


**WACHOVIA FREE CHECKING**  
 comes from the only bank that has been  
 #1 in Customer Satisfaction 7 years running.



get free checking →  
 WITH WACHOVIA  
 MEMBER FDIC

Tuesday, May 13, 2008  SANTA CRUZ, CA | Now: 62°F | High: 70°F | Low: 43°F | 5-Day Forecast

[Subscriber Services](#) [Mobile Edition](#)

Site  Web Search powered by **YAHOO! SEARCH**

[home](#) [news](#) [business](#) [sports](#) [entertainment](#) [opinion](#) [obituaries](#) [blogs](#)

[contact us](#) [jobs](#) [cars](#) [homes](#) [classifieds](#) [shop](#)

 del.icio.us  Digg  Reddit  YahooMyWeb  Google  Facebook  What's this?

 [Print](#)  [Email](#)

**Most Viewed** **Most Emailed**



(From the last 12 hours)

1. Dead cyclist's parents sue over death on Mission Street
2. Highway 129 crash victim remembered as hard-working, caring 'good...
3. Expect cyclists on Mission this evening
4. Anti-chain store sentiment hits Capitola in form of petition
5. Dead cyclist's parents sue over death on Mission Street
6. As You See It: May 13, 2008
7. Police seize \$1 million worth of pot plants from San Jose home
8. Aptos firm snares TV spot on "Dirty Jobs" May 12
9. Park the car and jump on a bike this week
10. Cops and Courts: May 10, 2008

## Gary Griggs, Our Ocean Backyard: Inside the ocean's oil-making machine

Article Launched: 05/11/2008 01:32:51 AM PDT

Oil from the ocean! A few people who read my first column were surprised to learn that the creation of oil starts with life in the ocean. But why doesn't oil form in the oceans everywhere? If it did, oil would be easier to find and we'd probably spend a lot less on gas. Unfortunately, it's not so simple.

To begin with, the massive blooms of plankton required to generate the organic matter that eventually becomes oil do not occur everywhere in the oceans. Only in certain areas did it all come together geologically, and those are the places that today hold the world's largest oil deposits. Curiously, six of the seven countries with the largest reserves of oil are all in the Persian Gulf: Saudi Arabia, Iran, Iraq, Kuwait and United Arab Emirates.

Why did so much oil form in the Middle East? To answer this we need to go back about 150 to 200 million years, when the distribution of land and sea was quite different than it is today. Most of the continents appear to have been united into one large land mass known as Pangea. The Atlantic Ocean hadn't yet opened up, so North America was connected to Europe, and South America was joined to Africa.

The area stretching eastward from this mega-continent, at about the present location of the eastern Mediterranean, was a vast sea known as the Tethys. This warm body of water straddled the equator and was extremely fertile. Plankton bloomed in profusion, and for centuries the dead bodies

of these tiny creatures sank to the seafloor and collected there. With little oxygen in the overlying water, the organic matter wasn't oxidized or broken down, so it accumulated to great thicknesses. The increased pressure and temperatures at depth over millions of years gradually converted the organic matter to oil.

About 200 million years ago, as the plates began to break up and the continents shifted, Africa and India pulled away from South America, Australia and Antarctica and began slowly migrating to the north. As these large land masses traveled north toward Asia, they began to compress the Tethys Sea, squeezing and folding the thick layers of sediments with their rich deposits of oil on the floor of this ancient ocean. The waters of the sea drained to the east and west, but the compressed and folded oil-rich sediments became the mountains and deserts of Saudi Arabia, Kuwait, Iraq and Iran. So an accident of plate tectonics made

Advertisement



**Does your career MAKE SENSE?**  
**CLICK HERE** to find out more about a great job opportunity on this side of the hill.

billionaires out of the Saudis, enabling them to trade in their camel for a Mercedes.

Although the United States originally had significant oil deposits, what remains today is only a small fraction of what lies beneath the sands of the Middle East. Our appetite for petroleum, however, is huge. The United States uses about 21.5 million barrels of oil every day. About 60 percent of it is imported, much of it from politically unstable areas. Americans use about 400 million gallons of gasoline every day, about 4,600 gallons a second. If lined up in 1-gallon cans along the equator, this daily usage would completely circle the earth over six times.

Gary Griggs is director of the Institute of Marine Sciences and Long Marine Laboratory at UC Santa Cruz. He can be reached via e-mail at [griggs@ucsc.edu](mailto:griggs@ucsc.edu).

 [Print](#)  [Email](#)  [Return to Top](#)

### Related Content

- HP to buy EDS for \$13.9 billion
- Expect cyclists on Mission this evening
- Monterey judge orders halt to moth spraying until full study is conducted
- Highway 129 crash victim remembered as hard-working, caring 'good lady'
- Ralph Nader makes appearance at Rio theatre
- Break the grip of the rip
- Scotts Valley teachers union: District will only trim 1.25 positions
- Anti-chain store sentiment hits Capitola in form of petition
- Coast Lines: May 13, 2008
- Setting it Straight: May 13, 2008
- Park the car and jump on a bike this week
- Dead cyclist's parents sue over death on Mission Street



**Mike O'Boy**  
 MikeOBoy.com  
 COLDWELL BANNER CO.

**David Morrell**  
 DavidMorrellSC.com

COMMENTS:

[Read 1 comment >](#)

Type in your comments to post to the forum

Name  
(appears  
on your  
post)

Comments

Type the numbers you see in the image on the right:

Post Comment



topix

Please note by clicking on "Post Comment" you acknowledge that you have read the [Terms of Service](#) and the comment you are posting is in compliance with such terms. **Be polite.** Inappropriate posts may be removed by the moderator. [Send us your feedback.](#)

**Free Credit Score and Report**

Get your free credit report and score from FreeCreditReport.com™. [www.FreeCreditReport.com](http://www.FreeCreditReport.com)

**Refinance \$300,000 for Only \$965/Month**

\$300,000 Mortgage for only \$965/month. Save \$1,000's - No obligation. [www.HomeLoanHelpLine.com](http://www.HomeLoanHelpLine.com)

**Free Credit Report with All 3 Scores**

Free 3-bureau Credit Report – includes Transunion, Equifax, Experian. [FreeCreditReportsInstantly.com](http://FreeCreditReportsInstantly.com)

Ads by Yahoo!

Start Talking  
Before They Start Drinking.

Ad Council  
SAMHSA  
Substance Abuse & Mental Health Services Administration

Contact Us | Subscriber Services | Site Map | RSS | [REAL Cities](#) | MNG Corporate Site Map

Copyright ©2008 MediaNews Group

Featured Links

Marketplace

- Find a Rental
- Find a Business
- Find Stuff
- Get Grocery Coupons

Special Sections

- Newspaper in Education
- SantaCruz PHOTOGALLERY
- Sentinel Triathlon
- Santa Cruz Live
- TV Schedule

Sponsored Links

- Alternative Cancer Treatment Clinic
- Attorney Finder Lawyer Search
- yellow pages
- Cellit Mobile Marketing
- Reverse Osmosis Water Softener
- Chrysler
- Heat Press
- Diamond Rings
- Debt Management
- Moving Companies Directory
- Vacation Home Rentals
- Bridesmaid Dresses
- Magic Love Spells
- Internet Auctions
- Moving Companies, Movers
- Aupairs & nannies available
- Personal Loan
- Stem Cell Medicine
- Alternative Cancer Treatment
- Sea Logix Pharmaceutical Grade Fish Oil
- Support our Troops
- Credit Help Resource
- Santa Cruz Real Estate
- Free on-line dating: Deception services
- Moving Companies
- Online Degrees
- Isagenix
- 2008 Calendars
- Property South France
- Apartment Amsterdam
- Property Provence

[Privacy Policy](#) | [MNG Corporate Site Map](#) | [Copyright](#)