New Waves in The Gulf of Mexico
OTC Paper 19259
Panelist and Presentation Format

*Moderators:*
- Sandeep Khurana, Facilities Advisor, Devon
- Tom Miller, Business Manager, Chevron

Part I: Scene Setting (by Moderators)

Part II: Presentations (by Panelist)
- Russ Ford, VP Technical - EP Americas, Shell
- Darrell Hollek, VP GOM Operations, Anadarko
- Chris Oynes, Associate Director, MMS
- Brian Smith, GM- Major Capital Projects, Chevron
- Neil Shaw, Sr. VP E&P, BP

Part III: Audience Voting and Panelist Replies / Discussion
Audio Visual System “Voting Pad”

- Question is displayed on the screen & read aloud
- System is activated
  - Countdown clock appears on screen
- Press Button representing your choice
- Graph is displayed
- Results are discussed
Audience Question: Occupation
What is your occupation:

A. Corporate Management (CEO, VP, GM) 31%
B. Technical Personnel 53%
C. Financial Trade 8%
D. Media 8%
Part I - Scene Setting
Defining the New Wave!

Miocene Trend

Lower Tertiary Trend

(Courtesy: Devon)
## Geological Perspective

<table>
<thead>
<tr>
<th>Age of Rock (Millions of Years)</th>
<th>Cum. MMBOE*</th>
<th>%</th>
<th>Tertiary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Present - 2</td>
<td>13,759</td>
<td>33</td>
<td>Pleistocene</td>
</tr>
<tr>
<td>2 – 5</td>
<td>10,755</td>
<td>25</td>
<td>Pliocene</td>
</tr>
<tr>
<td>5 – 24</td>
<td>17,236</td>
<td>41</td>
<td>Miocene</td>
</tr>
<tr>
<td>24 – 34</td>
<td>49</td>
<td>0</td>
<td>Oligocene</td>
</tr>
<tr>
<td>34 – 55</td>
<td>0</td>
<td>0</td>
<td>Eocene</td>
</tr>
<tr>
<td>55 – 65</td>
<td>0</td>
<td>0</td>
<td>Paleocene</td>
</tr>
<tr>
<td>65 – 144</td>
<td>49</td>
<td>0</td>
<td>Cretaceous</td>
</tr>
<tr>
<td>144 – 206</td>
<td>235</td>
<td>1</td>
<td>Jurassic</td>
</tr>
</tbody>
</table>

*IHS Federal Offshore Data as of February 2006.

Conversion Factor: 6 Mcf = 1 barrel

GOM Production from different Geological Stratum (Courtesy: Devon) (Lower tertiary rocks are highlighted in yellow)
Are We Ready?

RESERVES ARE DROPPING LIKE A ROCK.

OUR PLAN IS TO FIND LOTS OF GAS FOR FREE.

THE VISIONARY LEADERSHIP WORK IS DONE. HOW LONG WILL YOUR PART TAKE?
Challenge: Rig Availability

(Courtesy: Douglas-Westwood)
Challenge - Cost Escalation

( Courtesy: IHS-CERA)

"As you can see by this pie chart, most of our expenses go to, well, pie."

Q3 2006: 176
Q1 2007: 189
Q3 2007: 208

Index (2000=100)
A CHALLENGING GAME!

SUB SALT PROSPECTS
VERY DIFFICULT TO DRILL
VERY DEEP RESERVOIRS
VERY HIGH PRESSURES
LOWER PERMEABILITY
HIGHER VISCOSITIES
NO INFRASTRUCTURE
FLOW ASSURANCE ISSUES

THE PERIOD OF ‘EASY OIL’ IN GOM IS OVER
(Courtesy: STATOILHYDRO)
It has always been that way!

"Drill for oil? You mean drill into the ground to try and find oil? You're crazy."

Workers whom Edwin L. Drake tried to enlist to his project to drill for oil in 1859.
Part II - Panelist Presentation
PART III

Audience Voting and Panelist Replies / Discussion
Audience Question: Primary Association
Indicate your primary association with the oil and gas industry:

A. Major Oil Company 41%
B. Independent Oil Company 7%
C. Drilling Contractor 3%
D. Equipment Supplier 20%
E. Consulting Firm 29%
**Audience Question: Oil Prices**

With historically high oil prices, which of the following most closely represents your expectation for future commodity pricing for next two years?

- **A.** Will stay between $100 to $150 - 60%
- **B.** Prices will drop back to $80-$100 - 35%
- **C.** Prices will drop back to $50- $80 - 4%
- **D.** Prices will drop below $50 - 1%
Audience Question: Ultra-Deepwater

In your opinion, how well are Operating Companies performing in deepwater?

A. Excellent  18%
B. Above Average  26%
C. Average performance in deepwater.  28%
D. Having a difficult time.  28%
Audience Question: Your Opinion
Do you think the oil & gas industry is overly optimistic about ultra-deepwater prospects?

A. YES
35%

B. NO
65%
Audience Question: Impact of Cost Escalation
Do you think an increase in Royalty Rates and development costs are dampening the progress in this trend?

A. YES 49%
B. NO 51%
Audience Question: Required Technology Type
What is your opinion regarding what type of technology is needed for developing in ultra-deepwater?

A. Use only proven technology. 0% 
B. Use proven technology, & push it to its limits. 0% 
C. Mix – some proven & some new technology. 0% 
D. Use state-of-the-art technology & bank on future innovations. 0%
Audience Question: New Technology
Do you think Industry is developing new technologies fast enough to succeed in this trend:

A. YES 59%
B. NO 41%
A FACT (from Statoil Hydro Presentation)

Top five companies in each industry by total R&D spend

From: Mr. Lew Watts, President & CEO PFC Energy

Source: U.K. Department of Trade & Industry
Audience Question: Industry Challenge

Which of the following pose the greatest challenge to the oil & gas business over the next 3-5 years?

A. Access to equipment and services
   - 32%

B. Access to talent (right people & right skills)
   - 46%

C. Commodity price volatility
   - 14%

D. Competition from alternate energy sources
   - 8%
Audience Question: More Mergers
Do you think struggle for dominance in this trend will lead to mergers and buy-outs?

A. YES  53%
B. NO  47%
Audience Question: Your Predictions
Will there be another wave after this one in the Gulf of Mexico?

A. YES 79%
B. NO 21%
The prolific GOM has been pronounced “dead” many times already

“The report of my death was an exaggeration”
Mark Twain after reading his own obituary