

# Rising capital costs – Are we there yet?

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# What's Happening?



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## Latest News

### Hurricane Fears Slow Down GOM Drilling

Jack-up rigs are seeing a reduction in costs due to the turn down

### Korean shipyards receive Orders of \$2.5 bil.

Investments in Korea exceed \$2.5 bil. for all types of vessels

### End of 2006 Slowdown in Drilling

Companies are now slowing their drilling down in the last months of 2006 due to increased spending on rigs earlier in the year

### Drop in Gas Prices Slows Projects

The reduction in gas prices means that some of the projects planned no longer met the economic returns required

### Larger Oil Companies Focusing on Deepwater

The demand for large Independents and mid-size independents for drilling of deepwater projects has increased demand on the higher class of drill rigs and ships. These projects require considerable investment levels and challenging technology.

### 23 Jack-Ups to Middle East

The slow down in Jack up drilling this summer has led to 23 rigs being relocated to the Middle east to exploit higher drilling day rates

### Upstream Costs Keep Pace with Oil Price Increases

Increased costs for new oil and gas developments have risen to such an extent that the increase in prices is not showing the initial expected increase in project investment values initially anticipated.

## The Problem as We See It

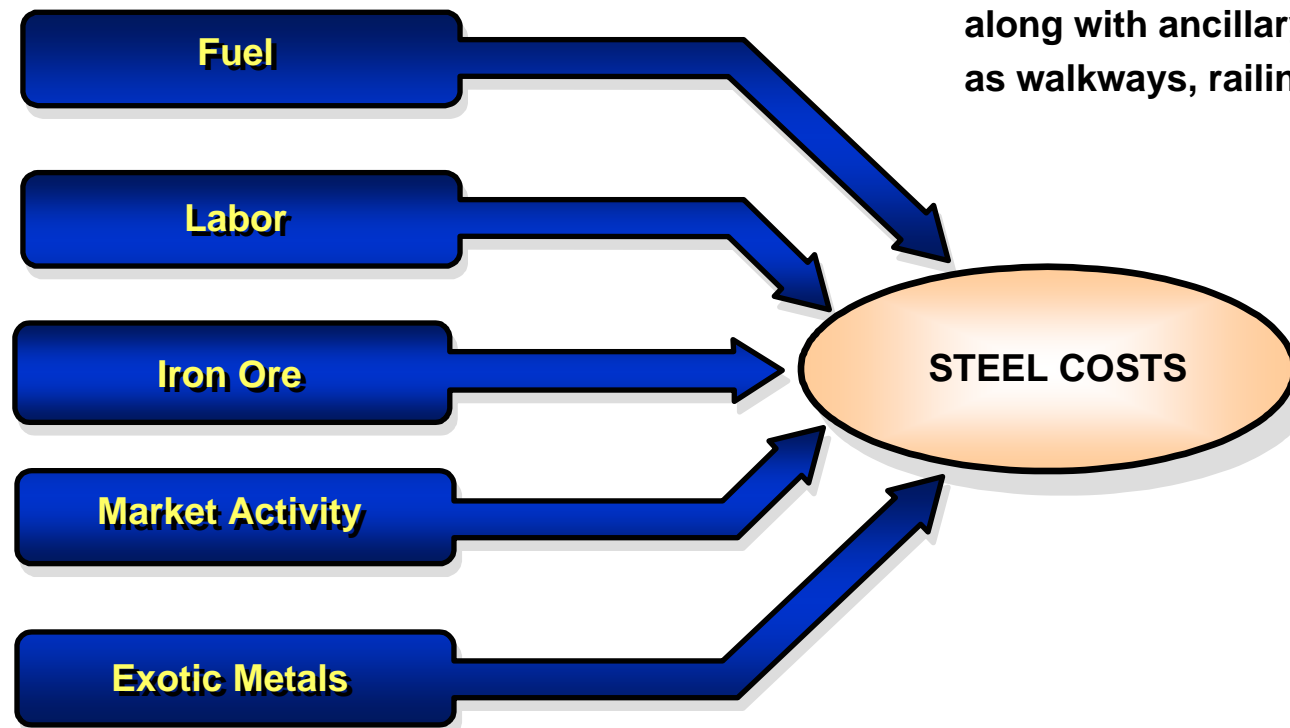
- Project construction **costs have escalated dramatically** above long-term averages
- It is **uncertain to what extent this trend will continue**, moderate, or enter a period of heightened volatility
- Due to the number of variables (e.g., labor, steel, etc) and the perspectives (e.g., regional, by project type, etc) associated with this issue it is often **difficult to discuss from a strategic, integrated point of view**

# Input Markets Tracked and Forecast

- **Rigs**
- **Yards and fabrication**
- **Offshore installation**
- **Vessels**
- **Land rigs**
- **Engineering and project management**
- **Steel**
- **Equipment**
- **Bulk materials**
- **Labor**

# The Steel Market

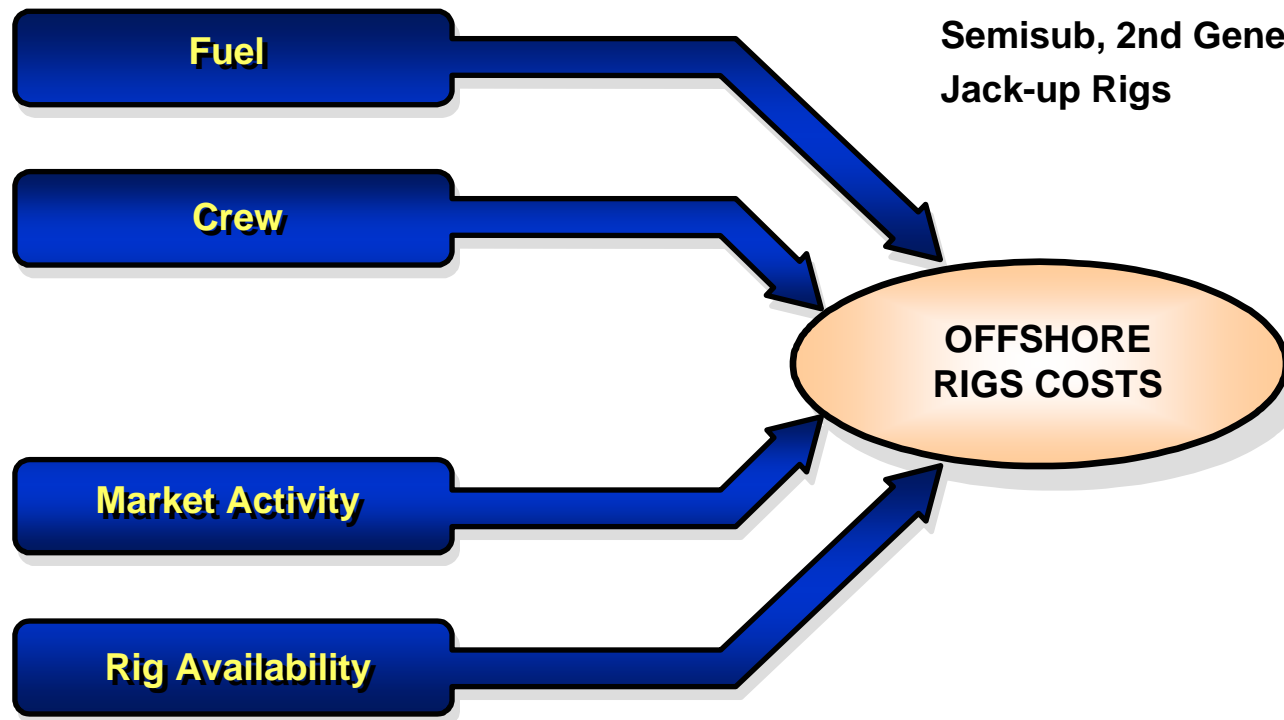
Steel market includes structural beams and sections, cast steel shapes, plate steel and pressed forms, and tubulars, along with ancillary components such as walkways, railings, and ladders.



**Market Driver**

# The Offshore Rigs Market

Offshore rigs market includes Drillship, 5th Generation Semisub, 4th Generation Semisub, 3rd Generation Semisub, 2nd Generation Semisub and Jack-up Rigs



**Market Driver**



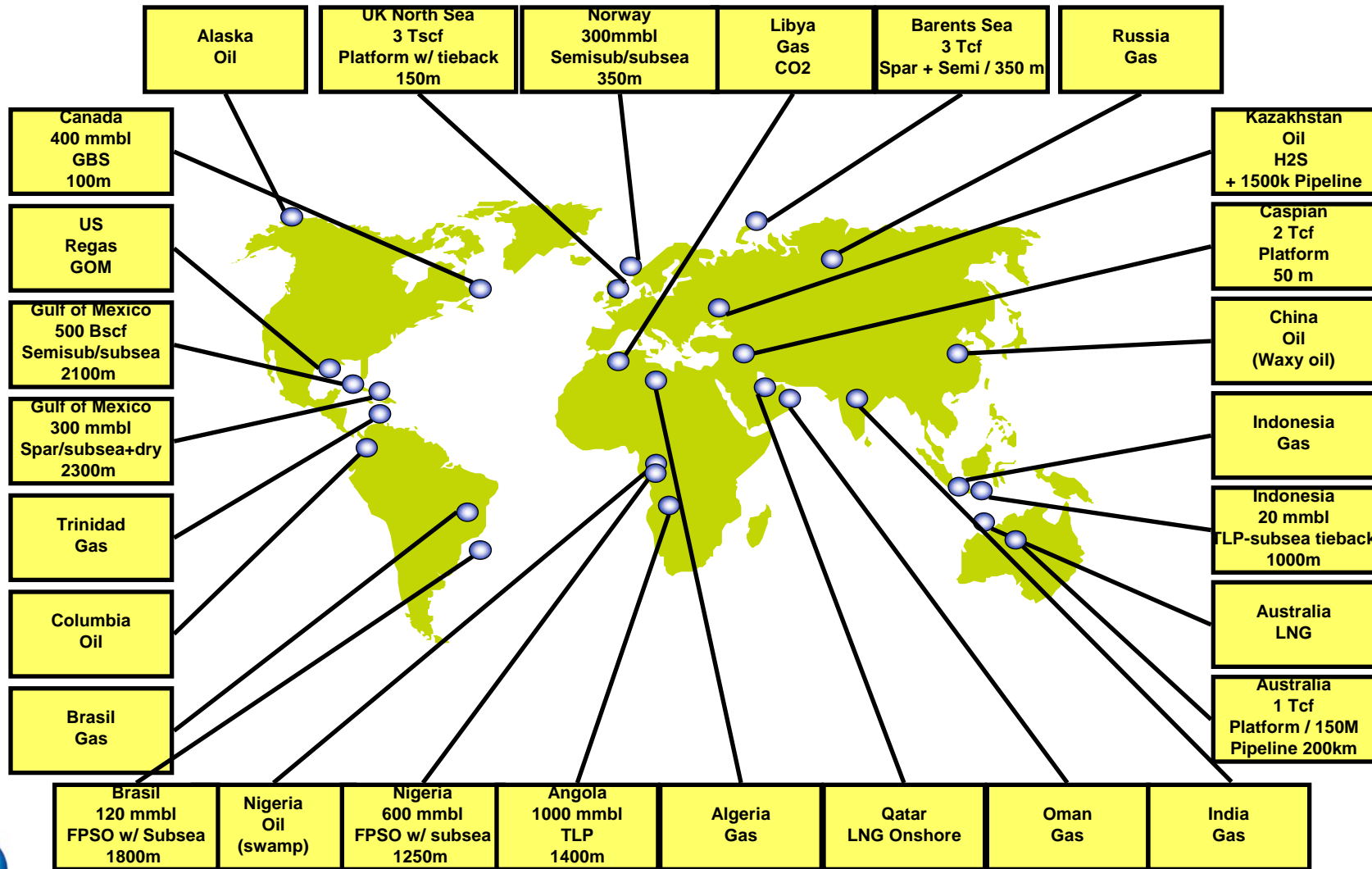
Source: Cambridge Energy Research Associates.  
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# CCAF Total Portfolio Index

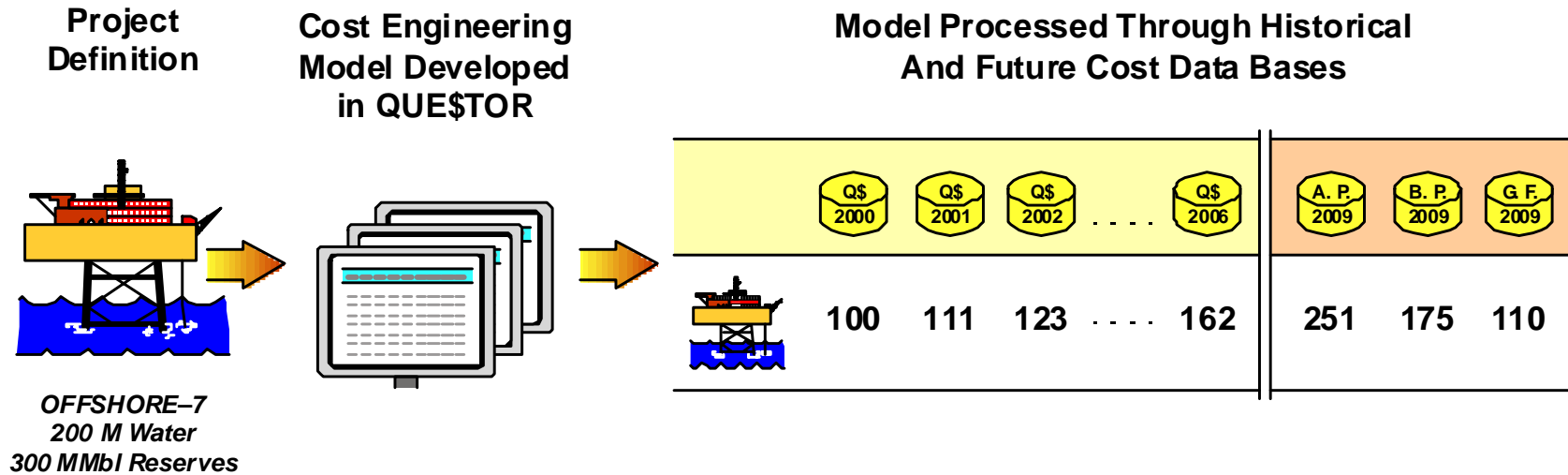


Source: Cambridge Energy Research Associates.

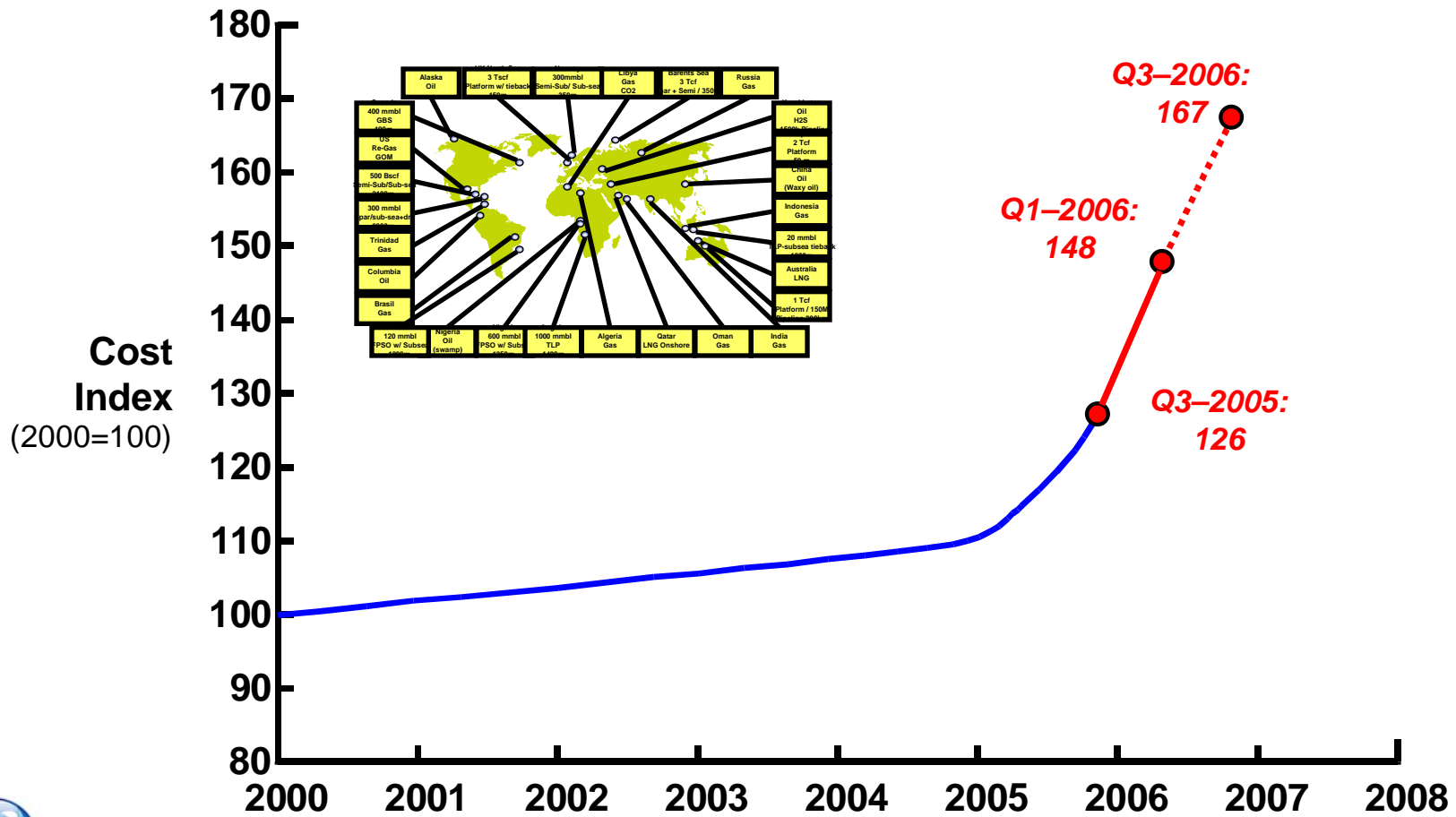
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# Model Development and Data Processing



# IHS-CERA Project Capital Cost Index



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## Summary of CCAF Indices

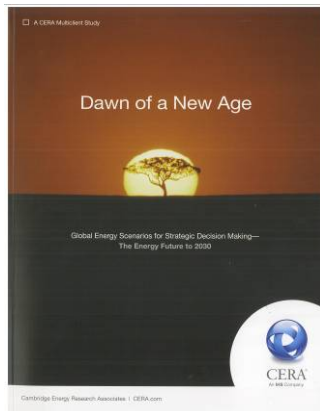
	Q1 2006	Q3 2006	Increase Q3 '05 – Q1 '06	Increase Q1 '06 – Q3 '06
<b>Total Portfolio</b>	<b>148.0</b>	<b>167.4</b>	<b>17.4%</b>	<b>13.1%</b>
<b>All Offshore</b>	<b>155.0</b>	<b>175.6</b>	<b>20.7%</b>	<b>13.3%</b>
<b>Deep Water</b>	<b>160.9</b>	<b>185.1</b>	<b>20.2%</b>	<b>15.0%</b>
<b>All Land</b>	<b>129.7</b>	<b>146.9</b>	<b>8.4%</b>	<b>13.3%</b>

# Building the Future



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# CERA Long-term Energy Scenarios



## About the CERA Global Energy Scenarios

- Supported by 73 corporations and governments
- Over \$3 mil. investment
- 10,000+ man-hours of research
- Integrated view on oil, gas, power, and carbon
- 25-year horizon
- 7 separate regions studied
- 400+ pages of data, analysis, and narrative

## Scenario Story Lines



**ASIAN PHOENIX.** Center of economic and political gravity shifts to Asia. Strong growth in China and India puts them on a path to eventually challenge the United States for global economic pre-eminence.

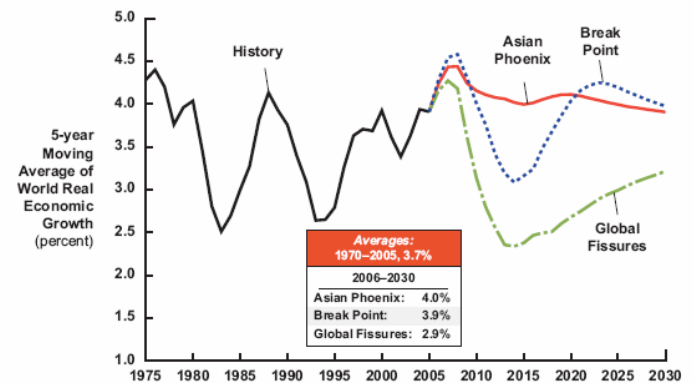


**BREAK POINT.** Oil supply difficulties limit production growth. Oil prices reach \$120 per barrel. Fear of “peak oil” encourages moves to enhance energy efficiency and accelerate growth of alternative fuels.



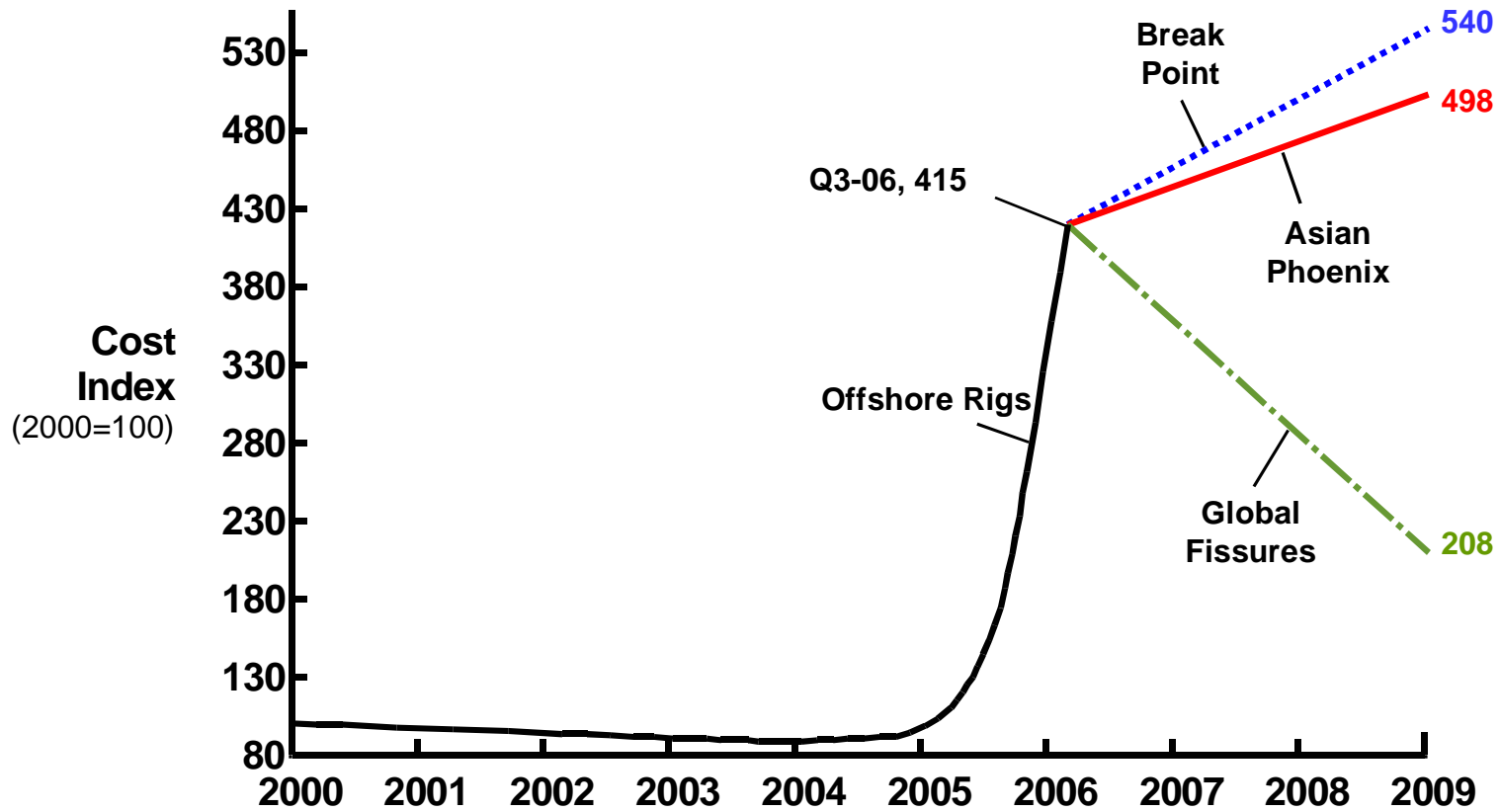
**GLOBAL FISSURES.** Widespread political backlash against free trade and globalization, combined with global trade and political disputes lower economic growth and weaken energy prices. Little to no effort to limit carbon emissions.

Economic Growth, 1975–2030



Sources: Projections by Cambridge Energy Research Associates, historical data from International Monetary Fund. 60715-4

# Offshore Rigs Market

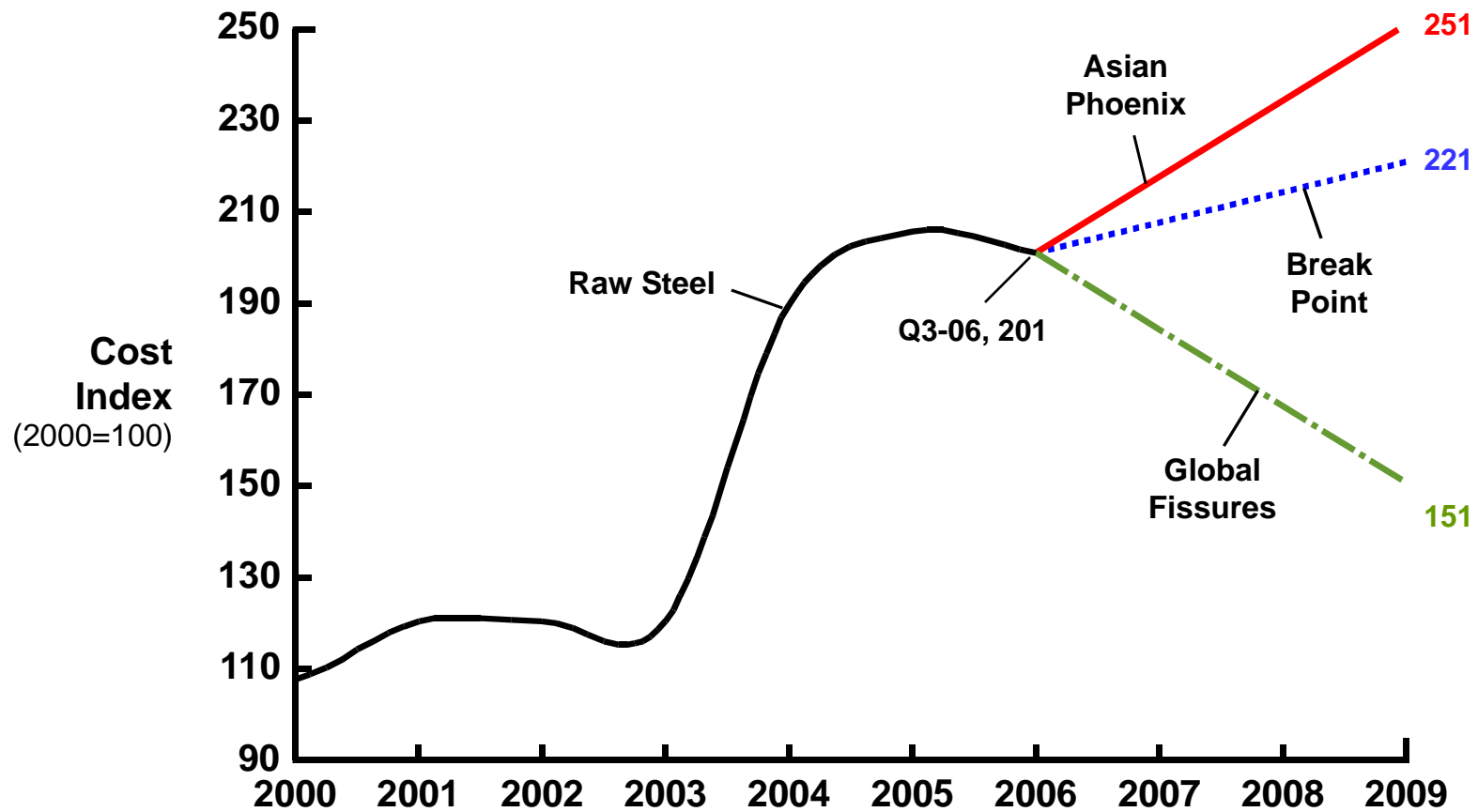


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# Steel Market



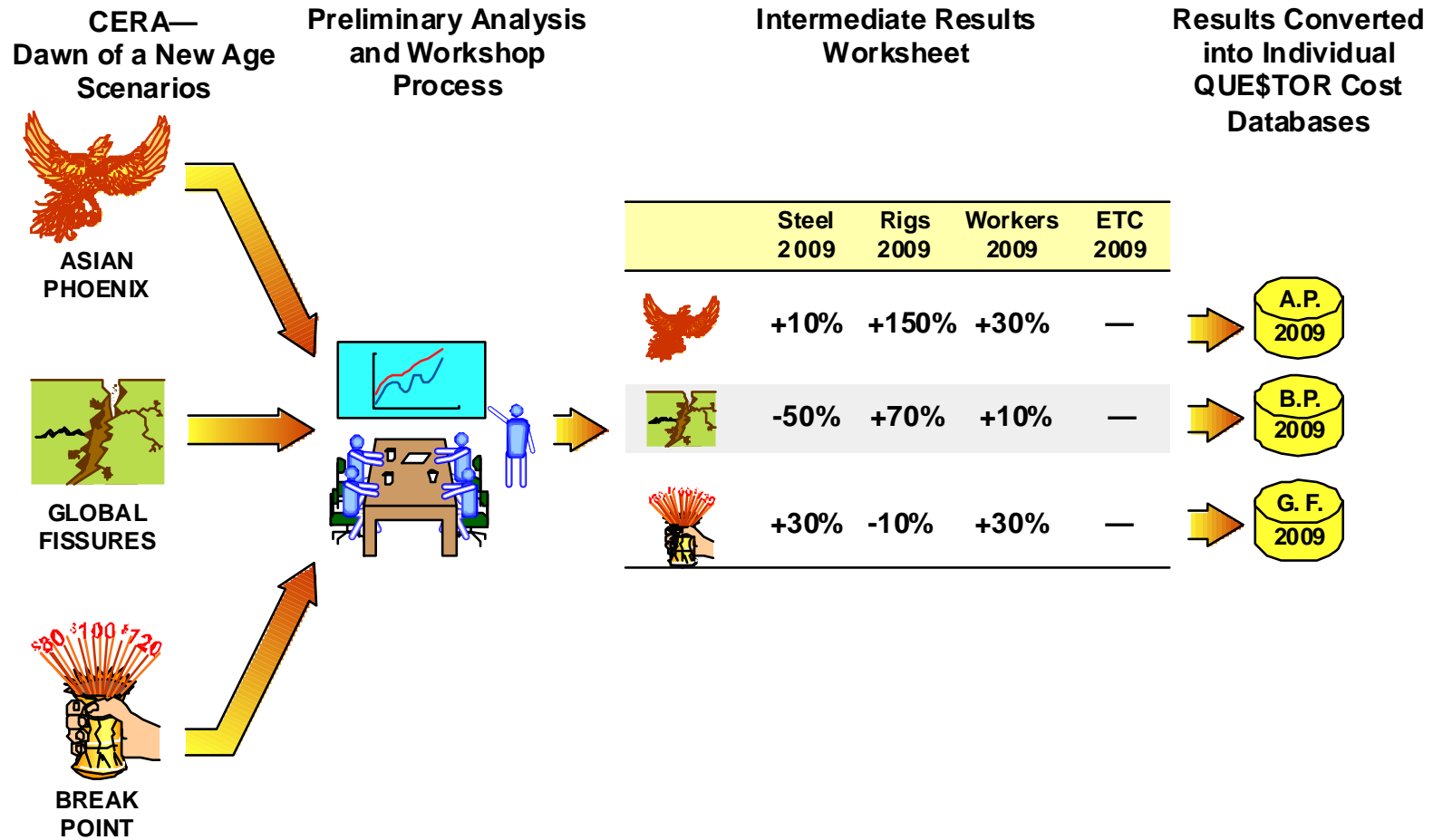
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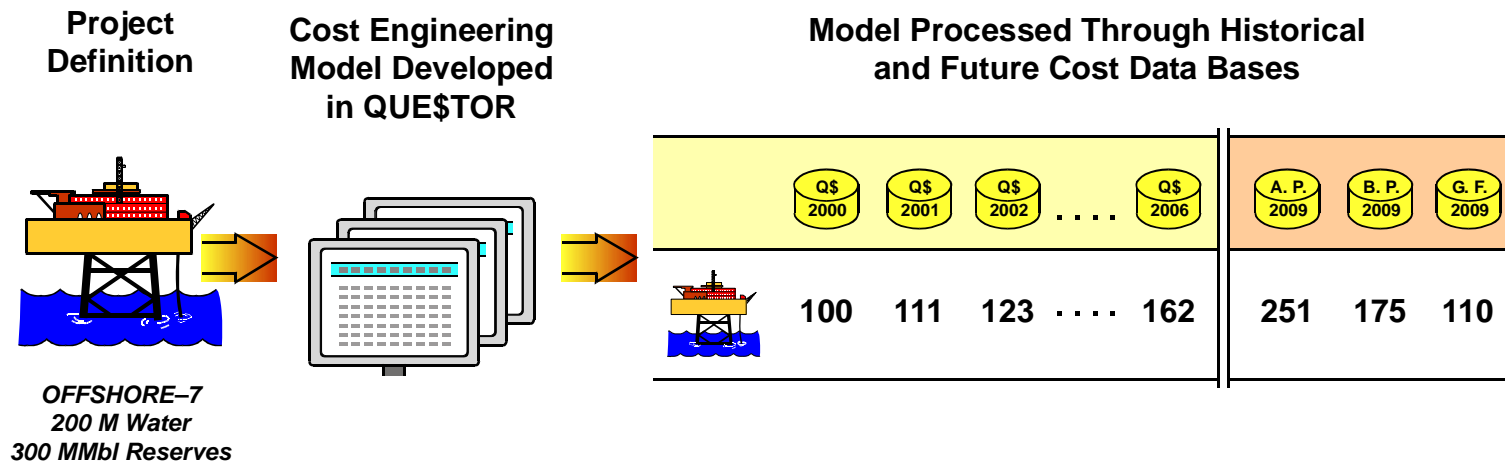
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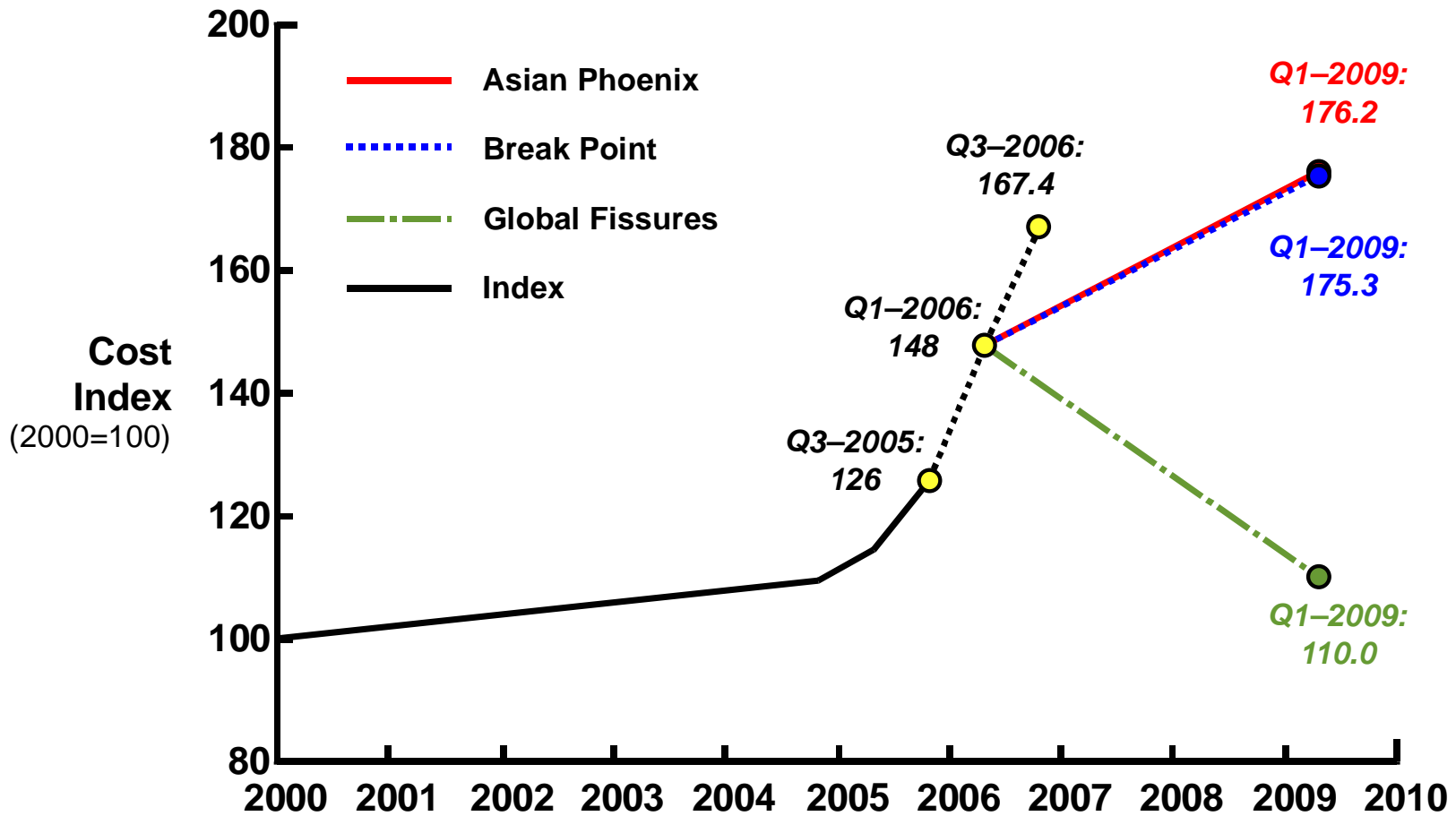
# Scenarios of Future Costs Process



# Model Development and Data Processing



# Overall Index



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# Conclusions and Observations

- **Economics of scarcity dominate 2 out of 3 scenarios**
  - Break Point driven by scarcity of oilfield specific services and materials
  - Asian Phoenix driven by scarcity of general commodities and equipment
- **Ageing western expertise an issue in all 3 scenarios**
  - Drives cost increases in Asian Phoenix and Break Point
  - Moderates decline in Global Fissures
- **Mega and large projects dominate 3-year period**
  - Project sanction in 2005–06 push requirements in 2007–09
  - Global Fissures helps support higher than historical cost

## Near-term 2007 Outlook

- **Oil price stability above \$50 per barrel will maintain demand**
- **Supply will continue to be market constrained until additional capacity in 2008/09**
  - Steel costs will be fairly stable
  - Constraint in personnel will effect several markets
- **There will be no relief to costs rises during 2007!**

**If you have any questions about this presentation or  
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