



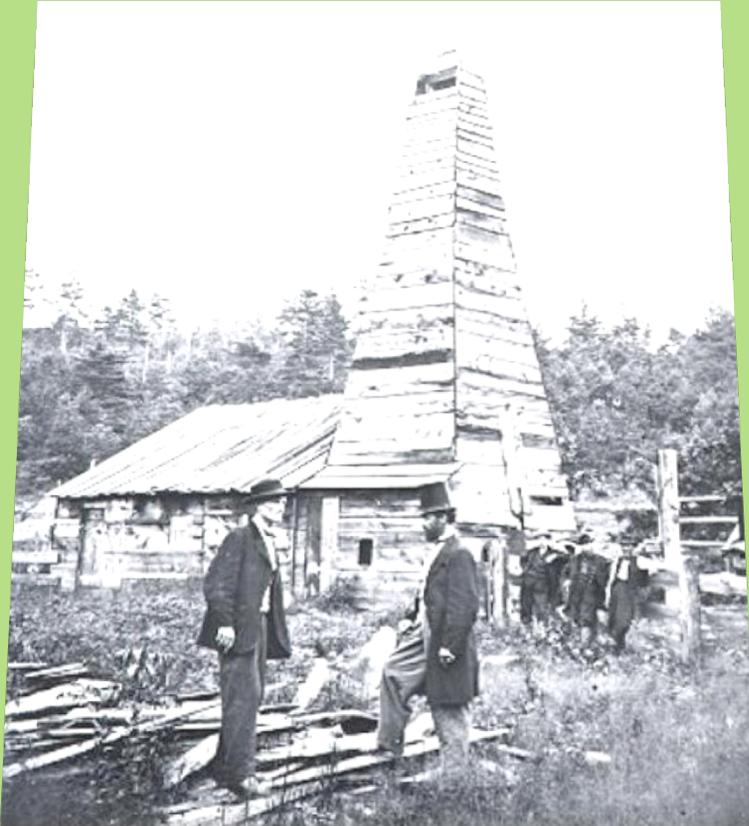
# OFF-SHORE DRILLING: IS IT WORTH THE RISK?

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# Oil Drillin Eh??

- Oil use can be traced back as far as the fourth century B.C. by the Chinese
- In the ancient world people used oil extracted from bubbling up to the Earth's surface for lighting, caulking ships (to make them watertight) and for jointing masonry
- Today oil is produced on every continent but Antarctica
- Despite increasingly sophisticated methods of locating possible deposits and improved removal techniques, oil is still obtained by drilling

# History of Off-shore Drilling



- In the 1850's oil was still being obtained by skimming the surface of ponds
- Whales pushed to the brink of extinction!
- In 1859 Edwin L. Drake, while working for the Seneca Oil Company in Titusville, PA, drilled the first modern oil well.
- Thus America's oil boom...

# GOT OIL?

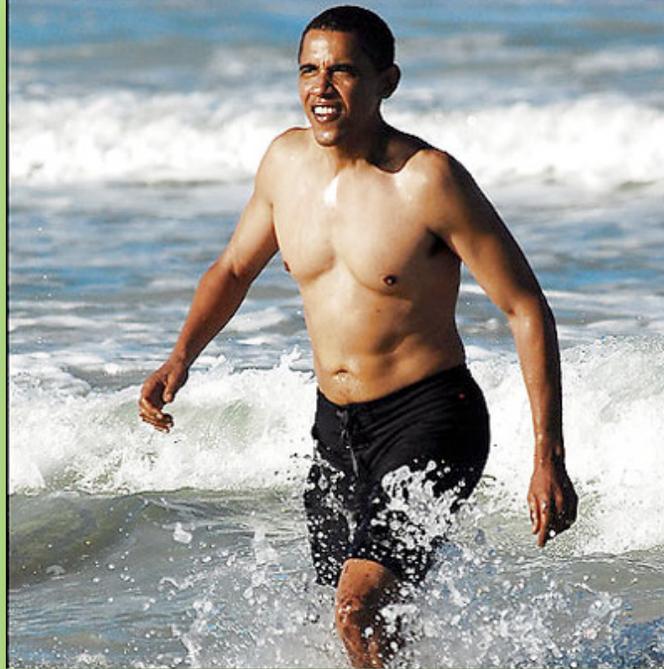


## Government Policies

August 2008, former president George W. Bush signed a consolidated appropriations bill that lifted the long-standing legislative ban on offshore oil and gas leasing put in place 19 years before by his father

Allowing the ban to expire lets oil companies drill as close as three miles off shore, putting food supply, oceans and coastal economies at risk

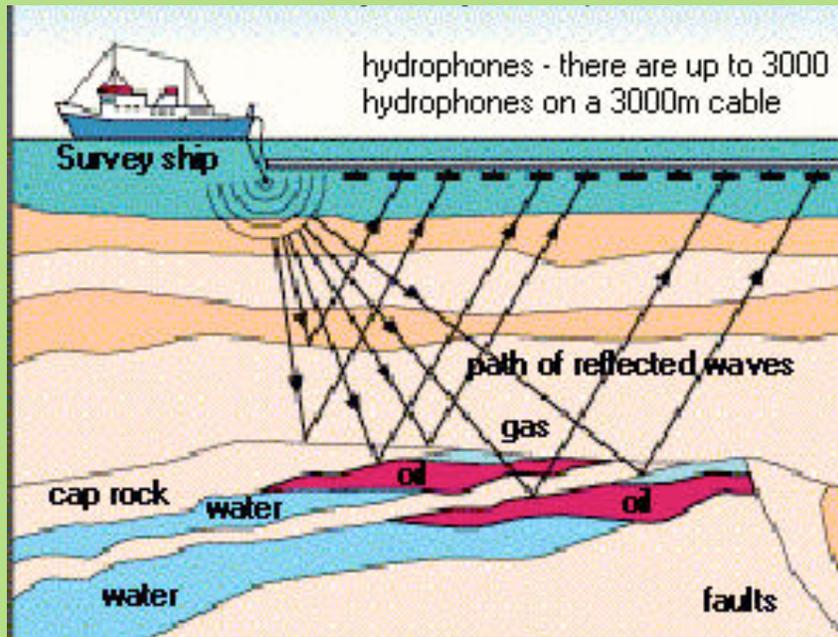
Does President Obama wants to swim in the ocean with drilling platforms?



# Negative Consequences of Off-shore drilling

- Removes natural buffers leaving coastal areas more vulnerable to erosion and hurricanes
- Pollution from everyday operations
- Possibility of oil spills from platforms, tankers, and pipelines
- Sonar used in oil exploration confuses sea mammals

# Exploration for Oil



Oil exploration uses seismic waves that are sent into the ocean floor. The waves bounce back and give a picture of the sea floor. The seismic waves can determine if there are natural formations that increase the odds of finding oil.

Seismic waves can cause serious problems and can damage marine life. Whales have been shown to become disoriented and beach themselves because of oil exploration efforts.

In 2008, approximately 100 rare melon-head whales were stranded following offshore seismic surveys by Exxon-Mobil off the coast of Madagascar.



On March 24, 1989, the oil tanker *Exxon Valdez* struck Bligh Reef in Prince William Sound, Alaska, spilling 10.8 million gallons of crude oil that covered 11,000 square miles of ocean. Thousands of animals died quickly, including as many as 500,000 seabirds, a least 1,000 sea otters, 300 harbor seals, 250 bald eagles, 22 orcas, and billions of salmon and herring eggs. Despite extensive clean-up efforts, a study conducted by NOAA in 2007 determined that at least 26,000 gallons of oil still remain in the beaches along the Alaska shoreline.<sup>7</sup>

# Erosion and weakening of buffers



Infrastructure required to drill wells and transport offshore oil can be devastating to the coast.

Canals build across Louisiana wetlands caused erosion and destruction of marshland.

The canals removed an important storm buffer, and possibly contributed to the damage caused by Hurricane Katrina.

# Oil Spills

1969 oil spill in Santa Barbara in attracted worldwide attention to the perils of oil production gone wrong

3.4 million gallons of oil were spilled, spreading across 800 square miles of ocean and spoiling 35 miles of shoreline



Technology today is much better than in 1969 and the likelihood of such a spill is greatly reduced. . But there is still a risk ..

# Why is this penguin wearing a sweater?



- Oil spills devastate local marine, animal, and plant life.
- If rescued, it is an intense process to clean oil-covered seabirds. 
- Birds need another 2 months for natural waterproofing to come back.
- During that time, birds are vulnerable and can freeze to death (unless someone makes them a cute little sweater).

# No proven methods for completely safe and effective clean up of an oil-spill disaster .

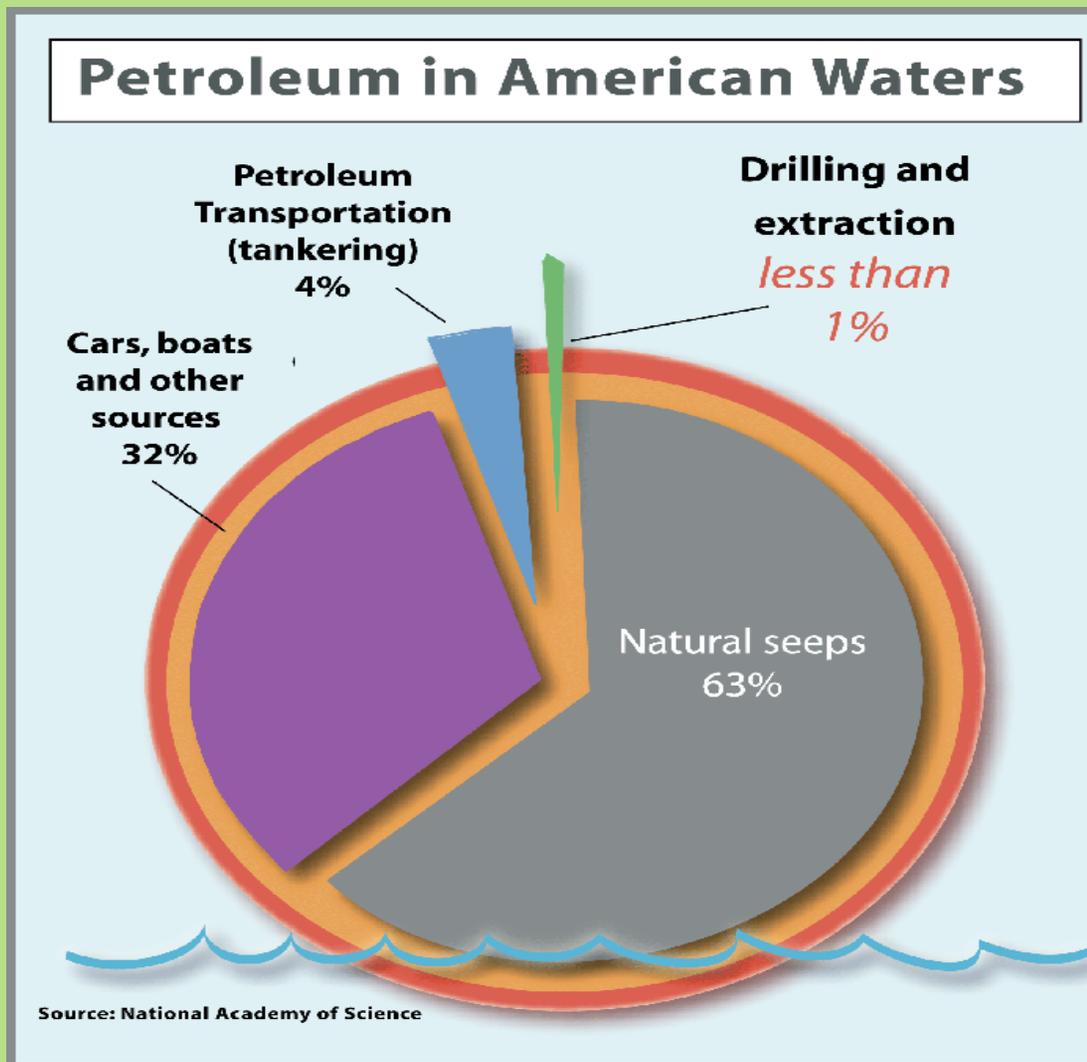


Clean up methods can cause more damage after the spill

Problems with solvents

Pressure washing of shoreline

# Pros of Off-shore Drilling



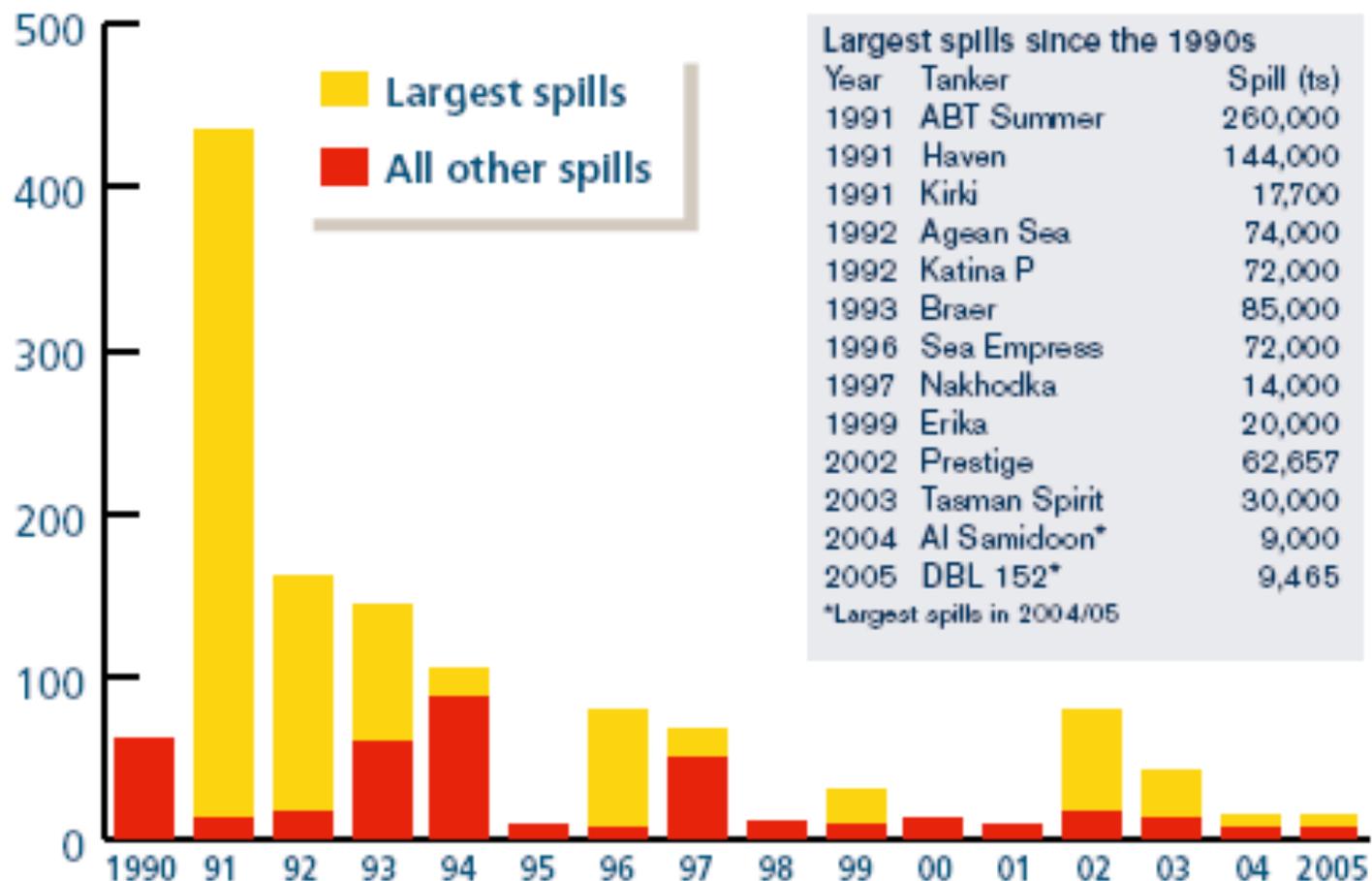
# Pros of Drillin'

- Would give more job opportunity for rig operators, ENGINEERS, environmental and safety specialists and many more.
- The recent DOI estimates put the amount of energy in the coast surrounding the U.S in the off-limit areas at 18 billion barrels of oil and 83.9 trillion cubic feet of natural gas.
- Could possibly lower the cost of oil for the U.S in the future.
- With today's technology the chances of an oil spill has decreased greatly compared to 20 years ago.

# Government on Drillin'

- Most recently the Deep Ocean Energy Resources Act (2006) would allow each coastal state to decide whether and where it wasn't drilling off its coast out to 100 miles. This passed the House but was never considered in the Senate.
- Congress can stimulate our energy industry and increase the market for energy stocks.

## Accidental Oil Spills from Tankers Thousand Tonnes



**Largest spills since the 1990s**

| Year | Tanker        | Spill (ts) |
|------|---------------|------------|
| 1991 | ABT Summer    | 260,000    |
| 1991 | Haven         | 144,000    |
| 1991 | Kirki         | 17,700     |
| 1992 | Agean Sea     | 74,000     |
| 1992 | Katina P      | 72,000     |
| 1993 | Braer         | 85,000     |
| 1996 | Sea Empress   | 72,000     |
| 1997 | Nakhodka      | 14,000     |
| 1999 | Erika         | 20,000     |
| 2002 | Prestige      | 62,657     |
| 2003 | Tasman Spirit | 30,000     |
| 2004 | Al Samidoon*  | 9,000      |
| 2005 | DBL 152*      | 9,465      |

\*Largest spills in 2004/05

Source: Intertanko Tanker Facts 2006,  
<http://www.intertanko.com/about/annualreports/2005/5.html>

Using their off-shore oil drilling skills, these guys saved the world.

