Louisiana State University

ConocoPhillips

Natural Gas Conference

Gas Supply Outlook for the Gulf of Mexico

Johnny Bradberry
ConocoPhillips
October 27, 2003

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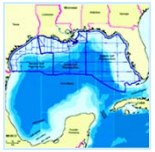

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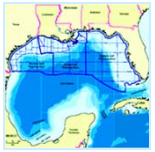

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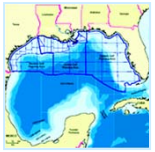

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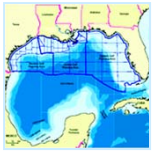

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Outline

- Fundamentals/Current Situation
- Supply Sources
- Hurdles/Challenges
- Perspectives

ANDERSON

The Arthur Anderson partner was on his phone when he said,

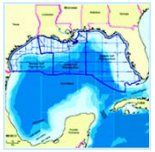
“Ship the Enron documents to the Feds,”

but his secretary heard,

“Rip the Enron documents to shreds.”

It turns out that it was all just a case of bad cellular.

Sprint PCS The clear alternative to cellular℠



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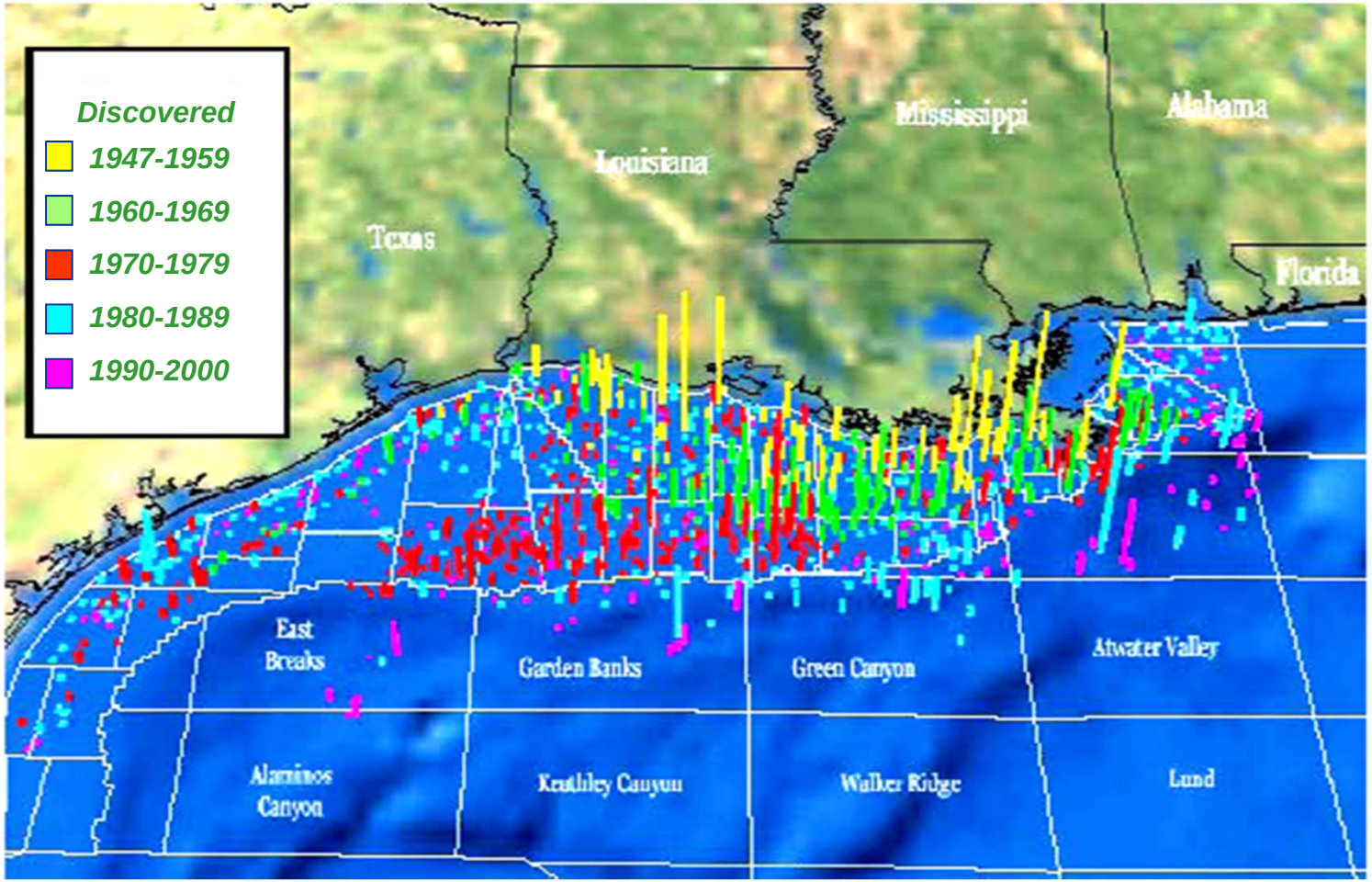
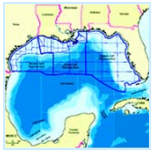
GOM Field Discoveries



Source: MMS 2003



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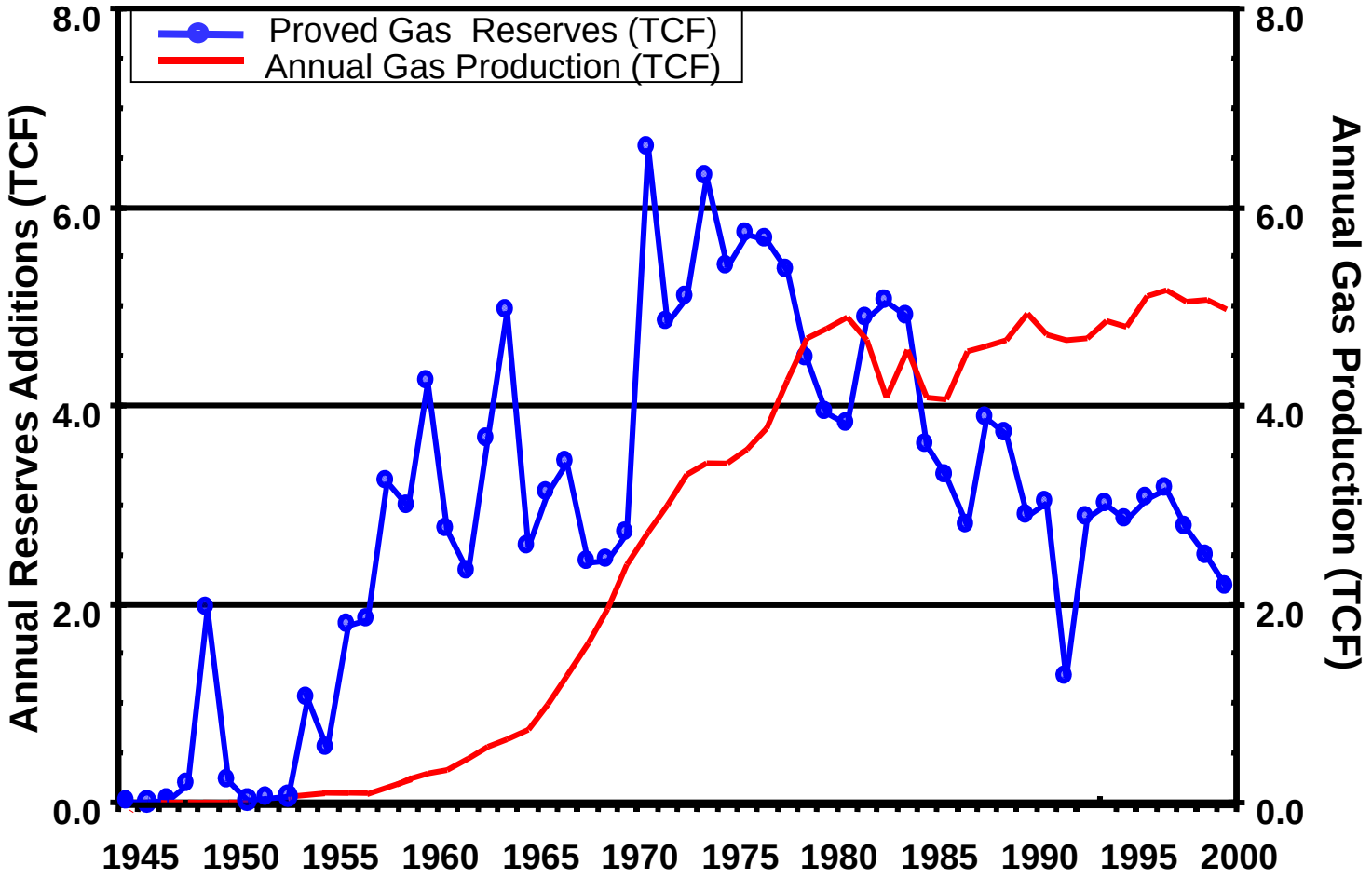
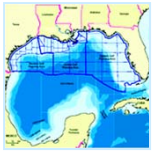
GOM Gas Reserves & Production Reserves Additions by Discovery Year Annual Gas Production



Source: MMS



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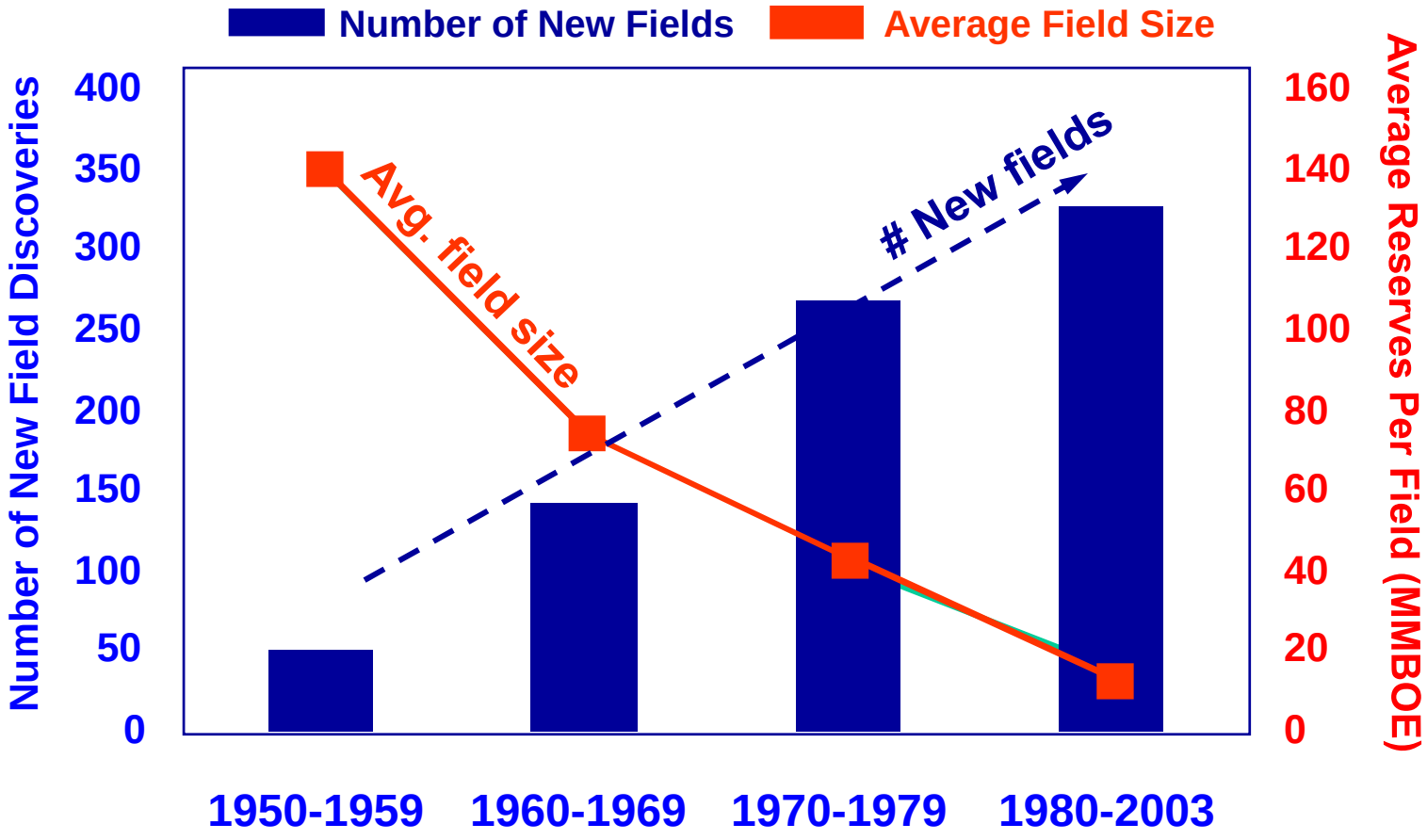
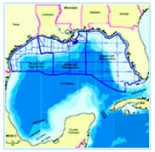
While Number of GOM Shelf Discoveries Has Increased, Field Size Has Dropped



Source: MMS/PFC Energy Consultants



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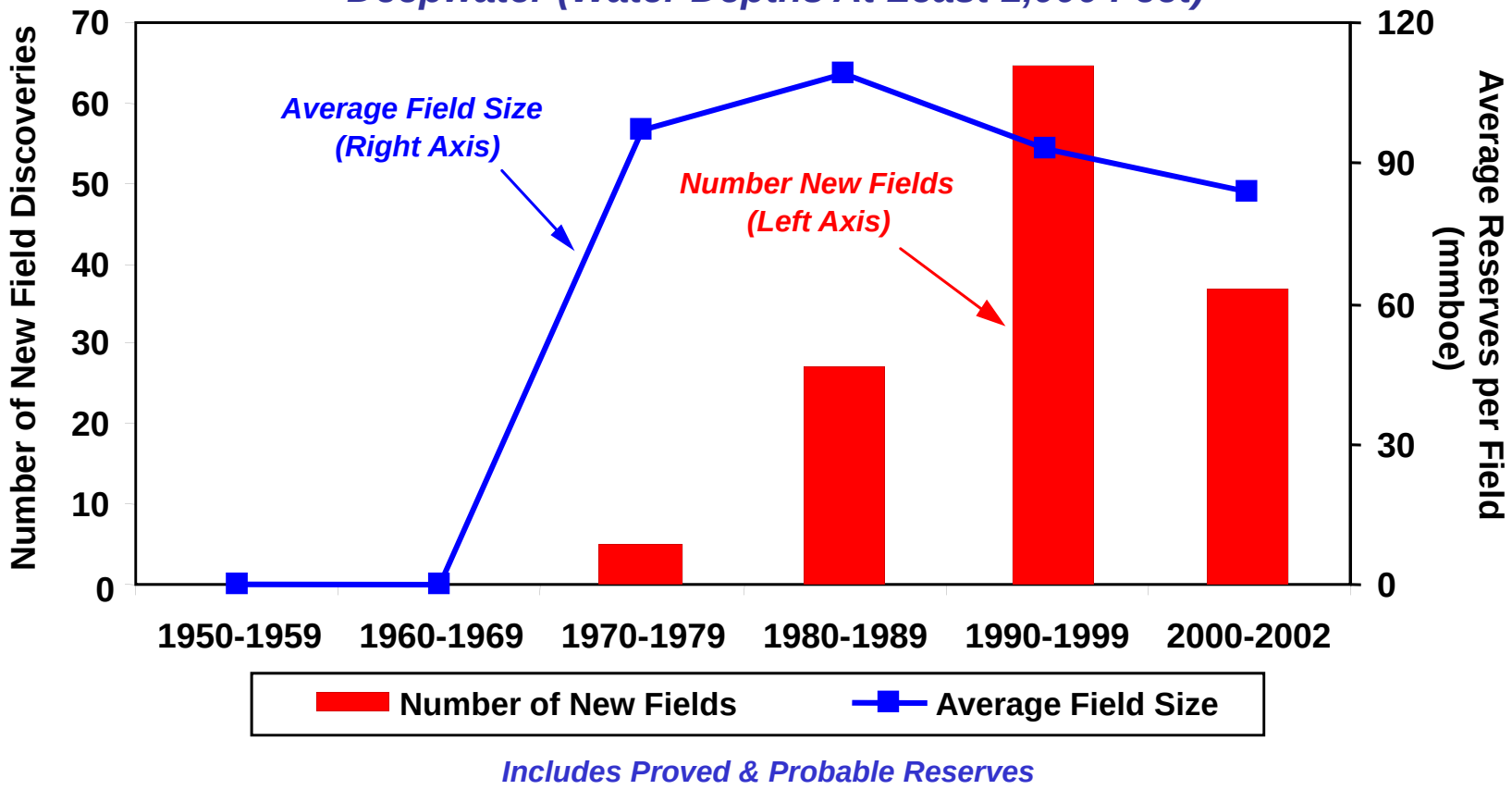
Discoveries & Reserves – *GOM Deepwater*

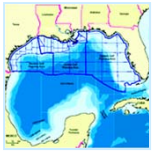
Number Of Fields Discovered & Average Reserves per Field By Decade

Deepwater (Water Depths At Least 1,000 Feet)



Includes Proved & Probable Reserves

Source: MMS/PFC Energy Consultants



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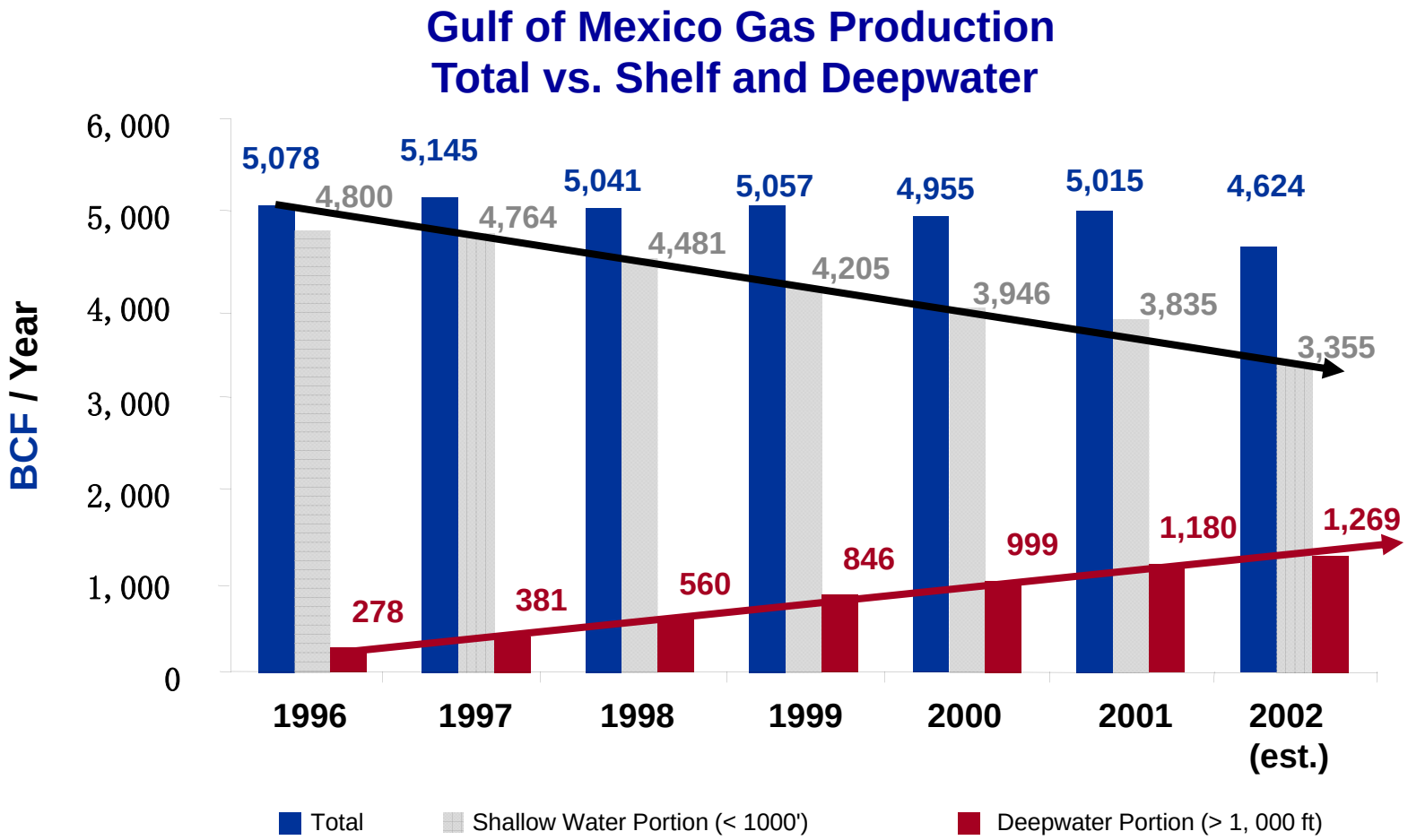
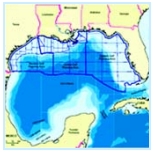
Gas Production from the Shelf is Declining While Deepwater Gas Production is Rising



Source: MMS/PFC Energy Consultants



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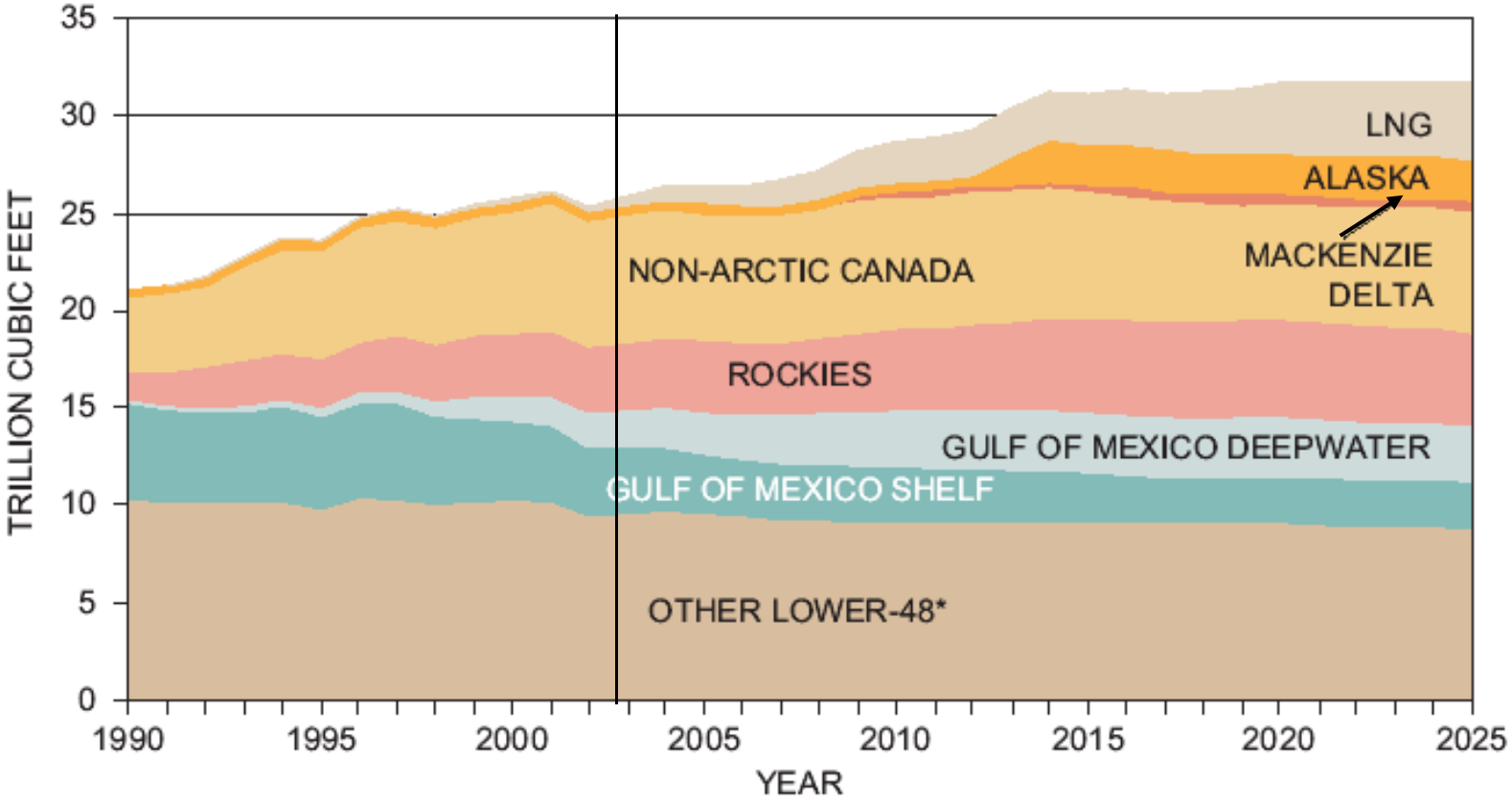
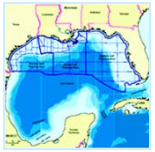
U. S. and Canadian Natural Gas Supply



* Includes lower-48 production, ethane rejection, and supplemental gas.

Source: NPC 2003



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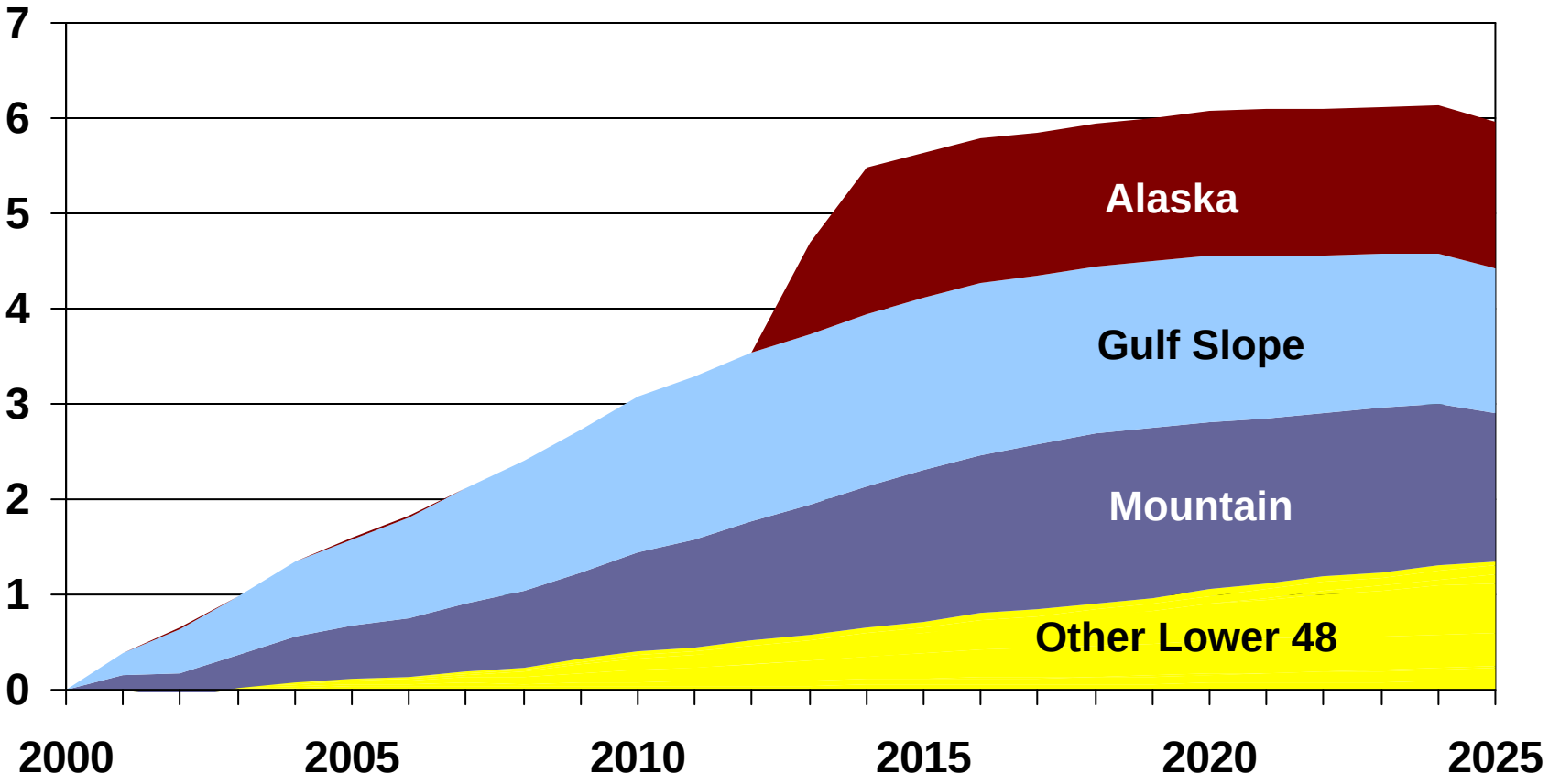
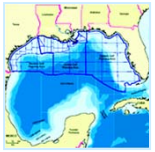
Sources of Incremental Natural Gas Supply, 2000-2025 (trillion cubic feet)



Source: NPC 2003



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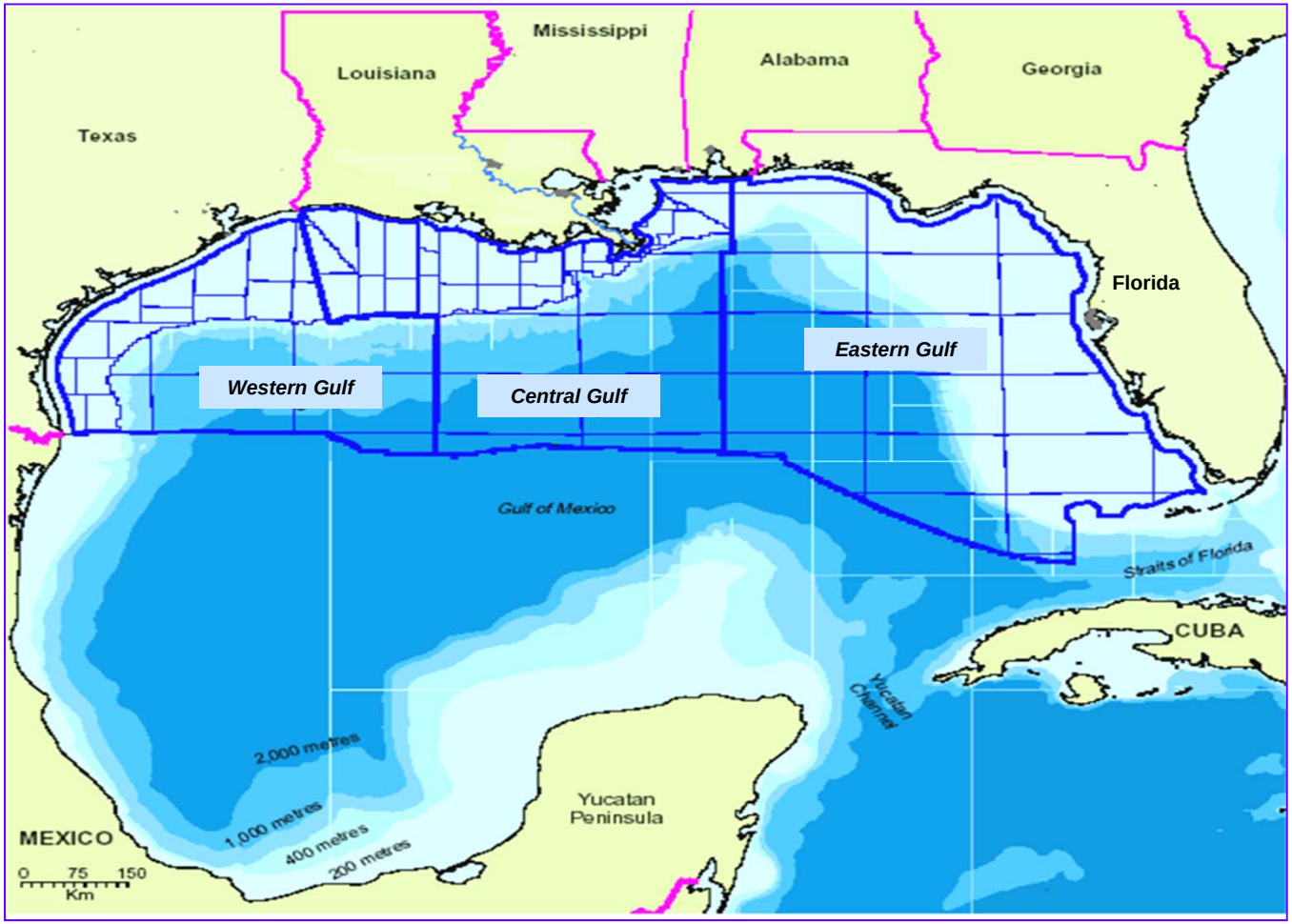
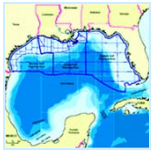
GOM Areas



Source: MMS



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GOM Shelf

Status:

- Very mature
- 70% of current GOM supply
- Rapid decline
- Current reserves
- Drilling pace/success
- Rig availability
- New discoveries small in size

Prize:

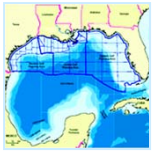
- Some shallow undiscovered reserves and deep shelf potential — >50 TCF (MMS 2000)

Challenges:

- Difficult drilling
- Aging infrastructure
- Rig availability for deep
- Acreage position

Who:

- Most majors have substantially decreased position
- Independents dominate



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Deepwater

Status:

- 30% of current supply
- Current reserves
- Projects under development
- Discovery pace
- Predominantly an oil play - associated gas

Prize:

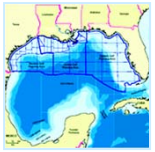
- >135 TCF potential (MMS 2000)
- Large reservoirs
- Leverage existing discoveries

Challenges:

- High cost per well/development
- Technology not here yet for ultra deep
- Project cycle time

Who:

- Predominantly majors but independents aggressively moving in



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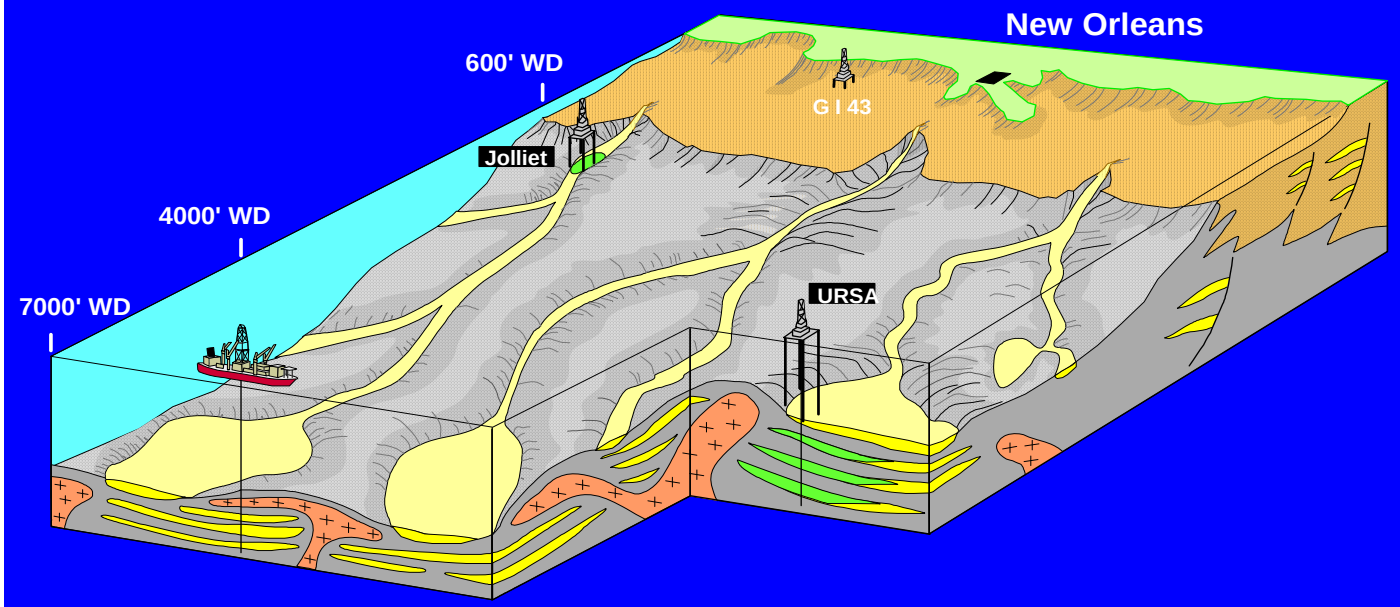
GULF OF MEXICO
DEEPWATER DEPOSITIONAL MODEL



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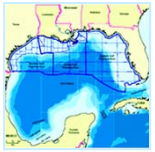

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Target Size Differences: Grand Isle 41\43\47 vs URSA

- ***URSA:***

Appx 400 MMBOE
Single structure
15 years to recover

10-50 MBOEPD/well
Up to 11 wells
Rec./well: 10-40 MMBOE/ compl

- ***Grand Isle 41/43/47***

Appx 830 MMBOE
54 platforms
60-70 years to recover
Recovery/well: 1.7MMBOE/well

.5-5 MBOEPD/ well
+500 wells/+180 active

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Technological Advances - Drilling

Sea bed is 1-2 miles below the rig:

Requires the latest in:

- **Marine Riser Technology**
- **BOP Control Technology**
- **Casing & Mud Program Design**
- **Dual Gradient Drilling**
- **AHC (Active Heave Compensated)**
- **Vessel Positioning**

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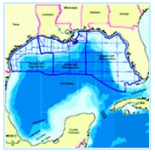
Technological Advances - Production

- FPSO and Shuttling
- Subsea Processing & Metering
- Seabed Storage
- Multiphase Flow
- Deepwater Pipeline
- Expandable Casing
- Dual Gradient Drilling



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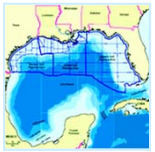
High Tech……High Cost

- **What's the most notable difference between deepwater and shallower operations? The answer is resoundingly…..*Costs*!**

- **DW dev. well cost: $25MM-$40MM**
  - **Shelf, avg dev. well : $5MM-10MM**
- **DW drilling costs: $250M-$400M/day**
  - **on shelf : $100M-$140M/day**
  - **with rig rates on shelf being only $30-40M/day compared to DW rates of $120-$220M/day**



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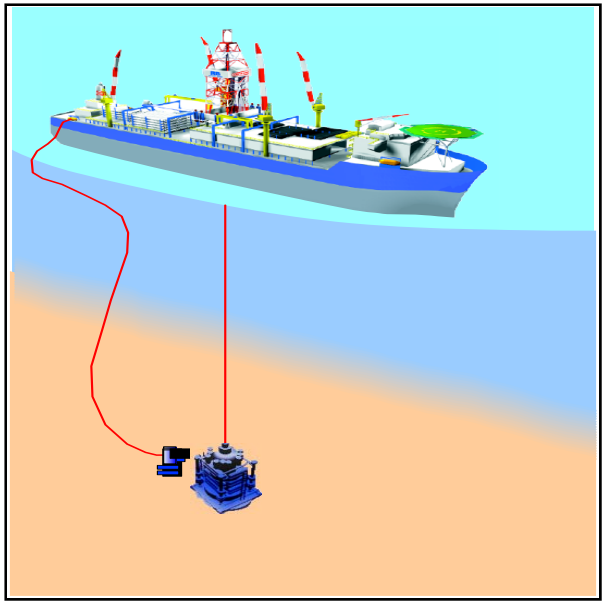
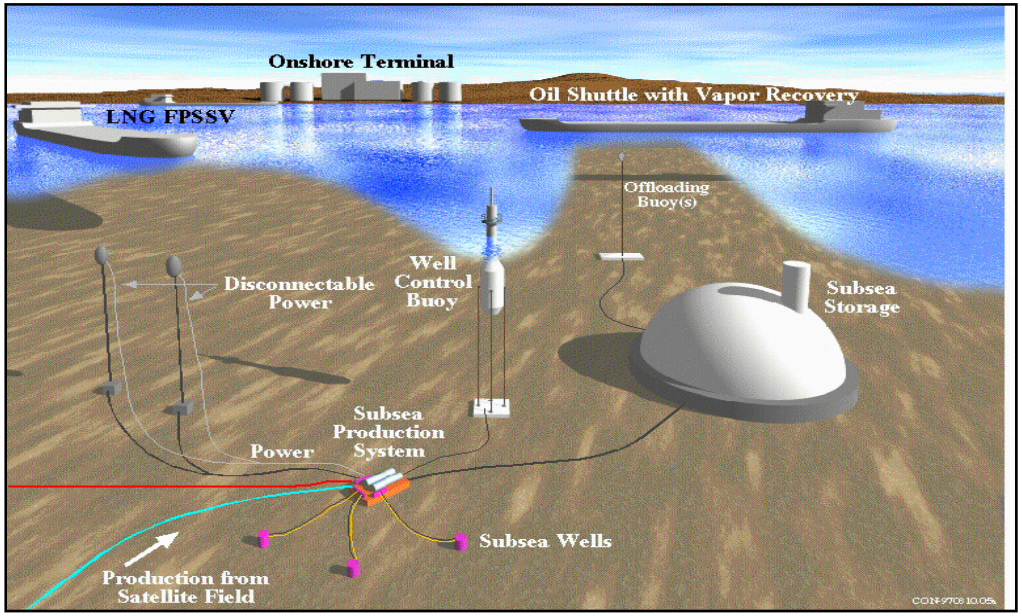
Deepwater - The Industry Responsibility

Safe, Environmentally Sensitive, Cost Effective Innovation



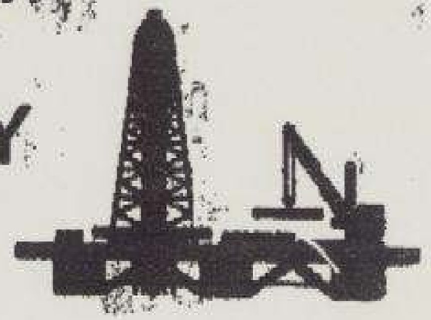


A MONUMENTAL STRATEGIC DECISION IS BEFORE US:

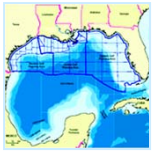
2/

- WATER DEPTH IS CHALLENGING
- ENVIRONMENT IS HARSH
- TECHNOLOGY IS UNCERTAIN
- COSTS ARE RISKY
- RESERVOIRS ARE SPECULATIVE
- PRODUCT PRICES ARE LOW

BUT OUR FUTURE MAY DEPEND ON IT.



GULF OF MEXICO CONTINENTAL SHELF, 1949



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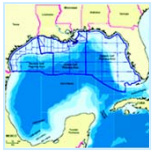
Eastern Gulf of Mexico

Status:
- Currently off limits

Prize:
- 25 TCF potential (NPC 2003)
- Can leverage existing infrastructure

Challenges:
- Gaining access
- Time to drill ready/total cycle time
- Restrictions/permitting
- Drilling

Who:
- Mixture of majors and independents



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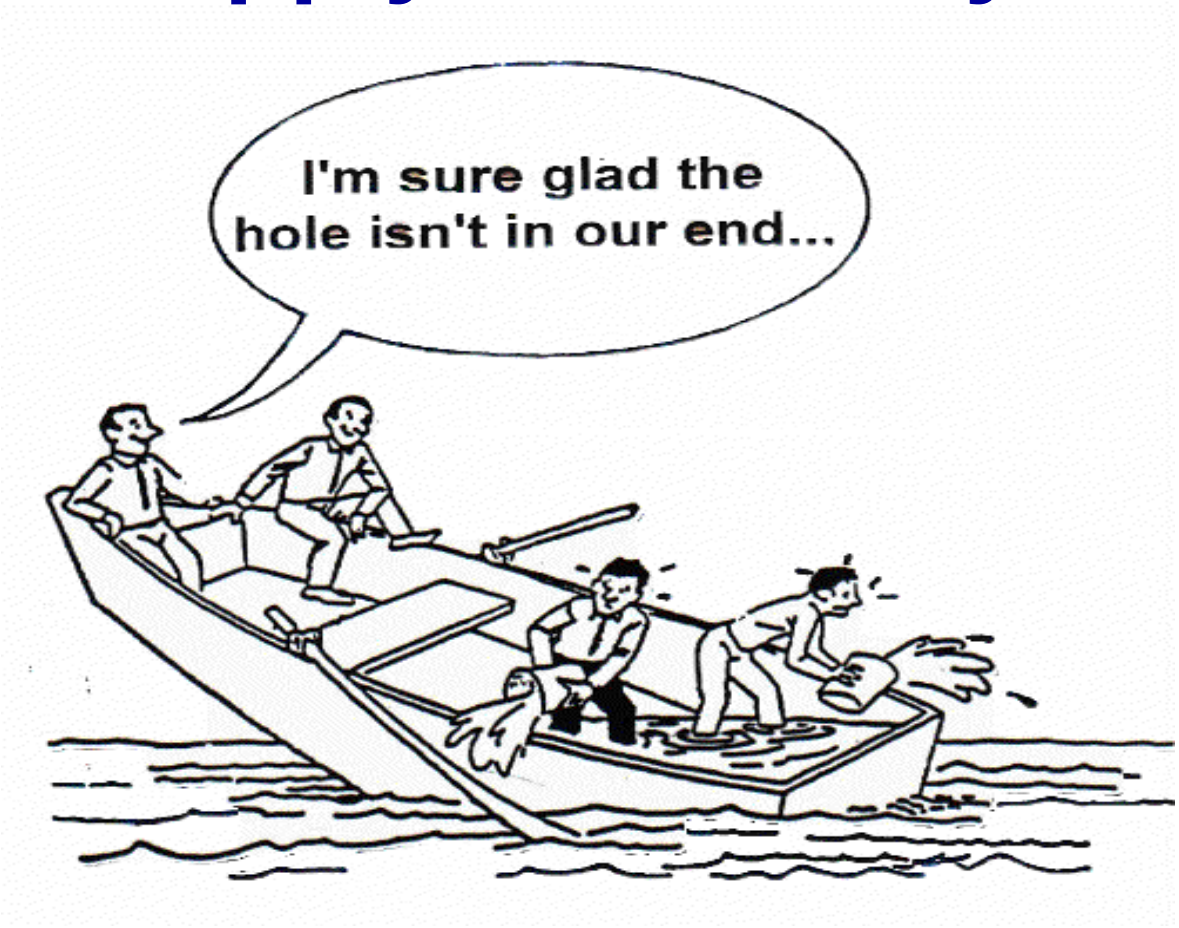
Supply Dichotomy?



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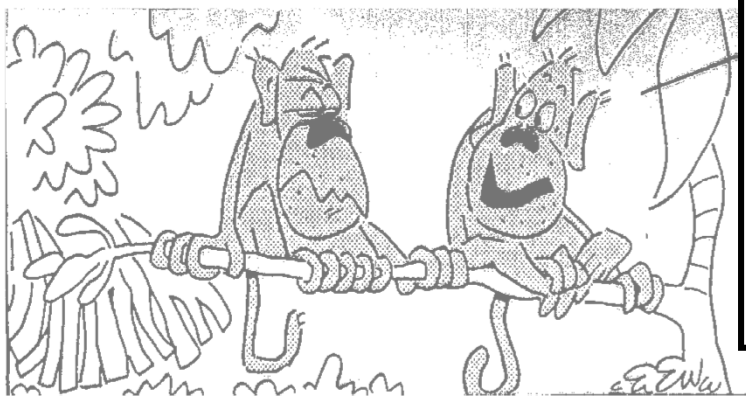
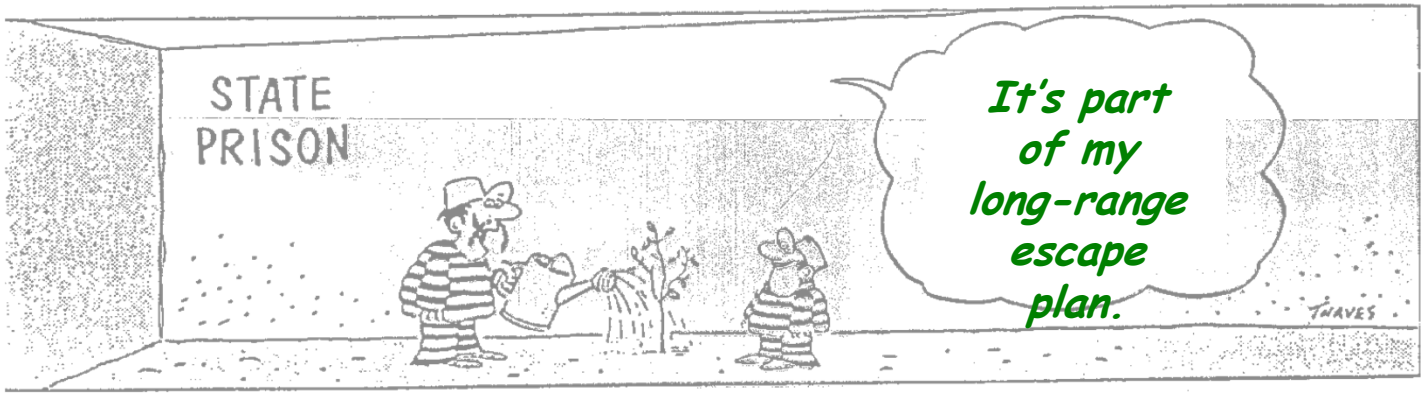
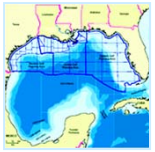
We Can't Wait Too Long!!!



I've been considering living on the ground, becoming a carnivore and developing a civilization…what do you think?





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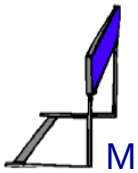
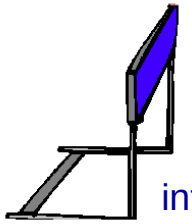
Delivering Supply Won't Be Easy

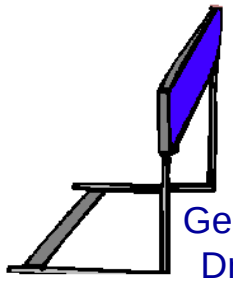
Shelf



Mature



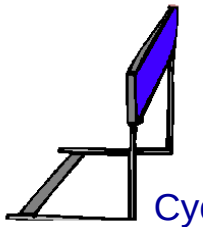
Aging infrastructure /cost



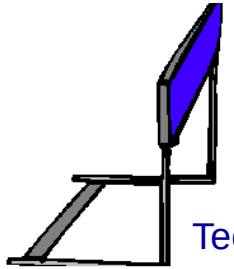
Geology/ Drilling

Deepwater

Cost

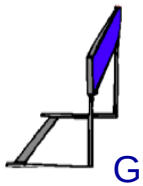


Cycle time

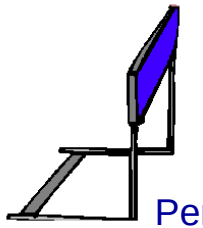


Technology

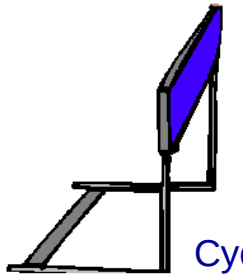
EGOM



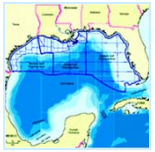
Gaining Access



Permitting



Cycle time



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Delivering Supply Won't Be Easy

ConocoPhillips Position

Shelf

Mature

Aging infrastructure/ cost

Geology/ Drilling

Not a Dominant Position

Deepwater

Cost

Cycle time

Technology

$

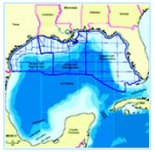
EGOM

Gaining Access

Permitting

Cycle time

?



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Supply Source Overview

35 TCF Discovered

>50 TCF Shallow and Deep Potential

Shelf

Discovered 46 TCF

Potential >210 TCF

11 TCF Discovered

>135 TCF Potential

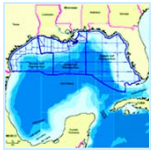
Deepwater

GOM/Supply

25 TCF Potential

EGOM

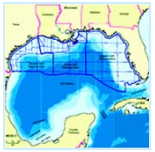
Source: MMS



Perspectives to Leave You With

ConocoPhillips

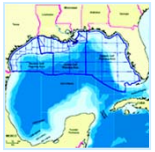
- Shelf
  - Production declining rapidly. Aggressive shallow drilling essential to help offset base decline. Deep gas is critical to filling supply expectation in the near term.
  - Look for Independents to pick up pace – particularly deep drilling.
  - Majors could re-enter - deep potential and improved incentives.
- Deepwater
  - Gas production important in filling void created by shelf decline.
  - Majors likely to stay primarily deepwater focused.
- Once EGOM moratorium is lifted, it will take time to supply gas.



Perspectives to Leave You With

ConocoPhillips

- New technology an important part of the supply formula.
- Resource availability still a critical issue.
- Need improved regulatory permitting/approval process.
- Despite hurdles, outlook for GOM supply to satisfy forecasted demand is optimistic.



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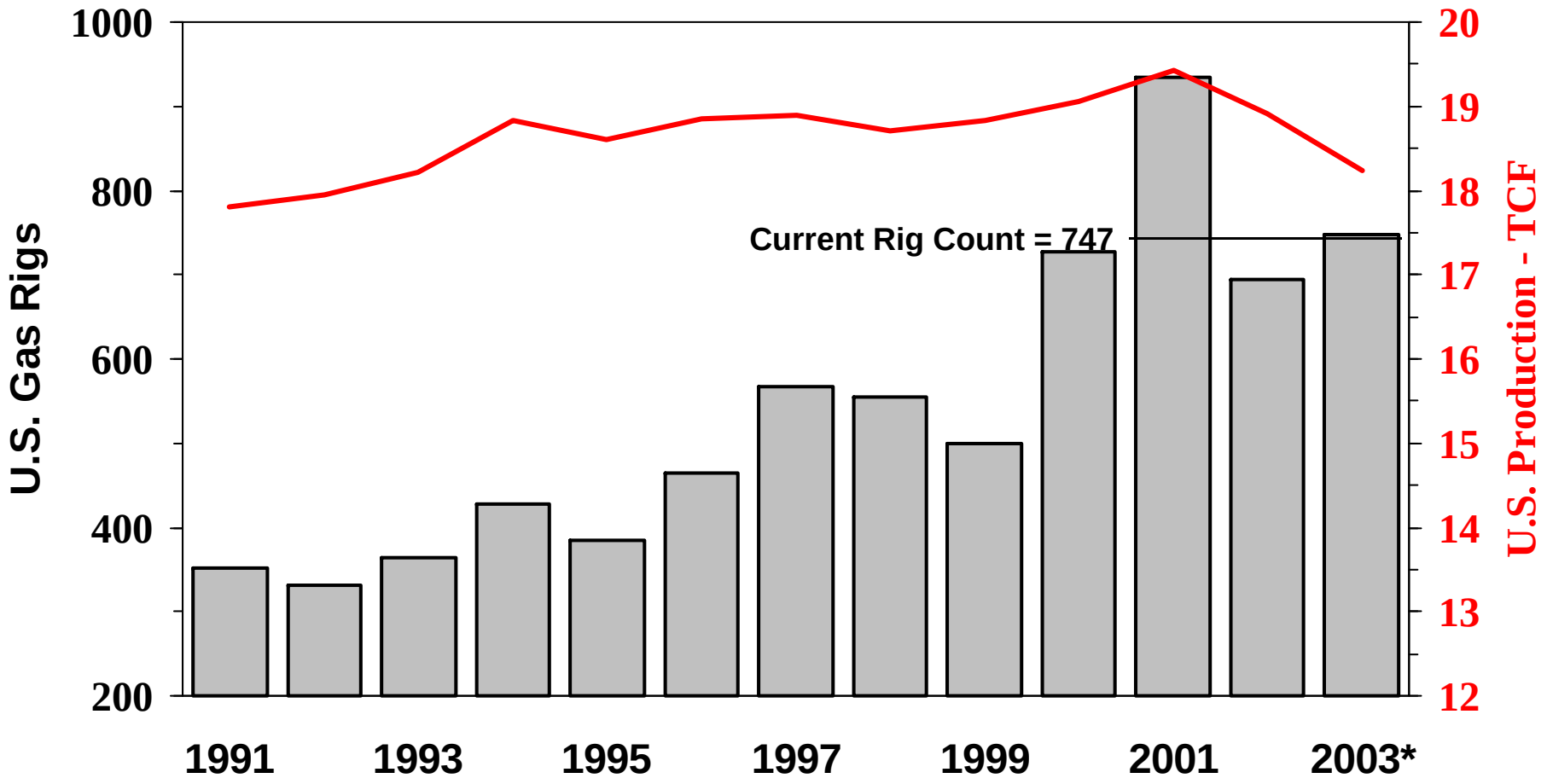
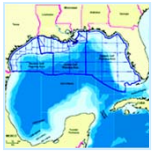
U.S. Rig Count and Production



*Avg. consultants estimate for 2003 U.S. Production



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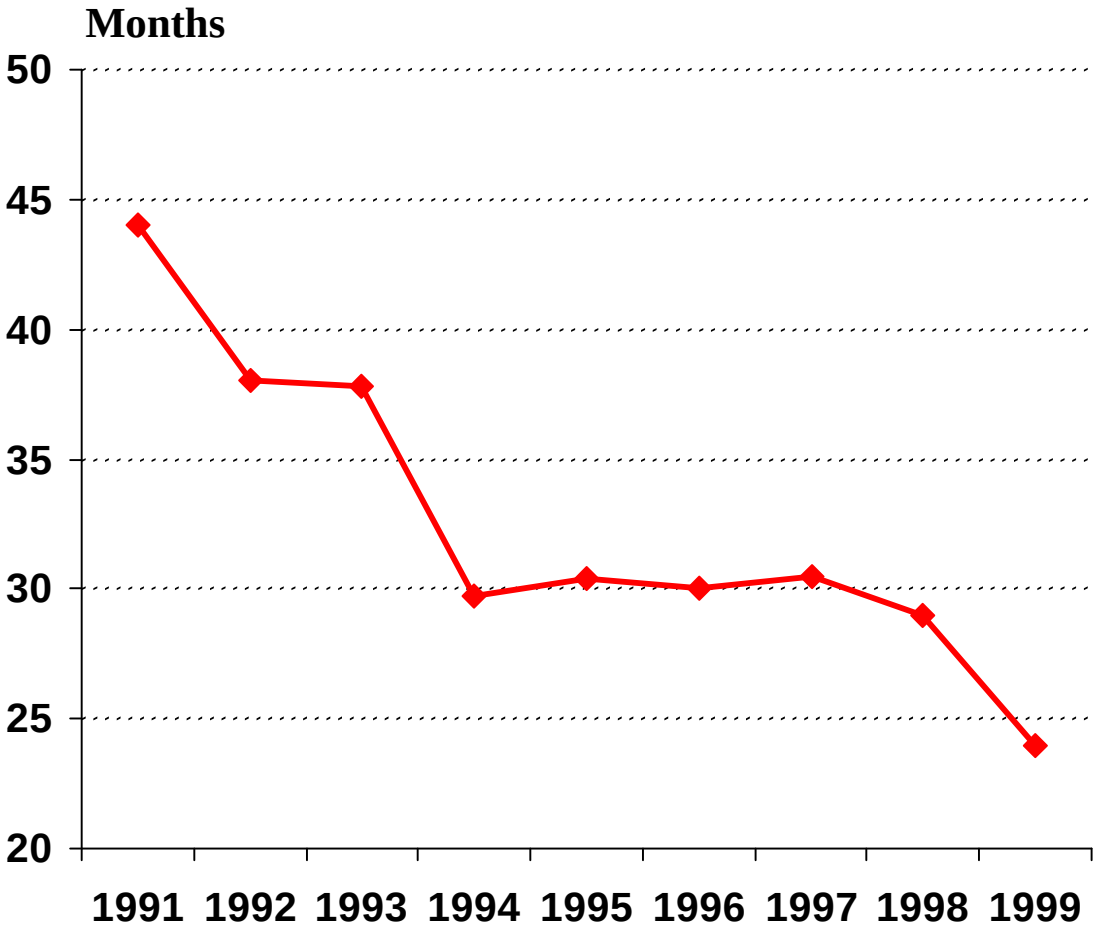
US well production half-life*



Source: EIA

- Natural gas well production rates have been declining steadily
- Rapid decline of productive capacity requires drilling more and more wells to maintain a given level of gas production

* Months to reach 50% of initial production rate

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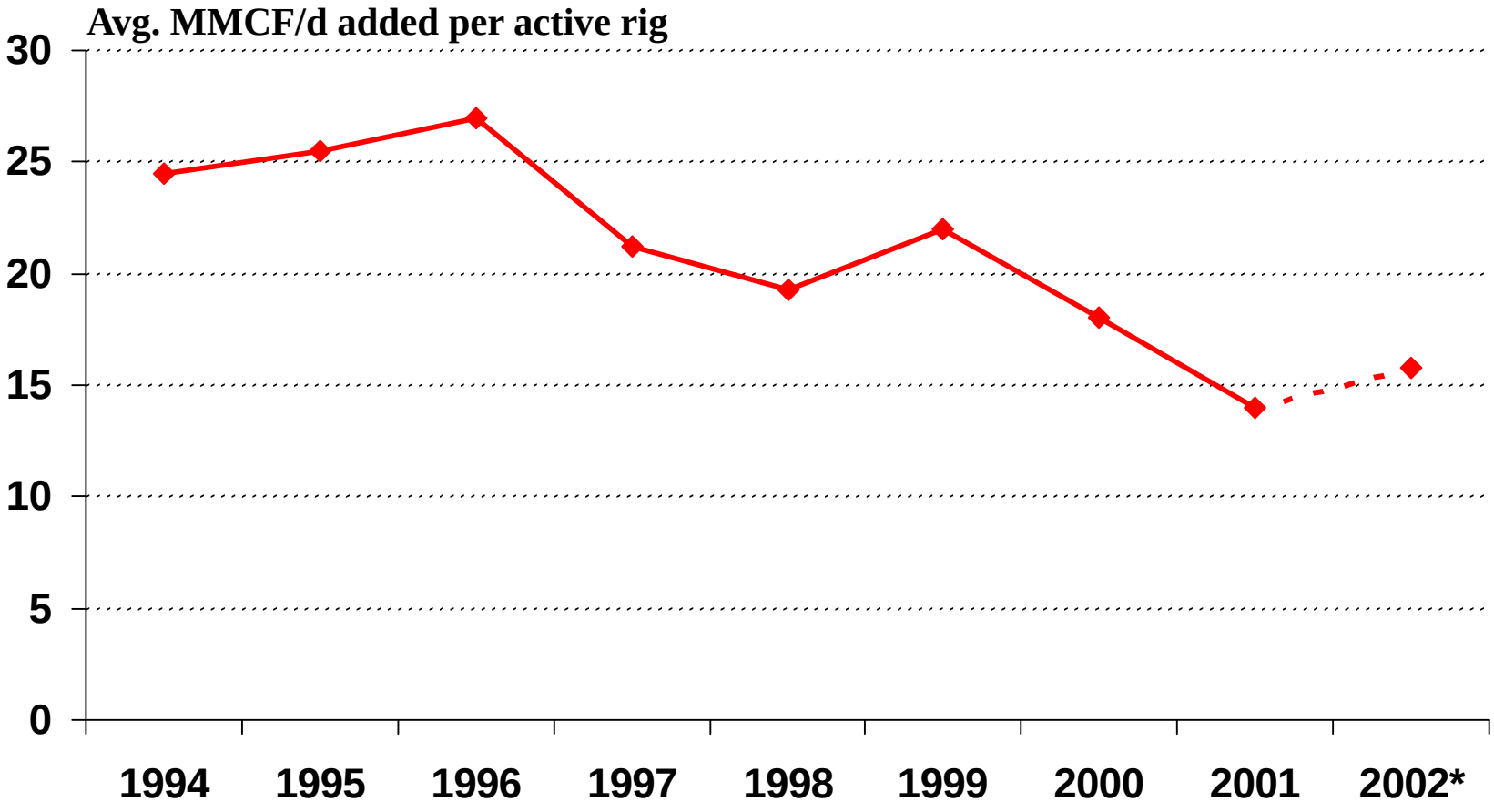
U.S. gas production additions per rig



Source: Salomon Smith Barney, Aug 16, 2002

** Estimate*

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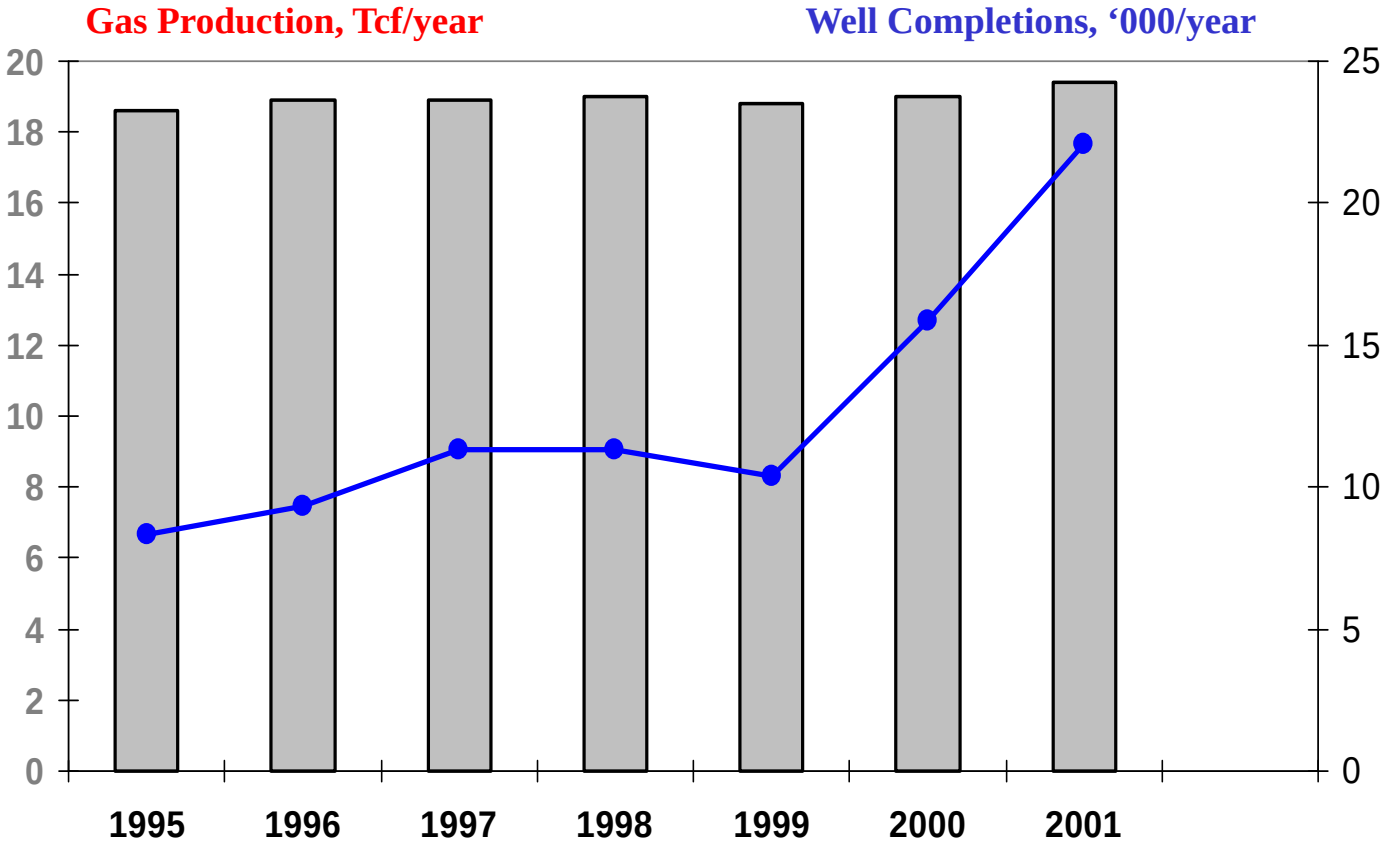
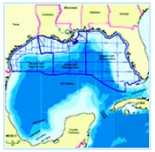
Drilling has failed to increase production



Source: EIA

- US gas production remained flat between 1995 and 2001
- However, it took a massive drilling effort to maintain the production flat



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Rig Counts Slow to Respond