Oil Industry Cooperation with IOOS

Dr. Cortis Cooper
Fellow
ChevronTexaco
CortCooper@ChevronTexaco.com
Long History of Cooperation

- Yucatan Straits
- U. Colorado Modeling
- Numerous data sharing
  - TAMU reanalysis
  - Navy access
  - NOAA access
Industry Needs for MetOcean Data

- Fatigue
  - MetOcean Climatology
    - Downtime Analysis
  - Pollutant Fates
- Design
  - MetOcean Extremes
    - Tows
- Operations
  - MetOcean Real Time
    - Accidental Releases
Wind & Wave Challenges

- Wind stress during storms?
- Wave decay & breaking in shallow water?
- Rogue waves ($H_{\text{max}}/H_s$)?
- Understanding extreme storms (10,000 yr event)?
Currents – Challenges

- Topographically intensified bottom currents
- Gulf Loop/Eddies
- Submerged jets
- Turbidity currents
- Vertical shear in hurricanes

Hi-res bathymetry in GOM showing mega-furrows cut by Rossby Waves
EddyNet

- Real-time rig-mounted ADCPs (500-800 m)
- Displayed on Web
- 6 sites; ~20 by ‘05
- 6 Shell sites
- Focus on deep water

↓ Indicates existing site, ● future site, ○ Shell site

ChevronTexaco
Possible Cooperation

- **Offshore Real Estate**
  - 3000+ platforms in Gulf
  - We have infrastructure

- **Industry Data**
  - D/W Gulf ADCP
  - Other is more difficult

- **Key Inhibitor**
  - Why give away our costly data to competitors?
  - Costs
  - Business driver?
Summary: Cooperation

- Long history of cooperation
- Major metocean ?? remain
- Industry could possibly offer
  - 3000+ platforms
  - Logistical support
  - D/W ADCP Data
- IOOS could offer
  - Additional instrumentation
  - QA/QC
  - Archival
  - Distribution