Presentation to
Santa Barbara County Board of Supervisors

Bruce Allen

August 26, 2008

HEARING - Consider recommendations regarding the energy crisis

Legislative File ID 08-00707

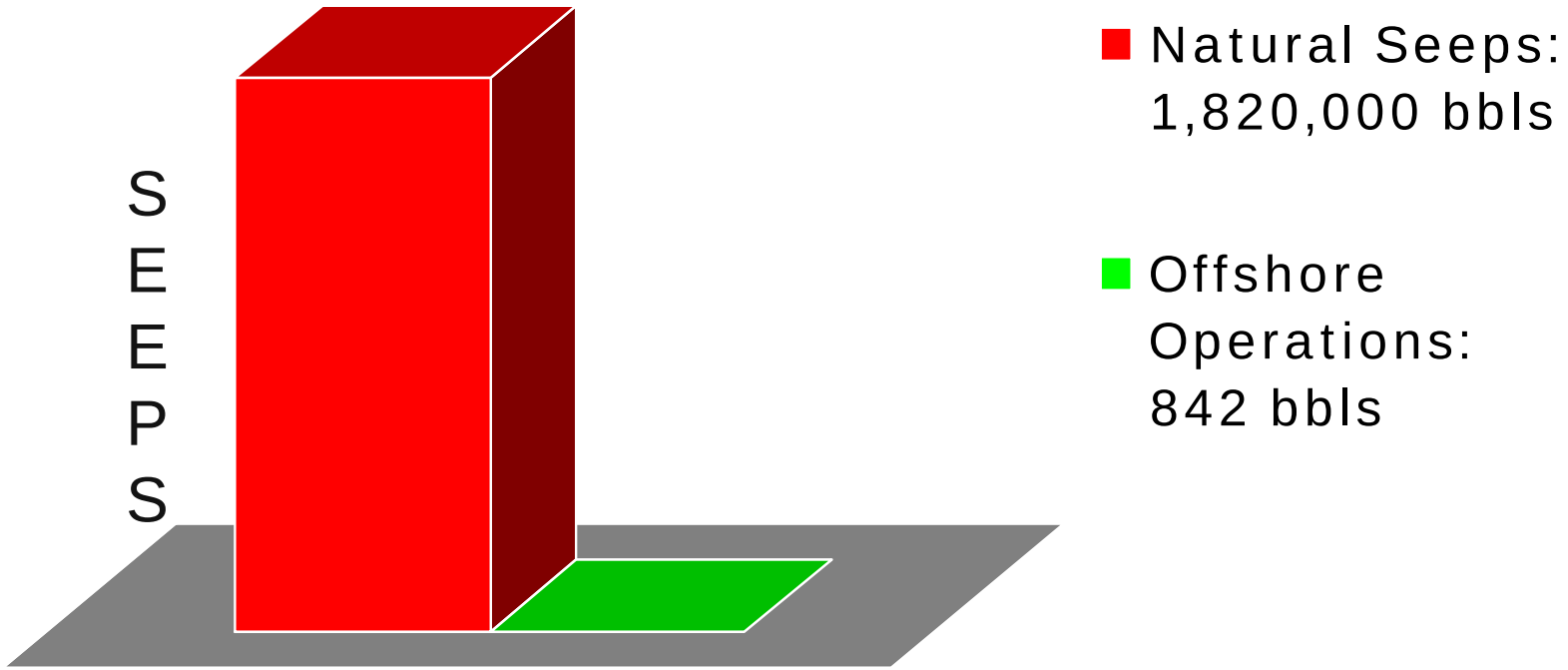
Offshore Santa Barbara Has the Second Largest Marine Oil Seeps in the World

Every day our coastal environment is being polluted by natural oil seeps at the rate of approximately 150-200 Barrels per day

- 50,000-80,000 Barrels Per Year
- Kills Hundreds/Thousands of Birds per Year
- Fouls Our Beaches With Oil / Tar
- 6000+ tons of ROC's per year
- EPA Considers Oil to be Carcinogenic

A recent USGS Survey estimates there are 2,000 active natural seeps all along Santa Barbara County Coastline

SB COASTAL WATERS POLLUTION SINCE 1970



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

UCSB 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."

[excerpts from www.ia.ucsb.edu/pa/display.aspx?pkey=412

Seep Issues

- **Letter to BOS August 18 From Prof. Luyendyk**
  - **"The relationship is <u>well established</u> for the Coal Oil Point field under current production methods but not tested by scientific studies elsewhere in the Channel."**
  - **"As oil fields age more elaborate Enhanced Oil Recovery measures are required, and these could have the opposite result of *increasing seepage.*"**

- **Current production methods at Platform Holly have included re-injection for many years and seepage continues to decline after over 31 years**

- **The clear conclusion is that new offshore production in similar seep zones under "current production methods" would likely result in oil seepage pollution reductions**

- **CA State Lands Commission Executive Officer Paul Thayer stated August 1, 2008 "Requests for additional Santa Barbara Oil Seep research funding have been turned down by the State of California"**

American Association of Petroleum Geologists Annual Convention
May 11-14, 2003 Salt Lake City, Utah

Geological Controls of Hydrocarbon Seeps in Santa Maria Basin, Offshore California

Dr. Peter J. Fischer, Joseph M. Saenz, California State University, Northridge, CA and Naval Facilities Engineering Service Center, Port Hueneme, CA

"We believe that the offshore Santa Maria Basin contains the greatest known concentration of hydrocarbon seeps and related bottom features (gas vent craters, pockmarks and tar mounds) in the world." **Controlled by active tectonism, these seeps and bottom features are both active (with water column anomalies-WCAs) and passive (without WCAs). Primary seep controls are the northwest-trending active faults of the Hosgri system, including the Purisima and Lompoc faults, and related growing anticlinal folds. We estimate that over 80% of the active seeps overlie the wedge-shaped tectonic block between the Hosgri and the western most Lompoc fault.**

Additional controls include the extent and depth of the fractured Monterey Formation reservoir, the presence of shallower secondary reservoirs (e.g. sands of the Pliocene Sisquoc and Foxen Formations, and the Quaternary deposits), water depths over 250 m and seismicity.

"There are 13 oil and gas fields within our offshore study area that extends north of Point Conception to a point about 20 km north of Point Sal. Of these fields only two, the unnamed block 445 and the Bonito field are not overlain by active seeps."

Both of these fields are in water depths of 200 m to over 400 m. Our data set includes geophysical trackline data from over 50 multi-sensor, shallow drilling hazard surveys, 73 exploratory well logs, cutting samples, cores and other data and other regional processed seismic records.

SANTA BARBARA ECONOMIC BENEFITS

- MMS 2004 Estimate For Pacific OCS Exceeds 13 Billion Barrels Oil Equivalent

- More than 1.8 Billion BOE Potential From Already Discovered But Undeveloped Offshore Santa Barbara Fields*
- CA Royalty Revenue: $1.6 billion/year (15% royalty) **
  SB County Revenue: $ 330 million/year (3% royalty) **

  - **Funds SB County To Build 450 MW Solar Thermal Farm From 3 ½ Years Royalty Revenue and Permanently Supply Solar Electricity to Every SB County Residence (30 kWh per day per Household)**

  - **Provides County Funds For Every SB Household to Receive $10,000 Credit for New Electric or Plug-in Hybrid Vehicle Every 4 Years**

  - **Funds New Waste Water Treatment Facilities, Education and Environmental Programs for Santa Barbara County…**

*** Dr. Tom Bjorklund 2006 & MMS 2004 Published Offshore Resource Estimates**

**** Production of 1.8 Billion Barrels over 20 years @ $120/barrel**