

# <sup>AV</sup>Recent Exploration Performance – Evidence of a Downturn?

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## **Abstract**

This paper examines the new field discoveries of the last two-three years versus the previous ten years. It reviews the evidence of a decline in exploration performance.

While gross resource volumes discovered per year seem to be reducing, data for very recent finds is incomplete. This gives the possibility that the picture for 2003 and 2004 will improve.

It is certainly the case that discoveries are becoming harder to commercialize as there are fewer giant oil fields being discovered.

Furthermore, discoveries often feature relatively low value reserves from long lead time gas, heavier oil, deeper water, and harsher fiscal terms.

On balance, deepwater remains the most important source of new field reserves and is the main driver of value creation for much of the exploration industry. Success trends in these plays are a key indicator for future performance.

The overall effect is that the goal posts are moving for exploration companies. Many companies can no longer afford to view traditional exploration in isolation. Increasingly, it forms part of a broader resource capture strategy.

We review all these key aspects of exploration during this presentation and draw some conclusions that will be important to those companies interested in new discoveries and exploration performance.



## Recent Exploration Performance – Evidence of a Downturn?

<date/month>

Andrew Latham

# The market is asking fundamental questions of exploration

*The end of exploration  
as we know it?*

Bernstein Research Report, December 2004

*Who shot JR?*

Deutsche Bank Equity Research, June 2004

*Spend Spend Spend: It was  
another impressive year for  
exploration spending in 2004*

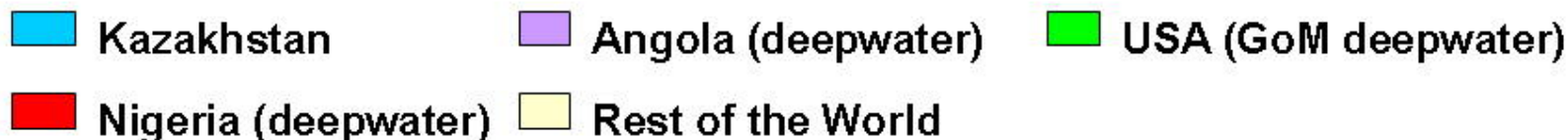
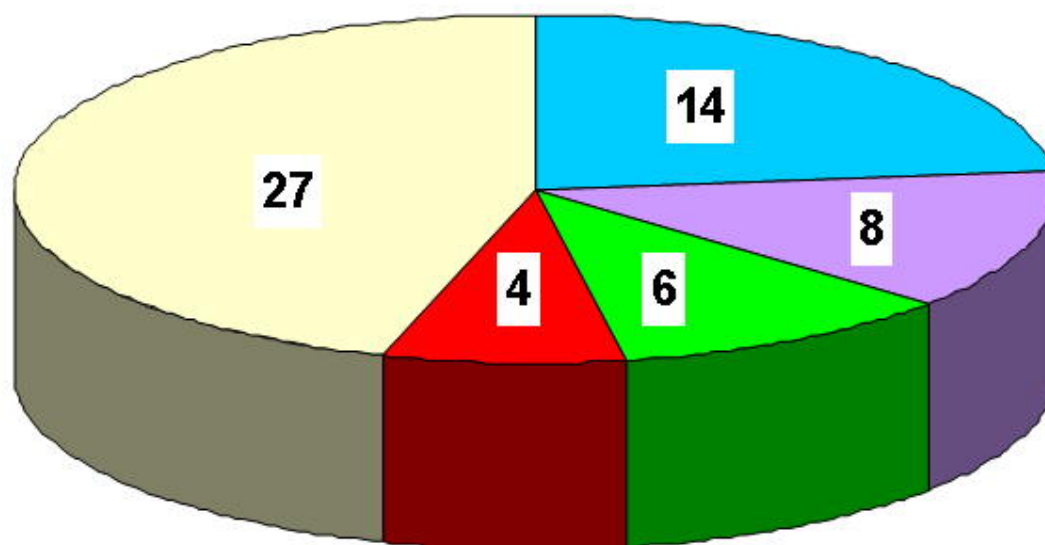
Petroleum Economist, February 2005

*Oil & Gas Exploration  
- Catching a crab?*

Deutsche Bank Equity Research, February 2003

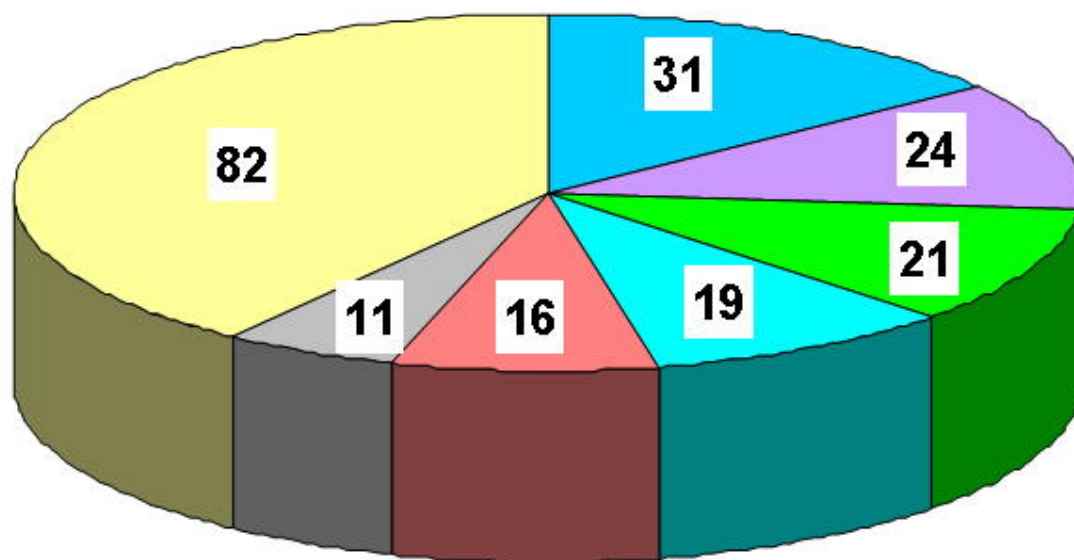
## The ten-year view looks rosy with a lot of oil found

**Commercial Oil Reserves Discovered by IOCs 1994-2003**  
**Total = 60 billion boe**



## Exploration has also discovered a lot of commercial gas

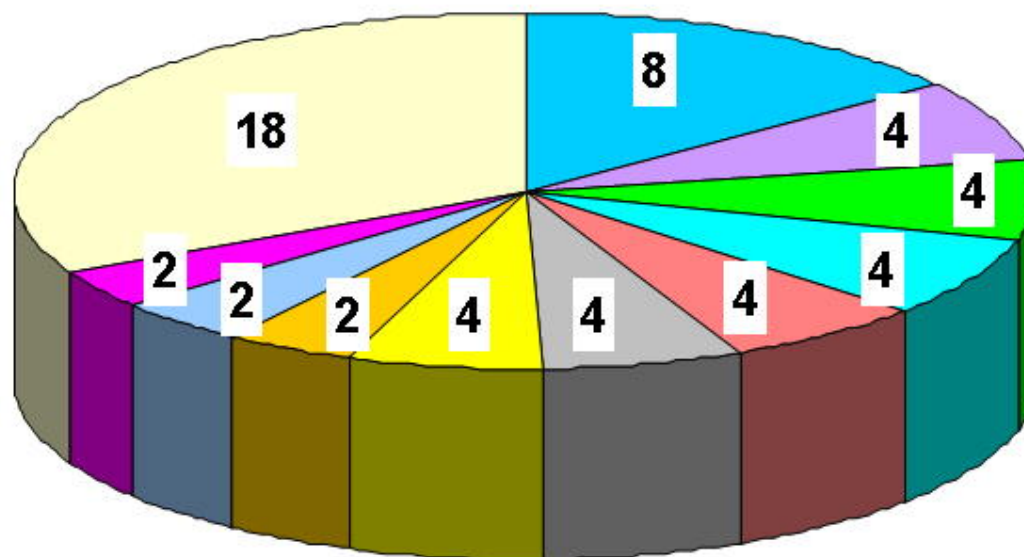
**Commercial Gas Reserves Discovered by IOCs 1994-2003**  
**Total = 200+ tcf**



## And exploration has also discovered a lot of resource

### Technical Reserves Discovered by IOCs 1994-2003

Total = 56 billion boe



Australia (offshore)

Indonesia

Nigeria (deepwater)

Angola (deepwater)

Bolivia

Azerbaijan

Egypt

Norway

Malaysia

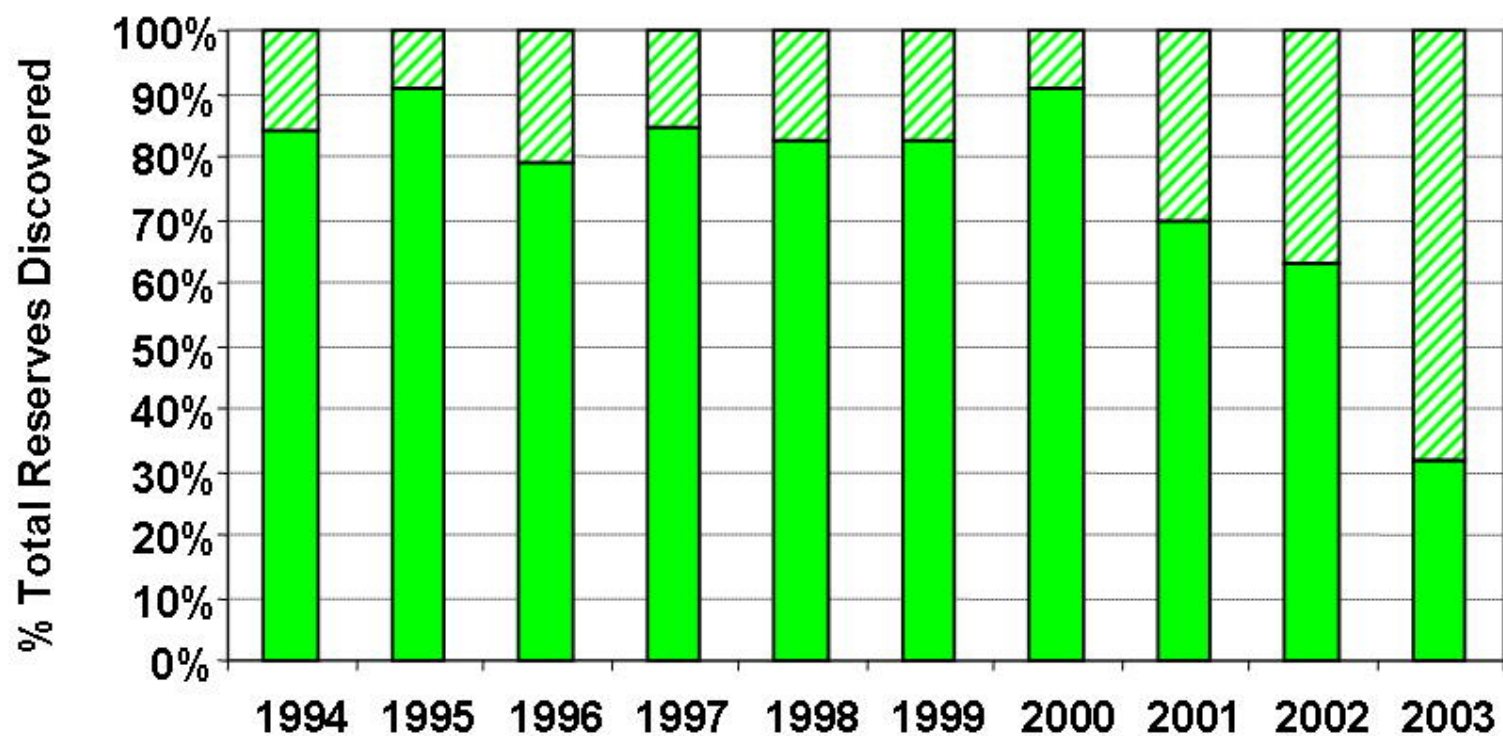
USA (GoM deepwater)

Rest of the World



## But is there a trend of declining quality of discoveries?

*Oil Reserves Discovered by Exploration Drilling*

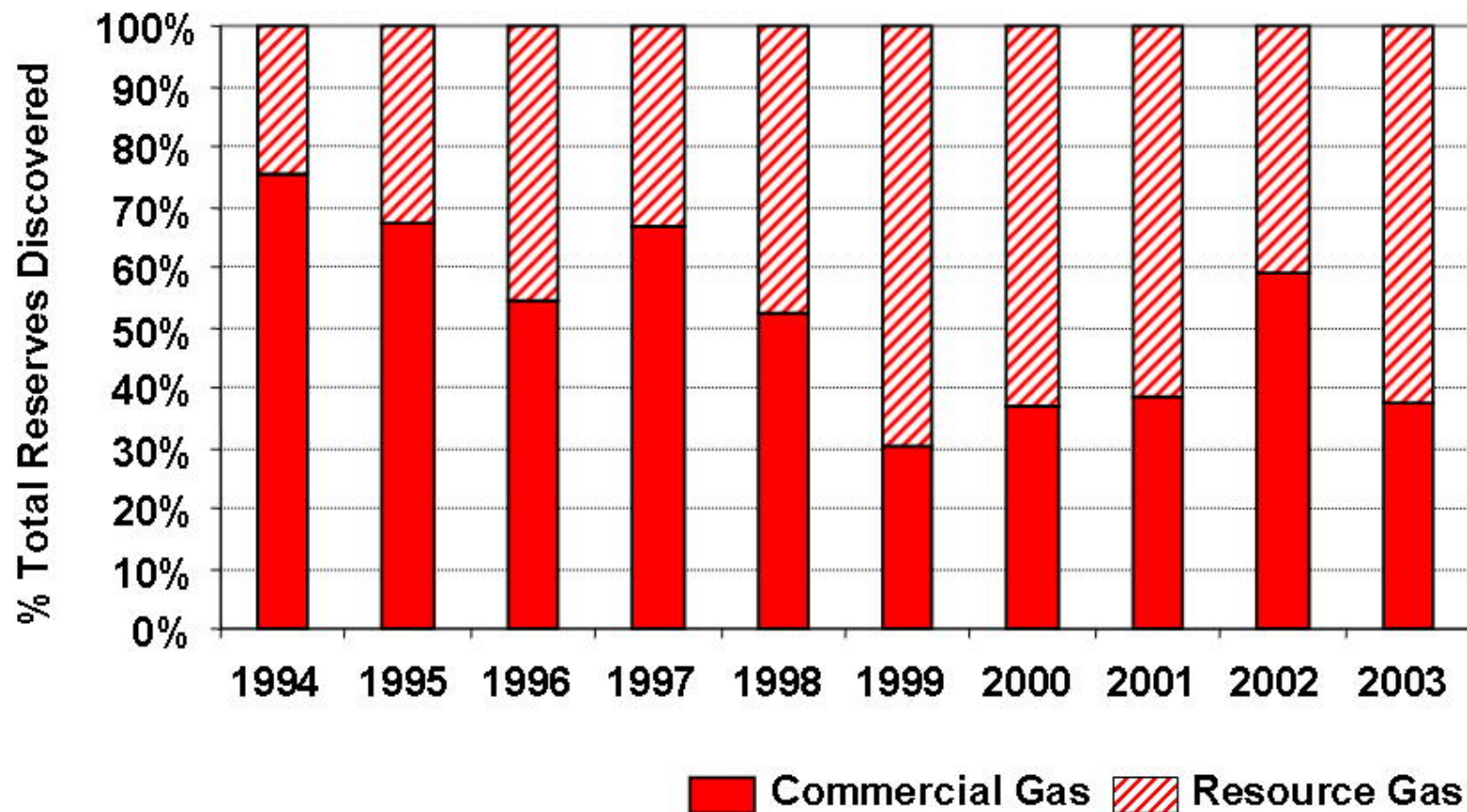


**Commercial = 77% of Total**

Commercial Oil  Resource Oil

## With gas much harder to commercialise quickly

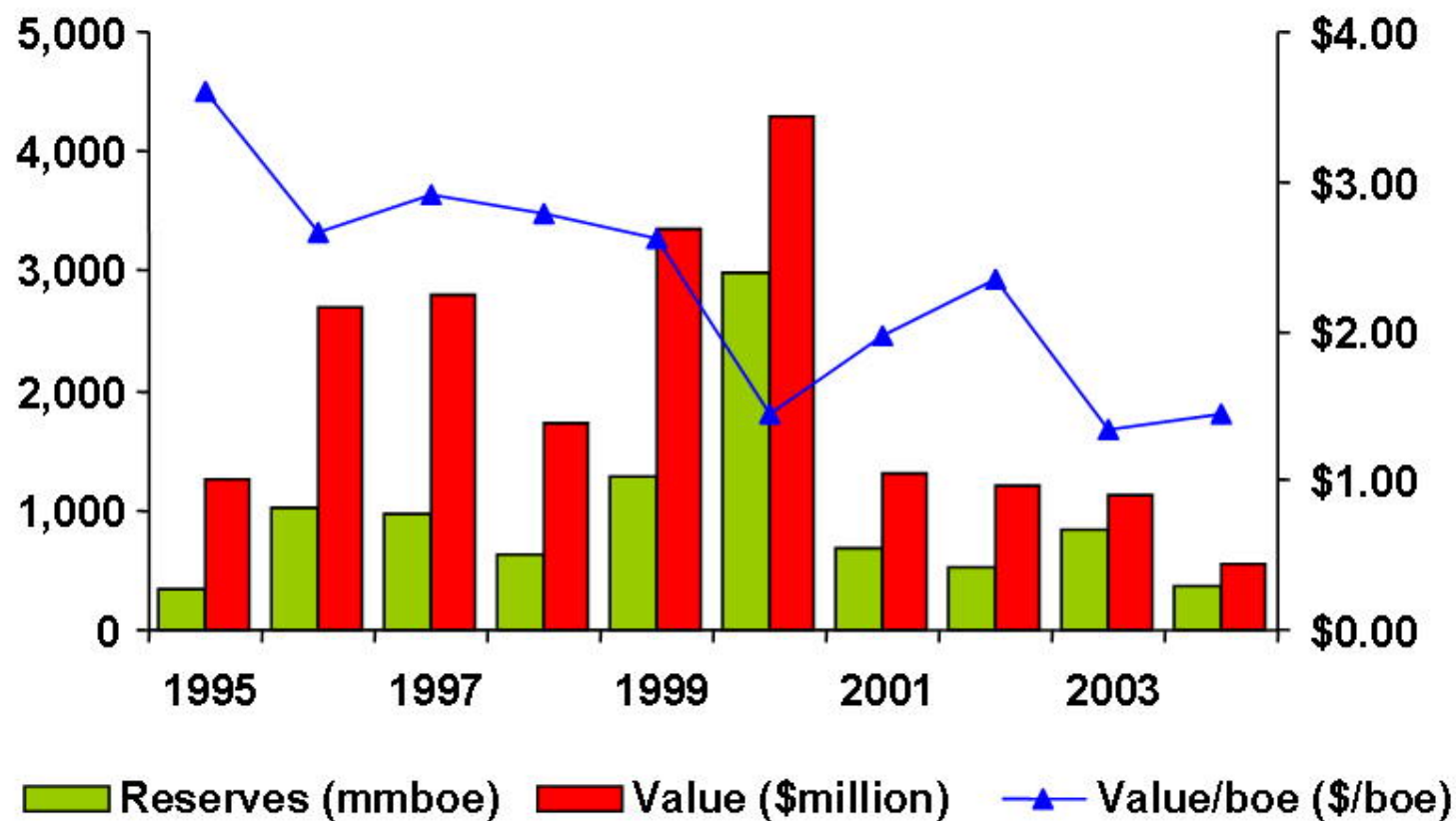
### *Gas Reserves Discovered by Exploration Drilling*



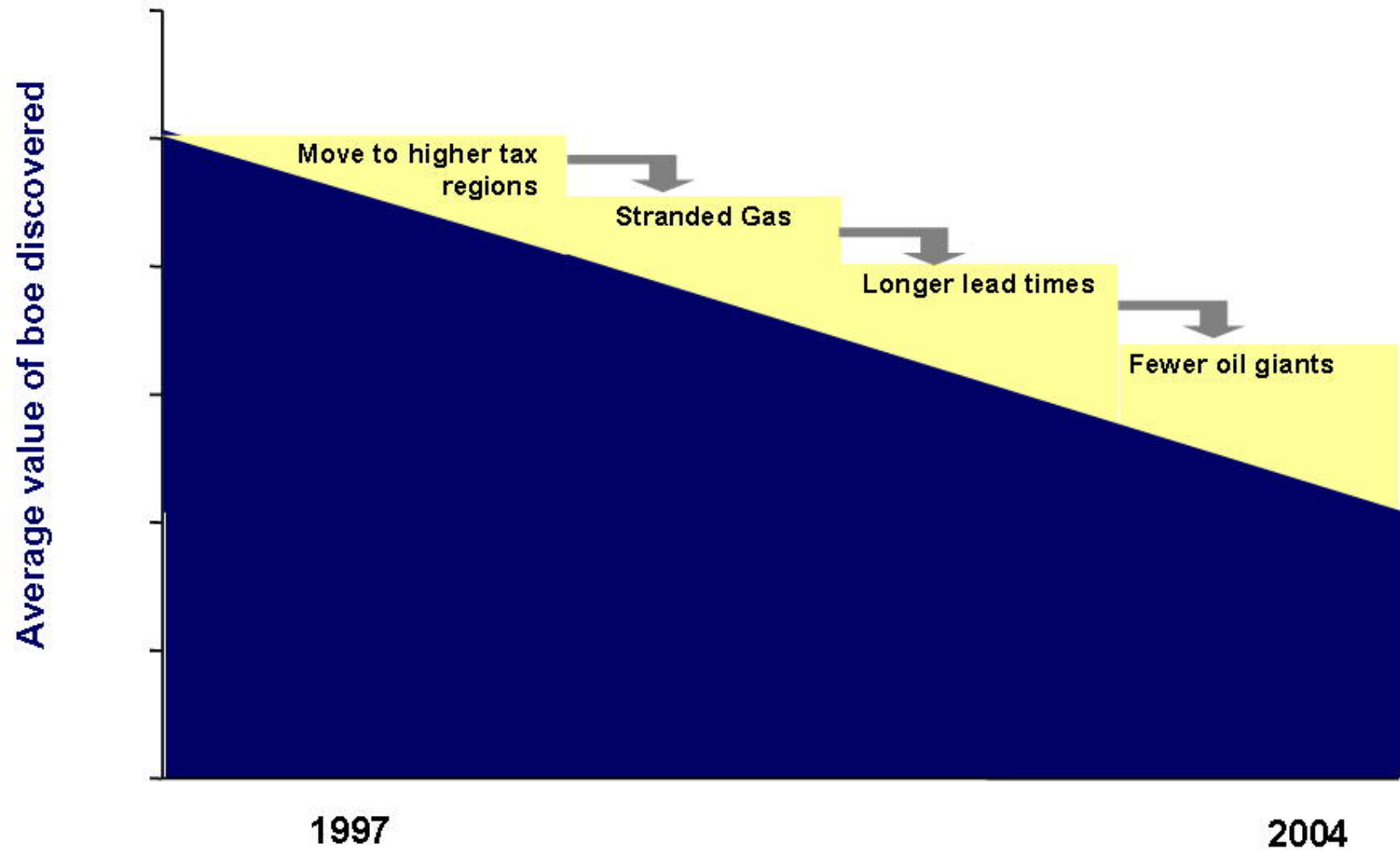


## Lower “commerciality” means lower value

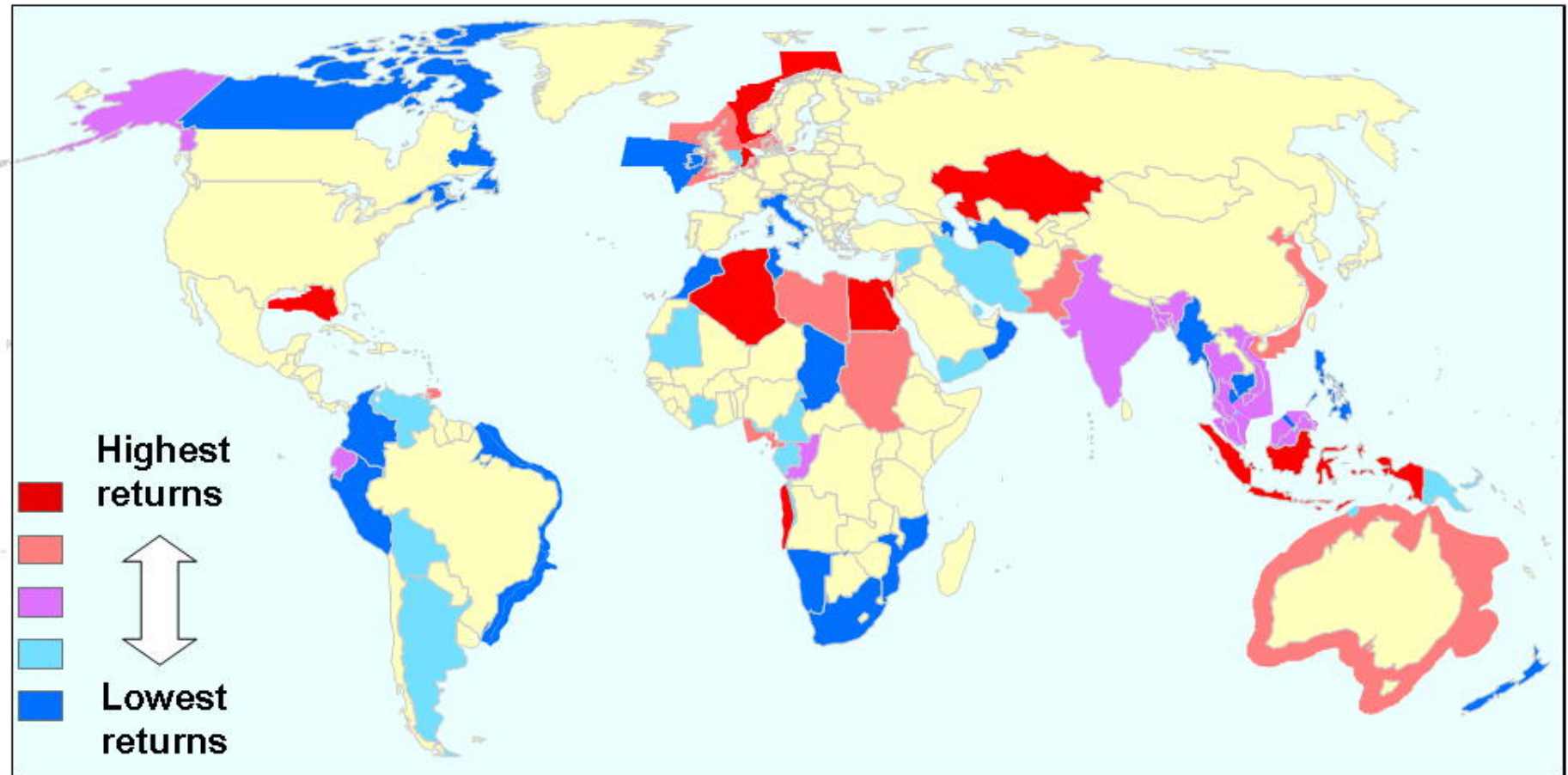
***Example company results – new fields discovered 1995-2004***



## Several factors contribute to a decline in reserves quality

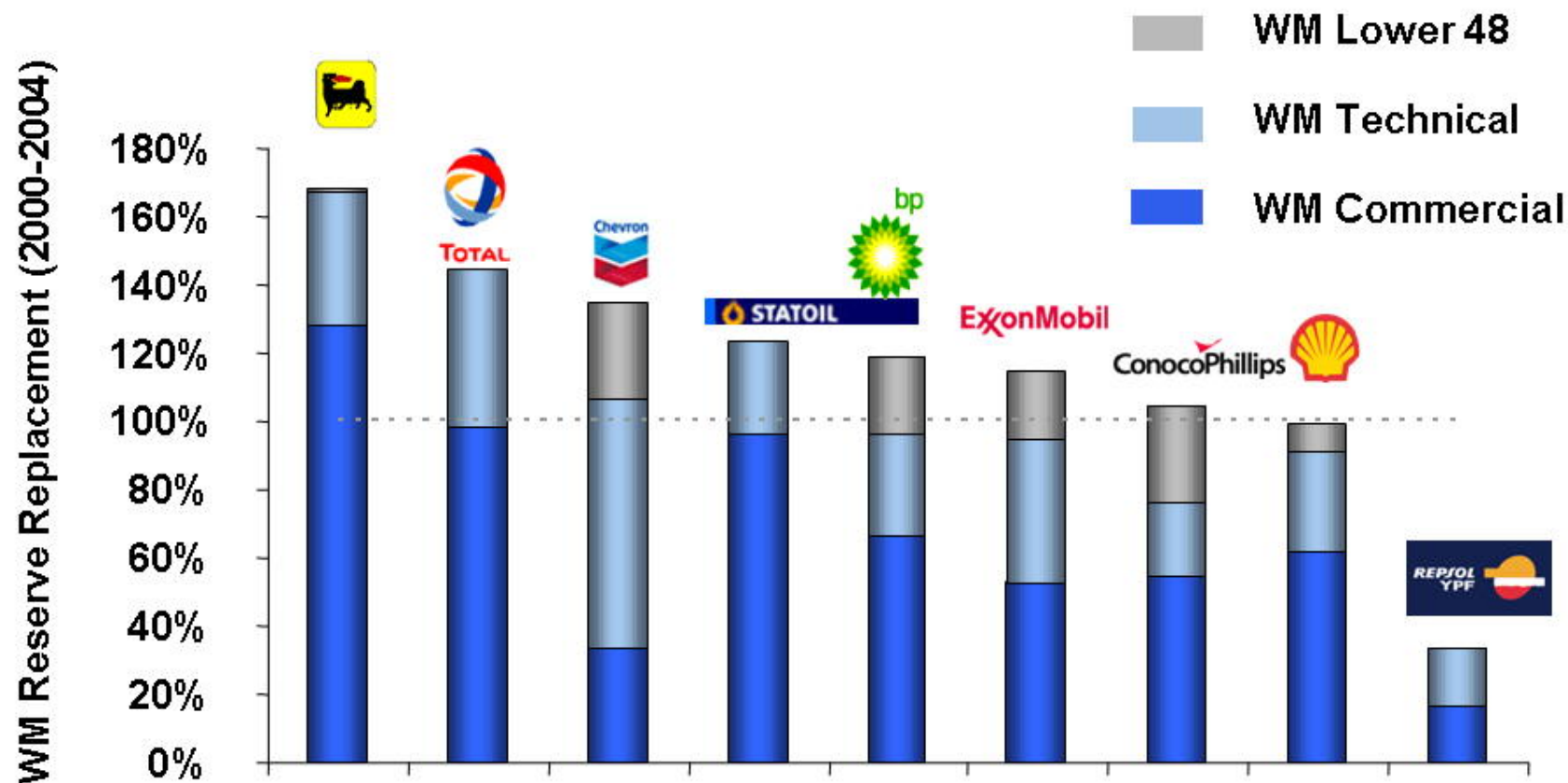


## Exploration value creation is localised



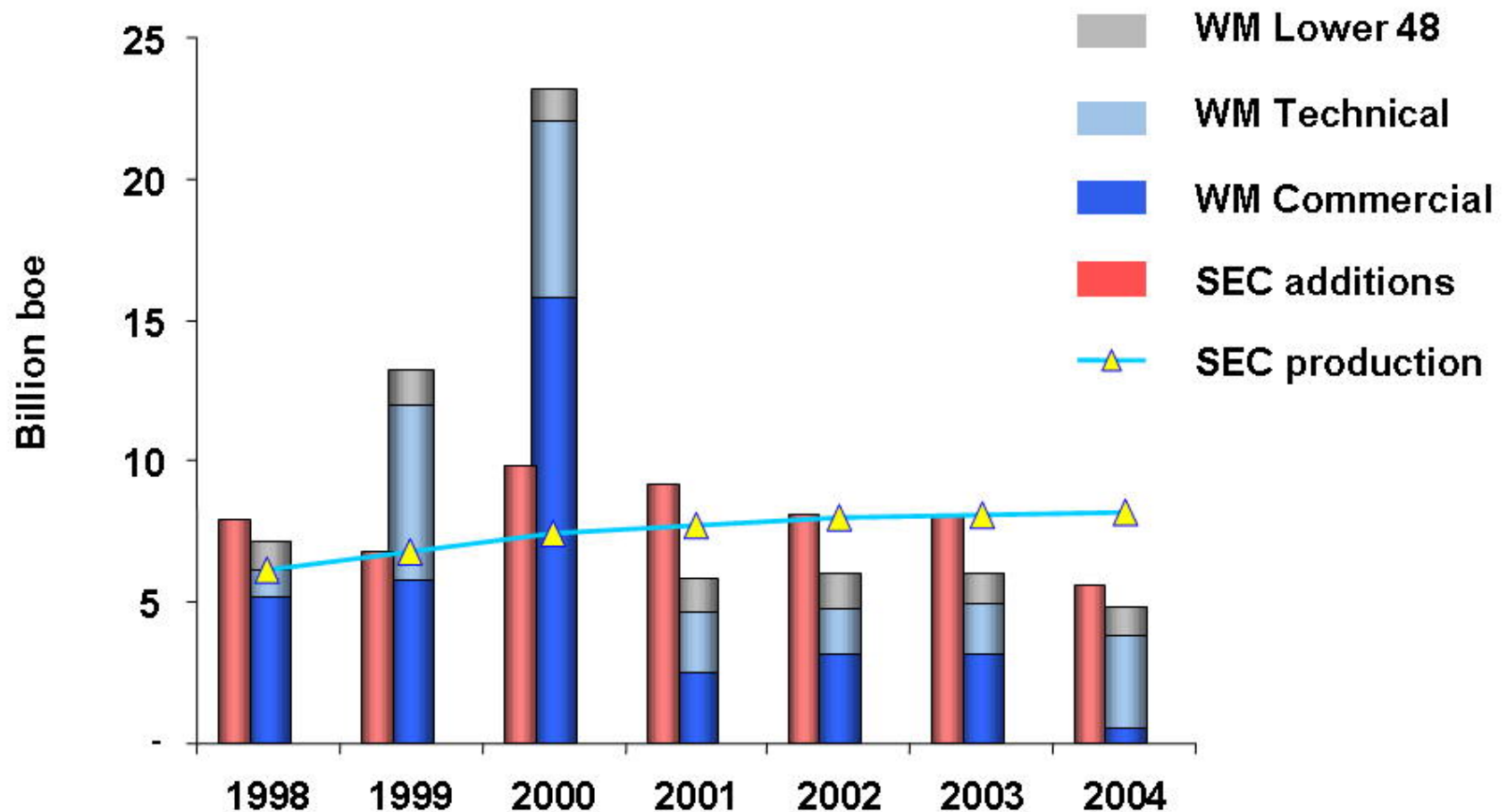
Source: Wood Mackenzie Global Oil & Gas Risks and Rewards

## For the Majors, 5-year exploration results look OK



Source: Wood Mackenzie working interest reserve estimates

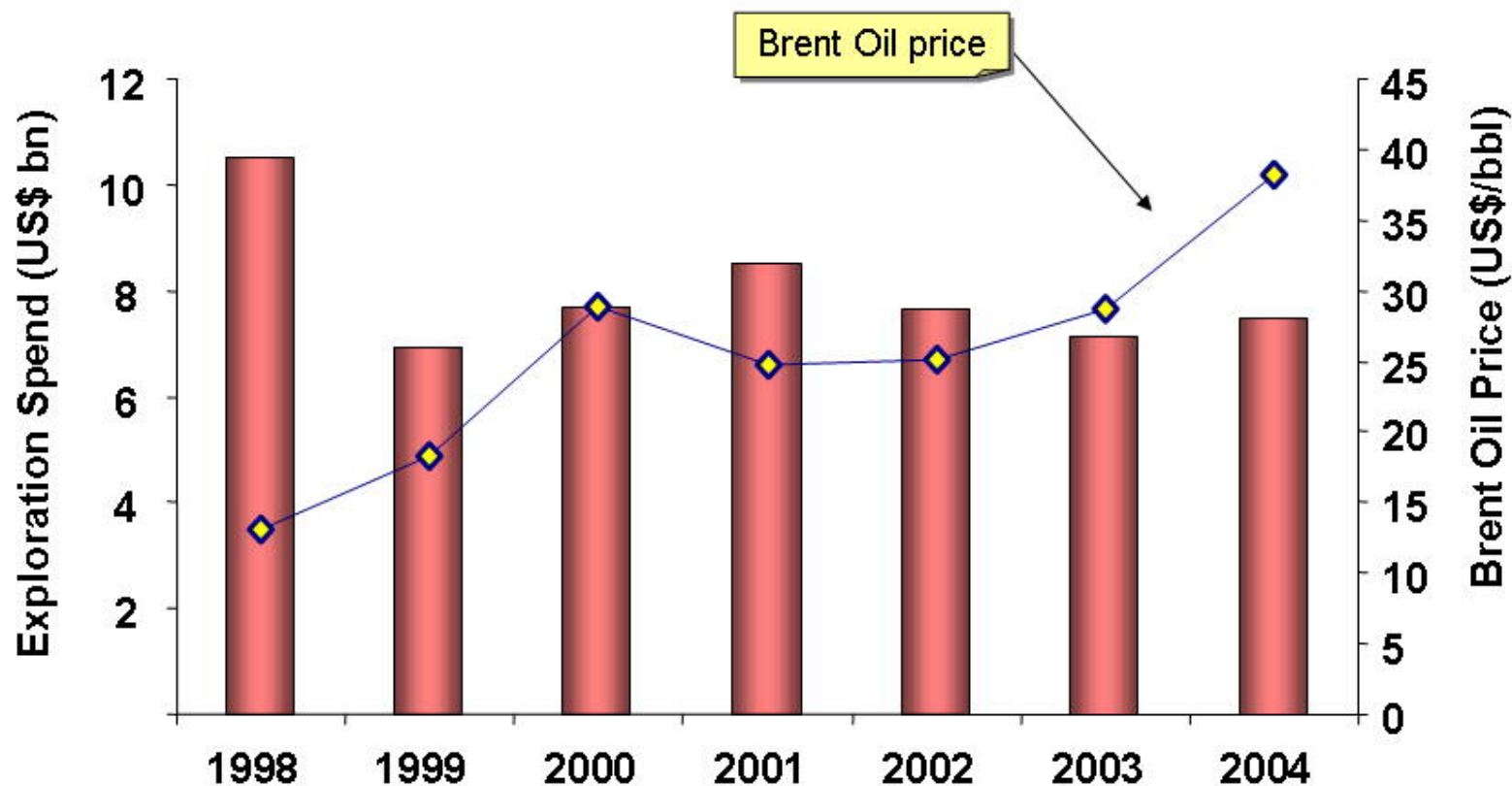
## ...but their very recent exploration results have been poor



Companies: BP, Chevron, ConocoPhillips, ExxonMobil, Eni, Repsol-YPF, Shell, Statoil and Total  
 Source: Wood Mackenzie, company reports

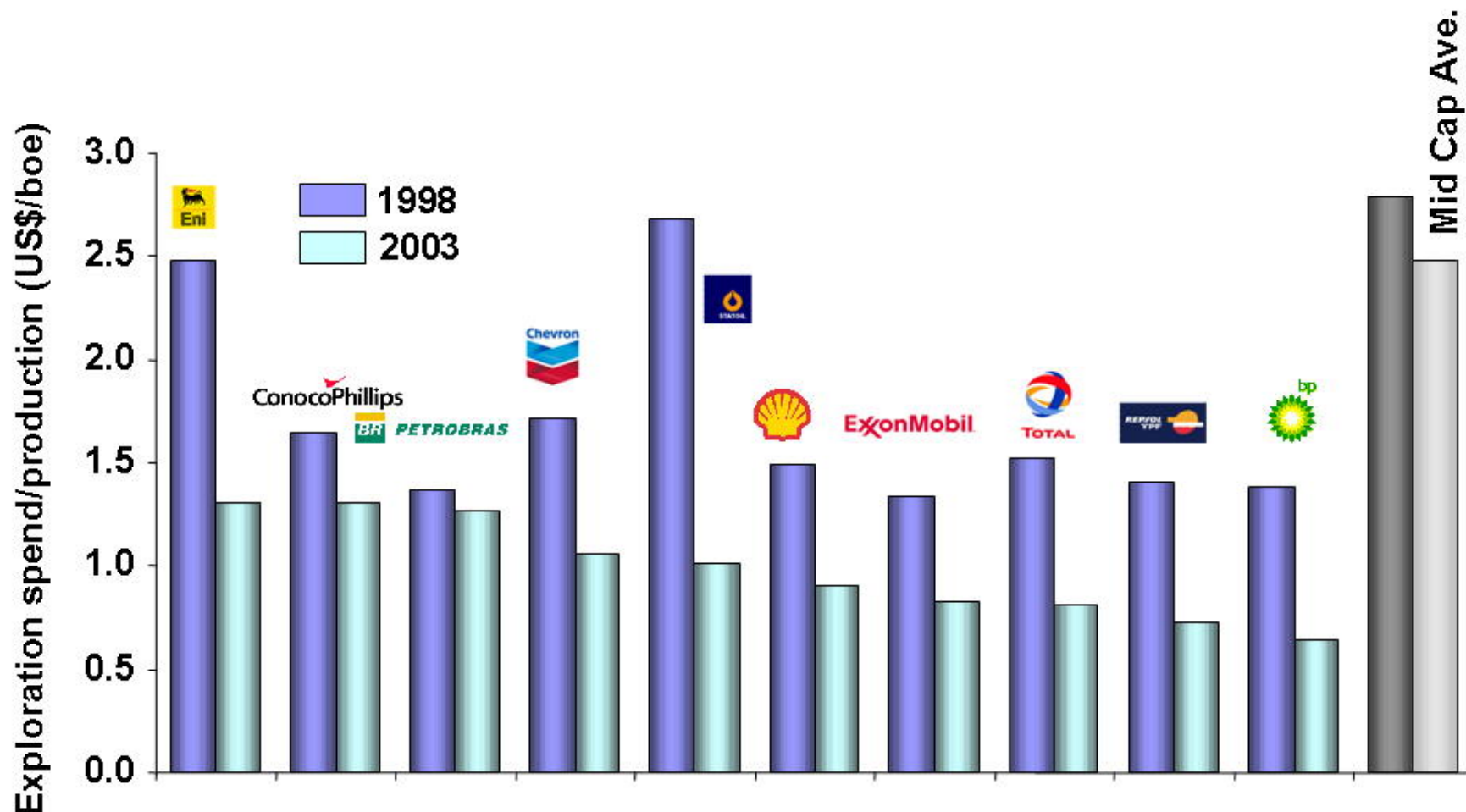


## The Majors are not spending price windfall on exploration



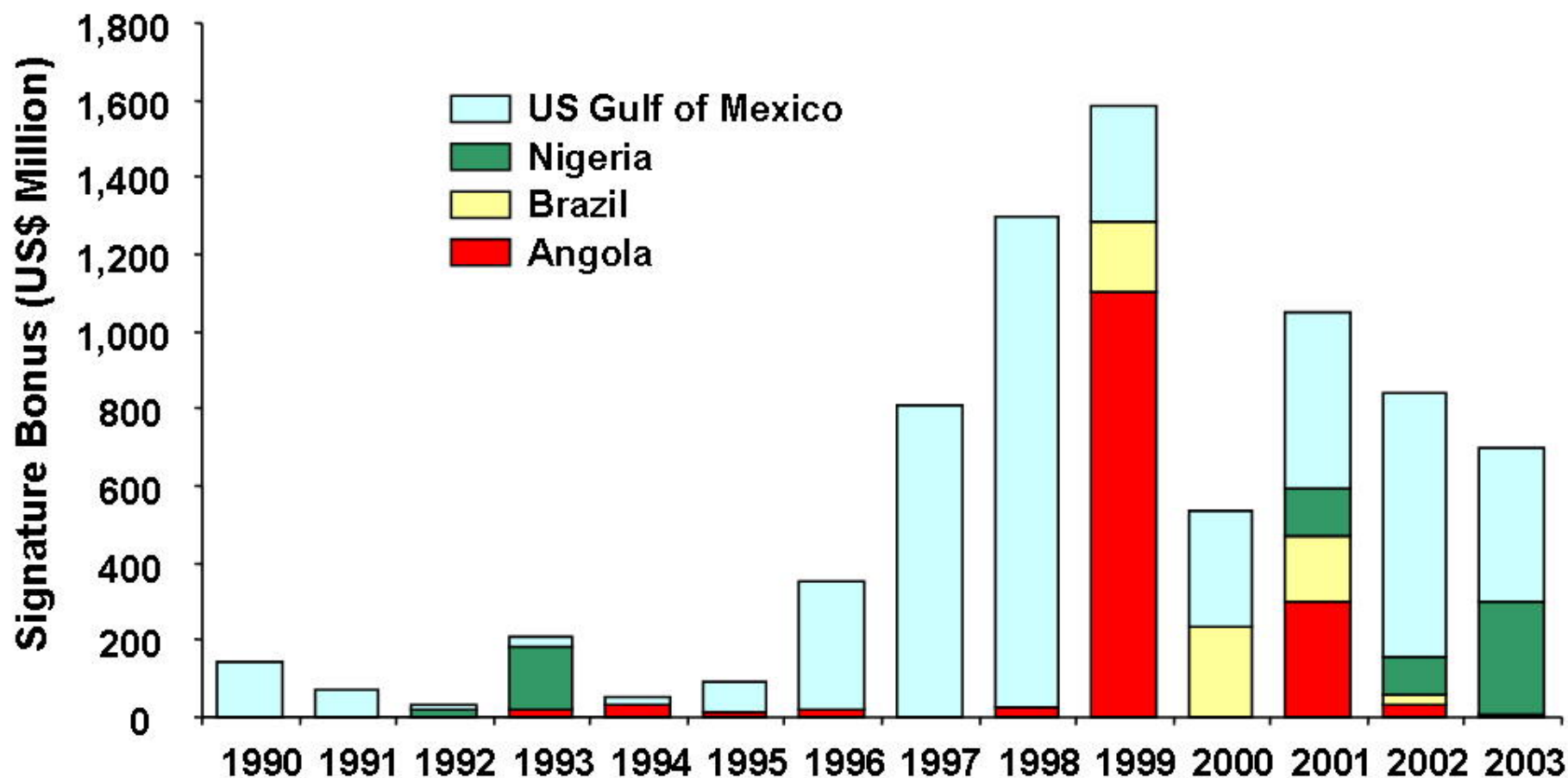
Source: company annual reports (BP, Chevron, ConocoPhillips, ExxonMobil, Eni, Repsol-YPF, Shell, Statoil and Total). Consolidated subsidiaries only

## Relative exploration investment is way down

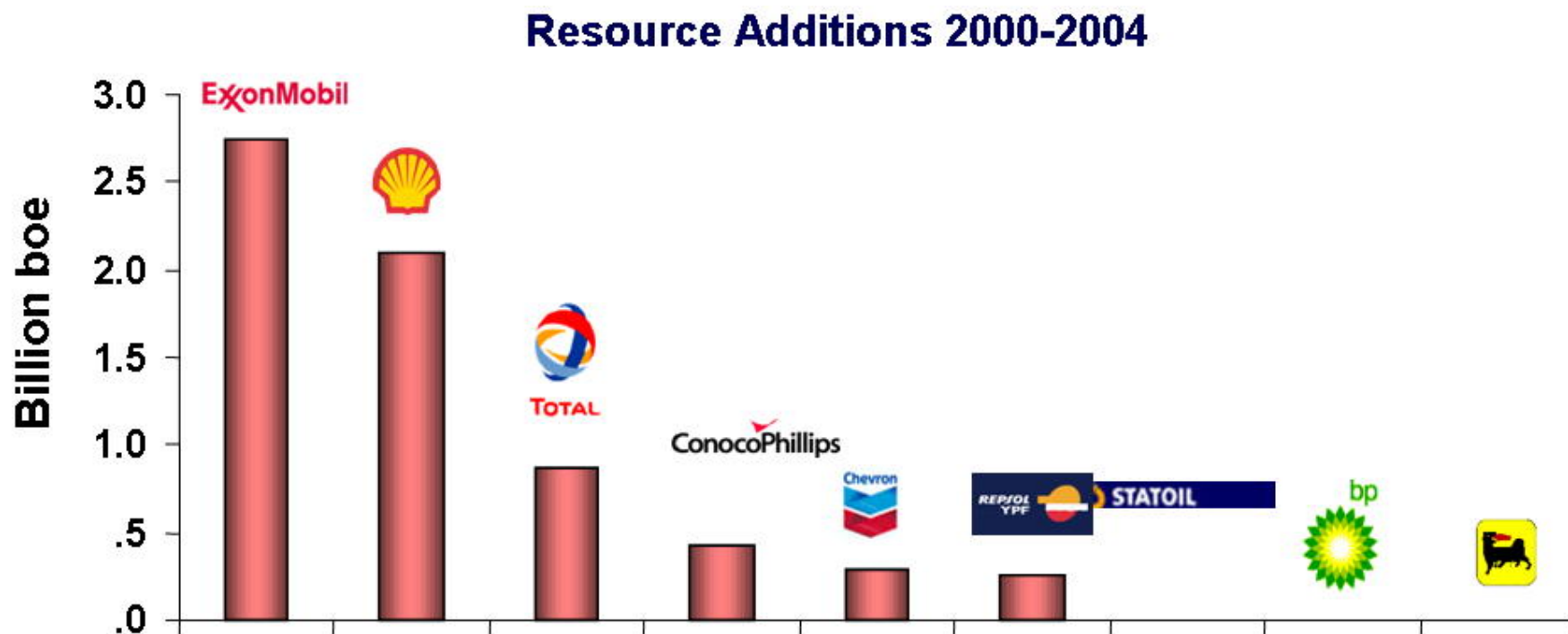


Source: Company reports / Mid-cap average based on peer group of 14 Wood Mackenzie Tier 2 companies

## Opportunity constraint is part of the issue




## And exploration is not the whole organic story...



Source Wood Mackenzie estimates

Resource additions includes access to reserves that are already discovered, including heavy oil and award of development contracts

## Conclusions – exploration performance

Last ten years:  

Last five years: 

Last two years:

?

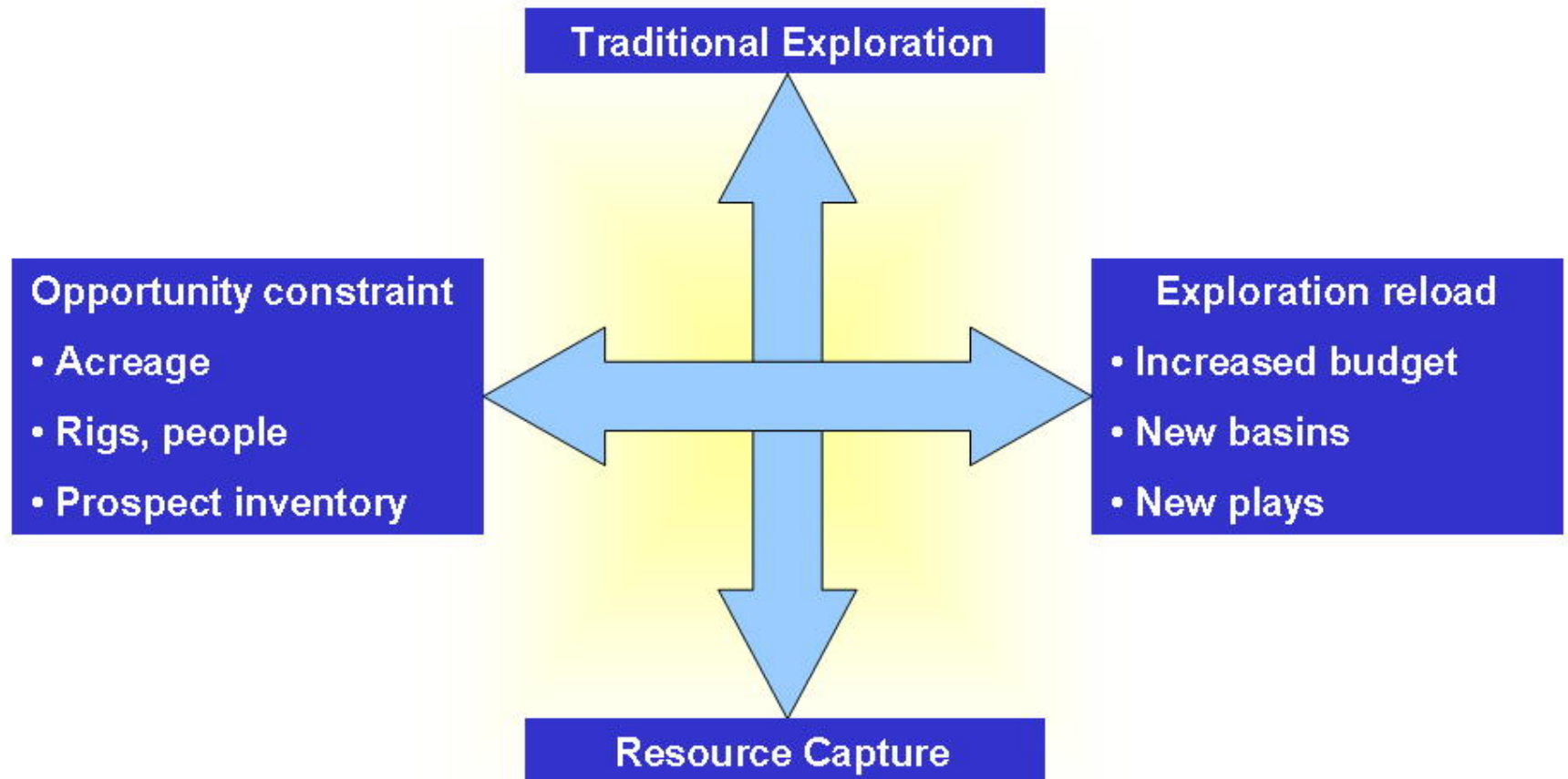
Incomplete data

Expect current estimates to increase

**Exploration is still the main source of organic growth even for the largest Majors**



## Future exploration strategies – varied and complex





**Thank you for your attention**

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