all along Santa Barbara County Coastline

Earthquakes can also expand sea floor fissures, releasing unpredictable quantities of trapped oil

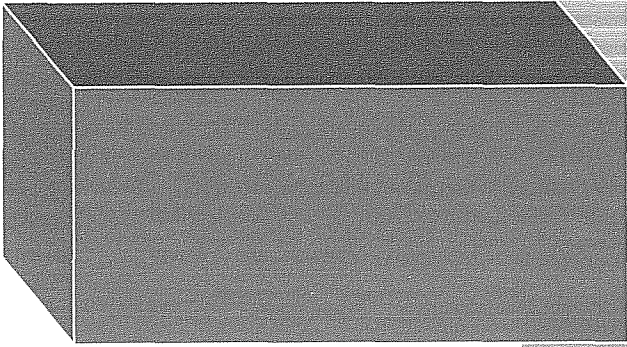
Offshore Santa Barbara Has the Second Largest Marine Oil Seeps in the World

Every day our coastal environment is being polluted by natural oil seeps at the rate of approximately 10,000 gals/day or...



SB COASTAL WATERS POLLUTION SINCE 1970

S E E P S



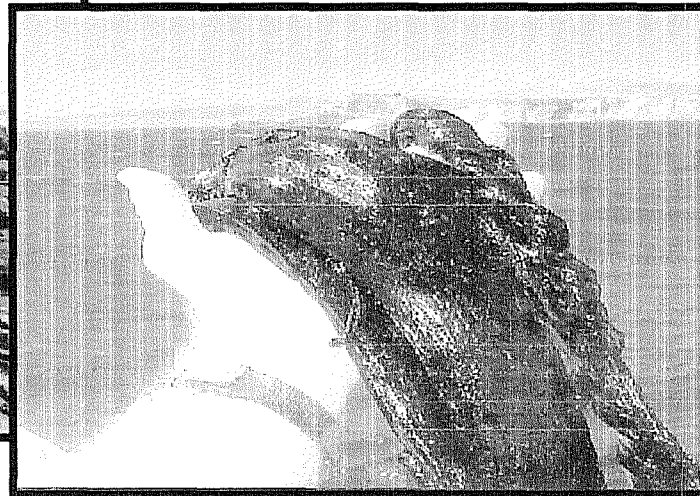
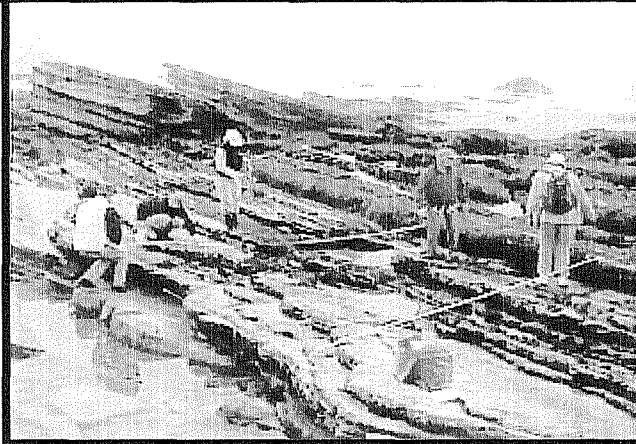
■ **Natural Seeps:**
1,820,000 bbls

■ **Offshore
Operations:**
842 bbls

**EVERY 12 MONTHS:
40,000- 80,000 BARRELS OF OIL**

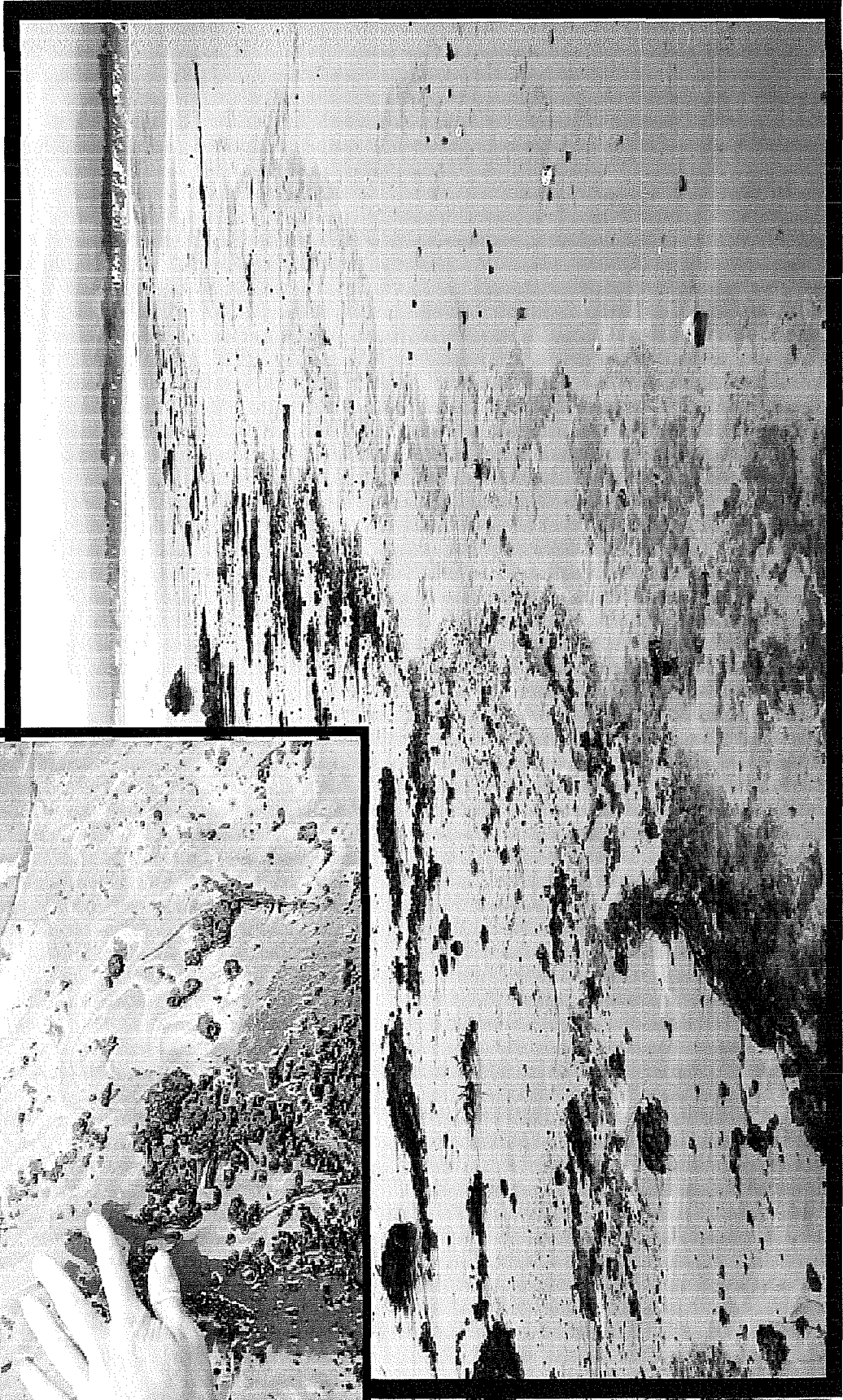


**The Quantity of Santa
Barbara Oil Seepage
Since 1970 Equals ~31
“1969” Oil Spills**

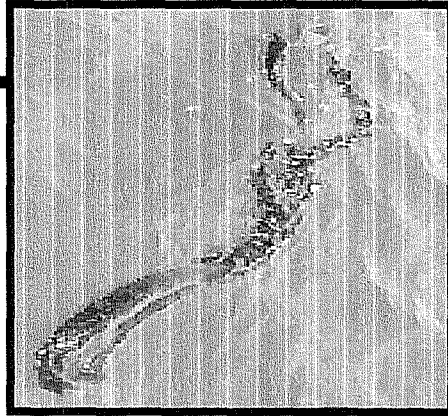
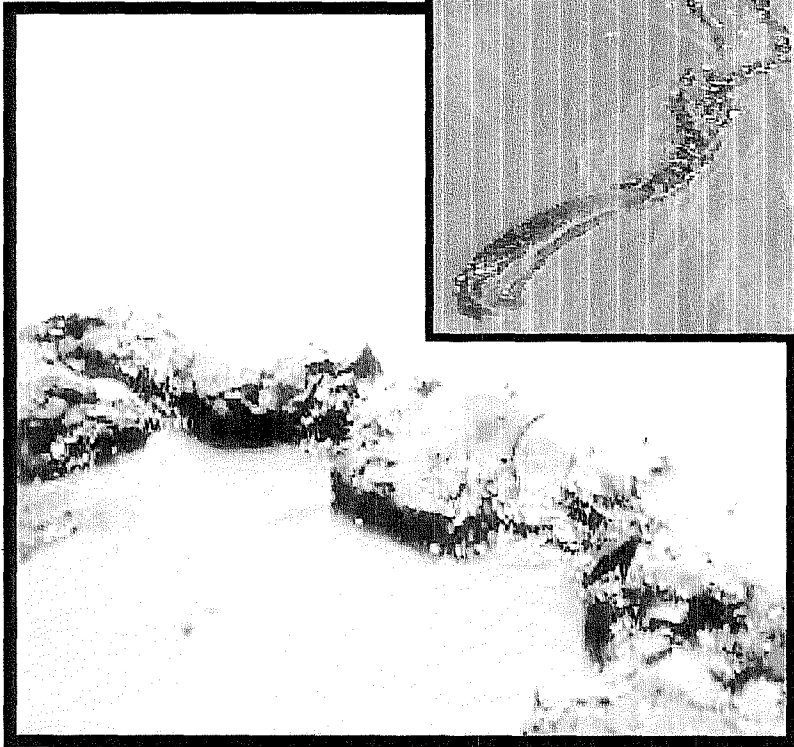


Santa Barbara Natural Oil Seepage Equals Exxon Valdez Spill Every 4 Years

**NATURAL SEEPAGE TAR ON OUR BEACHES-
Santa Barbara's Coastline Is Not Pristine**



SB Natural Offshore Seeps Pollute Beaches from Los Angeles To Monterey



**55% of the Tar that
Washes Up on the LA
County Beaches Comes
From Santa Barbara
Offshore Seeps**

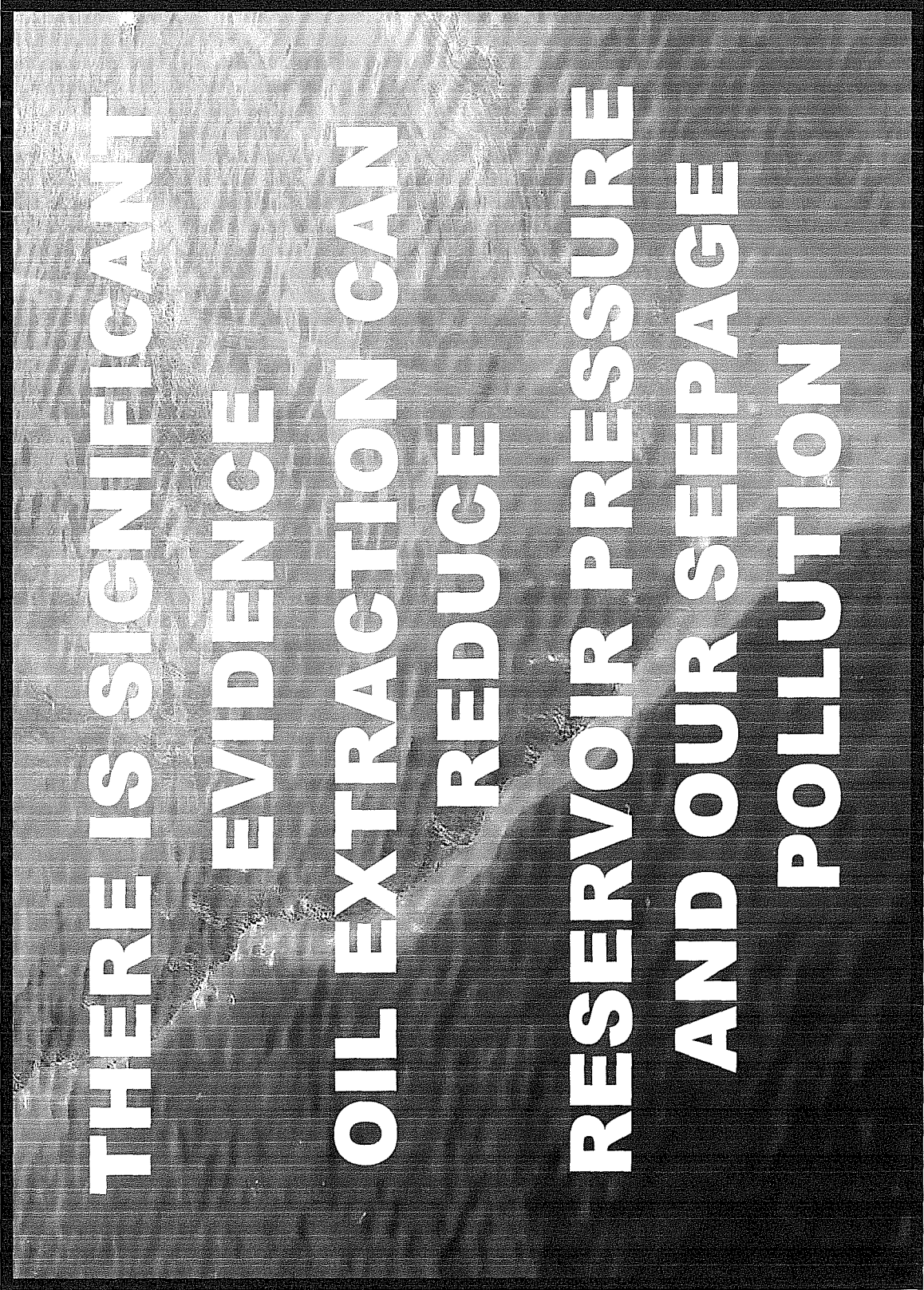
**Santa Barbara Oil Seeps
Even Pollute Monterey
County Beaches**

SANTA BARBARA COUNTY AIR QUALITY FACTS

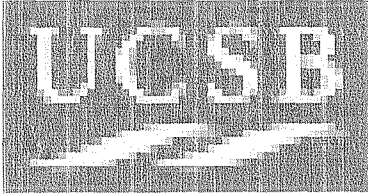
- **Santa Barbara's air quality historically violated state and federal standards. Strict regulations enforced to reduce man-made sources of air pollution**
- **Reactive organic compounds (ROC) are a significant pollutant source contributing to formation of SMOG**
- **Offshore seeps contribute approximately 6,075 tons per year of ROC's to Santa Barbara's air pollution**
 - **All transportation vehicles in SB County contribute about 4,000 tons**

[Ref. SB Air Pollution Control District - 2007 Clean Air Plan]

**Is There a Way Forward to
Reduce Central Coast Seepage
Pollution While Safely Producing
More Energy and Significantly
Increasing County Revenue and
Funding For Renewable Energy in
California**



**THERE IS SIGNIFICANT
EVIDENCE
OIL EXTRACTION CAN
REDUCE
RESERVOIR PRESSURE
AND OUR SEEPAGE
POLLUTION**

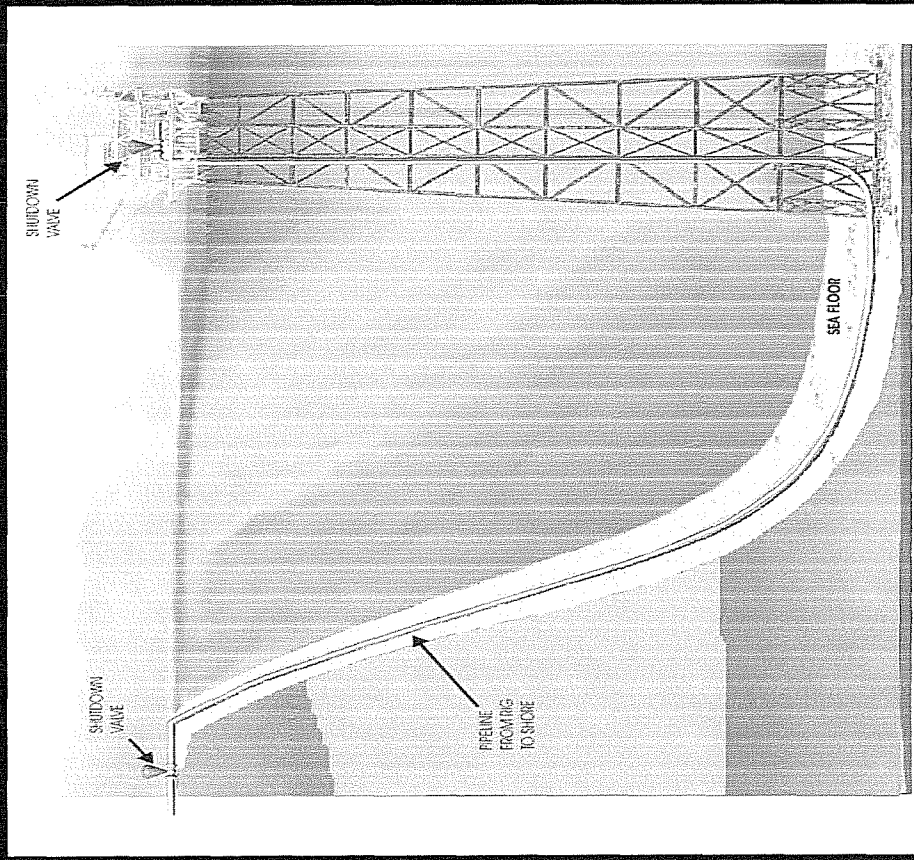
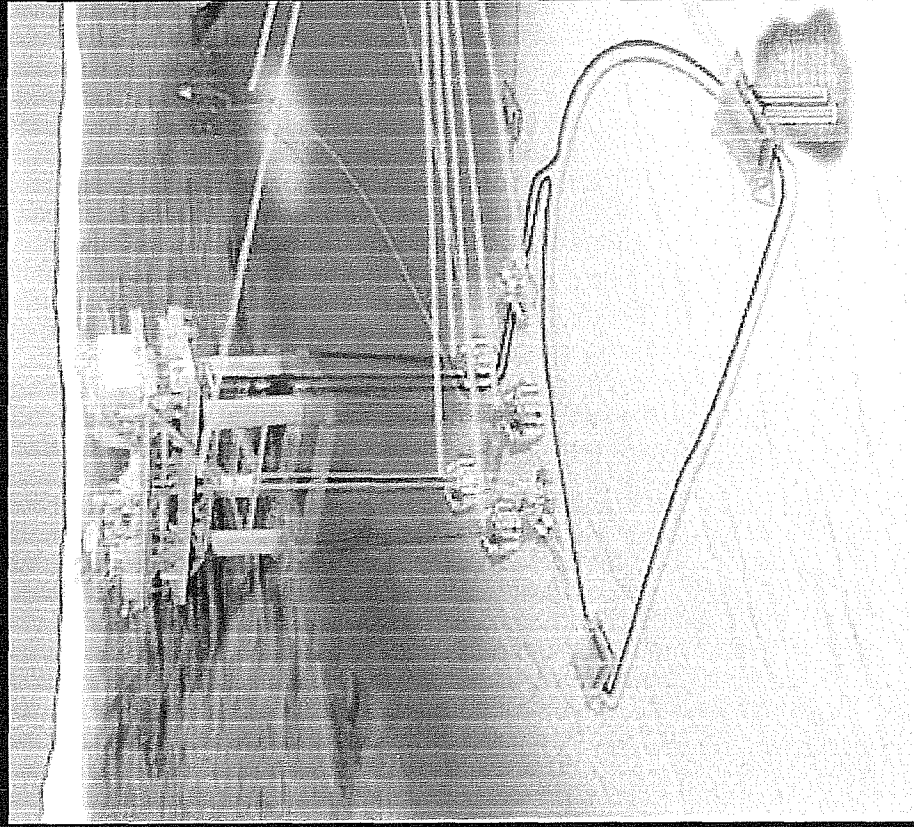


UNIVERSITY OF CALIFORNIA, SANTA BARBARA

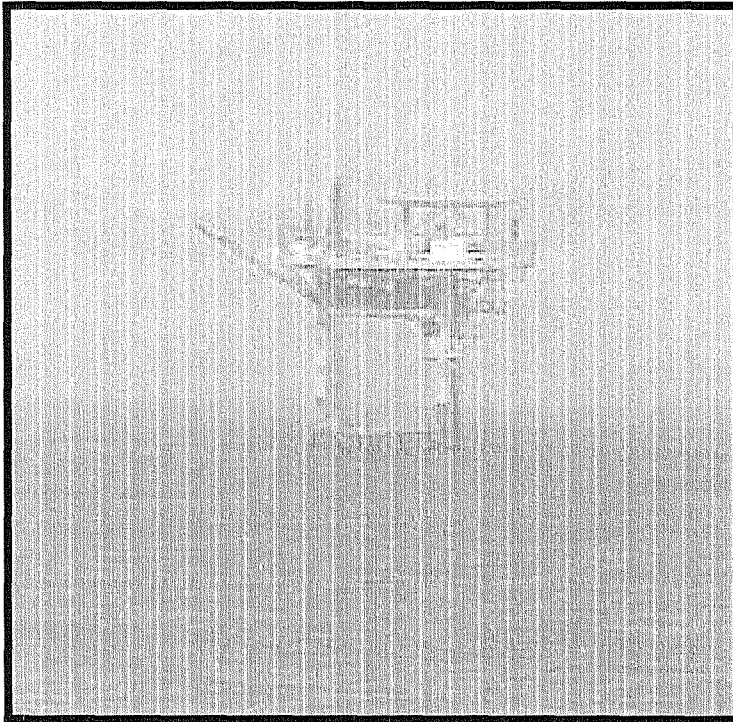
PRESS RELEASE: November 18, 1999

- **Peer Reviewed Studies- November 1999 Geology Magazine & Journal of Geophysical Research- Oceans**
- **“Natural seepage of hydrocarbons from the ocean floor... has been significantly reduced by oil production.”**
- **“Studies of the area around Platform Holly show a 50% decrease in natural seepage over 22 years”**
- **If oil was pumped out of the La Goleta Seep, researchers state that there would be “a reduction in non-methane hydrocarbon emission rates equivalent to removing half of the on-road vehicle traffic from Santa Barbara County.”**

OFFSHORE FAIL-SAFE MECHANISMS



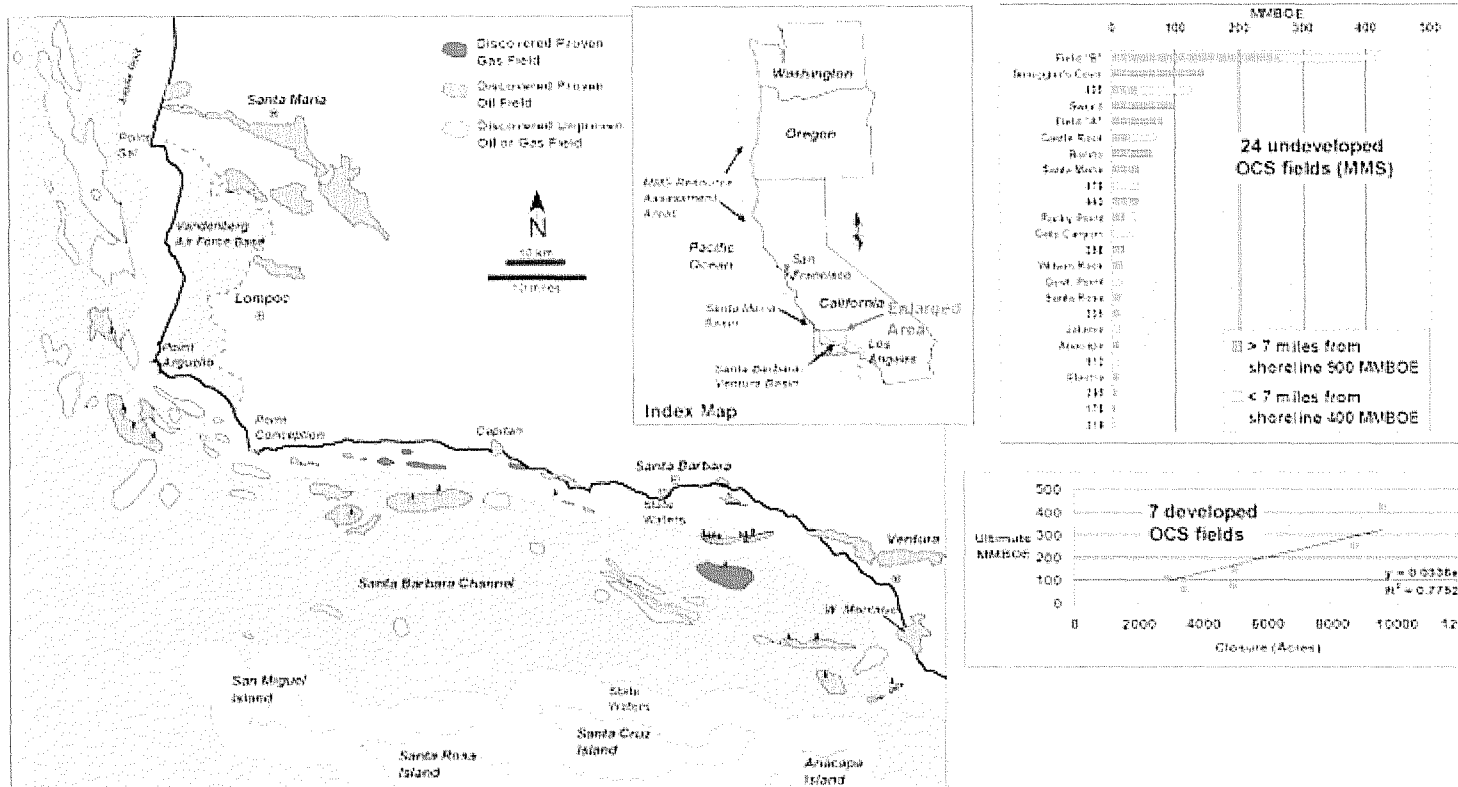
HURRICANES KATRINA & RITA: 100-YEAR STORMS



- **97% of 4,000 platforms survived**
- **No deaths or injuries to 30,000 offshore workers**
- **No Major spills from offshore facilities**

NO SHORELINE OR WILDLIFE IMPACTS

Summary of Discovered and Undeveloped Offshore Oil and Gas Fields



The total reserve potential of all undeveloped fields and prospects may range from 1.5-3.4 billion BOE

Data from Dr. Tom Bjorklund Research Scientist University of Houston

POTENTIAL BENEFITS OF LIFTING OFFSHORE MORATORIUM

- **Permanent Reduction in Marine Hydrocarbon Pollution- Cleaner Ocean Waters & Beaches, Cleaner Air**
 - **Healthier Environment For Sea Mammals, Birds, Marine Life, People and California Coastline**
- **Increased Oil and Gas Resources and Revenue For California**
 - **Less Dependence on Foreign Oil and Lower Gas Prices**
 - **Dedicated Revenue to Fund Significant Permanent Solar and Other Renewable Energy Sources**
 - **Money For Environmental and Education Programs**
- **Reduction in Coastal Oil Tanker Traffic and More CA Clean Natural Gas at Lower Prices**

Direct Santa Barbara County Economic Revenue Potential

- **Approximately 2.0 Billion BOE Potential From Already Discovered But Undeveloped Offshore Santa Barbara Fields. Discovered Fields Could Be Placed Safely into Early Production if Moratorium Lifted**
- **If Previous Discovered 1.8 Billion Barrel Oil Fields Placed Into Production- Would Cut California Oil Imports by 50%**
- **If OCS Royalty Applied to New Oil and Gas Production, and CA Obtains 15% Royalty and SB County Were to Obtain 3% Royalty**
 - *2 billion barrels oil equivalent over 25 year production @ \$120/barrel provides \$1.4 billion for CA and \$288 million per year to SB County*

POTENTIAL LONGER TERM ECONOMIC BENEFITS

- **MMS 2006 Estimate For Pacific OCS Exceeds 13 Billion Barrels Oil & Gas**
- **State Oil & Gas Royalty Revenue Bonds Can Fund Solar Electricity Conversion & EV/Plug-in Cars Prior to Start of Actual Oil Production**
- **Increased Natural Gas Supplies Can Provide Additional Source For CA CNG Buses, Trucks and Cars**
- **Large California Royalty Revenues Fund Solar Thermal Electricity Farm Subsidies, Photovoltaic Rebates, Wind Power and EV/Plug-in Hybrid Rebates**
 - **\$42 Billion* in CA Royalties Could Fund ~16 Gigawatts of New Solar Thermal Electricity Supplying More Than 50% of California Households.**
 - **More EV/Plug-in Hybrids Powered By Solar Electricity Would Further Cut California Dependence on Foreign Oil and Tanker Traffic, Reduce Gasoline and Natural gas Prices, Provide Cleaner Air and Reduce Corn Ethanol Demand**

* Production of 1.8 Billion Barrels over 25 years @ \$125/barrel

California AB 811 Provides Example For Funding Renewable Residential Energy Programs

- **Allows County to Provide 20 Year Low Interest Loans For Residential Energy and Solar Panel Installations**
- **Cost Can be Added to Residential Property Tax Bills**
- **County Can Provide Low Interest Loans to Residents**
- **Additional Offshore Oil and Gas County Royalty and Tax Revenues Can Provide Funds For Low Interest/ No Interest Solar Energy Loans**
- **AB 811 Signed into CA Law July 2008**

July 1, 2008

Subject: Today's resolution

Supervisors,

I was at the BOS meeting today to speak to the "Oil and Gas" resolution. Even though it was pulled, I'd like to provide you with my input.

The last time I was at a Board meeting was in my role as Chairperson of the Sheriff's Jail Overcrowding Commission. I remember very clearly both the support the Board gave our recommendations and the concern about sources for funds to operate the jail and the prevention/recovery/intervention programs that we recommended. As Supervisor Firestone put it, "we're broke".

The budget process you just completed has reinforced this issue in my mind. Today's discussion about the Emergency Operations Center furthered the point: the County has, and will continue to have, serious financial issues for several years.

In the midst of this, I read of and heard Dr. Bruce Allen from Stop Our Seeps (SOS). First I read of his presentation to the Natural History Museum forum and then last Sunday I saw him on KEY-TV's In Focus program.

The point he makes is that if we develop our oil and gas reserves the County can receive \$300 million per year in revenue for the next 25-30 years. This revenue could:

1. fund critical public safety issues (e.g. jail, prevention programs, EOC),
2. invest in renewable energy sources in the County (e.g. solar) to help us transition away from the petroleum age,
3. additional money would go to the State to help with it's financial woes, and
4. reduce the money we send to terrorist-supporting oil producers in the Middle East.

The environmental impact of this according to Dr. Allen is:

1. cleaner ocean water (less seepage)
2. less air pollution (from seeps)
3. less risk of oil spills than we have now (biggest risk is from oil tankers, not wells)
4. no ugly oil well "polluting" our ocean views (horizontal drilling).

Sounds too good to be true, doesn't it? Well, maybe it is. I don't know for sure, but I think the smart thing to do is to run these facts to ground. The Board could assign this task to Mike Brown, appoint a special task force or Commission, hold public hearings, or some other mechanism. But I think it's critical we learn the facts. A decision to develop, or not develop, our natural resources should be made on the facts today, not on what happened in 1969, not on fear of oil producers getting the "nose under the tent", or other such issues.

We need our County leadership to view this with an open mind and with a commitment to do what's best for our County, now and in the future.

I look to each of you to provide this kind of leadership.

Thanks for listening to my input.

Best,

Rick Roney

August 18, 2008

To: Lad Handelman
SOS

From: Byron M. Ishkanian
SOS

Dear Laddie:

Today I received my first response from the letter of August 15, 2008, requesting information on the length of time required to drill an oilwell and start production and processing toward refining and eventual sale into the marketplace.

The first response was from a Phil Schroeder of the Federal Mineral Management service, made at the request of Ellen Aronson, Regional Manager of that agency.

Mr. Schroeder stated the following (his phone number is (805-386-7775):

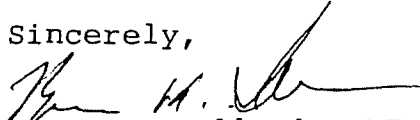
1. Normal wells take approximately 2-3 months to drill, from spudding in to actual production.
2. Hooking up to a pipeline for processing takes an additional period of time, so the full cycle is approximately 4-6 months on average.
3. Extended reach wells, those wells drilled horizontally at depth, take approximately 6 months.

In summary, we can obtain specific examples with well numbers etc, should we wish, to provide valid examples.

Mr. Schroeder was very forthcoming and cooperative, so we should thank Ellen Aronson for her help if we have the opportunity.

Should I obtain information from others on our mailing, the information will be transmitted to you.

Sincerely,



Byron M. Ishkanian, PE
1480 San Leandro Park Road
Santa Barbara, California 93108
Phone: 805-969-6020, Fax: 805-969-0297

SANTA BARBARA NEWS PRESS - Opinions and Letters

On Environment, Politicos Invoke Fear

Don Barthelmess, Santa Barbara

July 22, 2008 12:00 AM

Re: political grandstanding, Assemblyman Pedro Nava's recent commentary is despicable. These opportunistic pseudo-environmentalist politicos and special-interest groups have been riding the fear position for decades. Once in office, they perpetuate that position and our dependence on foreign oil.

Why? Because it was the easiest way to get votes in California. Voters are now moving in a different direction. Once the politicians see where the crowd is going, they will step out front to take credit.

Politicians like Mr. Nava, Rep. Lois Capps and Sen. Barbara Boxer are in part of the reason we aren't in a position to solve our own problem. They believe we will "upgrade" our global operating system to the much ballyhooed non-fossil fuels overnight. Where is their solution?

These same people oppose nuclear power. They believe 1969 rhetoric will gain votes while dreaming of alternative technology. They then write resolutions publicly touting their environmentalism.

We need politicians who are leaders with experience in engineering, technology and business.

Pseudo-environmentalist politicos now hope the public will believe that free markets wait 20 years to respond to supply and demand. Just after President Bush announced plans to lift the moratorium last week, oil dropped by its biggest margin in 17 years. Markets anticipate supply and demand. They respond accordingly.

It will take a combination of domestic oil production, nuclear power and natural gas to buy the time to develop alternate technology. We need to start now.

By the way, Mr. Nava forgot to include the word "pristine" in his article against offshore oil.



Opinions and Letters

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Letters: Time to tap into channel oil seepage

Allan La Fleur, Goleta

August 1, 2008 12:00 AM

It is always curious when one elected official, Assemblyman Pedro Nava, starts accusing another elected official of grandstanding. Even though President Bush's announcement does not open up offshore drilling, it is interesting that the price of oil has dropped \$20 a barrel in recent days

Mr. Nava worries about our pristine area; perhaps he is unaware that there are 80,000 barrels of oil per year spewing into the channel from offshore seepage. An additional 6,000 tons of air pollution comes from that same source.

Since Mr. Nava serves on the California Ocean Protection Council, one would think he'd be interested in removing the source of all that pollution to the environment. In fact, developing the offshore resources not only would reduce the pollution but would bring \$300 million into the South Coast each year.

Mr. Nava and his bunch have no real answers to solve the problem. They are the ones responsible for this whole economic mess. They're the ones who lowered the requirements to get a real estate loan. When the real estate bubble burst, the feds' inability to act boldly has caused the dollar to plummet. This, of course, caused oil and the rest of the commodities to go up. Their idea of solving the problem is to tax the oil companies and eliminate the speculators. More government tinkering and interference, but no solutions.

Alternative energy is not Big Oil's job

Rather than do something productive to increase fuel supplies, Congress wastes time hunting bogeymen and fabricating distractions. Lately they have excoriated Big Oil for the cardinal sin of "under-investing" in alternative energy.

ExxonMobil "only spent \$10 million on renewables last year," House Energy Independence Committee Chairman Ed Markey, D-Mass., moaned June 22 on ABC's "This Week."

"I am very angry, frankly, at the oil companies," presumptive Republican nominee, Sen. John McCain, R-Ariz., said June 12. "Not only because of the obscene profits they've made, but their failure to invest in alternative energy to help us eliminate our dependence on foreign oil."

"We are forcing oil companies to change their ways," Senate Majority Leader Harry Reid, D-Nev, told journalists May 7. "We will hold them accountable for unconscionable price gouging and force them to invest in renewable energy or pay a price for refusing to do so."

But before Congress dunks Big Oil's CEOs in crude

and dips them in feathers for this alleged inaction, a simple question occurs:

So what?

Where on Earth is it written that any industry must spend money to subvert its business model? Since when must any company plow scarce resources into helping consumers avoid its products? If enterprises now must meet this standard, the fascinating possibilities are endless:

● Shall Boeing develop "bullet trains" so Americans can de-plane jumbo jets and board high-speed rail cars?

● Why shouldn't Pfizer modernize traditional Chinese herbal medicine? Why create Viagra Jr. when the drug giant could craft better aphrodisiacs from deer antlers?

● Why won't Brooks Brothers invest in "alternative clothing," such as T-shirts, torn jeans, and flip-flops? Who do they think they are, producing that classic look embraced by the American Establishment?

● Why does Anheuser-Busch focus on beer, rather than wholesome fruit juices and dairy drinks? How

Deroy Murdock

The author is a media fellow with the Hoover Institution on War, Revolution and Peace at Stanford University.

Please see **MURDOCK** on G4

VOICES

SUNDAY

JUNE 29, 2008

SANTA BARBARA NEWS-PRESS

Big Oil not responsible for alternative fuels

MURDOCK

Continued from Page G1

much longer must Americans wait for the Budweiser Berry Smoothie?

- Where is NBC's literature division? Shouldn't viewers click off their flat-screen TVs and pick up mentally stimulating books?
- And why does Senator Barack Obama (D-Ill.), insist on fundraising only for his campaign? When will he hold a benefit for John McCain?

Despite this notion's manifest absurdity, Big Oil, in fact, has spent plenty on alternative energy. While Washington politicians spit venom at the petroleum industry, it funds more of such research than does Uncle Sam.

In May 2006, the Institute for Energy Research and the Center for Energy Economics found that oil and gas companies spent \$1.2 billion between 2000 and 2005 on wind, solar, geothermal, and other non-fossil fuels. Washington simultaneously appropriated \$1.6 billion on such

projects.

Meanwhile, Big Oil devoted \$11 billion researching end-use technologies, including efficient heat and power co-generation, plus fuel-cell vehicles. Big Government plowed \$800 million into such advancements.

All told, the evil oil companies expended \$12.2 billion on new energy sources. That quintupled the federal government's \$2.4 billion commitment.

BP in 2007 allocated \$700 million to domestic wind-power projects. This year, five new BP wind farms worth \$1.5 billion will generate 700 megawatts of electricity. BP, Chevron, Conoco Phillips, and Shell jointly have invested \$3.5 billion in solar, wind, and biodiesel ventures.

Mr. Markey's bete noir, ExxonMobil, has spent \$1 billion since 2004 on co-generation technology. It also is donating \$100 million to Stanford University's Global Climate and Energy Project.

"We have 40 breakthrough programs under-

way looking at every aspect of renewables," ExxonMobil senior vice-president J. Stephen Simon told Mr. Markey's committee April 1. "We are looking at solar. We are looking at biofuels, biomass."

Of course, if Exxon finally discovered how to extract fuel from banana peels, politicians who would burn CEO Rex Tillerson at the stake today will berate Exxon tomorrow for making "obscene profits" on banana power.

If oil companies' shareholders and managers enjoy researching renewable energy, hooray! But the awful new idea that they should be coerced or compelled to do so should be stomped on with work boots until dead. No firm or industry should be expected or required to invest in its own obsolescence. This is common sense. But most concepts that waft from Washington, D.C. — like methane escaping a landfill — stopped making sense ages ago. So it goes as Congress increasingly scorns alternatives to its own power.

U.S. needs offshore oil drilling

Rep. Lois Capps writes that she opposes the House Bill that will allow states to drill for oil in the federal waters off their coasts.

Today, natural gas and oil drilling is prohibited in all offshore regions along the North Atlantic coast, most of the Pacific coast, parts of the Alaska coast, and most of the eastern Gulf of Mexico.

In 2003, California received \$678,204,136 from federal offshore revenue. Can Virginia and the other states that want to drill be blamed for thinking California is being a little hypocritical in forbidding them from receiving this kind of revenue?

H.L. Williams drilled the first offshore well in the world in 1887 in Summerland. Therefore, we've had continuous offshore oil production here for 119 years. Doesn't our beautiful coastline prove we can produce oil offshore and preserve the environment?

The alternative fuels, ethanol, synfuel from coal, biodeisel, hydrogen, etc., require time to come on line. Every bit of oil and gas we don't produce, we will import.

In 2003, the Mineral Management Service estimated there were 406.1 Tcf of recoverable natural gas and 76 billion barrels of oil in U.S. offshore regions.

The purpose of the House bill is to provide states with incentives to support large increases in offshore production, which will result in increased revenues to both the states and the federal government. I urge support for the bill which is a meaningful step toward energy independence.

David King
Goleta

Santa Barbara
News Press
9-3-2006

Voices

IDEAS &
COMMENTARY

SANTA BARBARA NEWS-PRESS

❖ THURSDAY, JULY 17, 2008

LETTERS TO THE NEWS-PRESS

Blame Congress for high oil prices

Big oil companies are convenient villains to blame for high oil prices. But they are merely doing what companies are supposed to do: Invest a lot of money to make and sell products at competitive prices.

The objective of profit is to create incentive to continue to meet consumer demand.

Oddly, when the enterprise loses money, investors are

expected to accept the risk without whining; whereas when lucky enough to make a big profit, our politicians seem to think they should be punished by double-taxing.

So much for incentive.

The real losers are those among us who happen to own oil stocks in retirement portfolios, or work in the oil industry.

Oil companies don't cause high fuel prices; worldwide markets responding to supply and demand do. So who is really to blame?

Current demand is largely driven by developing nations like

China and India, while new oil supplies at home are deliberately restricted by a misguided majority in Congress.

Furthermore, Congress has come up with zero long-term policies for solving our energy problems, preferring instead to subsidize the conversion of edible corn to ethanol for burning in our gas tanks.

The result of this madness is we are sending billions of dollars to foreigners, many of them bent on our destruction, while driving up the cost of food products.

Ultimately, I suppose the blame goes to those of us who tolerate such utterly inept and destructive performance on the part of the people we send to Congress.

Charles E. Watson
Santa Barbara

Voices

IDEAS &
COMMENTARY

SANTA BARBARA NEWS-PRESS

SATURDAY, JUNE 28, 2008

LETTERS TO THE NEWS-PRESS ABOUT FUEL COSTS

I'd like to comment about Rep. Lois Capps and some of our government leaders expressing disappointment over President Bush's proposal to lift the moratorium on offshore oil drilling along the coast of California and other coastal states.

While I agree America should invest in other fuel choices and technologies for the future, it's apparent our "courageous leaders" would rather just talk about it, watching millions of Americans pay for many years of indecision at the gas pumps while they ride out their terms in office making high salaries with great benefits until they retire to a fat pension.

For years, Mrs. Capps voted no to oil drilling off our coast, even though the oil companies have spent millions of dollars meeting the safety demands of environmentalists to make it as safe as is possible. New technologies developed for safety drilling and delivering oil from off-shore is huge and our fanatical environmentalists are more interested in saving the much-alive snowy plover than providing us the means to maintain our livelihoods.

She'd have you believe America is not well-respected in other countries and that leaders like her know what's best for us. It's no wonder these are the same leaders who tell us Mr. Bush went into Iraq for one reason, the oil. Then where is it, and why are we not using it? It galls me to think other countries are drilling for oil off our coasts while we sit on our thumbs talking about future ways to save the planet.

How many safety systems do you think China and Thailand have incorporated into their drilling operations? Contact elected officials and complain.

Roy Belluz
Lompoc

I find it difficult to read or listen to comments about the price of gasoline. Basically, it's the law of supply and demand. As the largest and most wasteful country in regards to gasoline consumption, we now are paying for our low-mileage vehicles and the refusal of our politicians to open other areas

for oil drilling.

You want to lower your gas bill? OK, drive less, car pool, take public transportation, follow all the tips on increasing your car's mileage, buy a car that gets more than 30 mpg, buy a bike or motor scooter. Quit whining and do something about it.

It's doubtful that gas will be cheaper in the future; if anything, it will be more expensive.

Why should we develop more of our own energy with off-shore drilling and in Alaska? Not to reduce today's cost of gas, instead to help ensure we even have gas supplies in the future 5, 10, 20 years from now.

If gasoline dropped to \$3.50 per gallon, the smartest thing our politicians could do is add a 50-cent tax to get the price back over \$4. That money could be used to fix our roads and bridges and provide funds for developing alternative energy sources. At the same time, it would persuade people to use less gas and buy more fuel-efficient cars.

We will be dependent on oil for the foreseeable future. Get used to it. Our problem in the future won't be the price of gas, it's whether or not we have enough.

Jim Christensen
Santa Maria

On June 19, the price of a barrel of oil went down by over \$4. This was the direct result of action by speculators following news from China that the government there no longer would provide subsidies that artificially kept the cost low.

The speculators then speculated that the Chinese people would consume less and there'd then be reduced demand, thus bringing down the price.

The argument locally that opening new areas to oil production would not impact the cost of gasoline because of the years necessary to get new wells on line is false. When we make it a new policy to exploit our own resources like every other country, the speculation will then be

that a new, large source of supply is in the pipeline, so to speak, and therefore, the price will be bid down, significantly.

Those same people who disingenuously argue that more supply or even discussion of it won't help relieve the current gas crisis are the same who claim there'd be a serious environmental impact. Hurricanes Rita and Katrina ripped loose and severely damaged dozens of rigs in the Gulf of Mexico, but not a drop of oil was spilled into the water. That is why using our spill in 1969 as exhibit A in the case against offshore drilling is such a canard. The technology is infinitely better with specific safety measures commonplace now that prevent spills under any scenario.

Further, drilling in the Santa Barbara Channel will have a net environmental benefit by reducing the natural seep that releases thousands of barrels a year into the channel. The sole cause of serious oil spills in the past 20-plus years have been accidents with ocean-going tankers.

There is no rational reason to oppose more drilling, just about anywhere.

Santa Barbara News-Press, Letters To Editor

(Section) VOICES (Page A8)

Wednesday June 4th, 2008

Stuck in goo of inconvenient truths

Thank you to the News-Press for the article regarding the forum discussion about natural oil seeps in the Santa Barbara Channel.

Anyone who has walked most of the beaches here can attest to the joys of removing the plethora of the prehistoric products from the soles of one's feet and the waft of rotten eggs on the breeze. UCSB, SOS and the EDC were there. No mention was made of GOO. Everyone can agree it would be nice to walk, surf, swim, kayak or sail with less goop stuck in your mouth or on your body.

The article expressed to me the forum's optimistic yet cautioned suggestion that drilling in the channel will reduce seepage.

With one exception, the representative from the EDC. He seemed to have missed the purpose of the forum by extolling the EDC cadence and making a connection between nonpolluting solar panels and the 1969 oil rig blowout.

Recent revelations on pollution created by hybrid car-battery production coupled with the ethanol/E85 debacle has

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CHOICE WORDS

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Robert Hefferman

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Robert Hefferman
Lompoc

Frequent oil spills untenable

Natural disasters, such as monsoons, typhoons, cyclones and earthquakes, are unavoidable.

The repetitive and commonplace catastrophes at Greka are avoidable — and thus inexcusable.

Kay Quigley
Solvang

Channel oil, gas seeps nothing new

That was a very well-written article in Monday's News-Press about the oil and gas seeps in the Santa Barbara Channel. I wrote a letter to Rep. Lois Capps on the subject, but didn't get any response. I had a discussion with GOO at Earth Day, that didn't help either. I believe some of the public is aware of the problem.

Following is a letter I wrote in December 2004 that the News-Press was nice enough to publish: “A liquefied natural gas plant off our coast doesn't make any sense. I understand this facility would be for importing natural gas from other countries. There is gas bubbling up off our coast all the time. A few wells placed there might supply all the gas we need and take the pressure off the underground gas supply.

“Chevron built a gas processing plant to separate the gasses. There is talk about tearing the plant down. What a waste. Let's keep more jobs and money here in Santa Barbara.

“Over 40 years ago when I would walk on the beach with my children, I would have to wash our feet with paint thinner to get the oil off. That was when we should have been drilling in the channel.”

Edwin A. Weston
Santa Barbara

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Robert Hefferman
Lompoc



GEORGE SKELTON:
CAPITOL JOURNAL

Let go of the past and allow offshore oil drilling

George Skelton, Capitol Journal
August 18, 2008

SACRAMENTO -- Admittedly I'm biased on offshore drilling. I was born in Santa Barbara, grew up in Ojai and spent many a weekend on the beach.

But that didn't make me an anti-drilling fanatic. Hardly.

I was around lots of oil rigs -- onshore, offshore and some near the beach.

On some beaches around Santa Barbara, you could feel the oozing tar between your toes -- and that was long before a Union Oil platform five miles offshore spilled crud all over 20 miles of coast in 1969. For centuries, the tar naturally had seeped up through the sand, providing the native Chumash with caulking for their canoes.

Oh, another thing: My dad was an oil field roustabout, or driller or whatever job he could fill on a given shift. So were his dad, brother and cousins. They left their Tennessee farms and followed the migration to California for the 1920s oil boom.

My first summer job out of high school was in a Ventura oil field, an experience guaranteed to prod a kid into college if nothing else would. (But the oil job paid better than newspaper work, I soon discovered.)

So "Big Oil" never has been a big bugaboo for me. It was the producer of a vital commodity and provider of working-class jobs. Although oil derricks annoy many people as unsightly, I've always marveled at how they work, especially all lighted up at night.

Like a lot of Californians, however, when the drilling platform fouled our beaches, I became a NIMBY. *Get those leaking monstrosities out of our waters. No more drilling.* And enough people felt the same that California's coast became off-limits to any additional oil exploration.

That was nearly 40 years ago.

At that point, America was importing only 24% of its oil. Today, it's up to nearly 70% and rising, a

ludicrous transfer of American wealth.

Back then, we hadn't yet fought any Middle East wars with one eye on oil pipelines.

And nobody dreamed of \$4 gas.

California is the nation's biggest consumer of gasoline -- 45 million gallons a day, plus 10 million gallons of diesel. That makes us the third-biggest petroleum-consuming entity in the world, behind only the United States and China.

We are the nation's No. 3 oil-producing state, behind Texas and Alaska.

But California produces only 39% of the crude oil it uses. An additional 16% comes from Alaska and the remaining 45% is bought from foreign sources, according to the California Energy Commission.

So there's a gusher of hypocrisy here: The state that is the biggest consumer of gasoline in the nation -- but produces less than 40% of what it uses -- is opposed to drilling for more oil off its shores. We're slackers not pulling our weight.

The continental shelf off California contains an estimated 10 billion barrels of crude oil, according to the U.S. Minerals Management Service.

Offshore exploration opponents point out that if the federal drilling ban were lifted today, there'd be no immediate effect on gasoline prices. It could take 10 years to get any crude to the gas pump. Fine. Most people driving today still will be 10 years from now.

Anyway, the important thing is to produce the fuel ourselves, not be shaping our foreign policy to assure a steady supply from shifty overseas sellers.

It's time to let go of the past -- the past 40 years -- and allow some offshore drilling. It's about the principle as much as the production. And it also could be about principal: California's governor could follow the example of Louisiana's and demand state royalties for drilling in federal waters

Environmentally, drilling is much safer than in 1969. There are new technologies.

The rigs are ugly? They mar the sunset? That's an elitist attitude we no longer can afford.

And apparently increasing numbers of Californians agree.

A recent poll by the Public Policy Institute of California found that 51% of voters favor more offshore drilling; 45% are opposed. Pollster Mark Baldassare says his past surveys always have found more people opposed than in favor.

Nationally, a recent CNN/Opinion Research poll showed that 69% of Americans want more offshore drilling.

House Speaker Nancy Pelosi of San Francisco obviously has been reading the polls and hearing from other Democratic members of Congress. Last week, Pelosi said she was considering legislation to permit new offshore drilling -- except possibly on the West Coast -- as part of a broad, long-overdue bill that invests in alternative energy.

That brings up another argument for not lifting the drilling ban: Pumping more oil will just feed our addiction to the fossil fuel that is burning up the planet. We ought to be focusing on renewable energy -- wind, solar, geothermal.

"We should be moving toward renewable sources that are free, American and inexhaustible," says Alan Salzman, founder of VantagePoint Venture Partners, a huge Silicon Valley investor in clean tech.

"I can't say it's the end of civilization as we know it if we drill offshore. But we're missing the point. That's looking backward. Why live in the past, burning fossil fuels and living off dead dinosaurs? We don't need to do that. We have been endowed with phenomenal resources. All we have to do is scoop them up."

He adds, "The car industry is going to switch over to electric, and that's a certainty. Hundreds of thousands of electric cars will be on the road in 2011."

Let me know when one is affordable, practical and in the showroom.

People didn't give up their horse and buggy until Henry Ford began making affordable cars. We're anxiously awaiting our next transportation mode. Meanwhile, we'll need to keep pumping gas -- some of it from the Santa Barbara Channel.

george.skelton@latimes.com

SANTA BARBARA NEWS-PRESS

"HISTORY OF SANTA BARBARA EARTHQUAKES AUGUST 18, 2008"

"... EARTHQUAKES IN THE MID-TO HIGH- MAGNITUDE 6 RANGE ARE MODERATE EVENTS, BUT WE CAN EXPECT LARGER EARTHQUAKES AT SOME TIME IN THE FUTURE...

... SANTA BARBARA AND THE CHANNEL ARE PART OF THE SO-CALLED "EARTHQUAKE HOT ZONE," WHICH RUNS FROM LOS ANGELES THROUGH VENTURA AND UP THROUGH THE SANTA BARBARA CHANNEL. FREQUENT MODERATE TO LARGE EARTHQUAKES CHARACTERIZE THIS ZONE...

... REGARDLESS OF WHAT HAPPENS ON THE MISSION RIDGE FAULT SYSTEM, THE MESA FAULT, OR A NUMBER OF OTHER FAULTS ON LAND, THE MOST SERIOUS SEISMIC HAZARD IS IN THE SANTA BARBARA CHANNEL...

... ONCE AN EARTHQUAKE OCCURS IN THE CHANNEL, WE WOULD SOON KNOW ABOUT IT..."

DR. ED KELLER IS A PROFESSOR IN THE DEPARTMENT OF EARTH SCIENCE, ENVIRONMENTAL STUDIES PROGRAM AND GEOGRAPHY DEPARTMENT AT UCSB. CONTACT HIM AT [KELLER@GEOL.UCSB.EDU](mailto:keller@geol.ucsb.edu).

History of Santa Barbara earthquakes

SANTA BARBARA NEWS-PRESS

MONDAY, AUGUST 18, 2008

Some people have told me they moved to Santa Barbara to escape the earthquake hazard of the Los Angeles area. What short memories we seem to have!

Santa Barbara was heavily damaged in 1925 by a magnitude 6.8 earthquake that must have been similar to the magnitude 6.7 Northridge earthquake in 1994, which caused more than \$30 billion in damage and killed 61 people.

Earthquakes in the mid- to high-magnitude 6 range are moderate events, but we can expect larger earthquakes at some time in the future.

Some of our on-land faults, such as the Mission Ridge fault system, are clearly capable of producing Northridge-type earthquakes, but some of the faults in the channel could produce a magnitude 7 to magnitude 7.5 event.

In addition, there is a fault just over the Santa Ynez Mountains called the Santa Ynez fault, that the Santa Ynez River flows along, and a major fault on Santa Cruz Island, both of which could produce a magnitude 7 earthquake.

Damage to Santa Barbara from 10 past local and regional earthquakes since 1800, while significant, has not been catastrophic. This is because past earthquakes were mostly relatively small to moderate, and in the case of large earthquakes the area had not been nearly as developed as it is today.

Today we have earthquake codes for construction of buildings, and our wood-framed homes tend not to completely collapse during intense shaking. Thus, if we have a large earthquake, there will probably not be catastrophic loss of life, although property damages could exceed several billion dollars.

The following information, concerning damage from local earthquakes, is gleaned in part from the wonderful book by UCSB Professor Robert Norris on the geology and landscape of Santa Barbara County. The 4th of July earthquake of 1968 was a relatively small one of magnitude 5.2. It was most strongly felt in Goleta and was one of a swarm of earthquakes that also caused slight damage to Santa Barbara.

Some suggested that damage was greater to

the west and might have been a result of propagation of the earthquake rupture in that direction. This was emphasized further in the earthquake of August 13, 1978, which was a magnitude 5.9 event that occurred offshore off Goleta Point, probably somewhat to the east of the point. There was a strong focusing of the energy to the west.

UCSB sustained damage totaling several million dollars, and something like a million books were knocked off shelves in the library and office bookshelves. The acceleration, or intensity of shaking, caused the Marine Science building to shift about one inch on its foundation.

Had the event taken place at a time when students were on campus, injuries and death undoubtedly would have occurred.

It's also interesting that, to the west at Ellwood, a train derailed when it ran over a place where the rails had been spread by the shaking.

What really seems clear from this event is that the intensity of shaking and damage clearly increased from east to west, which was the direction of propagation of the faulting during the earthquake.

Talking about what produced the 1978 earthquake brings to mind a humorous story that a friend told me. She was living in Santa Barbara, and the earthquake occurred about 4 in the afternoon. She had been gardening and was pulling on a particularly tough weed, grasping it with both hands and pulling hard. Just as the weed was finally pulled free, the earthquake occurred. She said something like, "Oh my God, what have I caused now?" and tried to put the weed back in the hole to stop the seismic shaking.

Maybe pulling the weed was the straw that broke the camel's back, but somehow I doubt it.

Santa Barbara and the channel are part of the so-called "earthquake hot zone," which runs from Los Angeles through Ventura and

up through the Santa Barbara Channel. Frequent moderate to large earthquakes characterize this zone.

Santa Barbara has not sustained a magnitude 6 to magnitude 7 earthquake in more than 80 years, but we probably have been lucky.

Seismic shaking, from rupture of the Mission Ridge fault that uplifted the American Riviera (Mission Ridge) during numerous earthquakes over the past 125,000 years, is likely to be intense in the city of Santa Barbara because much of the town is on the hanging wall, or upper plate, of the fault. The fault is part of an extensive fault system that runs from near the Ventura River west to offshore near Ellwood Beach.

If the entire fault were to rupture, we could expect about a 6.5 to 7 earthquake. If a shorter segment of the fault, say in the Santa Barbara area, ruptured, we could expect a 6.5 event.

The problem is that the fault dips to the south beneath the city, and so the city is built on the upper plate. Upper plates of faults are particularly dangerous for seismic shaking compared with the lower plates below. This is because the upper plate tends to flop about, increasing the shaking.

We don't know how often we get large earthquakes on the Mission Ridge fault system. The last one was about the late 1700s, just prior to the establishment of the Santa Barbara Mission with consistent written record of earthquakes. We know this because Dr. Larry Gurlola, a UCSB geologist and my former graduate student, identified deformation from that event near Sheffield Reservoir just north of Mission Ridge.

The return period on the Mission Ridge fault system at any particular location is probably several hundred to 1,000 years or longer, but we can't rule out that earthquakes along the fault are clustered in time.

A new idea concerning earthquakes is that where you recently had a large earthquake is where you might expect another one in the

relatively near future.

Regardless of what happens on the Mission Ridge fault system, the Mesa fault, or a number of other faults on land, the most serious seismic hazard is in the Santa Barbara Channel. That is also where most of the small earthquakes occur. Our instruments that record earthquakes record many more earthquakes in the channel than on land.

A magnitude 4.3 earthquake in the channel near Santa Barbara occurred in November 2007. There are several large faults in the channel, including the Red Mountain, Oak Ridge, and the Mid-Channel faults. These have produced ridges and fault scarps on the floor of the ocean and present a potentially serious earthquake hazard to the Santa Barbara area.

This results because earthquakes in the Santa Barbara Channel would be felt almost instantaneously on land. Seismic waves are shaking travel very fast (a few miles per second), so, once an earthquake occurs in the channel, we would soon know about it.

Areas of particular concern include the El Estero, or salt marsh (roughly from East Beach south, Anapamu Street north, State Street west and Milpas Street east) that is riddled in, because shaking of that area would likely result in liquefaction of the land. The shaking rearranges fine sediment and water causing solid earth to turn into a liquid.

Other areas that might be subject to liquefaction are the Goleta Slough and some of the soft soils with high water tables around the Andree Clark Bird Refuge. Evaluation of the soil at a particular site is necessary to estimate the liquefaction hazard.

Next week: We will consider other aspects of our earthquake hazard.

This is the second article in a series.

Dr. Ed Keller is a professor in the Department of Earth Science, Environmental Studies Program and Geography Department at UCSB. The opinions in the column are Dr. Keller's and not that of the newspaper. Contact him at keller@geol.ucsb.edu.



HISTORY,
NATURALLY

-Ed Keller

Environmentalists Say Yes to Offshore Drilling

By ANDREW CLINE

July 12, 2008; Page A9

On the morning of Jan. 28, 1969, a Union Oil drilling site six miles off the coast of Santa Barbara, Calif., sprang a leak. The ensuing spill stretched for miles, killed thousands of birds, and gave America the image of wildlife and shorelines covered in black crude. That spill is widely considered to have conceived the modern environmental movement. A year later, the first Earth Day was held, followed by passage of the Clean Air Act and Clean Water Act.

After the spill, Santa Barbara residents formed an environmental group called GOO! (Get Oil Out!), one of the first community groups to oppose offshore oil drilling. Thirty-nine years later, GOO! is still around. But this April the group did something astonishing. It publicly supported an oil company's proposal to drill off the coast of Santa Barbara.

M.E. Cohen

Houston-based Plains Exploration and Production Company proposed drilling 22 wells from a platform 4.7 miles from land. It made numerous concessions to the local environmental groups that would curtail drilling in about a decade -- and in the end even the adamantly "no-drilling" crowd agreed that the deal was beneficial for everyone. The Environmental Defense Center, a nonprofit environmental law firm, endorsed the plan. Abe Powell, president of GOO!, told the Los Angeles Times it was "good for the community." Terry Leftgoff, a former GOO! executive director, wrote in the Santa Barbara Independent the deal was "a brilliant proposal that finally gives the public something back: the certain removal of four offshore oil platforms, the decommissioning of a notorious industrial plant, and the reversion of rural land subjugated into oil development back into the public trust as parkland."

When an environmental group formed for the sole purpose of opposing offshore oil drilling warmly embraces a plan to drill off its own coast, you know something important has changed in our culture: Americans have recognized that offshore oil drilling is largely safe.

Since 1975, drilling in the Exclusive Economic Zone (within 200 miles of the U.S. coast) has had a 99.999% safety record, according to the Energy Information Administration, which reports that "only .001 percent of the oil produced has been spilled."

Thanks to technological advances, large spills are rare. Most spills are tiny, only a few feet in diameter. Large tanker spills, such as the Exxon Valdez in 1989, are so infrequent they account for a very small fraction of the oil that winds up in the sea.

A joint study by NASA and the Smithsonian Institution, examining several decades' worth of data, found that more oil seeps into the ocean naturally than from accidents involving tankers and offshore drilling. Natural seepage from underwater oil deposits leaks an average of 62 million gallons a year; offshore drilling, on the other hand, accounted for only 15 million gallons, the smallest source of oil leaking into the oceans.

The vast majority of the oil that finds its way into the sea comes from dry land, NASA found. Runoff from cities, roads, industrial sites and garages deposits 363 million gallons into the sea, making runoff by far the single largest source of oil pollution in the oceans. "Every year oily road runoff from a city of 5 million could contain as much oil as one large tanker spill," notes the Smithsonian exhibit, "Ocean Planet."

The second-largest source of ocean oil pollution was routine ship maintenance, accountable for 137 million gallons a year, NASA found -- more than 2.5 times the amount that comes from tanker spills and offshore drilling combined. But no one is proposing that we ban cargo and cruise ships.

The public may be aware that offshore drilling accidents are infrequent and pose little threat to the environment; this awareness is probably part of the reason why growing numbers of Americans support drilling in formerly protected portions of our coastal waters. Last month, a Zogby poll found 74% of Americans support offshore drilling. That's up from 57% in May, according to a Gallup poll. Even a majority of Democrats support offshore drilling, according to a Rasmussen poll last month.

High gas prices clearly play a role in driving up support for drilling. But the fact that the U.S. coastline has not played host to news footage of sea birds coated in crude since 1989 may play a role, too.

Big oil spills can do long-term ecological damage. But the long-term effects seem to be on the micro rather than the macro scale. In Alaska and Cape Cod, where long-ago oil spills coated the shoreline, the aftereffects are visible only if one goes digging for them. Small creatures such as crabs and shellfish still suffer negative ramifications. But the ecological decimation predicted by environmental groups has not materialized.

Americans, including those at GOO!, are making the judgment that in the right circumstances, the benefits of offshore oil drilling can outweigh the risks of an occasional large spill. Unfortunately, the Democratic Congress remains beholden to environmental activists who oppose a sensible expansion of offshore drilling. If it is possible to find a compromise in Santa Barbara, it should be possible to find one on Capitol Hill as well.

Mr. Cline is editorial page editor of the New Hampshire Union Leader.

Energy Security Leadership Council

*"The group, known as the Energy Security Leadership Council, **also called for increasing U.S. oil and natural gas exploration**, saying that could add 1 million to 2 million barrels of oil per day to the nation's supply.*

"Republicans need to accept sensible increases in vehicle fuel efficiency standards and Democrats must be willing to allow responsible expansion of oil exploration and production," said Fred Smith, president and CEO of FedEx Corp., who called the report a "road map to energy independence."

Their website: http://www.secureenergy.org/energycouncil_about.php

CEOs, Military Leaders To Push For New Energy Policies

By Maya Jackson Randall
Of DOW JONES NEWSWIRES
Wednesday, August 2, 2006; Page A2

WASHINGTON (Dow Jones)--Concerned about high energy costs and energy security, top executives at airline, chemical, food and shipping companies are joining retired military leaders in a push for new energy policy.

The coalition announced Wednesday includes top executives from FedEx Corp. (FDX), Domino's Pizza Inc. (DPZ), Goldman Sachs (GS), Southwest Airlines (LUV) and Dow Chemical Co. (DOW), among others.

Retired Marine Corps Commandant Gen. P.X. Kelley and former Commander-in-chief of the U.S. Pacific Command Admiral Dennis Blair have also signed on as members. "America's dependence on oil makes vulnerable the country's economic and military security and our nation must finally address this fundamental risk," said FedEx Chief Executive Frederick Smith, co-chair of the Energy Security Leadership Council in a statement.

The group believes that extreme dependence on oil is a threat to national security.

Needed reforms have been hampered because corporations outside of the energy industry haven't played a major role in promoting government action, the council said in a statement.

The council is a project of the two-year-old nonpartisan group Securing America's Future Energy.

In coming months, it plans to develop an energy security policy proposal aimed at reducing energy demand, increasing domestic supplies of oil and gas and developing alternatives sources of energy.

High energy prices and concerns about U.S. dependence on Middle East oil have also brought together other unique alliances.

Last year, more than two dozen national security officials from both Republican and Democratic administrations called for new policies to reduce energy use in the U.S.

And earlier this year, CEO group Business Roundtable announced that executives of companies like Pfizer Inc. (PFE) and American Electric Power Co. (AEP) created an energy task force to focus on ways to address energy issues.

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Posted by John Ryden

John Ryden is an Engineer with a background in Finance and Economics. Here he will discuss how energy production, energy use, and conservation affect us and the rest of the world with a focus on the economic implications.

Rank-and-file lawmaker's plan to open offshore to drilling

POSTED JULY 16, 4:02 PM

House Speaker Nancy Pelosi gives a news conference on gas prices in front of a Shell gas station in San Francisco, Monday, July 7, 2008.

Pelosi discussed how the Congress is helping to provide relief at the gas pump. (AP Photo/Paul Sakuma)

At last a sensible plan for oil development is emerging from Congress, but without the support of congressional leaders. A by-partisan group of Democratic and Republican lawmakers is working on a plan to open 574 million acres of coastal waters. The plan would use revenue from oil drilling to finance renewable energy and household conservation measures. This is exactly the type of plan that should be enacted. It will take decades and cost trillions of dollars to create a clean energy infrastructure in this country. In the mean time, we are going to continue to be dependent on fossil fuels to power our economy. This plan provides the energy needed now by our current fossil fuel based infrastructure while taking 'profits' from oil production to fund development of new clean energy sources. The plan would also fund household conservation measures (like winterizing homes in the Northeast to reduce the amount of oil used for heating.)

California is one of the states that would benefit from this bill if the state decided to allow more offshore drilling. There is an estimated 5.7 billion barrels of oil offshore California. Some of this oil could be developed quickly as fields with known reserves lie very close to existing drilling platforms. All of the infrastructure to extract the oil, transport it to shore through already existing pipelines, and process the oil are in place. Horizontal drilling techniques now allow some of these reserves to be developed very quickly from existing platforms. Some oil production could be brought on-line in less than a year. Oil production requiring new leases and infrastructure could be brought on faster than the estimated 10 years if the government would speed up its part of the process. Most of the time lag is due to regulatory delay. It is estimated that even offering new leases would

take the government 4 years. Exploration and drilling permits could take another 3 years...
3 years to actually do the work and you have 10 years!

So why is California against drilling? Many claim the risk of oil spills might pollute their beaches and ruin their tourist business. There was a large oil spill off Santa Barbara in 1969 caused by a blowout of a well. 80,000 barrels of oil were released into the ocean. This resulted in new regulations requiring safety devices to prevent blowouts and oil spills in offshore drilling. Since that time, the industry record on oil spills from offshore drilling has been excellent. **California already has naturally occurring oil seepage into the ocean from oil and gas seeps. One large known seep offshore Coal Oil Point is estimated to release 150 to 170 barrels of oil per day into the ocean. There are at least 2,000 active oil and gas seeps offshore California. Oil is part of the natural environment. Drilling into undersea oil reserves may actually clean up oil seeps in California as extracting oil from a reservoir will decrease pressure and may stop some of the natural seepage.**

Producing more offshore oil in California will generate a considerable amount of money for the state. It seems the state has chronic financial problems that might be helped by this oil revenue. California seems a lot like Mexico to me when it comes to developing oil. They are simply not going to allow anyone to profit from oil development and would rather financially go down in flames before they change their position. To me it seems very political and irrational.

House Speaker Nancy Pelosi, D-Calif., is looking to divert the bill by looking at speeding up development of existing leases or offering leases in areas that are not currently off-limit to drilling. These areas are mainly in Alaska, but not including the Alaska National Wildlife Refuge (ANWR) with known probable reserves of 11 billion barrels and the oil infrastructure (Alaska oil pipeline) already in place to move the oil to market. She is also looking at tapping our Strategic Petroleum Reserve to provide immediate relief while at the same time maintaining there is no need for long term relief!

Voters recognize the need to develop our own oil resources and reduce our dependence on foreign oil. 74 percent of voters support offshore drilling for oil in costal waters and 59 percent favor drilling for oil in ANWR. While Republicans and independents overwhelmingly favor offshore drilling, 59 percent of Democrats also support offshore drilling. Offshore drilling will be a major issue in the upcoming election. Every day people are reminded of our dependence on foreign oil every time they pass a gas station or need to fill up their own car. There is always the question: where is my gasoline going to come from tomorrow and next year, and how much am I going to have to pay for it?

In my previous article "Understanding Energy Return On Energy Investment (EROEI)" I discussed why we should develop our cleanest, most readily

available oil resources first. **It does not make any economic or environmental sense to shut off development of oil resources with a high Energy Return on Energy Investment (EROEI) before developing lower EROEI sources like tar sands and oil shale. Restricting drilling would actually make global warming worse in the long run. Hopefully, developing offshore oil will get us the time and money to develop clean, renewable energy resources to we can leave a lot of coal, tar sands, and oil shale in the ground forever. To not develop our own high EROEI oil sources and then buy lower EROEI oil sources from foreign sources is just plain stupid.**

For more info:

UPDATE: Pelosi's Oil Strategy Faces Rank-And-File Threat

California offshore reserves beckoning anew

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Santa Barbara learns to live with offshore drilling But pricey coastal town wary of more oil reserve exploration in Pacific

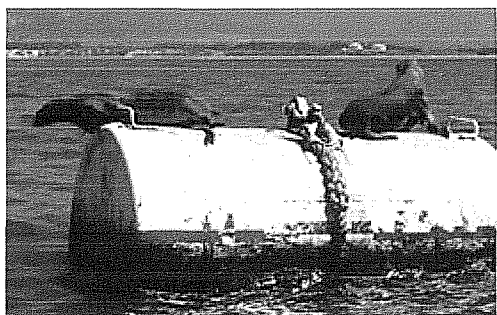
By Russ Britt, MarketWatch

Last update: 1:37 p.m. EDT June 27, 2008

SANTA BARBARA, Calif. (MarketWatch) -- As he looks out on the Pacific Ocean in this picturesque coastal enclave, Bobby Torrez can see a ribbon of golden sand that disappears into a rolling surf, pockets of prone sunbathers and frolicking swimmers, and -- off in the hazy distance -- a series of oil platforms.

None of it, not even the metal platforms jutting out of the water, seems out of place for the 50-year-old Torrez. He's gotten used to seeing the marine derricks that sit several miles out to sea. In fact, they are a source of income for the commercial diver. Roughly half his income comes from the scallops and mussels that attach themselves to the giant pillars that hold up the structure.

But the lifelong Santa Barbara resident also remembers the big oil spill in January 1969 that blackened the very beach upon which he's gazing. Like most locals, he's still pretty raw even after nearly four decades. While he's open to the idea of further drilling and its prospects of lower gas prices and increased income for his business, he's leery of the motives behind those who want to lift bans on ocean exploration.



Sea lions on a floating buoy in oily waters off the Pacific coast near Santa Barbara, Calif.

"I've got mixed feelings about it," Torrez said. "Under this administration, I'm totally against it."

Such is the wary mindset in Santa Barbara, two hours north of Los Angeles and one of the state's wealthiest communities. Set against steep mountains that tumble to the sea, this postcard-worthy region boasts an average single-family home price of more than \$1 million.

Santa Barbara and its surrounding communities are home to not only the wealthy, but a few of the famous as well. The home of talk-show icon Oprah Winfrey is in adjacent Montecito while "Seinfeld" star Julia Louis-Dreyfus also lives in the area.

Bluish-purple

While those two celebrities have come out in support of Sen. Barack Obama for president, an opponent of offshore drilling, the region isn't always convincingly blue. It's true the region has voted Democratic in the last four presidential contests but the margin of victory can be slim. Al Gore narrowly took Santa Barbara County with 47.4% of the vote in the 2000 election against President George W. Bush's 46.2%.

Registration figures indicate that the region's wealth, when coupled with a coastal/environmental sensibility, leaves the county with a bluish-purple hue. As of January 2008, registration was 54.4% Democratic to 45.6% Republican. Eight years ago it was a 53% to 47% mix.

And when Bill Clinton first was elected president in 1992, the region was closer to an even split with registration at

51.4% Democratic and 48.6% Republican.

It may not be surprising, then, that there's a mixed reaction among residents when they're asked about more drilling off their shores. All are wary of spills, but some say it could prove to be a positive in the long run.

"I think with the oil prices, we need to do something," said Blanca Martinez, a mother of five and a lifelong resident, as she left a nearby beach frequented by locals. "I don't think it will diminish our beauty at all."

Jim Bechtel, a four-year Santa Barbara resident, said he'd be more open to further offshore drilling if he could get guarantees that some of the federal funds would be used to develop alternative energy sources, like solar.

He said, though: "More platforms would bother me."

Avoiding the issue

It's probably no wonder that Obama's Republican opponent, Sen. John McCain, avoided the issue on a visit this week to the area. McCain stands with President Bush on lifting an offshore drilling ban but later said the resource would provide only a "psychological" boost. He added that individual states should be allowed to decide for themselves on the issue.

One Californian opposed to further offshore drilling is Republican Gov. Arnold Schwarzenegger. McCain sat next to Schwarzenegger at a town hall meeting at a county museum, but both avoided talk of the issue.

Schwarzenegger, though, has made his feelings known several times and did so again late in the week at a climate-change summit in Miami. He spoke at a gathering organized by Florida Gov. Charlie Crist, thought to be one of several potential running mates for McCain.

"Politicians have been throwing around all kinds of ideas in response to the skyrocketing energy crisis and energy prices, from rethinking nuclear power to pushing biofuels and more renewables and ending the ban on offshore drilling and it goes on and on," Schwarzenegger said. "But anyone who tells you that this will bring down our gas prices immediately or anytime soon, is blowing smoke."

Holiday lights

Santa Barbarans who have lived with offshore drilling for decades find the issue can be thorny, but it has its nuances. For example, some don't see the rigs as blemishes on what might otherwise be considered a pristine landscape. Some residents almost speak glowingly of Christmas lights that adorn the rigs during the holiday season.

What is almost a universal feeling, though, are the emotions that surface when the memories of the 1969 spill arise.

"That's forever embedded in people's minds here," said Arthur Korb, a resident of nearby Carpinteria.

One of the nation's first ecological disasters, it is credited with spurring the modern-day environmental movement. The spill occurred when a Union Oil Co. rig caused fissures underneath the Santa Barbara Channel and allowed the oil to escape. (Union Oil later was renamed Unocal and merged with Chevron Corp. (CVX) in 2005.)

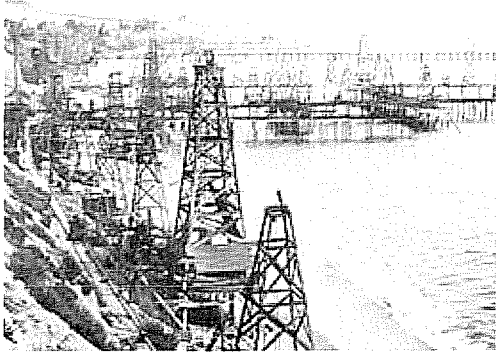
It was also a first for those who had to clean up. Residents watched workers learn on the job as they scrambled to soak up 3 million barrels of oil that bubbled up over a 10-day period.

Torrez, the commercial diver, remembers how workers pulled oil-drenched birds from the water and used a more primitive method of throwing hay into the ocean to sop up the crude matter. They would let the oily hay wash ashore and then scoop it up with bulldozers.

Abundant reserves

Yet there is no doubt the region is abundant in oil reserves. Oil firms have been trying to tap the area's rich source of petroleum for more than a century. At one point shortly after oil was discovered in the region, derricks dominated the

coastline.



National Park Service

Offshore oil field at Summerland, in Santa Barbara County, Calif. in the early 1900s.

The region now has 20 platforms off its shores, and petroleum firms are itching to get at more. Trouble is, drilling needs to take place within the bounds of the continental shelf, which on the West Coast extends for only a few miles. Platforms in the Gulf of Mexico, though, can be 50 to 100 miles out to sea, and out of sight.

Oil is still so plentiful in the region that it often bubbles uncontrollably to the surface, and shows up in the form of tar globules on some of the area's beaches. Tourists and new residents often curse the offshore platforms as they scrub their blackened feet, but long-time residents know the phenomenon has occurred naturally for thousands of years.

A sea of petroleum lurks underneath the city and off the Santa Barbara shore but is not covered over by what is known as "cap rock." Under normal drilling methods, explorers puncture cap rock, and then pressure from underneath squirts oil through the opening. The seeping oil is not covered over by cap rock and thus meanders throughout the area.

Korb, an Obama supporter who was at the McCain meeting earlier in the week, wonders whether it could be tapped.

"Maybe we should spend some money on capping the areas of main seepage," Korb said. "They could be capturing methane gas and the oil, rather than just letting it disseminate."

Do more drilling?

Bruce Allen says it can be done - by doing more drilling. Allen is the president of a group called Stop Oil Seeps, which argues that additional offshore drilling could be used to prevent oil from bubbling up on to beaches. And the region could produce nearly 2 billion barrels over a period of 25 years, he says.

Natural seepage alone over a four-year period amounts to roughly the same amount of oil that spilled from the Exxon Valdez incident in Alaska in 1989. He points out that a University of California, Santa Barbara study conducted in the mid-1990s shows that seepage around one of the nearby oil rigs known as Platform Holly dropped by more than 50% over 22 years as a result of production.

"If you expanded oil production, it's believed that you would have that same effect of reducing the seepage and reducing the pollution impact," Allen said. "That runs counter to a lot of people who do not want offshore oil production in other parts of the world as well as here, and they view it as a larger issue. But for central California residents, we view it as a local issue where we could see a reduction in the pollution and it's important to us."

Local environmentalists are skeptical.

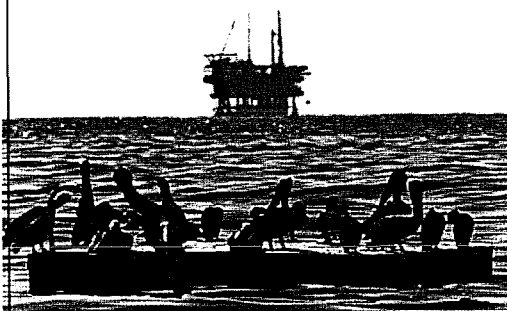
"Their science is a little sketchy," said John Abraham Powell, president of Get Oil Out, a group formed days after the 1969 spill. "It's not clear it would work."

Powell says there is no evidence to show an overall decline in seepage and that the decline around Platform Holly was limited to within a kilometer.

He adds that oil companies have leaked oil on land in the region over the years, including Unocal's 18-million-gallon spill on the nearby Guadalupe Dunes. And then, of course, the 1969 spill constantly looms.

"We're a little bit gun shy," Powell said. "We don't believe them when they say they can do it safely." ■

Russ Britt is the Los Angeles bureau chief for MarketWatch.



Oil capture: Pelicans perch atop a floating dock in Santa Barbara Channel off the coast of Carpinteria, Calif. An oil rig stands several miles in the background. ROBERT HARBISON/CSM/FILE



OOEY, GOOEY OIL SEEPS ON THE SEAFLOOR

For kids: Off the coast of Santa Barbara, Calif., people aren't polluting the ocean with oil – nature is.

By Lance Wills

from the April 22, 2008 edition

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Page 1 of 3

Santa Barbara, Calif., is famous for its golden beaches, wind-swept cliffs, and scenic views of the Pacific Ocean. But the city's postcard image hides a dirty secret: oil slicks – as colorful as a rainbow and as smelly as a gas station – float atop ocean waves just offshore.

Don't blame the oil rigs that dot the coastline, though. They may actually be helping keep the marine environment clean. In this topsy-turvy place, people aren't polluting the ocean – nature is.

Oil from underground deposits has been seeping into the Santa Barbara Channel for thousands of years. Every day, about 11 tons of oil droplets and oil-coated gas bubbles leak out of small holes or fissures in the seafloor.

Because oil is lighter than water, much of it rises to the ocean's surface and floats in thin, silvery slicks. But not all of it will reach the surface. About 15 percent will dissolve in the water in about a month. A small amount will sink into the mud and muck on the seafloor. And some of it will thicken into the gooey, black tar balls that wash ashore on Santa Barbara's tourist beaches.

Tar balls can be little black pebbles not much bigger than your fingernail, or they can be big, black blobs several inches across. Step on a sticky tar blob with your bare foot, and you'll wish you

hadn't.

A LONG TIME FORMING

There are about 2,000 natural oil seeps in the vicinity of Santa Barbara. Where did they all come from? Over millions of years, oil-bearing rocks thrust upward by the San Andreas fault were exposed to the erosive forces of wind and rain. Oil-bearing sediments were swept into streams and rivers, where they settled in thick layers on the bottom of ancient oceans, lakes, and swamps.

Tectonic forces slowly folded and compressed the sediment into bituminous (oil-bearing) rocks. Heat in the earth's interior "cooked" the rocks, releasing liquid oil that collected in vast underground deposits.

Earthquakes opened deep cracks in the seafloor. Shaken by tremors and pulled by ocean tides, the oil seeped out of the cracks and floated up through the water like the gooey blobs in a lava lamp. Scientists think Santa Barbara's undersea oil seeps have been leaking this way for more than 20,000 years.

USEFUL TO PEOPLE

European explorers reported the seeps as early as 1775. In 1793, George Vancouver, an early European explorer to California, noted in his journal that the sea off Goleta, near what is today Santa Barbara, was "covered with a thick, slimy substance, which, when separated or disturbed by any little agitation, became very luminous...."

The oil seeps astonished the Europeans, who had never seen anything like them. But to the native Indians living in the area, they were as familiar as the sea itself. For generations, the Chumash, Yokuts, and other Indian tribes had used asphaltum (a natural tar that oozes from oil seeps) to help start fires and waterproof roofs, baskets, and canoes.

New technology boosts deep-water oil drilling

By KEVIN G. HALL
McCLATCHY NEWSPAPERS

WASHINGTON — If someone had suggested a decade ago that oil could be pumped from beneath 29,000 feet of water in the Gulf of Mexico, the notion would've been dismissed as a tale rivaling Jules Verne's "Twenty Thousand Leagues Under the Sea."

So when Chevron Corp. and its partners announced last week that they'd pumped oil from 5.3 miles below the gulf's surface, it spoke volumes about the pace of technological advance.

Giant new drill ships and sophisticated computer technology made Tuesday's announcement possible.

Drill ships more than seven football fields long have drilling platforms and derricks in their centers. They rely on electric motors beneath their hulls to maintain their positions over the drill sites or wells. That's no easy task given that the ships work as far as 200 miles offshore in heavy seas.

Their electric motors work in tandem with onboard computer systems that keep the vessels above the drill sites or wells by using satellite positioning technology and sensors on drilling templates.

The drilling itself is done with heavy, massive diamond bits, not unlike the knobby diamond bits that weekend handymen use to drill through stone or concrete. Giant pumps circulate the drilling mud as layers of drill pipe are forced down via top drives that rotate the drill pipes as heavy additional pipe is added.

Visualize the process as giant drinking straws being connected one to another in a long chain. Those that

stretch down almost 6 miles apply more than a million pounds of pressure.

The next generation of gargantuan ultra-deep-water drill ships — Chevron ordered two this year for deployment in 2010 — will be able to drill below 12,000 feet of water to a depth of about 7.6 miles from the ocean's surface to the bottom of the well.

Complementing the new ships and rigs are advances in computer modeling and seismic imaging that allow geologists to estimate accurately what lies miles below the ocean floor.

In the 1950s, deep-water drilling was defined as about 100 feet of water. Today, ultra-deep water is defined as 5,000 feet or more.

When oil companies began to explore the deep waters of the Gulf of Mexico, they dragged a single long cable measuring almost 3,300 feet to shoot sound waves along the ocean floor. The acoustic data received were crunched in computers to create a two-dimensional seismic image, sort of a vertical slice of what lay beneath.

Today, tow vessels can drag up to nine cables, each stretching as much as 33,000 feet. Computers with better processing capabilities generate three-dimensional — or cubed — images for geologists and engineers to examine in "visualization" laboratories.

What had long stymied ultra-deep exploration were thick layers of salt below the ocean floor that distorted the sound waves geologists use to gauge density. That made it difficult to assess the rock formations below the salt layers to determine whether they held trapped hydrocarbons.

Generally, oil flows up from

porous rock such as sandstone and pools into reservoirs that are trapped under nonporous rock. Visually, it's like water trapped under an upside-down cereal bowl. These reservoirs are what energy companies are looking for with seismic imaging and what they target when drilling.

More powerful computers and software advances helped overcome salt layer-imaging problems, allowing for remarkably accurate computer modeling. Oil companies are high-tech gamblers. Exploratory drilling in ultra-deep water can cost as much as \$120 million per well.

Thanks to the imaging advances, Devon Energy, which holds many exploration leases in the Gulf of Mexico, boasts four strikes in six drills, a success rate of 66 percent. Company officials said that was remarkable given that the usual success ratio averaged closer to 10 percent.

"As you look to the future, those advances will continue, so we'll be able to look deeper — both in the water and under the earth — and we'll be able to get better images and use that information to place our wells," said Steve Hadden, the senior vice president of exploration and production for Devon Energy.

To date, oil companies have drilled at a water-depth record of 10,011 feet and a total depth record of 34,189 feet. Making this possible are larger and larger drill ships, able to withstand more weight. Fifth-generation vessels being built in South Korea for Houston-based Transocean Inc., the world's largest offshore driller, will have a deck-load capacity of 22,000 short tons, allowing more weight to push drill bits deeper below the ocean floor.

Santa Barbara Newspress 9-10-06

Offshore drilling on the table as gas prices rise

By **LISA FRIEDMAN**
LOS ANGELES DAILY NEWS

WASHINGTON — As gas hovers at \$3.30 a gallon, there is growing fear that a plan to open areas off the Gulf of Mexico to oil drilling will erode protections for California's shores.

The U.S. Senate could vote as early as next week on a bill to open an 8 million-acre segment of the eastern Gulf of Mexico to oil production while barring drilling within 125 miles of the Florida coastline.

If it passes, negotiations are likely to begin over merging it with a separate House bill that would end a 25-year-old moratorium on drilling in the Outer Continental Shelf. The House measure passed with support from coastal Republicans such as Rep. Elton Gallegly, although opposition to offshore drilling runs deep in California.

Coastal states like California could continue to ban offshore drilling but would have to vote to do so every five years.

While California Gov. Arnold Schwarzenegger opposes moves that could open the door to drilling off the state's coast, environmental advocates and others said it is a distinct future possibility.

"I don't foresee California any time in the near future opting out of any ban, but long-term I think it's very possible," said Bryan Brendle, director of energy and resources policy for the National Association of Manufacturers.

"I don't foresee any long-term decline in demand for natural gas. Electricity and energy prices will continue to go up. The price of manufactured goods will go up. And

we're in a period where there has not been in quite some time any environmental disaster related to offshore development," Mr. Brendle said.



Gallegly



Panetta

agreed that even eco-friendly California could some day bend to the pressure accompanying skyrocketing gas prices.

Added Annie Strickler, spokeswoman for the Sierra Club, "This is a free ticket for oil and gas lobbyists to flood state capitols even more than they already have."

The House measure, driven by Resources Committee Chairman Rep. Richard Pombo, R-Stockton, would give individual states the right to allow drilling in federal waters extending three to 100 miles off the

coast. It would permanently open federal waters between 100 and 200 miles from shore.

At the same time, some of the royalties from new oil extraction would go to state coffers. Currently, all royalties go to Washington.

The bill passed 232 to 187. Among Southern Californians, the vote came down strictly along party lines with even coastal Republicans such as Rep. Dana Rohrabacher, Huntington Beach/Long Beach, and Mr. Gallegly, Thousand Oaks, voting in favor.

Mr. Rohrabacher said opposition was "the phoniest environmentalism of all. In reality what we've got are some people who want to have a beautiful view of the ocean from their yacht, and they're willing to let the needs of the country go to hell," Mr. Rohrabacher said.

Mr. Gallegly issued a statement emphasizing state's rights, saying, "I have long been an advocate of giving states a say in the resources off their shores. This bill does exactly that. States that do not want oil and gas exploration off their shores are protected."

Both lawmakers argued that the skyrocketing costs of gasoline underscore a dire need for U.S. oil production.

Mr. Panetta said he believes it would be between 15 to 20 years before consumers would see any price reduction from offshore U.S. drilling. "The reality is that we're, in effect, helpless to do anything about the price of oil right now because of what's happening in the world, and the fact that Congress has not taken steps to reduce our dependence on oil," he said.

If Sweden can do it, can't Santa Barbara?

Sweden surprised the world last year by announcing its intention to get off oil by 2020. We'd like to think the Swedes got the idea here in Santa Barbara; the Community Environmental Council has been calling for "fossil free by 2033" for a couple of years, and the city of Santa Barbara is performing a greenhouse gas inventory and is on its way to adopting similarly ambitious goals for its energy use.

Alas, we can't really take credit for Sweden's aspirations; great ideas often come at about the same time to different people. It's not hard in this case to discern what prompted our concerns about fossil fuels around the same time policymakers in Sweden became concerned enough to set hugely ambitious national goals.

Here are the highlights:

Climate change concerns are growing ever more urgent as more and more evidence comes to light indicating that our climate may be changing even faster than previously predicted.

"Peak oil," the point at which global oil production reaches its maximum, may have already arrived, and if it's not already here, it's not far off.

A recent report from the U.S. Army Corps of Engineers states: "We are at



Tam Hunt



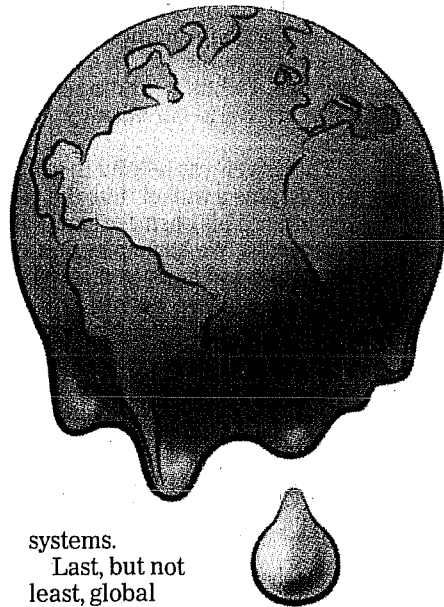
Roger Horton

Tam Hunt is Energy Program director at the Community Environmental Council and runs the "Fossil Free By 2033" campaign.

Roger Horton is a Santa Barbara City Council member and chairs the county's Economic Vitality Committee's Energy Sub-Committee.

or near a peak in global oil production." There is growing evidence that the large increase in oil prices (and gas prices) may be related to "peak oil" concerns as demand outpaces supply.

Air pollution continues to dog our cities, and the major culprit is the burning of fossil fuels like oil and gas. California recently re-gained the title for most polluted state (Texas took it from us for a few years), so with California's population continuing to grow, air pollution concerns will only get worse unless we seriously change our fuel mix and transportation



systems.

Last, but not least, global geopolitics has always been at least in part motivated by energy concerns. Today, the great game is being overtly played over oil and other energy supplies. Petro-diplomacy is the name of the game now as the United States, India, Japan, China and Europe compete for the remaining resources. Think of it as chess with offshore oil rigs as rooks and liquid natural gas (LNG) tankers as pawns.

Sweden, a country of just 9 million and a land mass slightly larger than California, currently generates 34 percent of its total energy demand (including electricity, natural gas and transportation fuels) from renewables — primarily biomass, hydropower and wind power. Of the country's

Please see **OIL** on **G4**

Santa Barbara Newspress
May 23, 2006

Local natural resources offer great opportunities

with amazing natural resources here in our county: solar, wind, biomass, geothermal, ocean power, biofuels and great opportunities to increase the efficiency with which we use energy.

With oil and natural gas prices skyrocketing, it is now even clearer that renewable energy isn't "just" an environmental concern anymore; it's a matter of economics. Wind power is already cheaper than fossil fuel energy in some places around the country. Ethanol and biodiesel can be cheaper than gasoline. And energy efficiency projects are generally the lowest cost "source" of new energy.

The county's Economic Vitality Committee and its Energy Sub-Committee are working to frame regional energy issues in economic terms. We have indeed reached the point that we can pursue renewable energy and energy efficiency based purely on economic motivations.

As prices for fossil fuels and nuclear power continue their upward march, renewables will only become more and more economically favorable. Yes, we can have our cake and eat it too by doing good for the environment while also doing well for our regional economy.

OIL
continued from Page G1

rising energy demand, about 40 percent comes from oil, 14 percent in nuclear power, and the rest in various sources, including natural gas.

Large, new development in the county of Malmo, in southern Sweden, is already fossil-free. The "Bo01" area of Malmo obtains all its energy from locally available renewable energy sources such as wind, biomass, solar and geothermal power.

Sweden plans to grow its biofuels, mass and wind industries to meet its goal of eliminating its reliance on oil. Because of the far northern location, solar power will probably not be a large part of the energy mix.

Will Sweden reach its goal? It takes a long time for major changes in national energy policies, but Sweden could certainly get off oil by 20 if its current popular and political will continues, especially if prices continue their upward march.

Here in Santa Barbara, we've taken ourselves 27 years to get off fossil fuels, but it could be done much sooner if we all get behind this goal. We are indeed blessed

Impeach impeters of all oil drilling

I could not believe my eyes, reading Friday's issue of the News-Press, regarding the Democrats' attempt to gain political points with the gasoline issue.

The Democrats were blaming the Republicans for the high gas cost. Anyone in their right mind, knows the Democrats have blocked every attempt in the last five years, for further oil exploration in Alaska and off the California coast.

I say we "impeach" any Democrat who delays or blocks further exploration for oil anywhere on the globe.

You could make a good start by impeaching Sen. Charles Schumer, D.-N.Y., first, followed by Sen. Hillary Clinton, Rep. Lois Capps and Sen. Barbara Boxer of California.

Dave Tennant
Lompoc

Price hikes ratchet up pressure

■ DRILLING

Continued from Page B1

natural-gas drilling off its coast. And lawmakers from Virginia, South Carolina and Georgia are among those willing to vote for some type of offshore drilling.

"This has always been a bipartisan, bicoastal, multistate effort to maintain the moratorium," said Richard Charter of the National Outer Continental Shelf Coalition, who has followed the issue for nearly 30 years. "They are chipping away at it, state by state. It's a divide-and-conquer strategy."

Mr. Charter attributes the change to a clever campaign by the energy industry that has ginned up some support for drilling at the state level in South Carolina and Georgia, as well as Virginia.

But drilling advocates say they are picking up steam because recent hurricanes and high prices have reminded the country of the importance of domestic sources of energy. Last week, the Energy Information Administration, for instance, said residential-heating costs will jump as much as 60 percent this winter.

Peggy Laramie, spokeswoman for the American Gas Association, said those price increases are ratcheting up the pressure in Congress to allow drilling.

Rep. Henry E. Brown Jr., R-S.C., who represents Myrtle Beach, is convinced that drilling makes sense.

"If it's OK for Alabama, Louisiana and Texas, it should be OK for other states," he said. "Everyone should be treated the same. We are in an energy crisis, and we should do everything we can to become more energy-independent — including offshore drilling."

Politicians from Gulf drilling states such as Texas and Louisiana have long supported exploration, but the growing support among coastal senators has environmentalists worried.

"If Florida gets a deal, then all the other states get the shaft."

Richard Charter,

of the National Outer Continental Shelf Coalition

"Drilling for natural gas is both environmentally sound and critically needed," said Sen. Johnny Isakson, R-Ga.

"The will is out there like I've never seen before," said Virginia state Sen. Frank Wagner, a Republican, who said his commonwealth could earn \$3.5 billion in royalties. His bill urging gas drilling was vetoed by the governor on a technicality earlier this year. But Mr. Wagner said he has picked up more support for trying again next year.

Both of Virginia's U.S. senators also have supported drilling. David Sneypp, spokesman for Sen. George Allen, R-Va., said legislation that gives authority to states to allow drilling off their shores is appropriate. Sen. John Warner, R-Va., has introduced his own bill to let states allow drilling and reap royalties from it. The outer continental shelf is in federal waters, so current law gives royalties only to the U.S. government.

The drilling controversy has produced plenty of drama in Washington, too: a filibuster threat by Florida senators; 3 a.m. negotiations between House members and Florida Gov. Jeb Bush; and impassioned debate pitting potential environmental destruction against strapped homeowners facing rising heating prices.

The debate will pick up again this week when Congress returns. The Senate starts work on a large budget bill that some drilling advocates want to use to open up offshore drilling. Sen. Pete Domenici, R-N.M., chairman of

the Senate Energy Committee, will not back adding the drilling provision to the budget bill, according to his staff.

Twenty senators, including Florida Democrat Bill Nelson and Republican Mel Martinez, sent a letter to Mr. Domenici urging he leave the hot issue off the budget bill. Both Florida senators oppose the expansion of drilling in the Gulf.

But Mr. Domenici could pursue the idea as part of other legislation. And leading House proponents of drilling are considering pushing the idea on the House version of the budget bill later this month or on other legislation.

Rep. John Peterson, R-Pa., said natural gas fuels not just home heating but the entire country's economy.

"This is about the future of the economy of the United States," said Mr. Peterson, who thinks the coastal coalition is wavering and is optimistic the moratorium will fall.

Mr. Peterson's legislation would allow drilling for natural gas but not oil and would allow it to happen nearly immediately.

The other major House proposal, by California Rep. Richard Pombo, R-Tracey, would allow oil and gas drilling but give states the right to ban it within 125 miles. Mr. Pombo would entice states to allow drilling by giving them a portion of the royalties.

Mr. Pombo has been negotiating with Jeb Bush and a team of Florida House members. They tried making a deal earlier this year on a major energy bill but couldn't work out the details in a 3 a.m. call as the vote loomed. Now, according to those involved, they are close to the deal.

Environmentalists say Florida is the linchpin in keeping the moratorium intact for the rest of the Atlantic and Pacific states. The state has 25 seats in Congress — the fourth-largest delegation.

"If Florida gets a deal, then all the other states get the shaft," Mr. Charter said.

Santa Barbara Newspress 10-17-05 Coastal states at odds over offshore drilling

By TAMARA LYTTLE
THE ORLANDO SENTINEL

WASHINGTON, D.C. — After decades of solidarity, the coalition of coastal states that has blocked most new offshore oil and gas drilling on the nation's seaboard is beginning to fracture.

Florida — with its large and powerful congressional delegation — is the most high-profile potential defector. Republican House members are negotiating a deal that would allow oil and gas rigs in exchange for buffers that keep the drilling 125 miles from

state waters.

Those Florida lawmakers are not alone in breaking ranks from the coastal bloc that has been strong enough to prevent most new drilling leases for more than 20 years in the eastern Gulf of Mexico, as well as the continental Atlantic and Pacific coasts. They've done it through a congressional moratorium on drilling and by supporting similar presidential bans.

Virginia's state Legislature this year passed a measure endorsing

Please see **DRILLING ON B12**

Domestic oil drilling could solve our problems

In a rather startling statement on her congressional Web site, Congresswoman Lois Capps writes that, "more drilling will do nothing to lower gas prices or make us more energy independent, but it will jeopardize California's economy and environment."

Just the opposite is true. In fact, the only two ways to lower the price of gas are to increase supply and/or decrease demand. Decreasing demand requires either rationing by the government or waiting for the price to get so high that buyers change their behavior and buy less. Increasing supply requires drilling more wells, pumping it out of the ground faster, and then refining it.

Greg Johnson

The author lives in Goleta.

Mrs. Capps would have us believe that the government has already issued enough oil leases (about 70 million acres) on federal land to sustain our needs but she says the oil companies are "sitting" on this land and not drilling. Think about that statement. Our congresswoman, who believes that the oil companies are making "excess profits," is telling us that the oil companies are intentionally sitting on the oil they sell to make their "excess profits." So, are they making their "excess profits" by drilling for oil or by not drilling for oil? How does an oil company

Please see **JOHNSON** on G4

Liberalism in the way of domestic drilling

JOHNSON

Continued from Page G1

make money by not drilling for oil?

It doesn't. One of the issues Mrs. Capps wants to avoid is the fact that there has not been a new refinery built in this country for over 30 years. Though many refineries have been expanded during that time, it has not been sufficient to meet our needs. When the refineries are working at 100 percent capacity, delivering more crude to them makes no sense, and we have far more pumping capacity than refining capacity. We all know that when the refineries are forced to switch over to summer or winter formulas or when a refinery is down for maintenance or repair, the price of gas at the pump spikes. This is because we are at 100 percent capacity and cannot increase refining at one facility to replace a refinery that goes offline, thus creating short-term shortages.

Another issue she ignores is the fact that oil companies are the favorite targets of environmental litigation. We all know the trials suffered by the oil companies in trying to open up Alaska's Prudhoe Bay field, and right here in Santa Barbara every step taken by the oil companies is watched, scrutinized and stopped by some group concerned about a salamander or fruit fly.

In fact, oil companies here can't even shut down an oil platform without getting sued. Oil companies, like any business, are geared toward making a profit and they cannot make money by paying lawyers while their men and equipment sit idle. As a constituent, I find it rather insulting that our congresswoman is always in league with the environmentalists who want to stop oil exploration while at the same time she criticizes the oil companies for not drilling in their existing leases.

In this election year we have two choices for energy policy. The Republicans who want to drill, build refineries and do research and development, and the Democrats who want to punish the oil companies for making a profit and allow the price of gas to continue to rise while they wait for the R & D of their pet alternative energy sources.

But just because the Democrats say that other fuels are preferable does not mean that we can stop producing gasoline and heating oil right now.

Mrs. Capps wrote that, "Senator McCain has missed an opportunity to push for real solutions to our energy needs, such as enhanced efficiency and alternative fuel sources."

But, Mrs. Capps, alternative fuel sources are not a real solution today,

tomorrow or next year, and we cannot put our lives on hold while we wait for whatever it is you think we're waiting for. And we who live on less than a six-figure income cannot afford gas at \$5 per gallon without greatly diminishing our quality of life.

For now, our lives, and the world economy, run on oil and the United States has tremendous amounts of it right under our feet. Even here in Santa Barbara County there has been a discovery of more than 100 million barrels just off-shore from Vandenberg Air Force Base. The Arctic National Wildlife Reserve (ANWR) has enough oil to supply this country for decades and is dwarfed by the known reserves at Gull Island, where drilling also is prohibited. The Bakken Field in North Dakota is larger still and recent explorations in the Gulf of Mexico reveal the possibility of oil and natural gas reserves in staggering quantities.

So why not utilize our own oil resources while we develop technologies for the future? Why not start building new refineries now while we start sinking new wells in these newly discovered oil fields?

Democrats love to tell us that we should not develop these resources because it will be 15 years before that oil does us any good, so we should concentrate on new technologies that may be ready in that same 15 years.

We could be using oil from ANWR, Gull Island, North Dakota and the Gulf of Mexico in just a couple of years if the liberals will get out of the way, allow the construction of new refineries, and unleash the power of capitalism. And for those liberals who would tell us that bringing oil into production a year or two down the road will do us no good now, try letting the world know that we're going to start pumping from our known reserves and watch the price of crude oil fall.

Many experts believe that we have more oil under our own soil than the known reserves in Saudi Arabia. By wisely utilizing our own oil, coal and natural gas, we can lower the price of gas, create jobs for Americans, be less dependent on foreign oil and all of its entanglements, and provide revenue to the government.

I challenge Mrs. Capps to break from the social-environmental mantra of her party and do what is right for her constituents by getting the government out of the way of the oil business and embracing capitalism and free enterprise by allowing the oil companies to explore, drill, and refine the domestic oil we need to prosper.

Heartland has a big stake in offshore drilling plan

Senate vote likely today on Gulf expansion

By H. JOSEF HEBERT
ASSOCIATED PRESS

WASHINGTON — Strangers from the heartland, two businessmen share the hope that the energy resting beneath the deep blue waters of the central Gulf of Mexico might bring relief from high natural gas prices.

So, they wonder, why isn't it being pumped?

The Senate was expected to vote today on whether to expand oil and gas drilling to 8.3 million acres of Gulf waters off-limits to energy development for a quarter-century. The House has passed a

broader bill dealing with offshore drilling.

Watching the developments closely are Tony Raimondo, owner of a metal fabricating company in Columbus, Neb., and Jay Bender, who runs a plastics plant in Brookings, S.D.

While they do not know each other, they have a common problem. Natural gas prices have soared and their companies are feeling the pain. These men believe the answer is more production, including in the restricted coastal waters.

"We're the only industrialized country that is not actively pursuing more natural gas resources. It makes no sense to me,"

Mr. Bender said in a telephone interview.

Mr. Bender, Mr. Raimondo and hundreds of business owners, in letters to members of Congress, have urged an end to the freeze that has barred oil and gas drilling off 85 percent of the country's coast. Lobbying powerhouses, such as the Washington-based National Association of Manufacturers, U.S. Chamber of Commerce and National Chemistry Council, have led the drive.

For the first time in a decade, Mr. Bender says, he has been forced to raise the price of the plastic components his plant molds into parts for such things as electronic scoreboards, medical equipment and printer cartridges. The cost of

Please see GULF on B3

Companies feel pain of soaring natural gas prices

GULF

Continued from Page B1

the raw plastic pellets has doubled in the past two years because those pellets are made of natural gas and oil.

Heating the warehouses by gas, Mr. Bender says, "costs two or three times what it did three years ago."

At his four metal fabricating plants, Mr. Raimondo's annual cost for natural gas has gone from \$530,000 in 2000 to nearly \$1.3 million — an expense that is hurting his business.

Costing about \$2 per thousand cubic feet only a few years ago, natural gas soared to as high as \$15 late last year. This spring and summer it retreated to below \$6, but has risen in the past month because of greater demand for air conditioning brought on by the intense heat across the United States.

The natural gas bill for chemical companies has jumped from \$7.5 billion in 1999 to \$30 billion last year, and some companies are expanding overseas where gas is cheaper, says Jack Gerard, president of the American Chemistry Council, the industry trade group.

Other energy-intensive business sectors including forest and paper, pesticide, aluminum and makers of carpets, bedding and furniture are being hit hard, he says.

The U.S. uses about 22 trillion cubic feet a year for everything from making plastics and fertilizer to producing electricity and heating homes. Supplies have struggled to keep up with demand.

Large amounts of gas are beneath offshore waters. But for 25 years lawmakers have feared tampering with the freeze on oil and gas drilling that Congress has put in place every year, covering 85 percent of the country's coastal waters — almost everywhere outside the western Gulf of Mexico.

That soon may change.

Senators planned to vote on whether to expand oil and gas development in the east-central Gulf, opening up 8.3 million acres for drilling.

Last month, the House approved

an even broader measure that would lift the quarter-century drilling freeze in Pacific and Atlantic coastal waters, although states could prohibit drilling if they choose to do so.

"In a nutshell, this bill is good for the people who are burdened with high cost of natural gas, the high cost of oil. It is their property. We ought to develop it and do it now," says Sen. Pete Domenici, R-N.M., the Senate bill's main sponsor.

Many environmentalists — as well as senators from coastal states such as New Jersey, California and Florida — fear the drilling will increase the risk of oil spills, and threaten fragile ecosystems and tourism.

David Alberswerth of the Wilderness Society says the question people "should be asking is why is the oil and gas industry sitting on large amounts of unproduced federal natural gas that they have leased already."

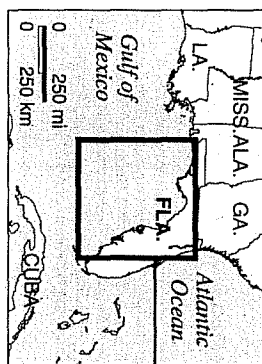
The Senate bill is limited to an area of the central Gulf that is 125 to 300 miles off Florida's coast. The plan has gained momentum with bipartisan support.

Largely at the insistence of Sen. Mary Landrieu, D-La., it would increase sharply the amount of federal royalties given to the four Gulf states — Alabama, Mississippi, Louisiana and Texas — that have drilling rigs off their shores.

Democrats, who once had threatened a filibuster fight over the bill, have backed off, wanting to give Ms. Landrieu a political victory that could prove important in her reelection bid in 2008 when Democrats hope to regain their majority in the Senate.

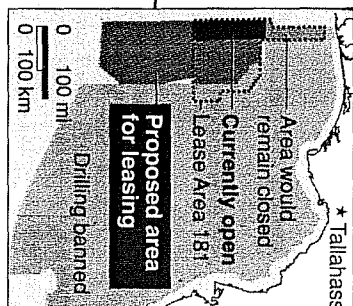
But many senators from coastal states worry about the push to open broader areas of the Outer Continental Shelf to energy development and pledge to block the broader House bill.

Senate Majority Leader Bill Frist, R-Tenn., said the Senate version was "a carefully crafted compromise" not to be tampered with. Sen. Harry Reid of Nevada, the Democratic leader, warned that if the House insists on broadening the measure, he will produce the votes needed to kill it.



Proposed area for Gulf offshore drilling

A Senate bill could allow the Department of the Interior to offer and gas drilling leases in an 8.3 million-acre protected area in the Gulf of Mexico. Currently, only a portion of Lease Area 181 is available for drilling.



SOURCES: ESRI; U.S. Department of the Interior

ASSOCIATED

In California, Support Grows for Offshore Drilling

Just 51% Favor Ban, As High Prices Lead To Some Rethinking

By **STU WOO**
AND **SIOBHAN HUGHES**

With gas prices rising, California residents are softening their long-held opposition to offshore drilling, a new opinion poll suggests.

The shift comes as Congress and the Bush administration are escalating a battle over whether to end a two-decade federal ban on drilling off the coasts of California, Florida and the Eastern seaboard.

A new Field Poll survey to be released Thursday shows that 49% of Californians support the idea of drilling for oil or natural gas along the state's coast, compared with 51% who oppose it. In the last Field Poll survey on the topic, in 2005, 39% supported such drilling, compared with 56% in opposition. The majority of Californians have opposed the drilling in the poll since 1984.

The Bush administration and Democratic leaders in Congress have been trading jabs in the most intense election-year battle over energy policy in nearly 30 years. Democratic congressional leaders plan to push for votes Thursday on plans to promote more domestic oil and natural-gas drilling, and to crack down on oil-market speculation.

Their moves were upstaged



Memories of a 1969 oil spill off the Santa Barbara, Calif., coast appear to be fading as gas prices rise.

Wednesday by the Bush administration, which announced a long-planned action to move forward with big oil-lease sales in Alaska. The leases could result in the development of as much as 8.4 billion barrels of oil and trillions of cubic feet of natural gas for shipment to North American markets, the government predicted.

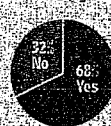
Mr. Bush earlier this week lifted a presidential ban on drilling in off-limits areas along the coast. Democratic congressional leaders, including House Speaker Nancy Pelosi of California, have vowed to maintain the ban, while pushing other measures aimed at easing high oil prices.

But Democratic leaders are facing trouble in their effort to sustain the offshore ban. A bipartisan group of House members is trying to rally support for an end

Softening Shorelines

Rising gasoline prices have made Californians less resistant to increased offshore drilling, Californians who...

Say recent increases in gas prices have caused them to spend less in other areas



Source: Field Research International, polls of registered voters; 2008 poll conducted July 8-14; margin of error: +/- 3.5 percentage points.

Favors allowing oil companies to drill along the California coast



to the ban, which has blocked access to potential oil fields off California, Florida and other states. In the Senate, Republicans are threatening to block a Democratic-backed measure to rein in oil-market trading if the bill doesn't relax the offshore-drilling ban.

The shift in sentiment on drill-

ing in California could help Republicans in the Washington debate, though they still can't say that a majority of Californians support more oil rigs off the coast. Much of the opposition stems from media images of a 1969 oil spill off Santa Barbara. "That memory was embedded

in the minds of local officials, state legislators and members of Congress," said Richard Charter, consultant to the Defenders of Wildlife, which is lobbying against lifting Congress's moratorium.

Other businesses and politicians worry about the potential impact that drilling would have on coastal tourism and ocean-dependent businesses.

Of California's 27 offshore platforms, 20 are in the Santa Barbara channel and environs.

Ms. Pelosi, as well as the state's two Democratic U.S. senators and Gov. Arnold Schwarzenegger, have blasted Mr. Bush for lifting the moratorium. Even if Congress lifts the federal moratorium, California can prevent new drilling in federal waters, said Brian Baird, the assistant secretary for ocean coastal policy for the state's resources agency.

If the Department of Interior opens federal waters to drilling from oil companies, the California Coastal Commission can exercise its "federal-consistency" authority and prohibit specific plans to drill. But oil companies could appeal to the secretary of commerce, who could override the coastal commission's decision, Mr. Baird said. That appears unlikely, because the Bush administration has said it supports states' right to decide on drilling.

At a Shell gas station in San Francisco charging \$4.89 for a gallon of regular unleaded gas—ons of the highest prices in the city—Carlos Vasquez said he had

previously opposed offshore drilling because of environmental concerns. But the 41-year-old said the recent rise in gas prices changed his mind. "A [President Bush] can do to alleviate the perceived or in supply of oil—even if it little while to take effect that's the right move Vasquez said. "It's a risk to take...at this point."

Resistance to offshore drilling is still fierce, as in Santa Barbara. "The more drilling will significantly change the cost of gas down the road, just make sense," says J. A. Powell, president of Get a local advocacy group ever, he says pressure is from "oil friendly" Republicans in the county.

A nonprofit group, Stop Oil Seeps, is mounting a public campaign to spread the message that more drilling could reduce natural gas that pollutes the air and sticky tar deposits on beaches.

One Stop Oil Seeps spokesman Bill Rogers, a 66-year-old Santa Barbara attorney who was in Get Oil Out many years ago. "The environmental activists are still stuck in the spill. There are many changes they choose to ignore they are basically hostile to us and the oil industry,"

—Rhonda L. and Ian contributed to this

UNIVERSITY OF CALIFORNIA, SANTA BARBARA

November 18, 1999

OIL AND GAS SEEPAGE FROM OCEAN FLOOR REDUCED BY OIL PRODUCTION

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Santa Barbara, Calif. Next time you step on a glob of tar on a beach in Santa Barbara County, you can thank the oil companies that it isn't a bigger glob.

The same is true around the world, on other beaches where off-shore oil drilling occurs, say scientists, although Santa Barbara's oil seeps are thought to be among the leakiest.

Natural seepage of hydrocarbons from the ocean floor in the northern Santa Barbara Channel has been significantly reduced by oil production, according to two recently published peer-reviewed articles, one in November's *Geology Magazine*, the other in the *Journal of Geophysical Research - Oceans*.

The Santa Barbara Channel provides an excellent natural laboratory, as it is among the areas with the highest levels of seepage in the world, said co-author Bruce P. Luyendyk, professor and chair of the Department of Geological Sciences at the University of California, Santa Barbara.

The studies were not funded by oil companies, but rather by the University of California Energy Institute and the U.S. Minerals Management Service, states Luyendyk, responding to the fact that the results favor off-shore oil production and are opposed by some environmentalists.

"We've done a good piece of science," said Luyendyk. "We've developed a good understanding of a natural process. It's all public data; it's all straightforward. If I thought the study was compromised I wouldn't be involved in it."

Most of the seepage is methane, a potent greenhouse gas which escapes into the atmosphere, said Luyendyk. About 10 percent of the seepage is composed of "higher hydrocarbons," or reactive organic gases which interact with tailpipe emissions and sunlight, creating air pollution.

The researchers state that the production rate of these naturally-occurring reactive organic gases is equal to twice the emission rate from all the on-road vehicle traffic in Santa Barbara

County in 1990.

According to the articles, studies of the area around Platform Holly showed a 50 percent decrease in natural seepage over 22 years. The researchers show that as the oil was pumped out the reservoir, pressure that drives the seepage dropped.

"If the decrease in natural seepage found near Platform Holly is representative of the effect of oil production on seepage worldwide, then this has the potential to significantly alter global oil and gas seepage in the future," state the researchers in the article "The World's Most Spectacular Marine Hydrocarbon Seeps: Quantification of Emissions " in the Sept. 14 issue of the Journal of Geological Research - Oceans.

They continue, "For example if the 50 percent reduction in natural seepage rate that occurred around Platform Holly also occurred due to future oil production from the oil field beneath the La Goleta seep, this would result in a reduction in nonmethane hydrocarbon emission rates equivalent to removing half of the on-road vehicle traffic from Santa Barbara County. In addition, a 50 percent reduction in seepage from the La Goleta seep would remove about 25 barrels of oil per day from the sea surface, which in turn would result in a 15 percent reduction in the amount of tar found on Santa Barbara beaches."

They conclude by saying that the rate of increase of global methane atmospheric concentrations has been declining for the past 20 years, and that a "worldwide decrease in natural hydrocarbon seepage related to onshore and offshore oil production may be causing a global reduction in natural methane emission rates."

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(124)

California Offshore Gas, Oil and Tar Seeps. Prepared by the Staff of the State Lands Commission. 1977.

This bibliography follows all the reports by experts on various aspects of seepage.

In some areas... as many as one hundred seeping vents occur in a square meter of sea floor.

Intense seepage frequently occurs near intersections of faults.

Of the areas of consistent high seepage...three are on major fault zones with areas of intense seepage near the intersection of major faults.

There are nine seep areas near Santa Barbara, Summerland and Carpinteria. Four of these are controlled by east-west faulting and folds.

The total volume of seepage for the Santa Barbara Channel has an estimated range of between 40 and 670 barrels per day.

Following the 1925 Santa Barbara earthquake, the Santa Barbara Channel was reportedly covered by thick patches of oil.

With respect to seismicity and seepage, it was concluded that:

A band of high seismicity coincides with the southern extent of the coastal Santa Barbara oil and tar seep province.

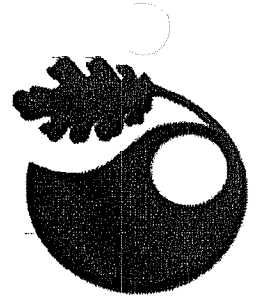
Active faults occur within several miles of the shoreline along better than 90% of the coast between Point Arguello and San Diego.

Much of the volatile fraction is removed from the surface slicks by evaporation and dissolution.

Most of the remaining oil is either deposited along the coastline or it sinks and is incorporated in the bottom sediments.

It is known that a very widespread slick covered a large area of the eastern Santa Barbara Channel during early October 1974, and fouled the eastern

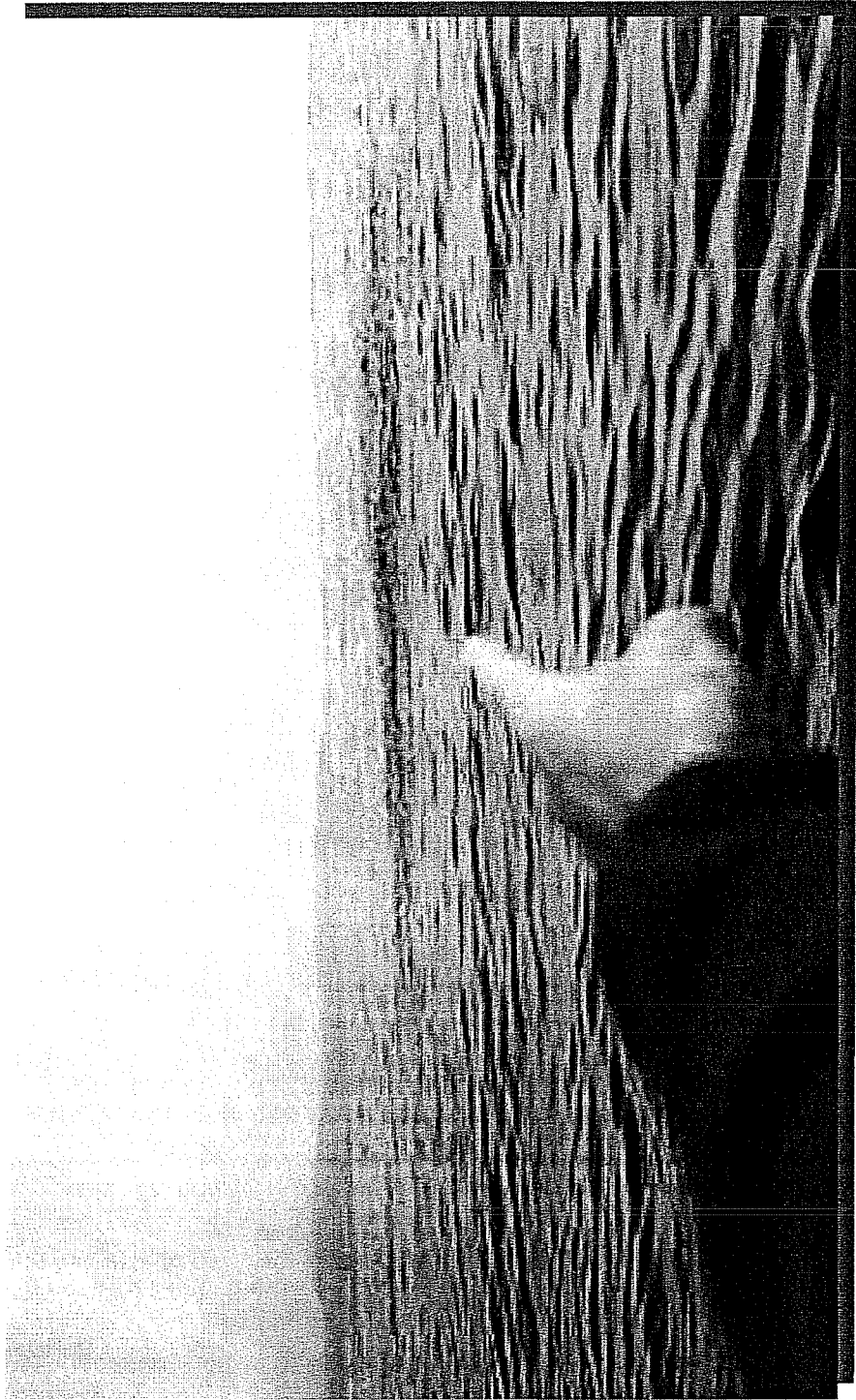
channel beaches on October 3, 4, and 5. There were also reports of widespread slicks in 1975 and 1976.



Marine Hydrocarbon Seep Capture

**Feasibility and Potential Impacts
Santa Barbara, California**

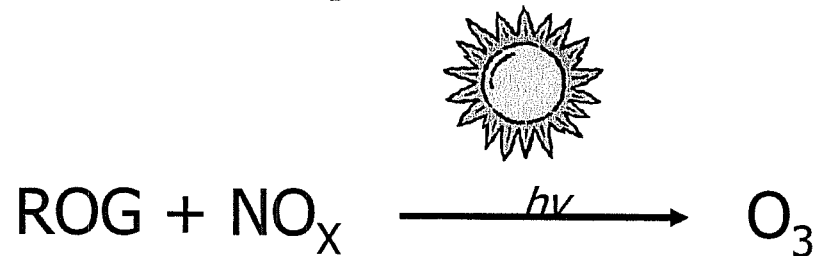
What are "Seeps?"



Seep Environment

air quality

- Primary component is methane
 - Contributes to global warming
- Seep gas contains reactive organic gases (ROGs)



- Ozone (O_3) is a serious health concern

There has been much rhetoric stating that “marine life has adjusted to the effects of oil from natural seeps”.

These photographs and statistics demonstrate otherwise.

HUNDREDS OF OILED BIRDS DIE FROM NATURAL OIL SEEPS EACH YEAR



Oiled Grebe Tries to Preen
Photo © Ingrid Taylar

Grebes and other diving birds and ducks, struggle to preen the oil off of their feathers. The feat is impossible as the oil sticks to their plumage and prevents the birds' feathers from insulating the animals properly.

Unless captured and washed, oiled birds eventually succumb to cold, hunger and weakness -- as well as toxicity from ingesting the oil as they groom.

**SOURCE: US COAST GUARD AND THE CALIFORNIA
DEPARTMENT OF FISH & GAME'S OFFICE OF SPILL
PREVENTION AND RESPONSE**

FROM A SINGLE NATURAL SEEP INCIDENT AT PT. MUGU

JANUARY 31, 2008

Number of birds collected alive: 60

Number of birds that died or were
euthanized subsequently: 21

Number of birds in-house: 39

Number of birds released: 0

Number of birds collected dead: 4

**SOURCE: CALIFORNIA
DEPARTMENT OF FISH & GAME –
OSPR DIVISION**

Local Stories by Local People

Jun 03, 2008

Young Pelican

by Betsy R. Cramer

EXCERPT:

.....There seems to have been more oiled seabirds this spring: many grebes, loons, pelagic murres, a few pelicans, but no one has a count of the numbers of seabirds, especially grebes, seen dead along Santa Barbara beaches this spring.

.....For the diving birds there certainly are serious consequences. The now hard coating from head to feet is so thick it has burned through some of the feathers on this one's back probably came from a natural seepage. There have been no reports of oil spills.....

