

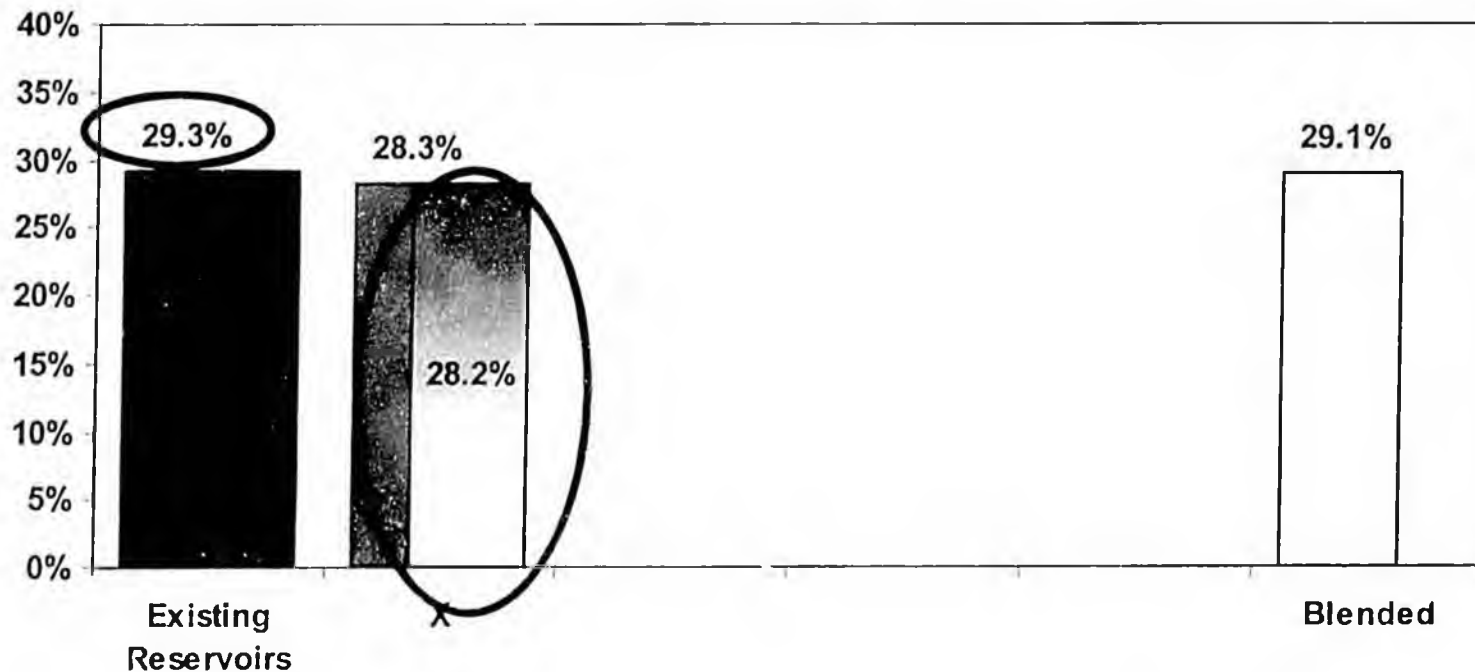
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# So, Does That Mean I Am Paying 29.1% On Each Field ?



Tax Rate By Field Within A Company - As Affected By Portfolio Blending



The mathematics of this reduction means that actually while Existing Reservoirs continue to pay tax at a rate of 29.3%, The effective rate on Field X is actually 28.2% ....  
... less than it would be if it were developed stand-alone

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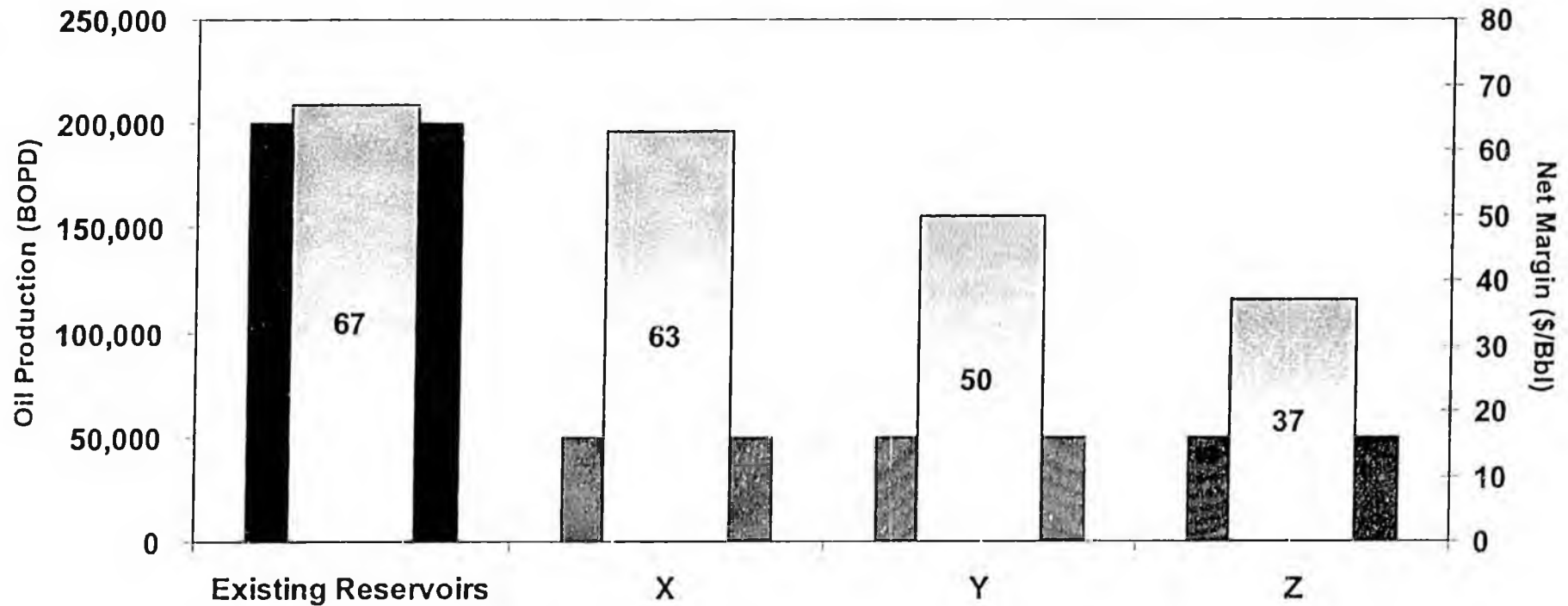
**This Impact Can Be  
Seen Further  
In A Broader Portfolio**

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# Consider A Portfolio Of 4 Fields

Portfolio Production Rate and Net Margin

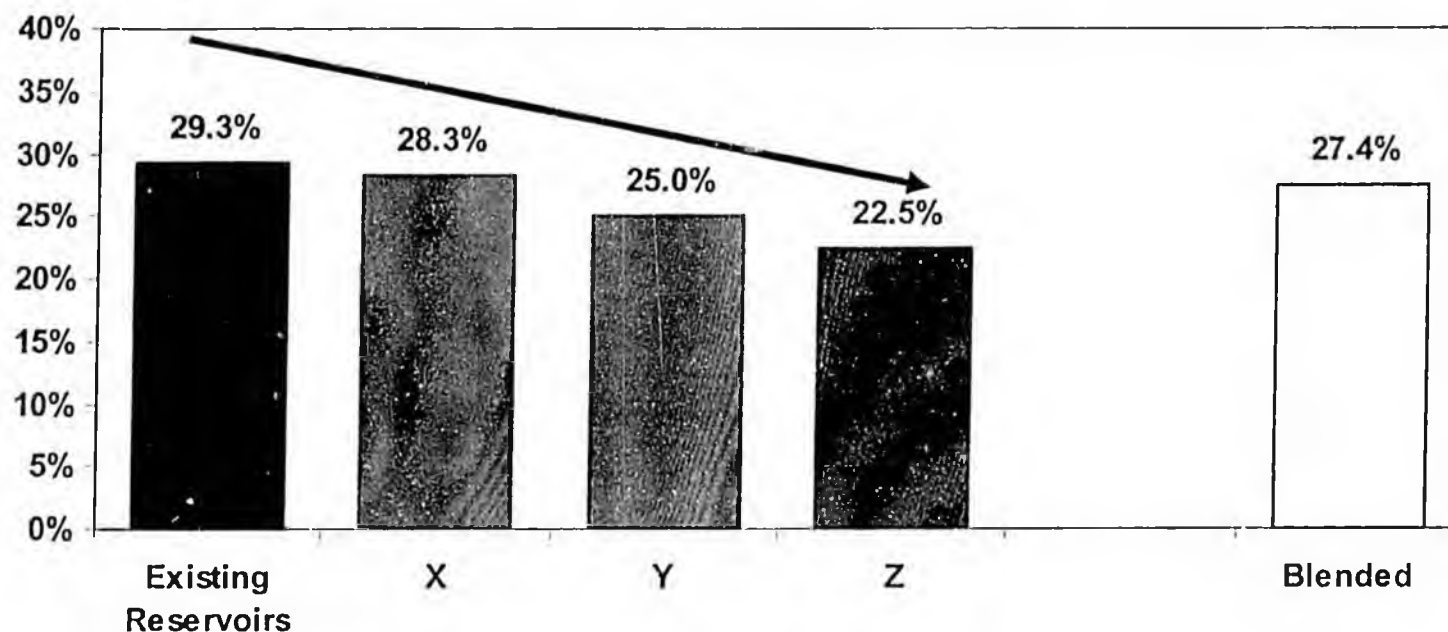


.. One producing 200,000 bopd and three others, each producing 50,000 bopd, and each of decreasing profitability



# Tax rates if stand alone development

Tax Rate By Field Within A Company - As Affected By Portfolio Blending



The progressivity can be seen through the lower tax rate on lower margin fields

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# **The Least Profitable Field ..**

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**... can actually have an effective rate  
below the basic rate**



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# **The Impact Of Capital Investment**

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# How The Net Tax System Operates

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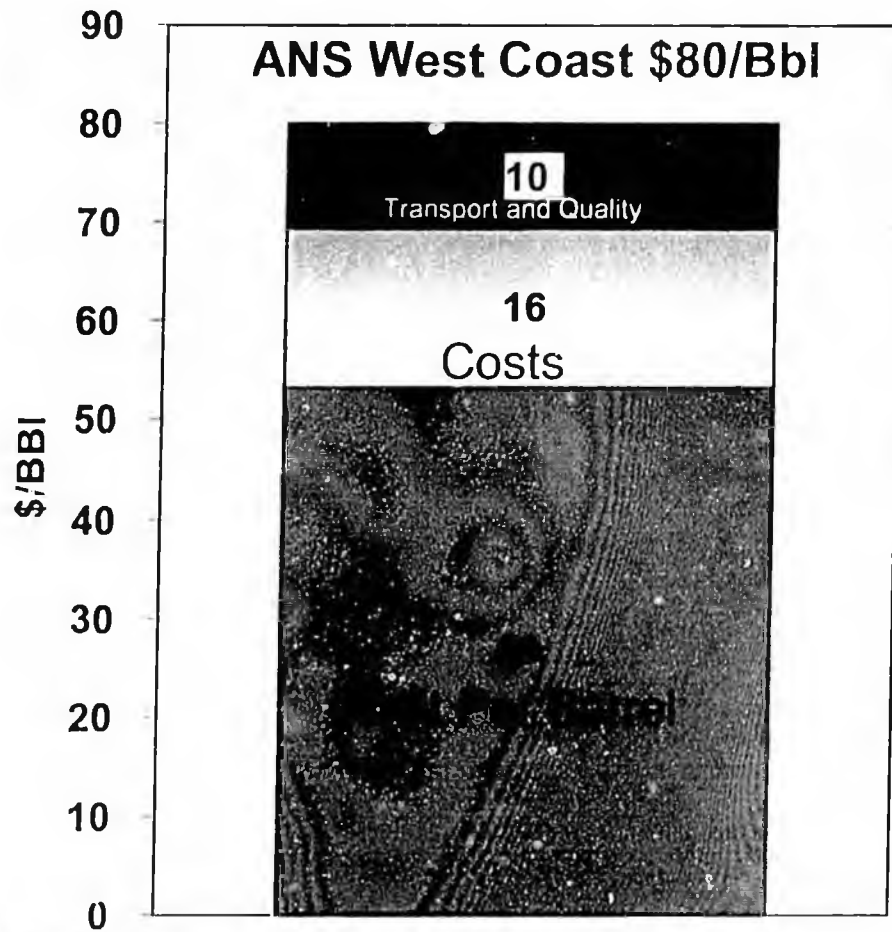
- “Net” taxes all fields at a single rate
  - If only looking at the “headline” net tax rate, this would be the perception
  - In reality, when looking at the marginal impact of different parts of the portfolio, it taxes different fields or reservoirs at different rates
    - Based upon their individual profitability
- **Further, it doesn’t tax operating profits, but retained cash flow after reinvestment**



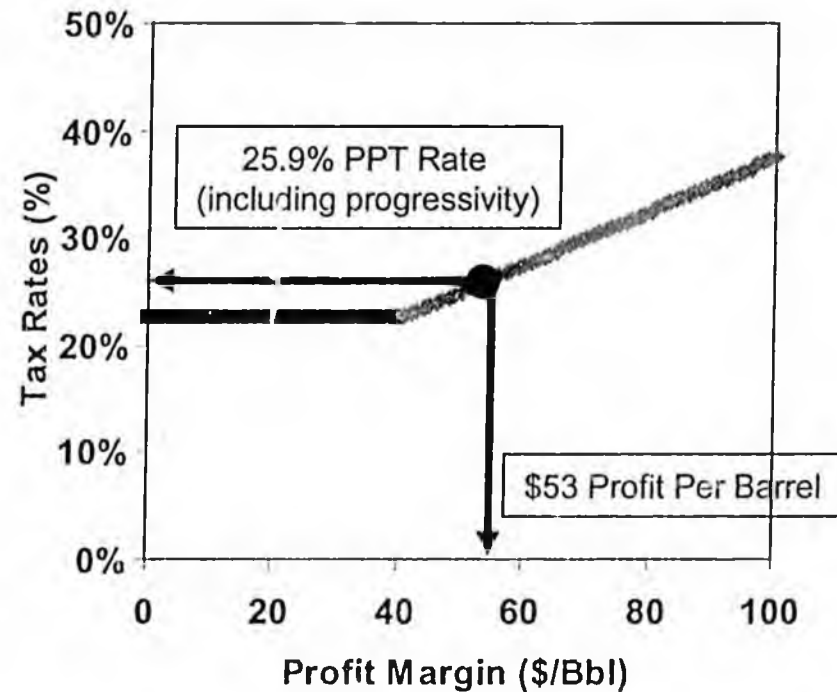
# Remember These Slides ?

## Portfolio Profitability

The portfolio in the previous slides had a blended rate of 27.4%, not 25.9% ....



## Tax Rate Structure (Incorporating Progressivity)



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**Assume that 27.4% is the rate that will  
be payable before further capital  
investment decisions are made ...**

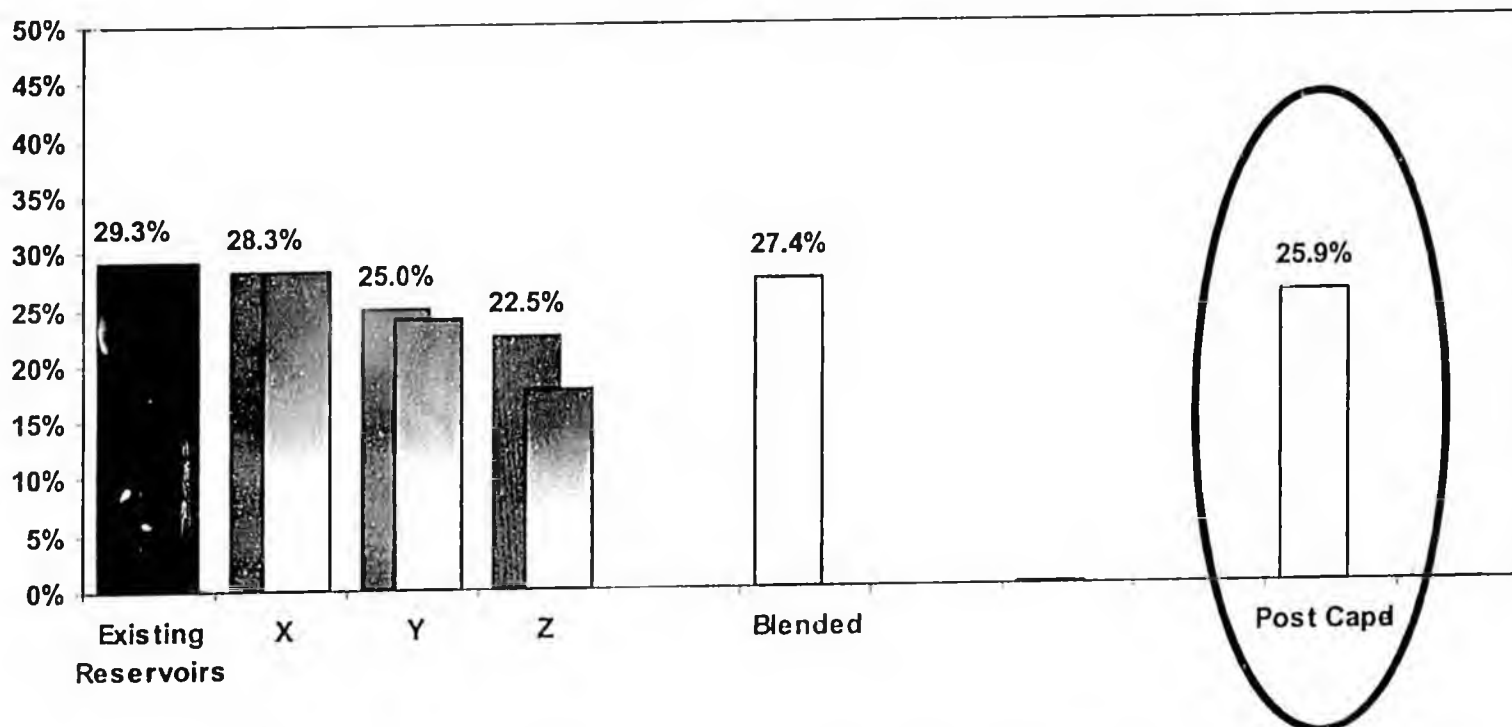
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**... in this example \$800 million**

# Capital Spending Has An Impact On Rate, Too ....



Tax Rate By Field Within A Company - As Affected By Portfolio Blending,  
Capex And Tax Credit



This reduces the rate payable from 27.4% to 25.9%

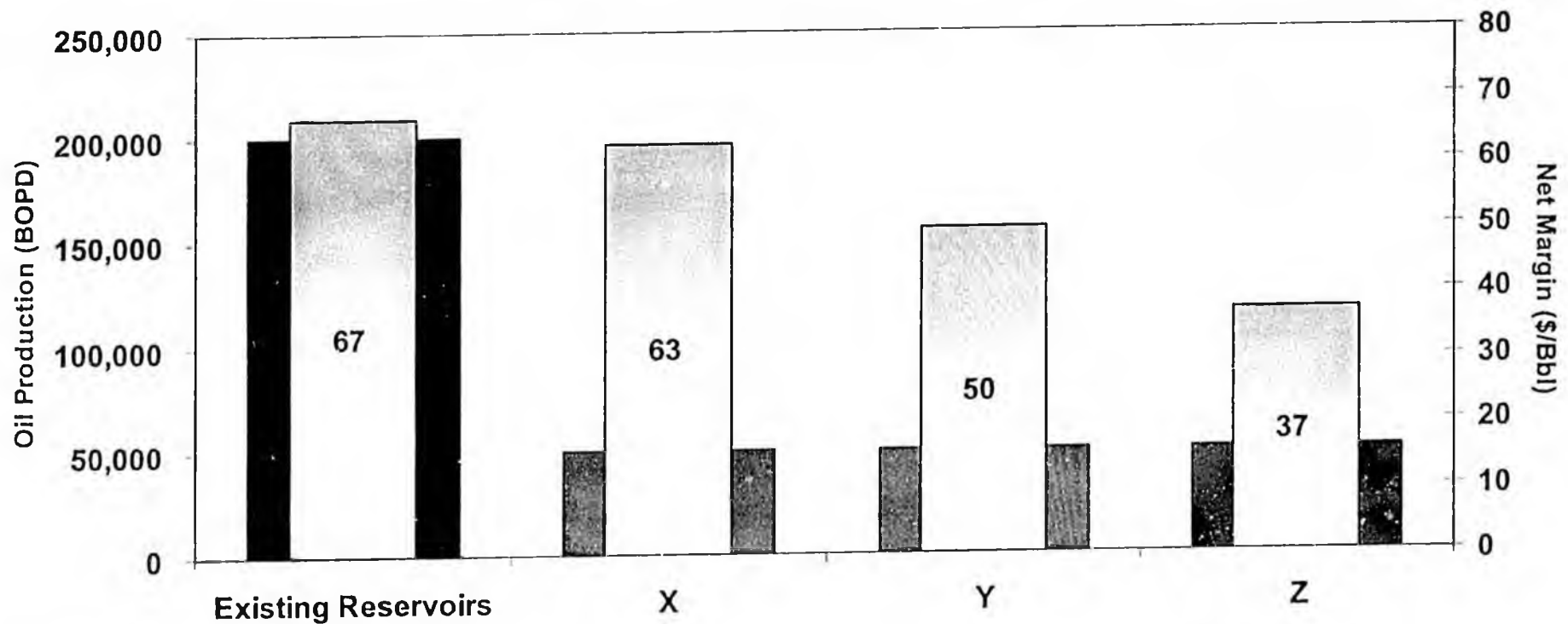
How ?



# The Portfolio Produces 350,000 Bopd

this is 127.75 Million Barrels Per Year

Portfolio Production Rate and Net Margin



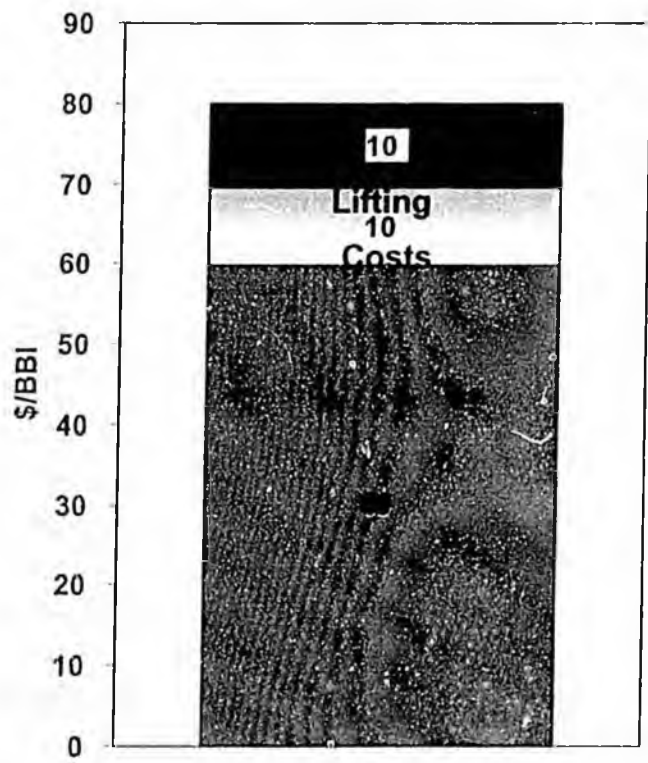


# The \$6.26 Per Barrel Capital Increases "Costs" And Lowers The Tax Rate

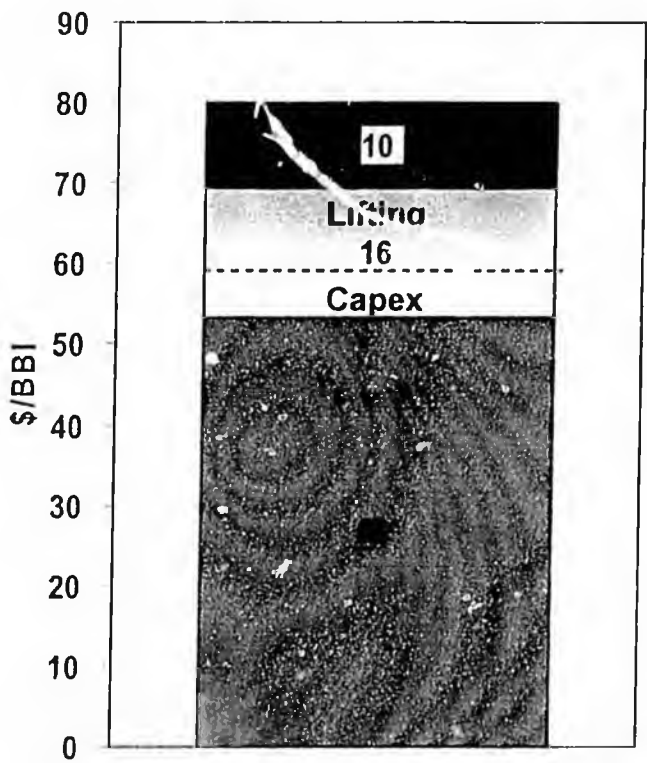


## Portfolio Profitability

### Pre-Capex Margin



Tax Rate  
27.4%



Tax Rate  
25.9%

---

# **This Can Be looked At Differently Though ...**

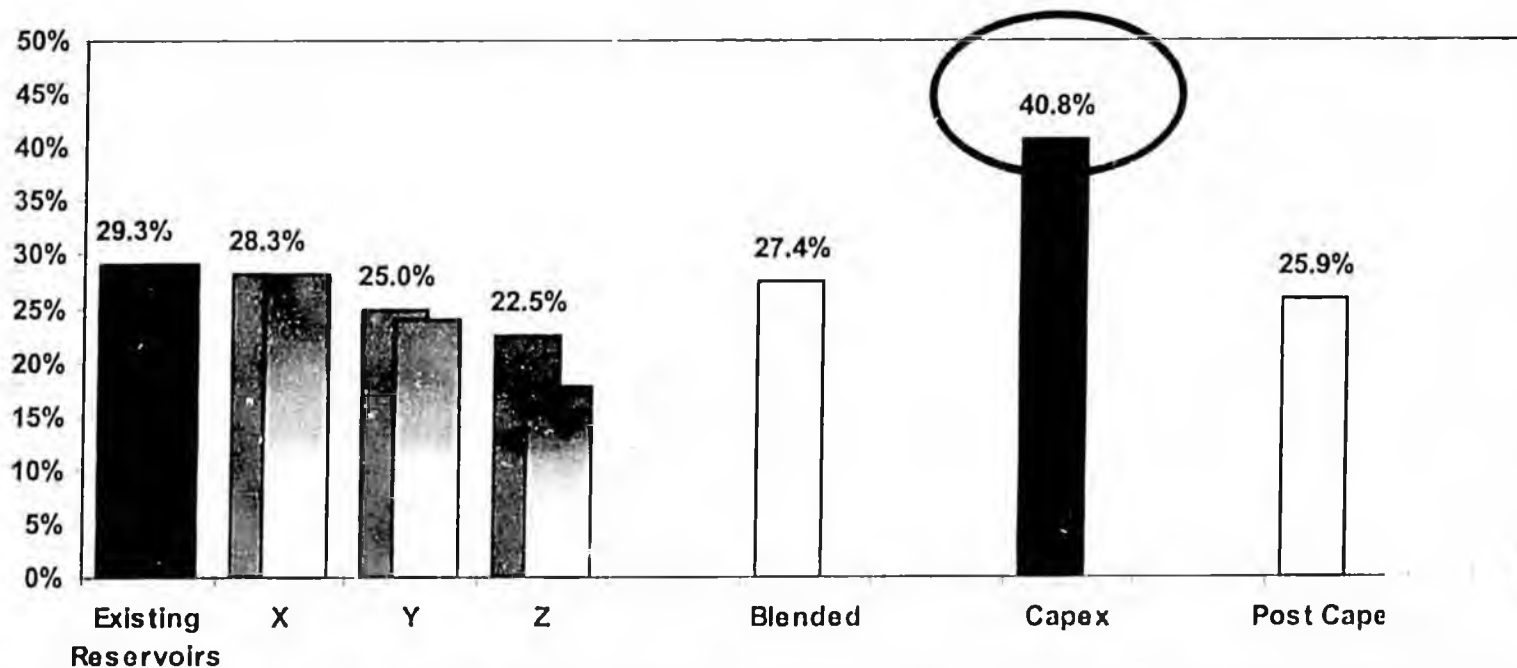
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**... as a tax rebate on the capex**

# The Reduction In Tax Rate Lowers The Net Investment Cost To Companies



Tax Rate By Field Within A Company - As Affected By Portfolio Blending, Capex And Tax Credit



It is the same as still paying the blended rate of 27.4% on the portfolio production (or having an effective rate of 29.3% on Existing Reservoirs .. down to 17.7% on Field Z) and Alaska paying\* 40.8% of that \$800 million capital

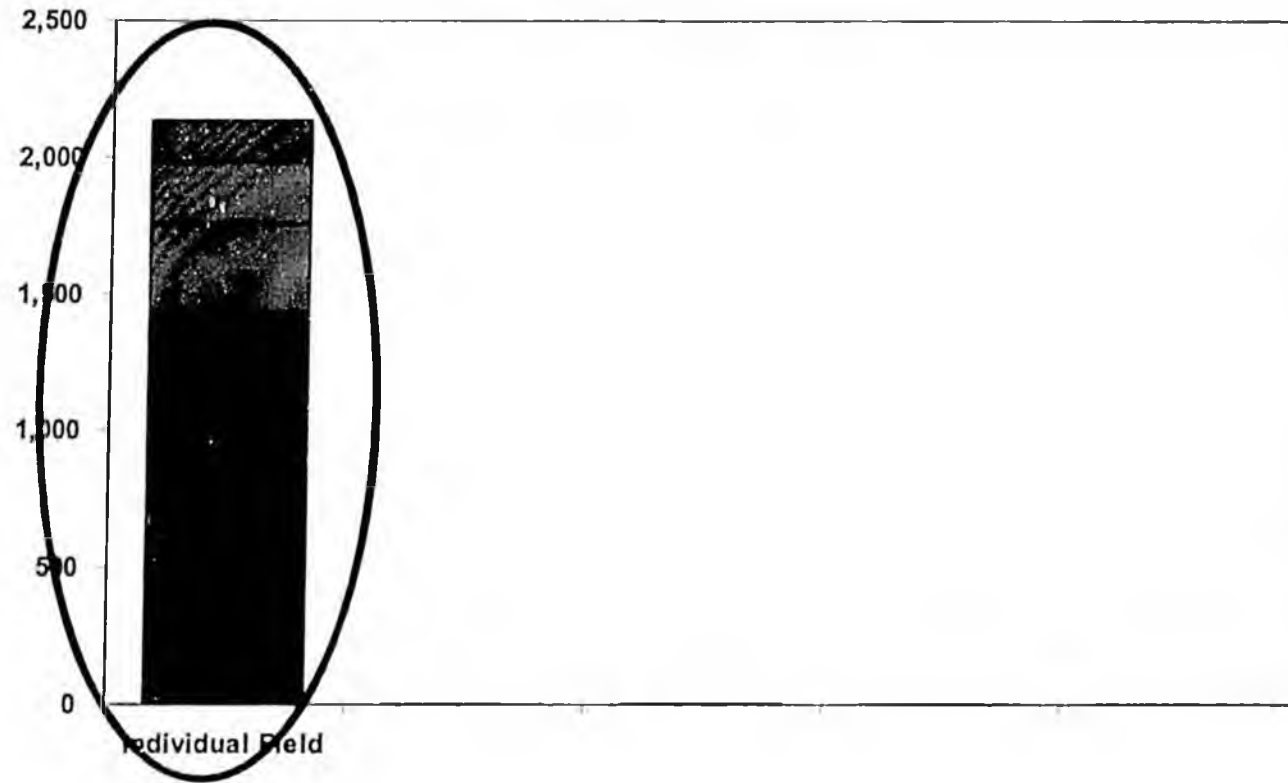
This 40.8% is higher than the Blended tax rate ... and is a function of the capex per barrel and the overall portfolio cost and margin structure

\* from PPT only - does not include State and Federal tax effects

# Look At The Tax System Through The Amount Of Tax Payable ...



Tax Allocable By Field Within Portfolio



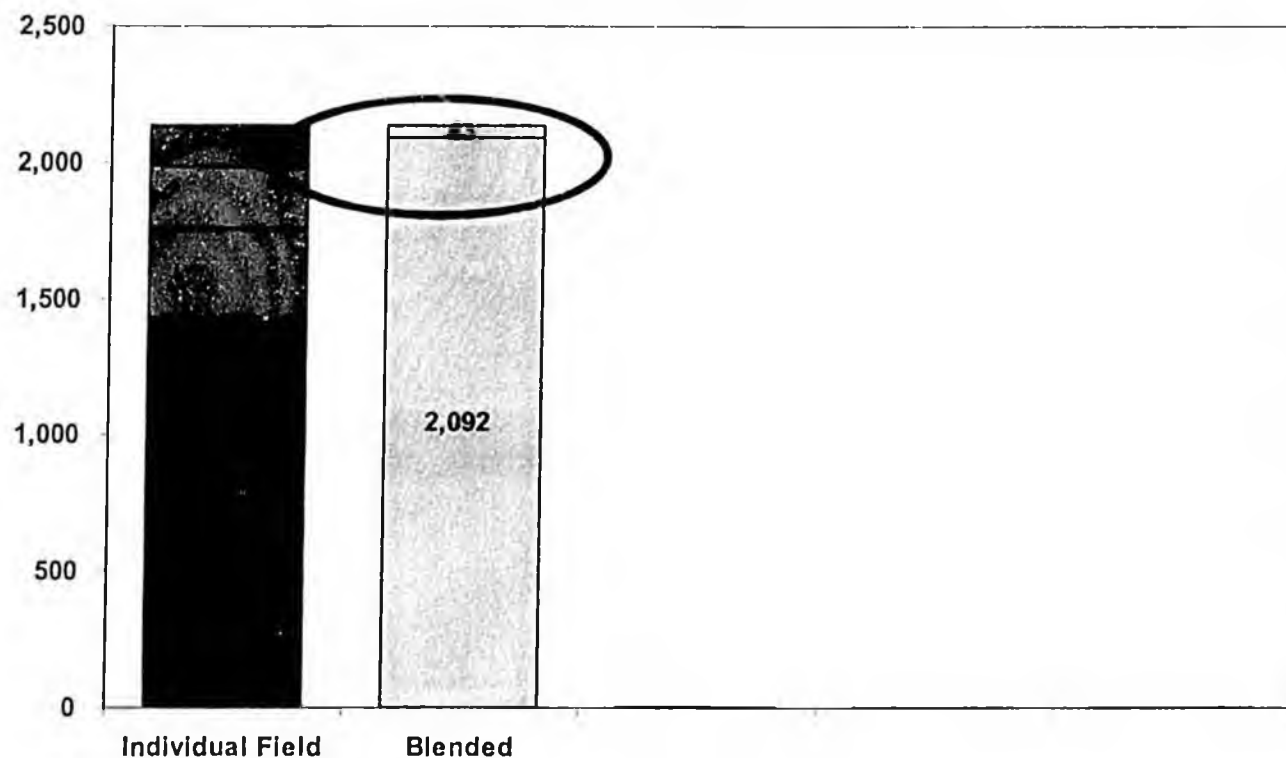
As individual fields, and at these assumed oil prices and costs, this portfolio would pay \$2,135 million in PPT

\* from PPT only – does not include State and Federal tax effects



# Portfolio Effects Lower Total Tax

Tax Allocable By Field Within Portfolio

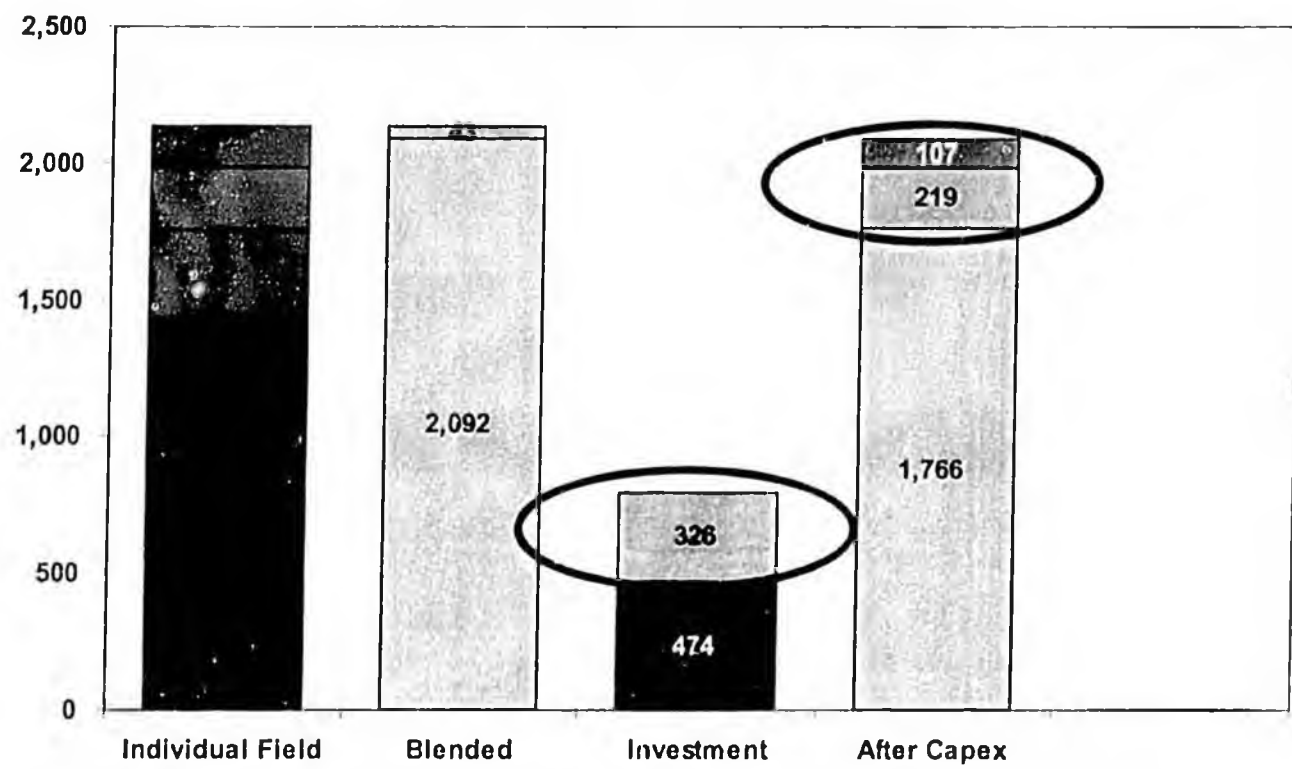


Putting all fields in one portfolio (company) lowers this to \$2,092 million  
... a saving of \$ 43 million



# The Big Winner Though Is Capex

Tax Allocable By Field Within Portfolio



In this example the State pays \$326 million (40.8%) of the capital (the percentage will vary based on overall portfolio net margin per barrel)  
The \$326 million can be allocated as \$219 million from reducing taxable income at 27.4% and \$107 million from lowering the rate from 27.4% to 25.9%

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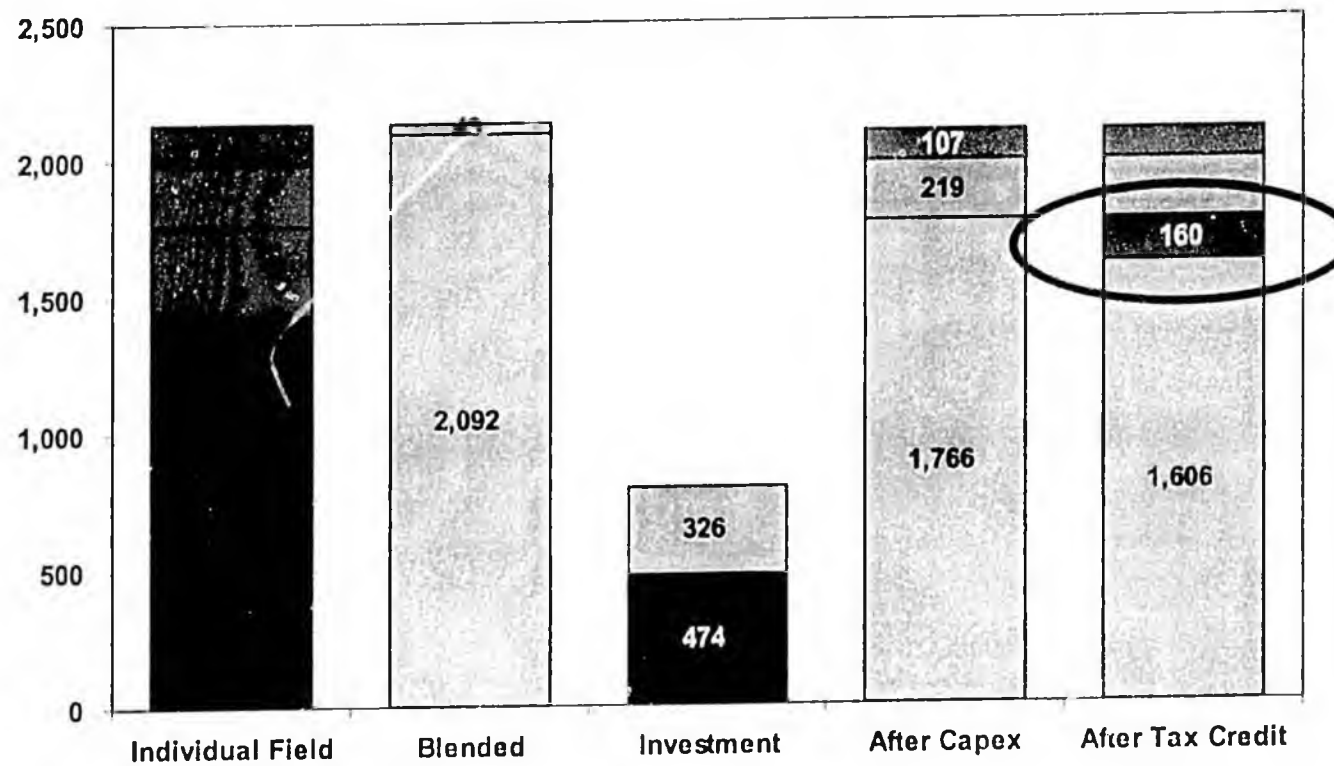
**But Wait ! That Is Not All ....**

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# Investment Credits Also Apply ..

Tax Allocable By Field Within Portfolio



Investment Credits Take a further \$160 million (20% of \$800 million) from the tax payable



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# **Tax Structure As Applied Under Various Structures**

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PPT  
ACES  
Senate Judiciary  
House Resources

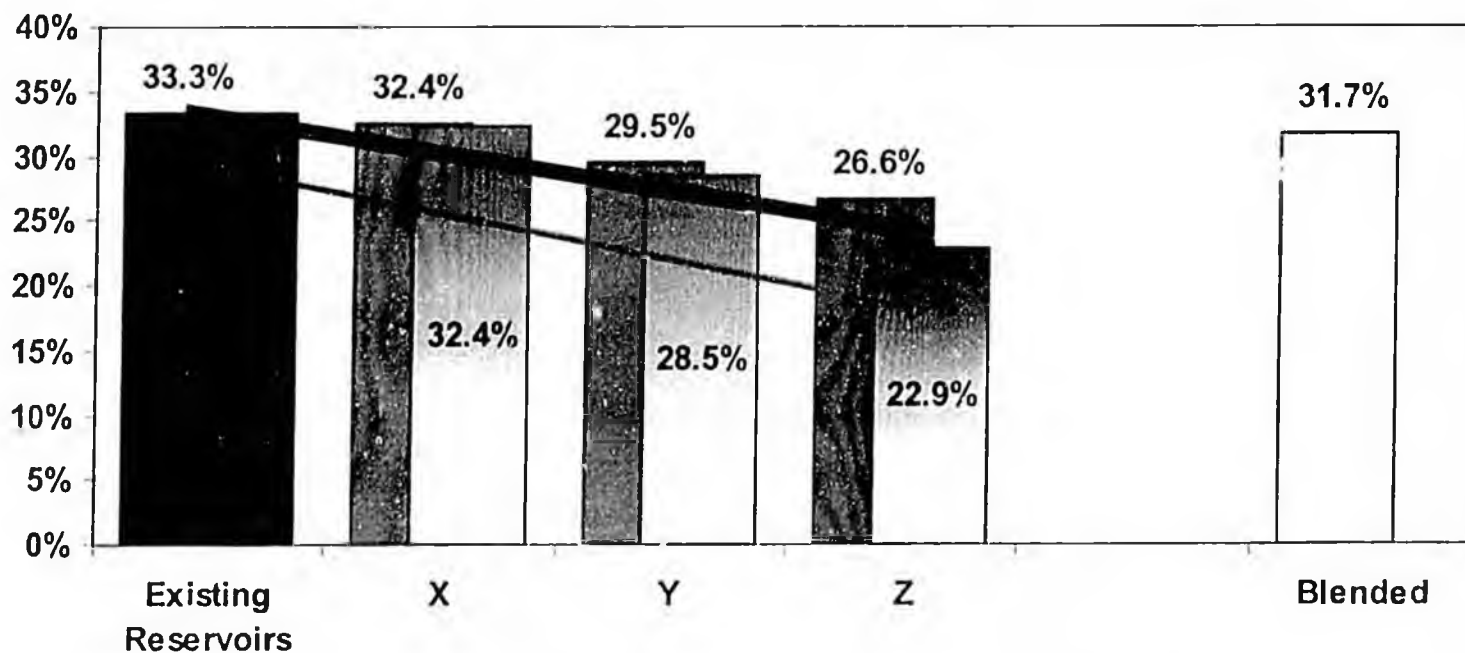






# ACES Progressivity

Tax Rate By Field Within A Company - As Affected By Portfolio Blending

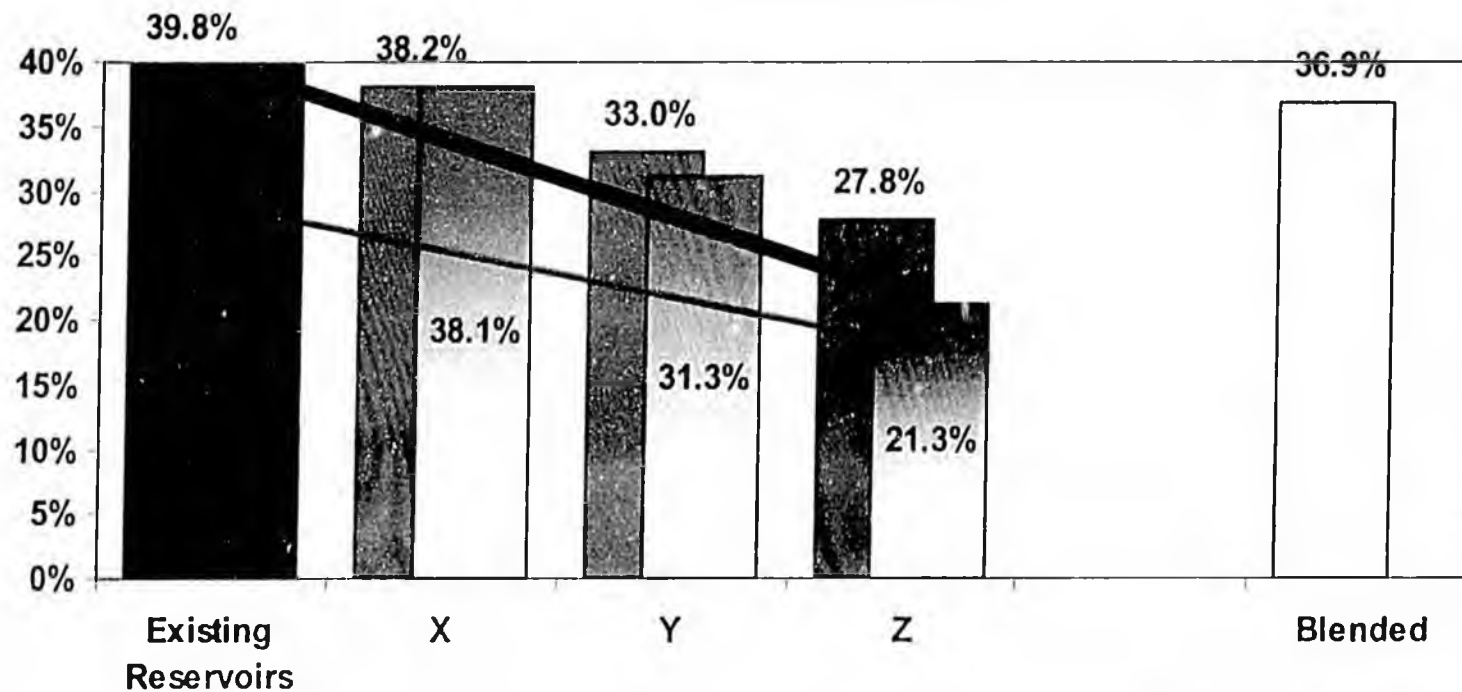


The progressivity feature is maintained, although ACES has a higher base rate (25% compared to PPT 22.5%) and a shallower progressivity (0.2% compared to 0.25%), starting \$10 earlier (\$30 rather than \$40 net cash flow per barrel)



# Senate Judiciary Progressivity

Tax Rate By Field Within A Company - As Affected By Portfolio Blending



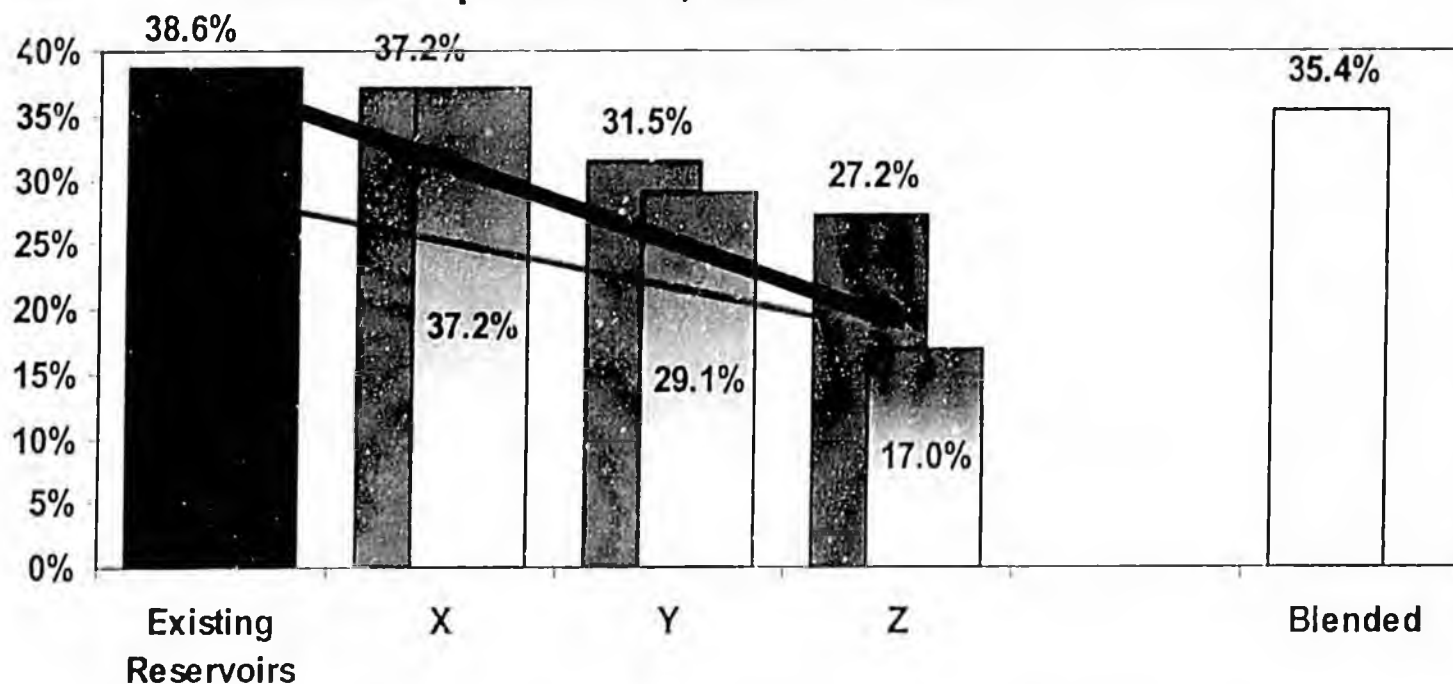
The Senate Judiciary CS starts at the same point as ACES, but has a progressivity of 0.4%, rather than 0.2%  
As a result, while this results in an overall larger take, the less profitable field in this example actually benefits from a lower rate



# House Resources Progressivity

Tax Rate By Field Within A Company - As Affected By Portfolio Blending

The progressivity in the House Resources CS sets its rate from the net cash flow per barrel, but taxes the Gross Value



As such its effective rate becomes higher than a “pure net” system with the same progressivity feature, but the progressive taxation of different profitability fields is maintained



# Conclusions

---

- A net tax on the “profit margin” is actually a tax on a company’s retained cash flow and not just a tax on simple profitability
- The progressive feature in PPT, in ACES, and in the Senate Judiciary CS and House Resources CS allows fields of different profitability within the same company to have different effective tax rates
- More aggressive net progressivity provides a greater differentiation on the effective rate

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# Actual Prudhoe Results

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# Where is the tipping point?

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- **Quite legitimately several legislators have asked how far (increasing taxes) is just right and how far is too far?**
  - The companies, for obvious reasons, have passed on the opportunity to describe in numerical terms what impact a change in Alaska taxes will have
    - Decision making process has many factors
    - Worldwide better rock trumps fiscal systems
    - Appears the majority of capital spending of the major Alaskan oil companies is in regimes with higher government take
  - All consultants acknowledged that taxes are but one of many factors that control decision making, and cannot say with certainty what tax rate is just right



# Testing the Tipping Point

---

- **Industry testimony to previous committees paints a fairly clear picture of one very important aspect of North Slope operations**
  - AOGA letter which reflects “the full consensus of the members of the AOGA Tax Committee, with no dissent”
  - BP’s very detailed presentation on Prudhoe Bay area
  - Conoco’s useful insight on project economics
  - And other information supplied by Anadarko, Chevron, Exxon and Pioneer.
- **Details presented were then double checked against annual reports, SEC filings, analyst presentations and other company press releases where available**



# Overall Observations

---

- **Based on the testimony and presentations from industry GCA believes:**
  - There is significant upside in terms of barrels of oil to be produced by investing to reduce the natural field decline rate in the major North Slope fields
  - The economics of reinvestment in existing producing assets on the North Slope are extremely profitable
    - Evaluated with actual costs, production and prices as reported by BP
    - Profitable even when tested against various stress points



# AOGA Testimony to the House

---

In discussing the merits of HB 2001 versus PPT and the Administration's concerns, we must always keep in mind the real-world situation that Alaska faces. The greatest challenge that confronts this generation of Alaskans and the next is the ongoing decline of oil production, which has been, is today, and promises to remain the cornerstone of the finances of state government.

- **The fiscal system chosen must recognize the current and near-term importance of improving production from existing assets.**



# AOGA Testimony – Recent Success

This gets us to investment in currently producing fields. Fortunately, there are investments that can be made, and are being made, in these fields to slow their decline. In the short term, this is in-fill drilling — that is, drilling new wells into the portions of a reservoir that are between the wells that have already been drilled. This accelerates the drainage of oil from the rock that currently lies in between existing wells. In-fill drilling last year contributed some 70,000 barrels a day to production from the Prudhoe Bay field. To put this into perspective, a 70,000 barrel per day field would be the 4<sup>th</sup> largest stand-alone field on the North Slope today.

- **AOGA, with the 100% backing of their member organization touted the importance of infill drilling along with its success**
- **Additional production of 70,000 bopd was achieved with the 2006 infill drilling program.**

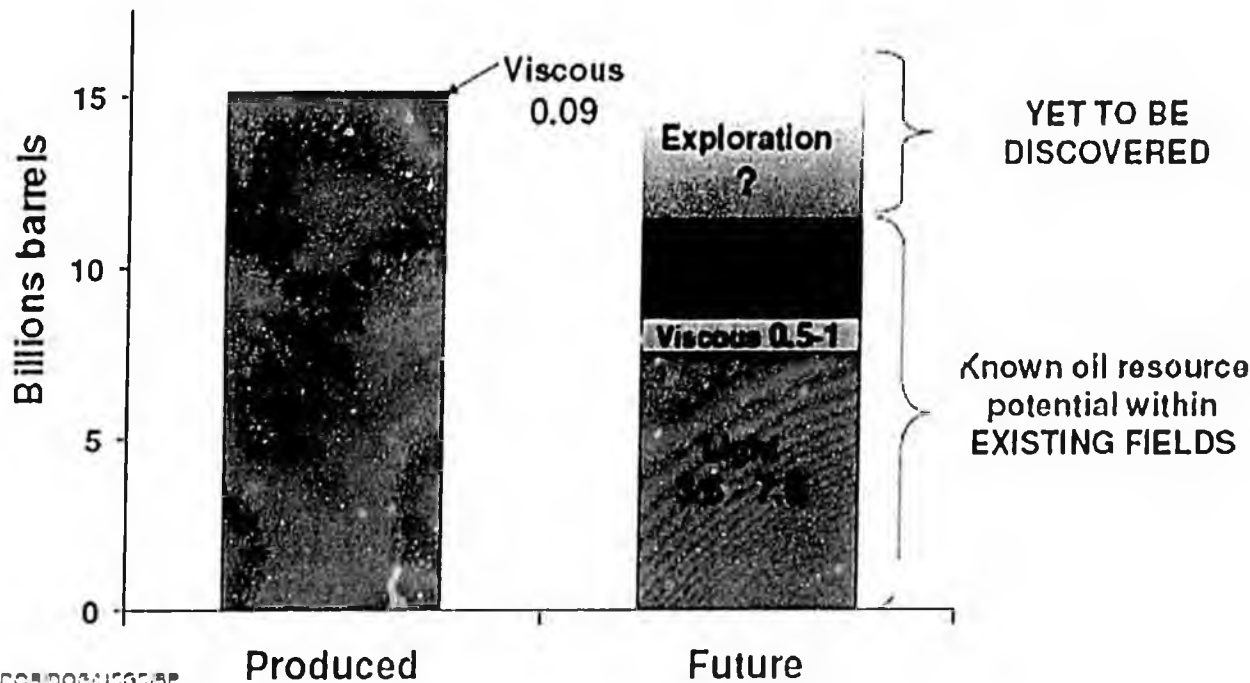
# Potential infill upside



The future of North Slope oil still tied to existing fields



Sustained investment in light oil development is critical to developing heavy oil and new fields



Source: DOR, DOE, USGS, BP

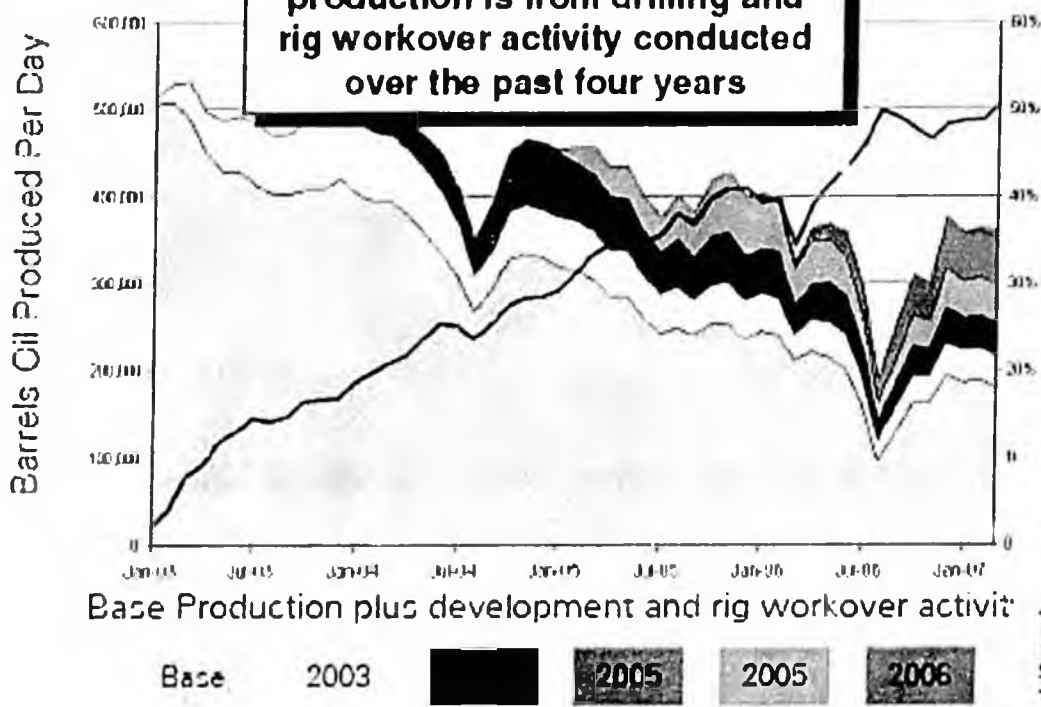
BP noted that light oil represented as much as 7.5 Bn bbls out of a total of 11.5 Bn bbls

Light oil ~ 70% of the identified potential

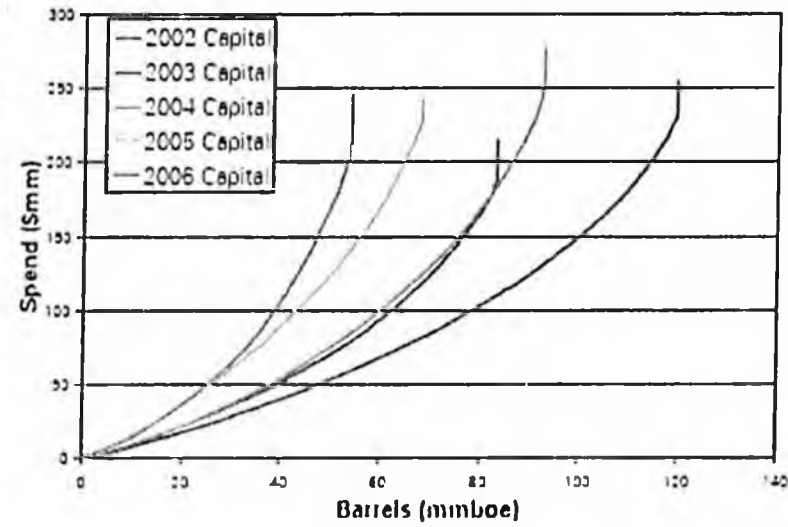


# Prudhoe Bay infill drilling results

**50% Of GPB's current oil production is from drilling and rig workover activity conducted over the past four years**



**GPB Well Investments: 2002-2006**



BP House testimony page 12



# Costlier Development

- It is getting more expensive to develop a barrel of reserves (BP Infill program)

	2002	2003	2004	2005	2006
Capex	255	220	275	240	245
MMbbls	120	90	80	60	50
\$/bbl	2.13	2.44	3.44	4.00	4.90

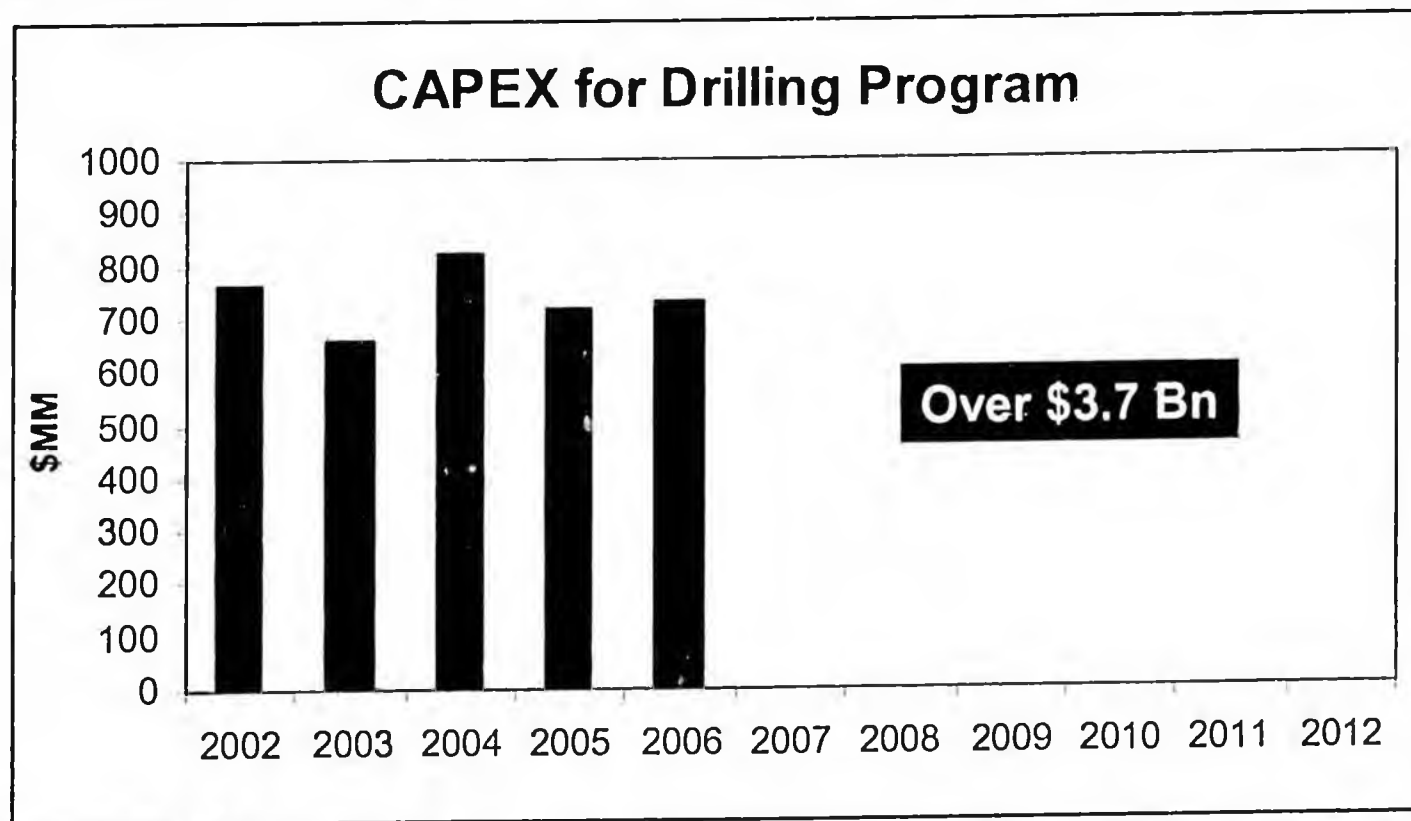
*Findlay  
Indonug*

- Contrast the above per barrel F&D costs with:
  - \$2 or less CAPEX for Prudhoe and Kuparuk to date
    - \$19bn to produce 9.5 bn bbls
  - The P/K upside at \$3.5(15%), \$7.7 (6%), \$12 (3%)
  - Pioneer's view of average F&D for Lower-48 of \$14



# 5 Year Prudhoe Drilling Program

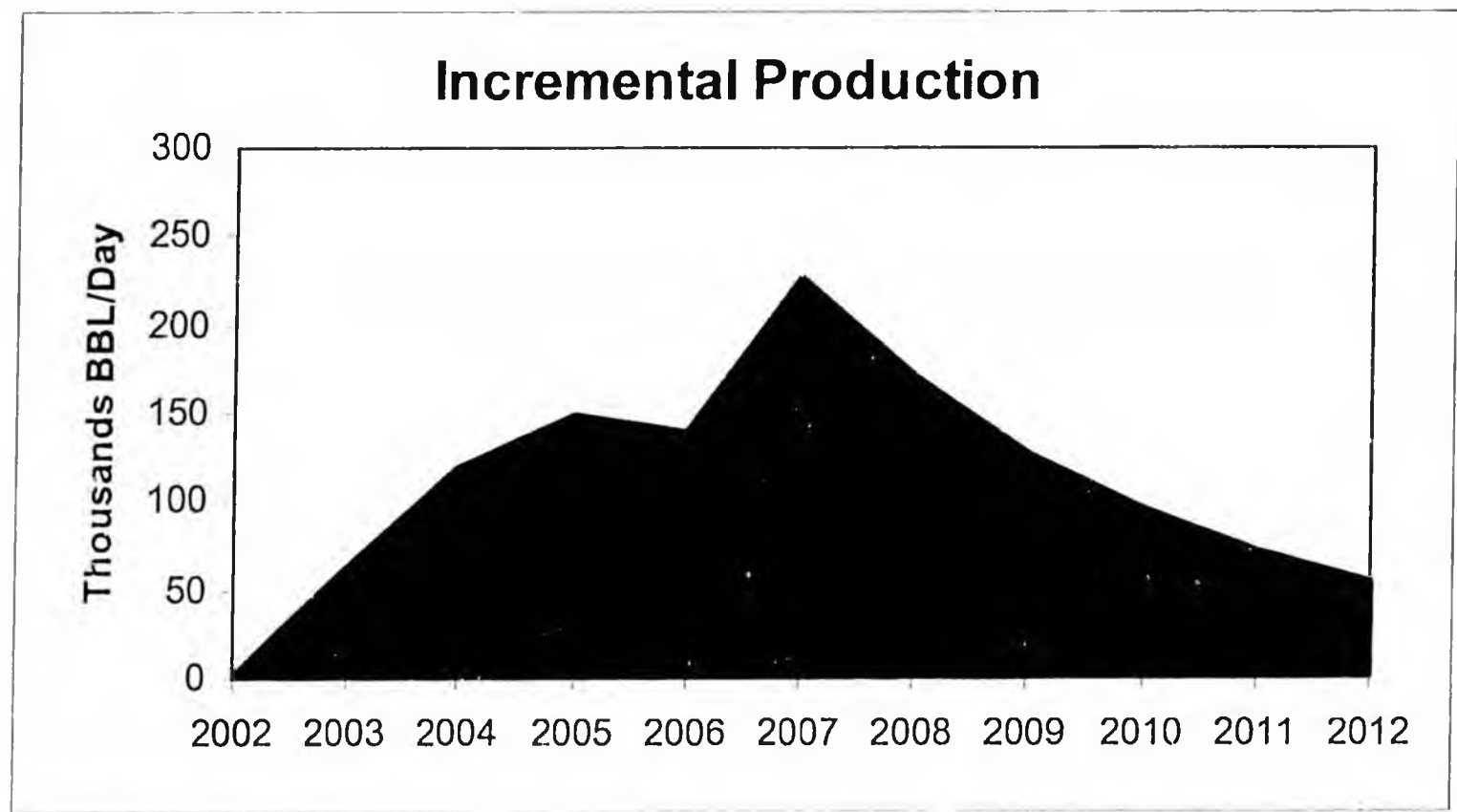
- BP noted that for every dollar spent on an infill well another two dollars were spent on injection and surface facilities – base case is 300% Capex





# BP – Prudhoe Bay

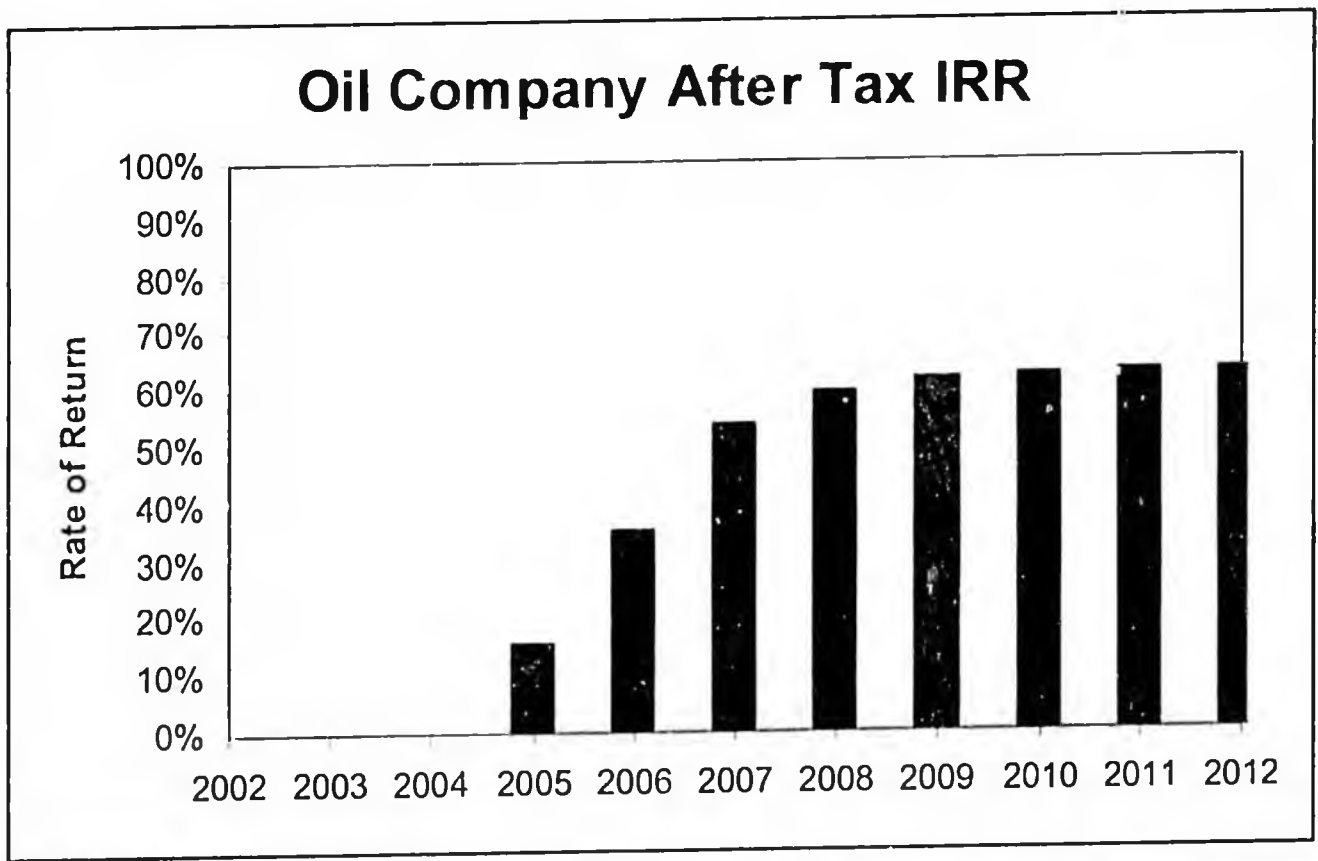
- Production from infill program as presented by BP





# BP Prudhoe Bay

- This is the after tax return on (300%) investment realized by the Prudhoe Bay owners

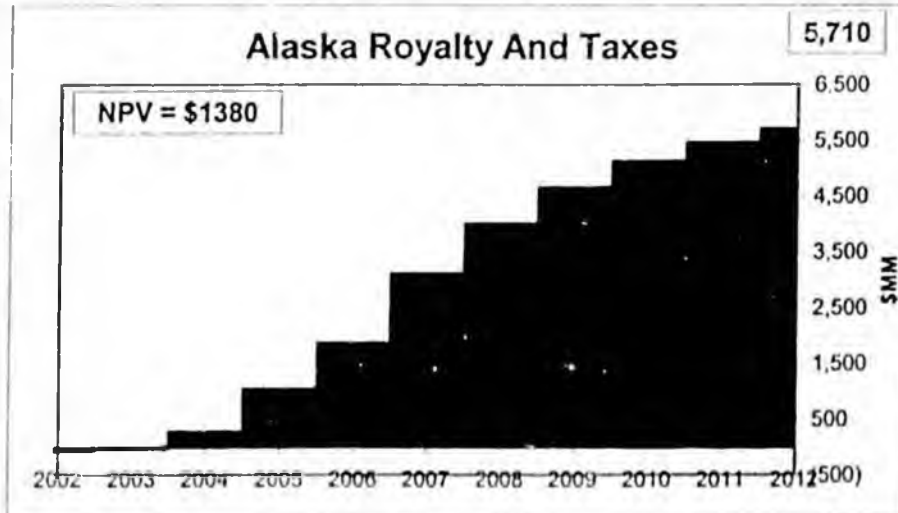
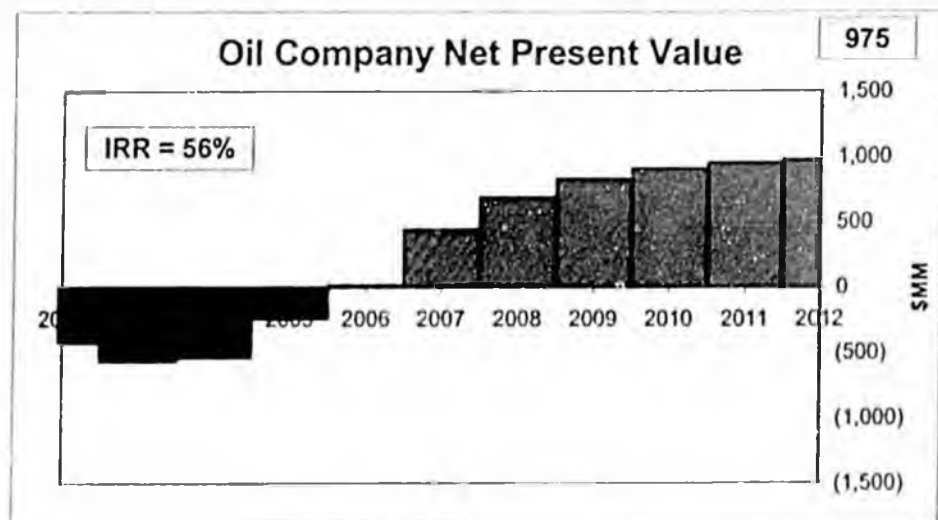
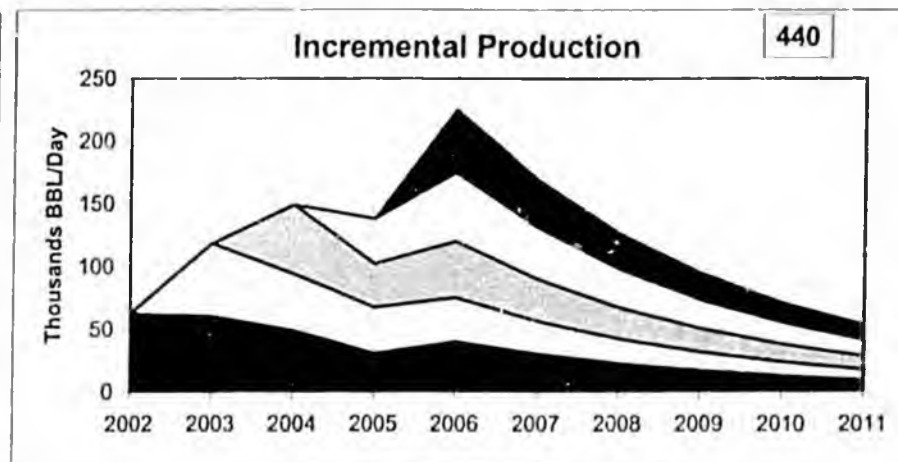
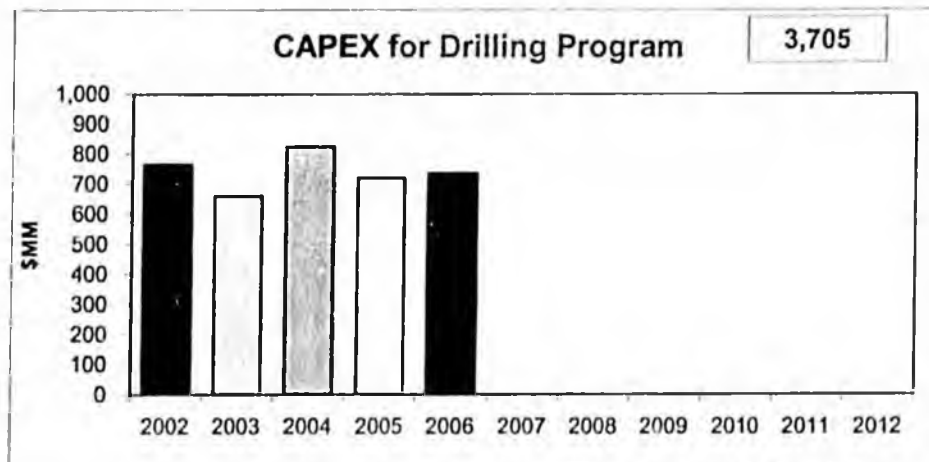








# Overly Stressed Case



# Model Demonstration

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# North Slope Potential

## Production Drives Revenue



Decline Rate	15%	<b>6%</b>	3%
Produced Barrels	1.3 bn	3.9 bn	7.5 bn
Industry Investment	\$5 bn	\$25 bn	\$70 bn
		<b>Status quo</b>	

- **Built a generic model based on the above barrels and investments**
  - Used indicated decline rates
  - 250,000 bpd abandonment rate  
(Based on the oil companies' and AOGA presentation of the mechanical limit of 300,000 bpd for TAPS and the above decline rates and produced barrels )







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# Backup

---

# Actual drilling program assuming PPT applies throughout



- Without investment credits pre 2006
- Oil Company IRR = 53%, NPV10 = \$4 billion

Modeling the Prudhoe Success contained in AOGA/BP Testimony

Drilling Program Year  
 2002   
 2003   
 2004   
 2005   
 2006

Capex Multiplier 300%

Opex Multiplier 100%

Production Multiplier 100%

Discount Rate 10%

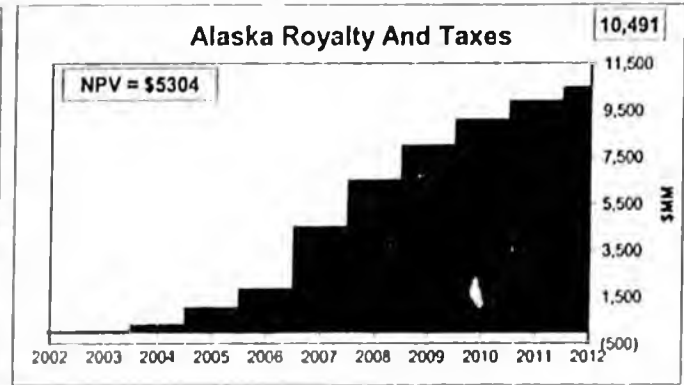
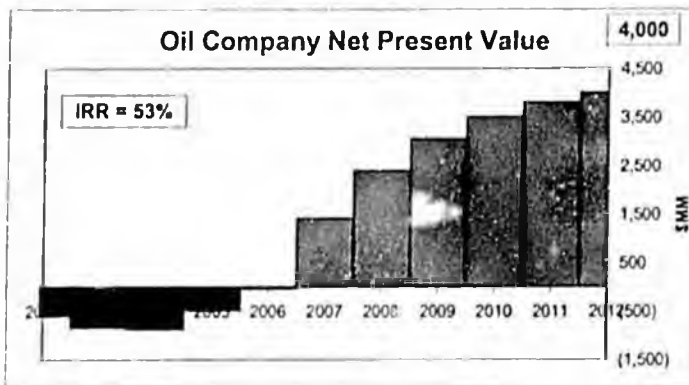
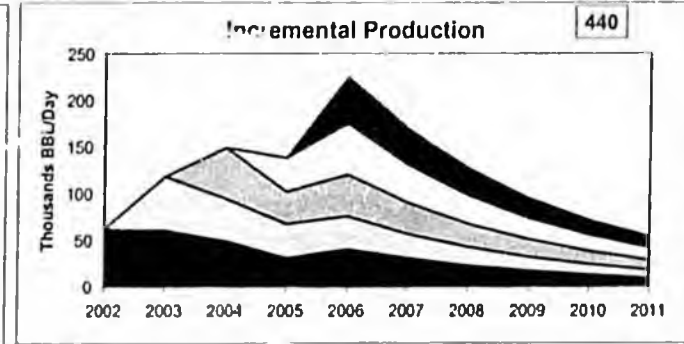
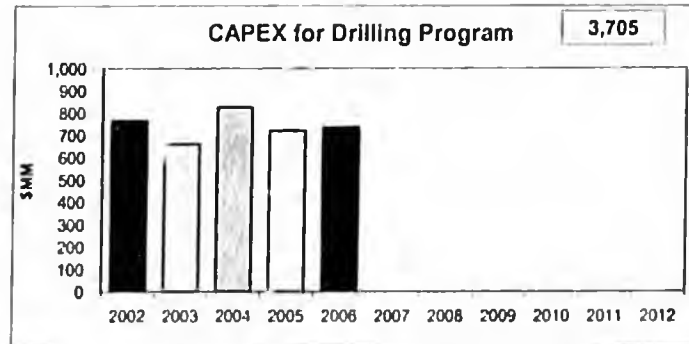
Royalty 12.5%

Net Tax Rate 22.5%

Progressivity 0.25%

Progressivity Start 40

Price 80



No tax credits 2002-2005

Actual oil price (but based on PPT) thru 2006, then Fcst

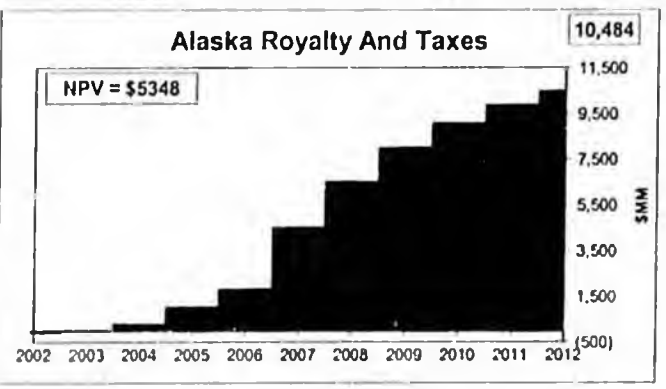
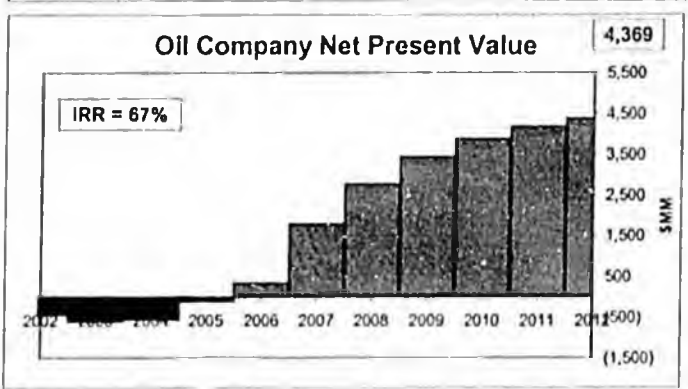
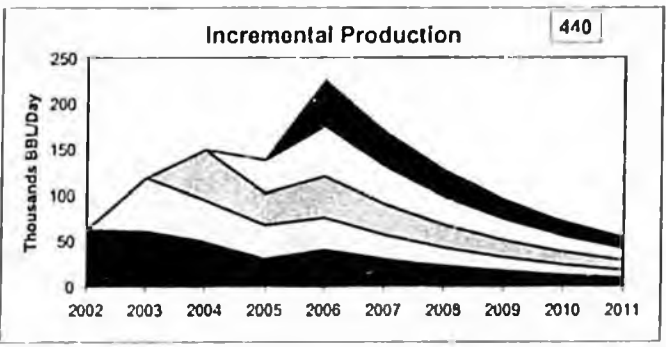
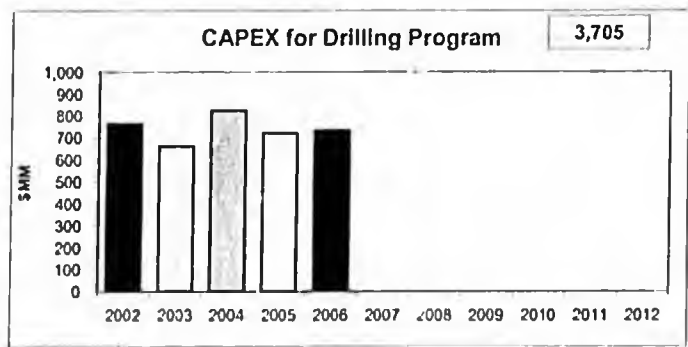


# Assuming PPT from 2002 with credits

- With investment credits pre 2006
- Oil Company IRR = 67%, NPV10 = \$4.4 billion

Modeling the Prudhoe Success contained in AOGA/BP Testimony

- Drilling Program Year
  - 2002
  - 2003
  - 2004
  - 2005
  - 2006
- Capex Multiplier 300%
- Opex Multiplier 100%
- Production Multiplier 100%
- Discount Rate 10%
- Royalty 12.5%
- Net Tax Rate 22.5%
- Progressivity 0.25%
- Progressivity Start 40
- Price 80



Tax Credits from outset  
 Actual oil price (but based on PPT) thru 2006, then Fcst

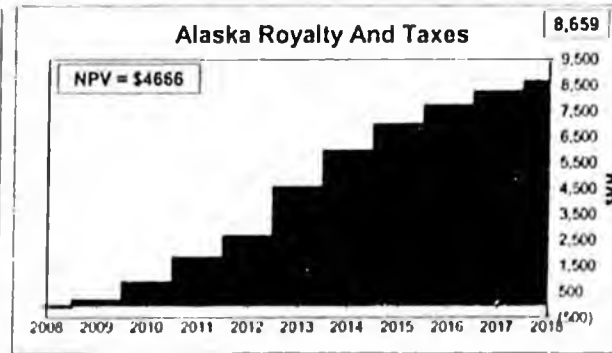
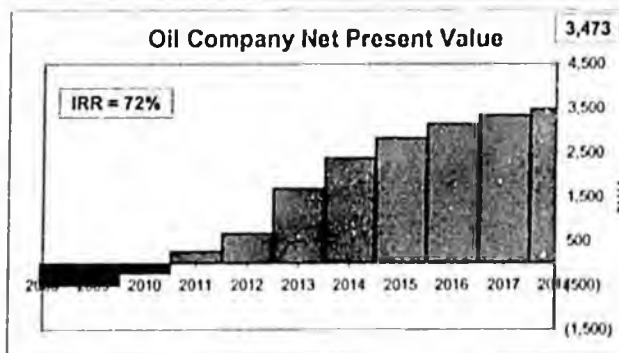
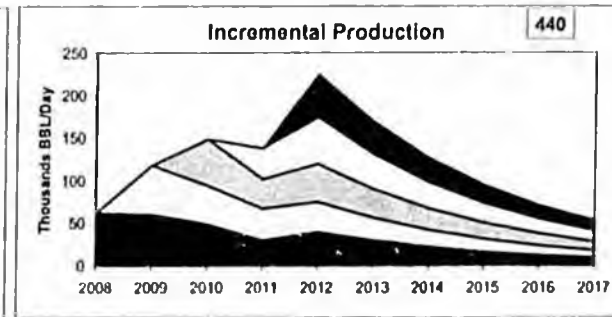
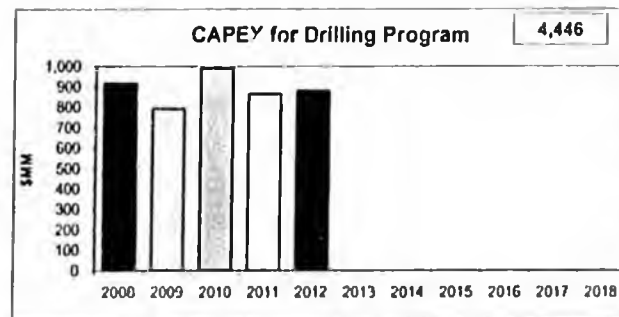
# Duplicate 2002 – 2006 Program Starting in 2008



- Capex to 360%, \$60 oil, Senate CS, Forecast mode
- Oil Company IRR = 72% and NPV10 = \$3473 MM

Modeling the Prudhoe Success contained in AOGA/BP Testimony

- Drilling Program Year
- 2002
  - 2003
  - 2004
  - 2005
  - 2006
- Capex Multiplier 360%
- Opex Multiplier 100%
- Production Multiplier 100%
- Discount Rate 10%
- Royalty 12.5%
- Net Tax Rate 25.0%
- Progressivity 0.40%
- Progressivity Start 30
- Price 60



- Tax Credits from outset
- Forecast Only Mode

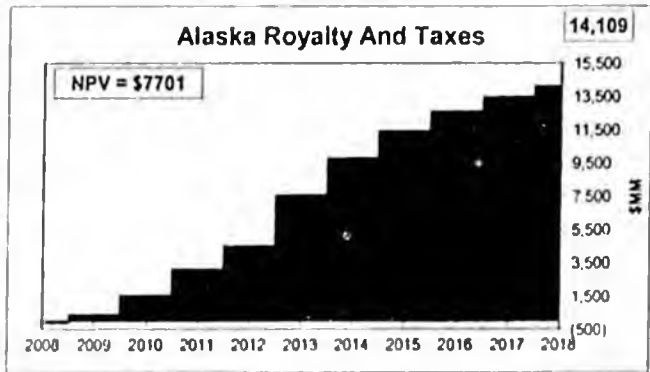
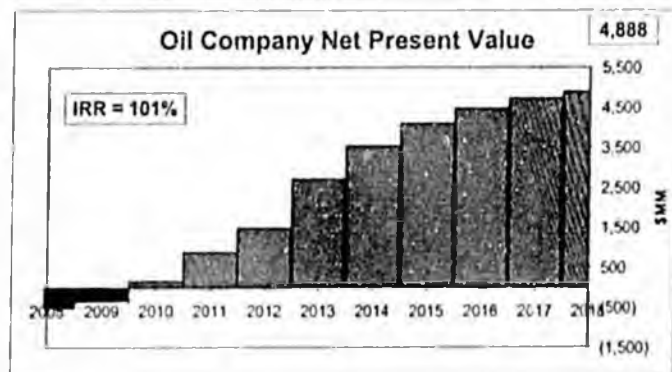
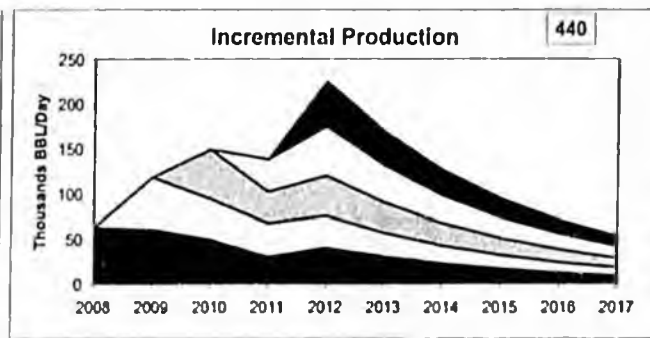
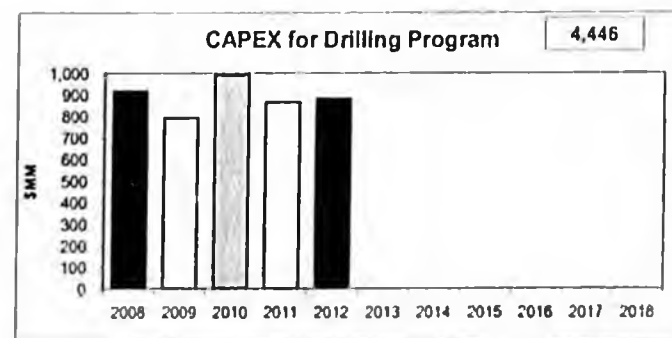


# Forecast at the NYMEX strip price

- All things the same, but oil at \$80 per barrel
- Oil Company IRR = 101%, NPV10 = \$4,888 MM

Modeling the Prudhoe Success contained in AOGA/BP Testimony

- Drilling Program Year
  - 2002
  - 2003
  - 2004
  - 2005
  - 2006
- Capex Multiplier 360%
- Opex Multiplier 100%
- Production Multiplier 100%
- Discount Rate 10%
- Royalty 12.5%
- Net Tax Rate 25.0%
- Progressivity 0.40%
- Progressivity Start 30
- Price 80



Tax Credits from outset  
 Forecast Only Mode

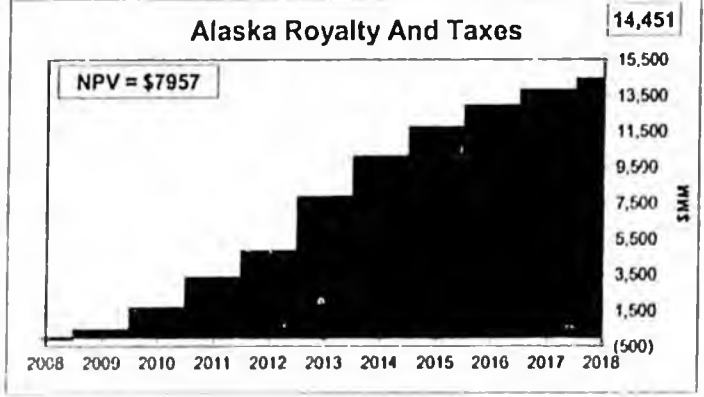
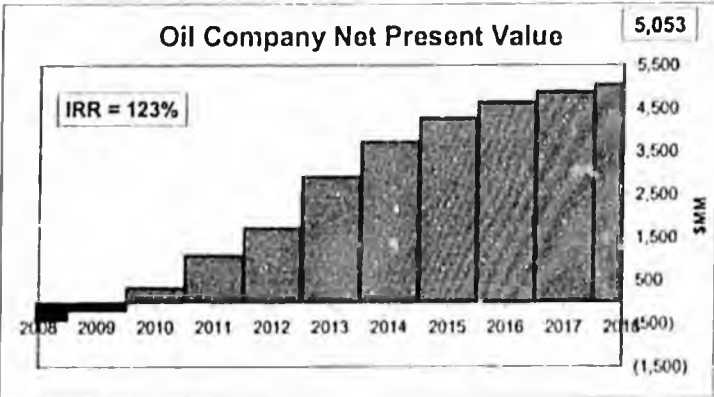
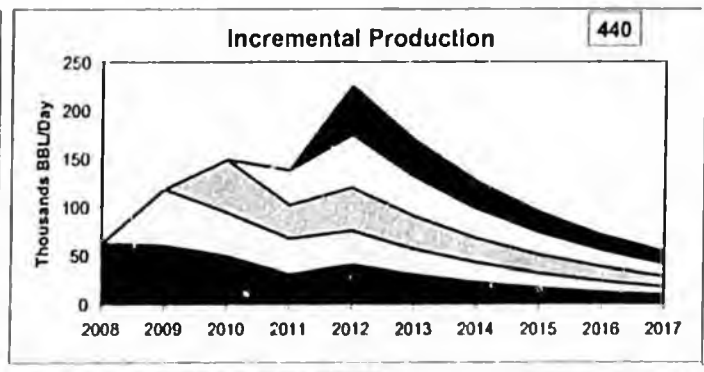
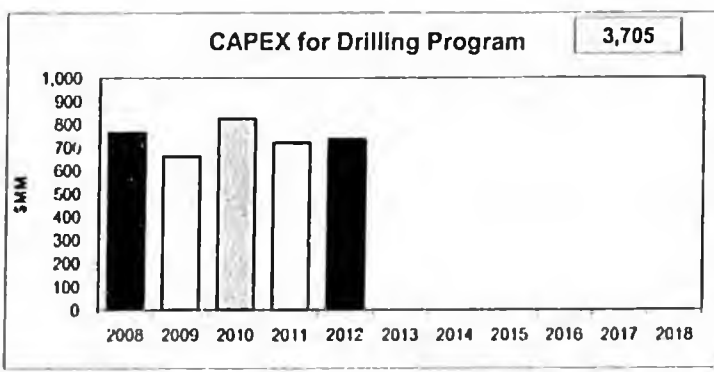


# Senate CS – Forecast Mode, \$80 oil

- IRR = 123%, NPV10 = \$5.375 billion

Modeling the Prudhoe Success contained in AOGA/BP Testimony

- Drilling Program Year
  - 2002
  - 2003
  - 2004
  - 2005
  - 2006
- Capex Multiplier 300%
- Opex Multiplier 100%
- Production Multiplier 100%
- Discount Rate 10%
- Royalty 12.5%
- Net Tax Rate 25.0%
- Progressivity 0.40%
- Progressivity Start 30
- Price 80



Tax Credits from outset  
 Forecast Only Mode

# Report to the Alaska Legislature on Production Cost Increases

November 7, 2007

**Barry Pulliam**  
**Senior Economist**  
**Econ One Research**

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econ  
ONE

# Summary of Costs

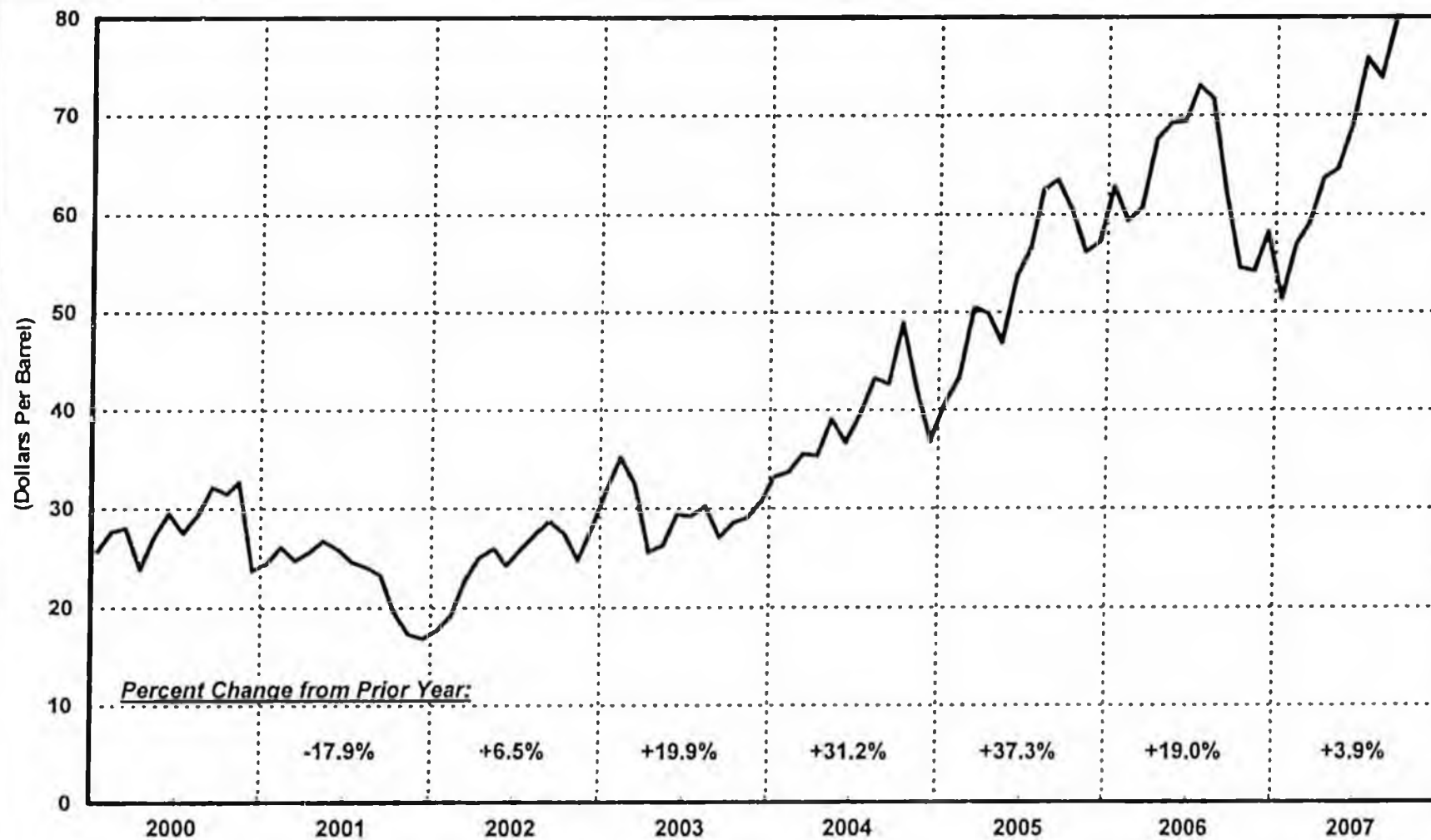
## *Fiscal Note HB 3001:*

	FY 2008		
	<u>Capex</u>	<u>Opex</u>	<u>Total</u>
Total (\$M)	\$1,052	\$1,076	\$2,128
Per Taxable Barrel (\$/Bbl.)	\$4.58	\$4.68	\$9.26

## *Fiscal Note HB 2001 (Current):*

	FY 2008		
	<u>Capex</u>	<u>Opex</u>	<u>Total</u>
Total (\$M)	\$2,146	\$2,187	\$4,333
Per Taxable Barrel (\$/Bbl.)	\$9.33	\$9.51	\$18.85

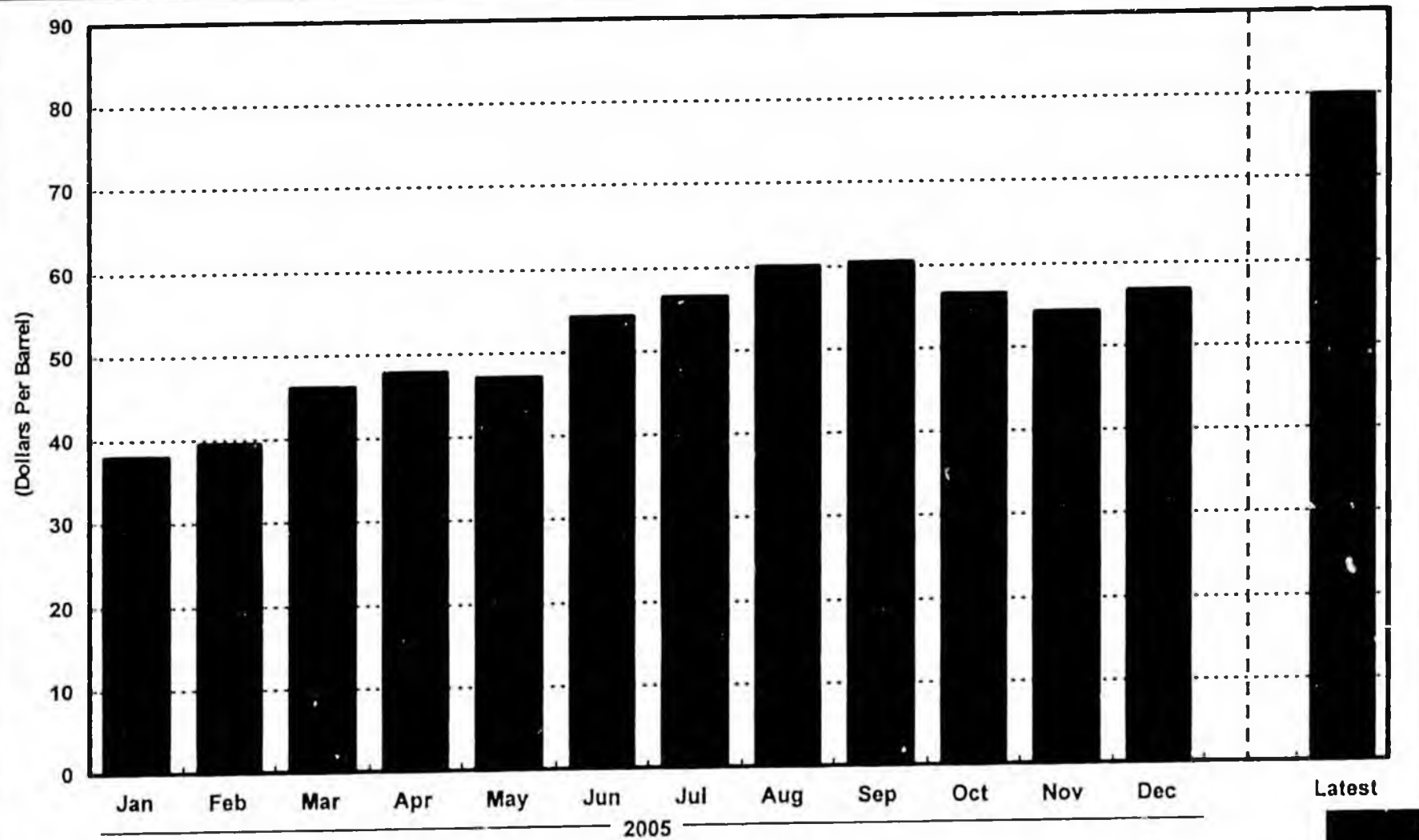
# Platt's ANS Crude Oil Price January 2000 - September 2007



Source: Platt's.

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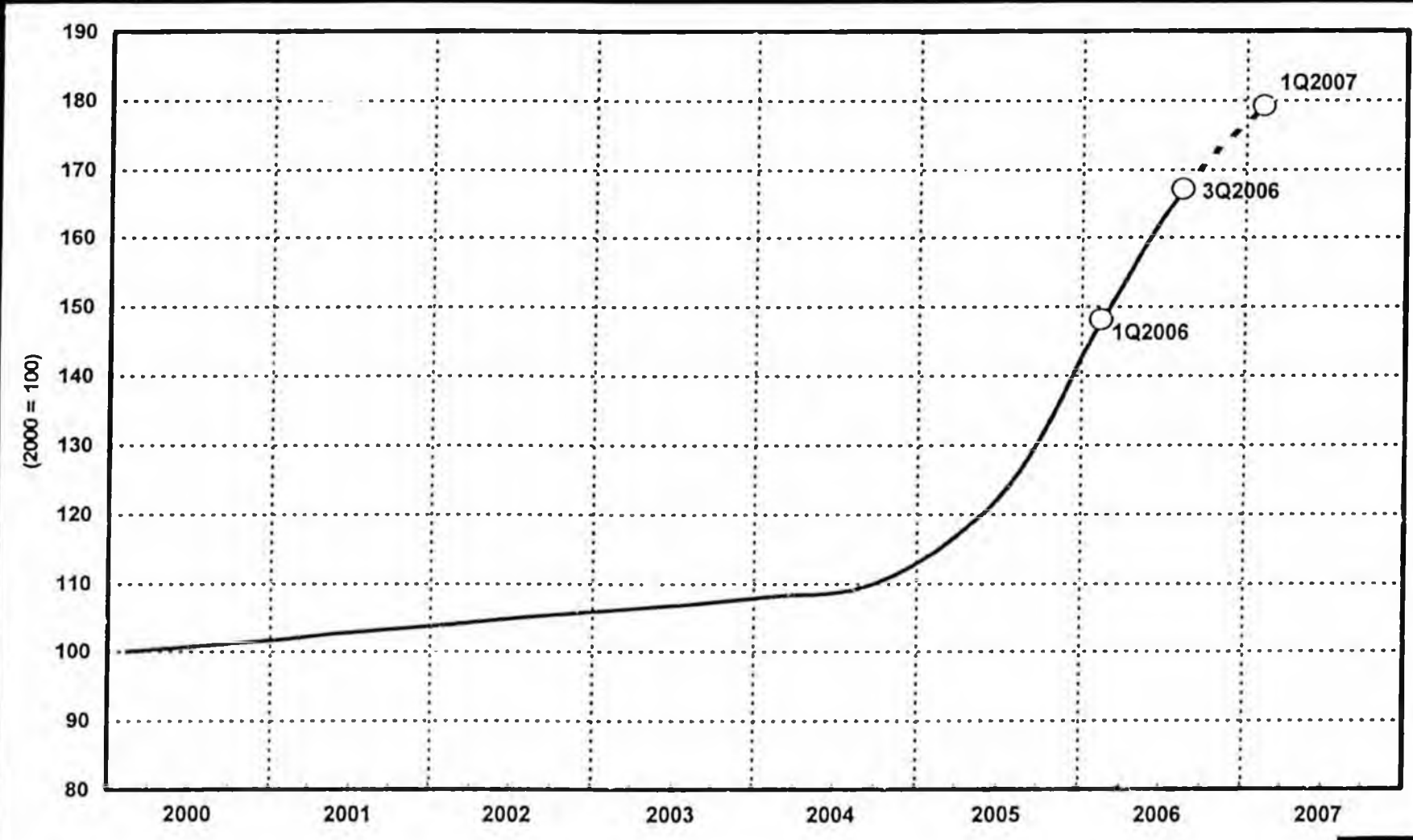
# NYMEX Futures Price for December 2011 Delivery January - December 2005, Latest Quotes



Source: NYMEX.



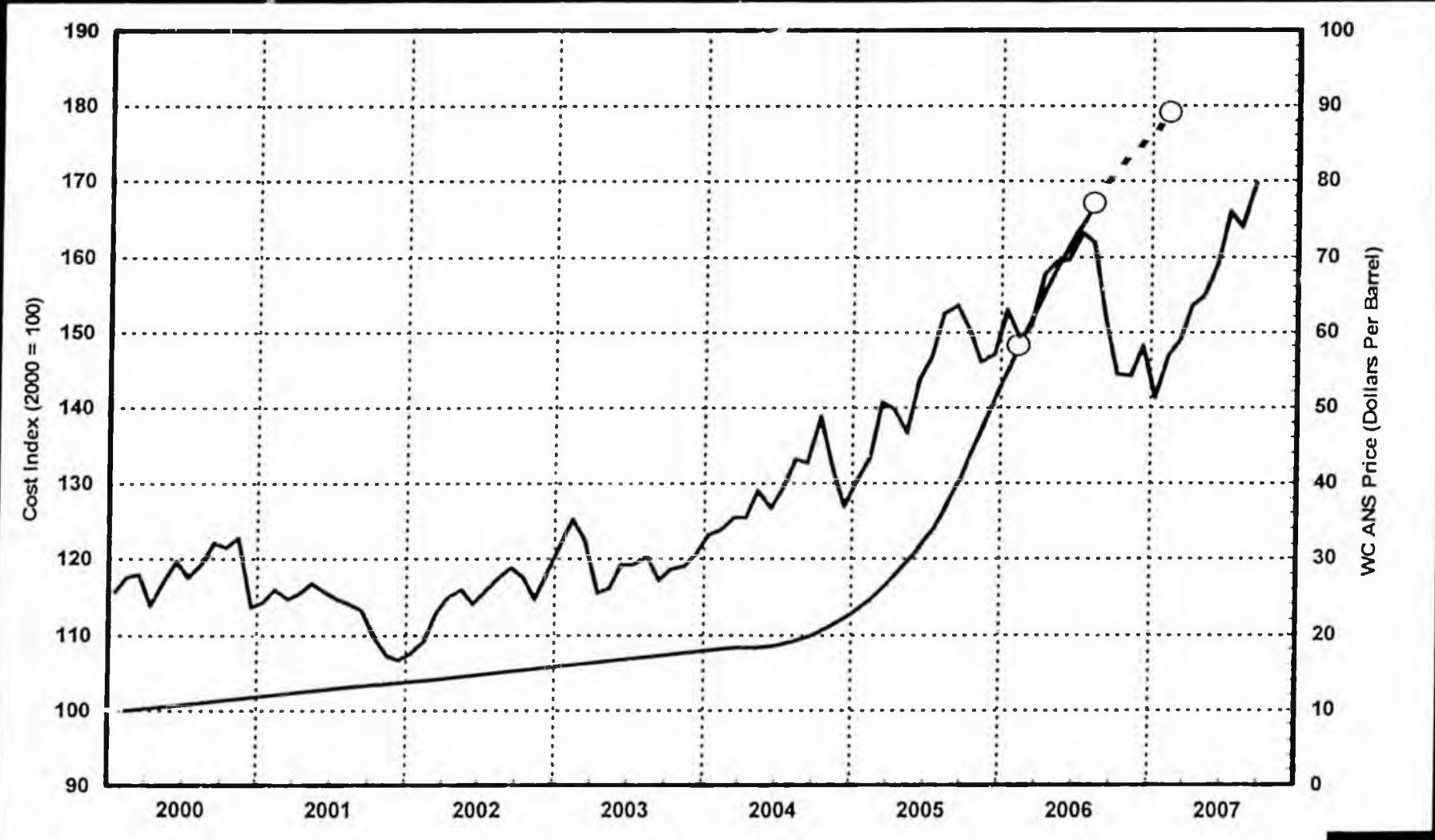
# IHS/CERA Upstream Capital Cost Index 1Q2000 - 1Q2007



Source: Based on Cambridge Energy Research Associates May 8, 2007 Press Release.



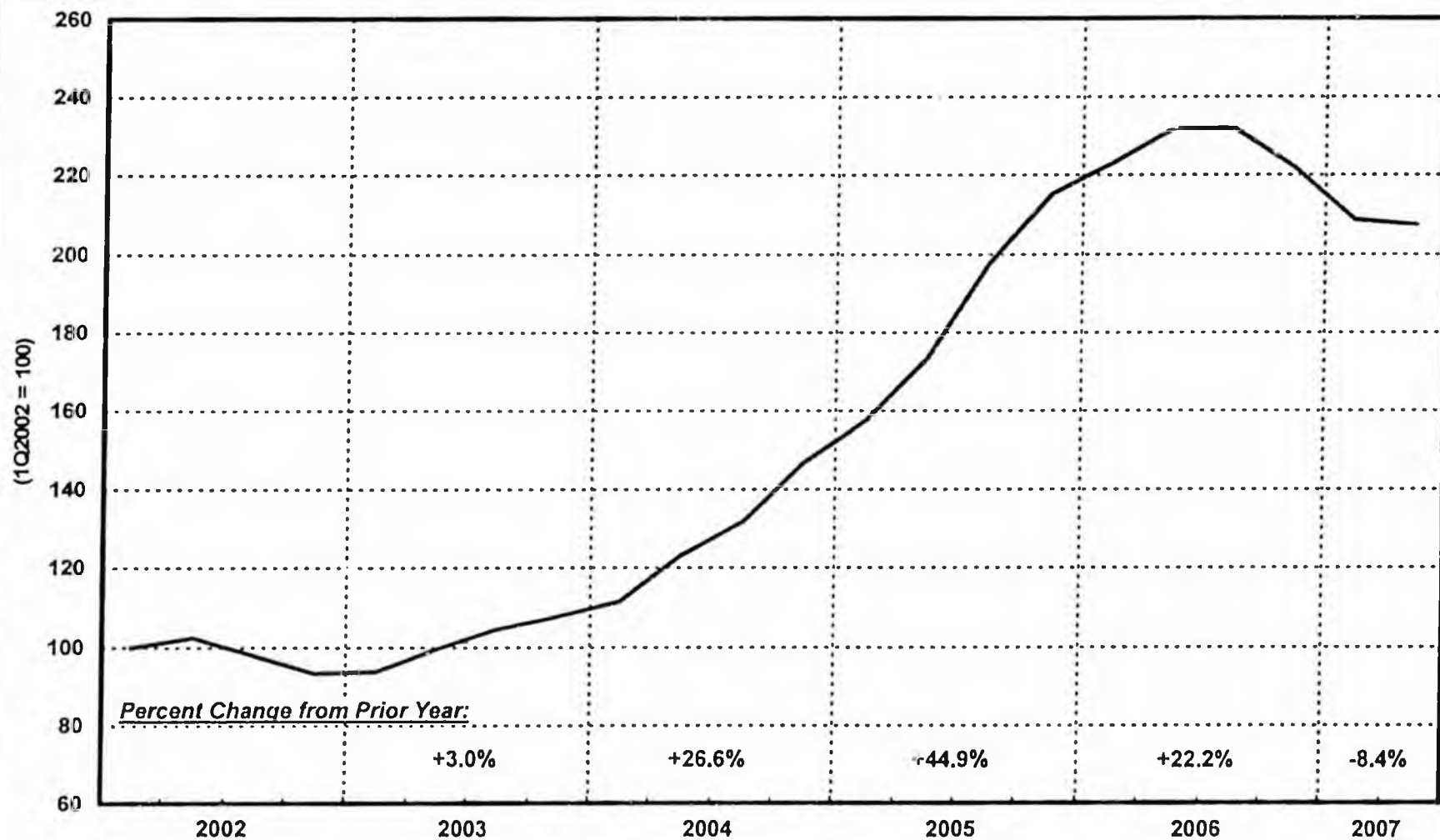
# IHS/CERA Upstream Capital Cost Index vs. West Coast ANS Price 2000 - 2007



Source: Index Based on Cambridge Energy Research Associates May 8, 2007 Press Release; Prices from Platt's.



# Average\* Oil Drilling Rig Daily Rates Index 1Q2002 - 2Q2007

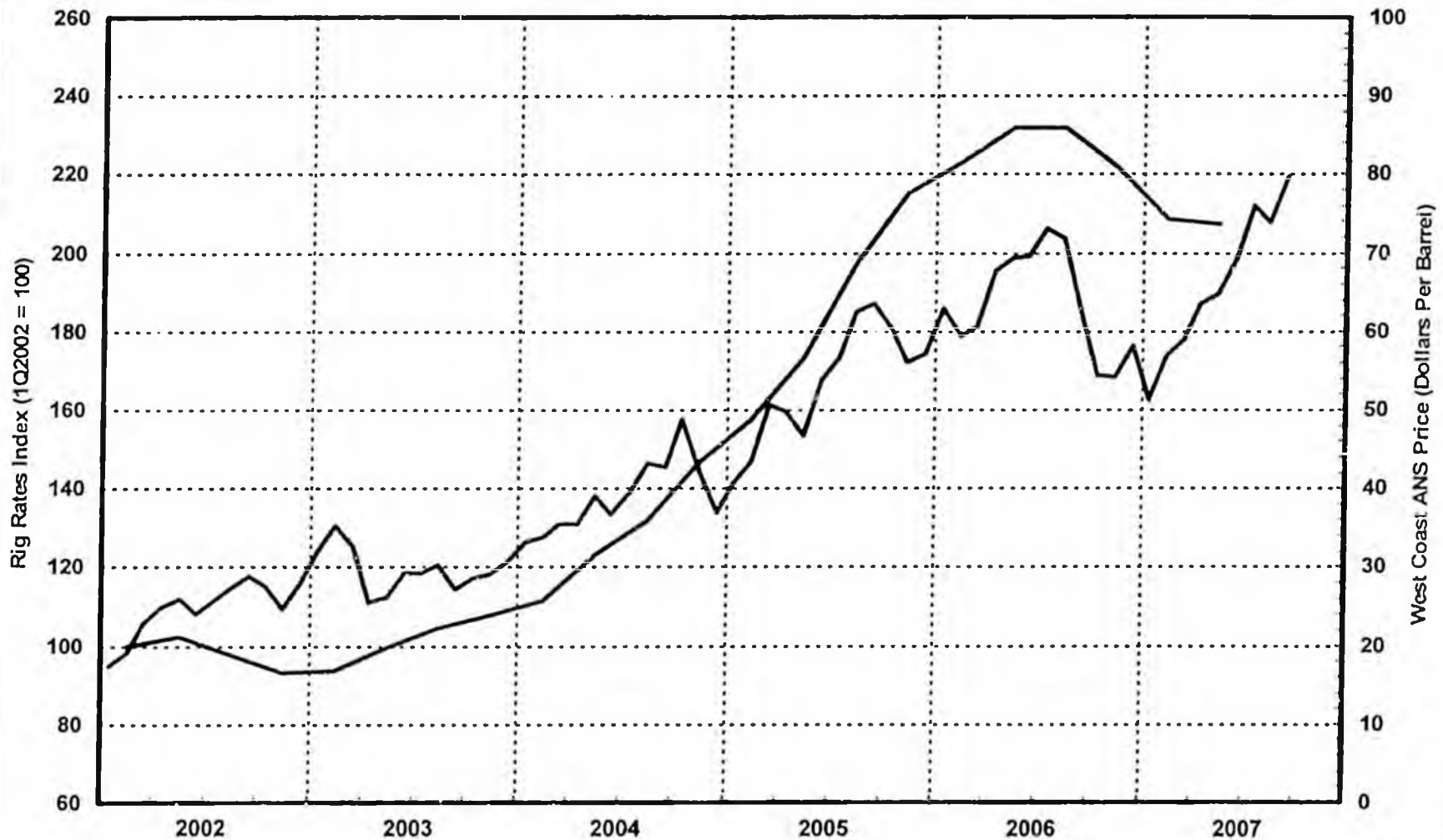


\* Average of Mid-Continent, ArkLaTex, Gulf Coast, Permian Basin, Rocky Mountains, and South Texas.

Source: Land Rig Newsletter.

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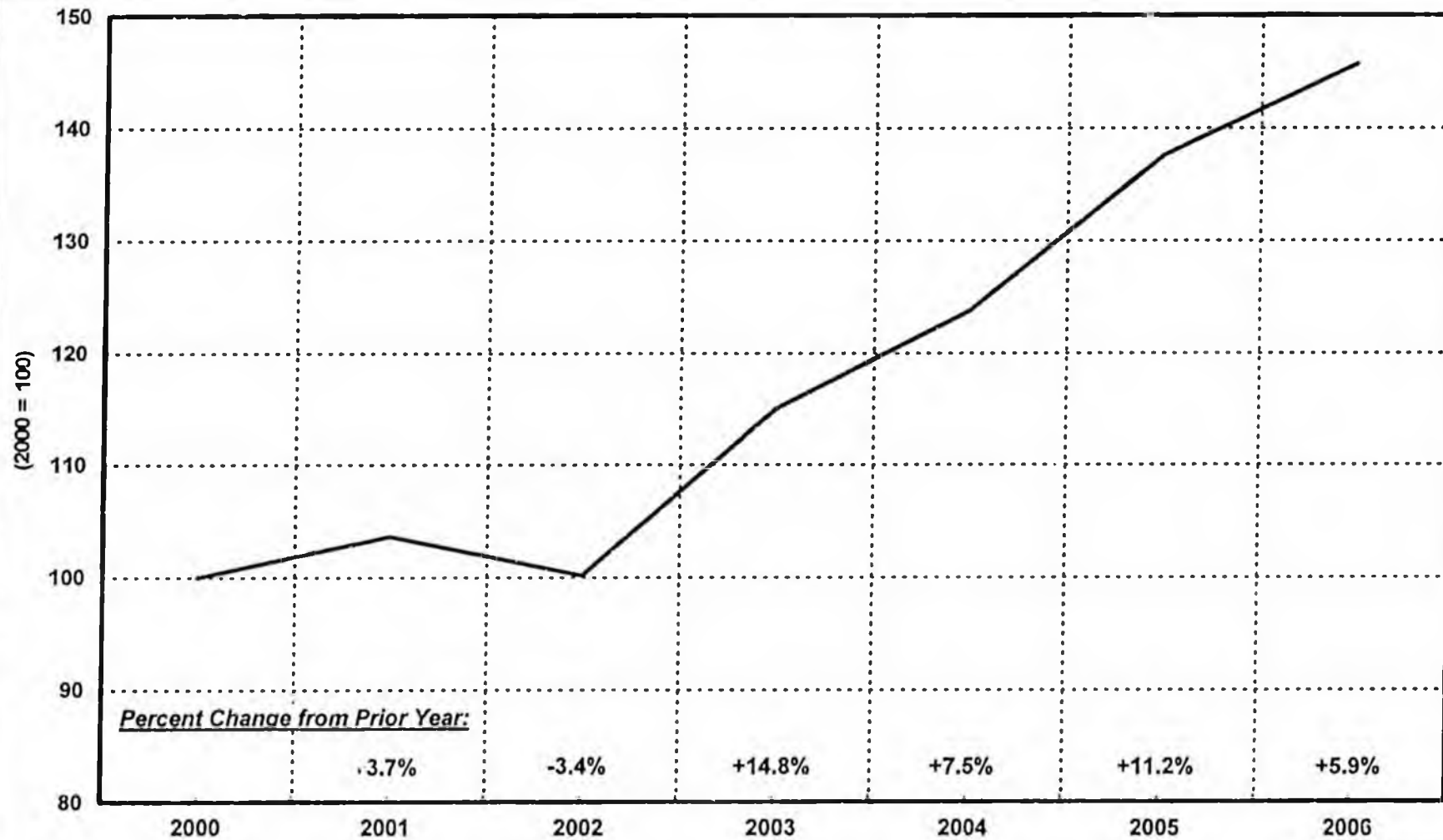
# Average\* Oil Drilling Rig Daily Rates Index vs. West Coast ANS Price 2002 - 2007



\* Average of Mid-Continent, ArkLaTex, Gulf Coast, Permian Basin, Rocky Mountains, and South Texas.

Source: Rig Rate from Land Rig Newsletter; Prices from Platt's.

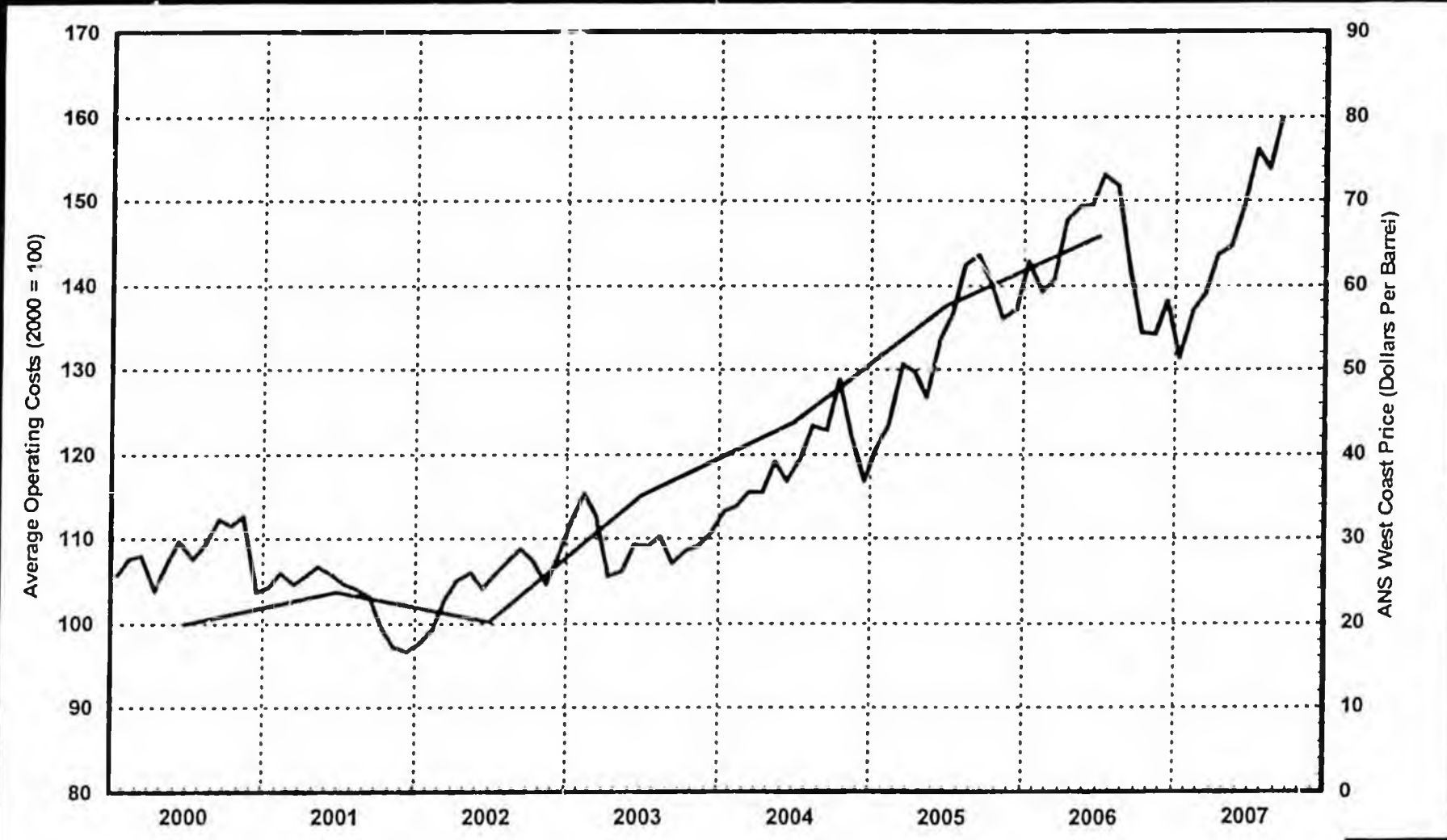
# Average\* Operating Costs for 10-Well Oil Lease Index 2000 - 2006



\* Average of California, Oklahoma, South Louisiana, South Texas, West Texas, and Rocky Moutains.

Source: EIA.

# Average\* Operating Costs for 10-Well Oil Lease Index vs. West Coast ANS Price 2000 - 2007

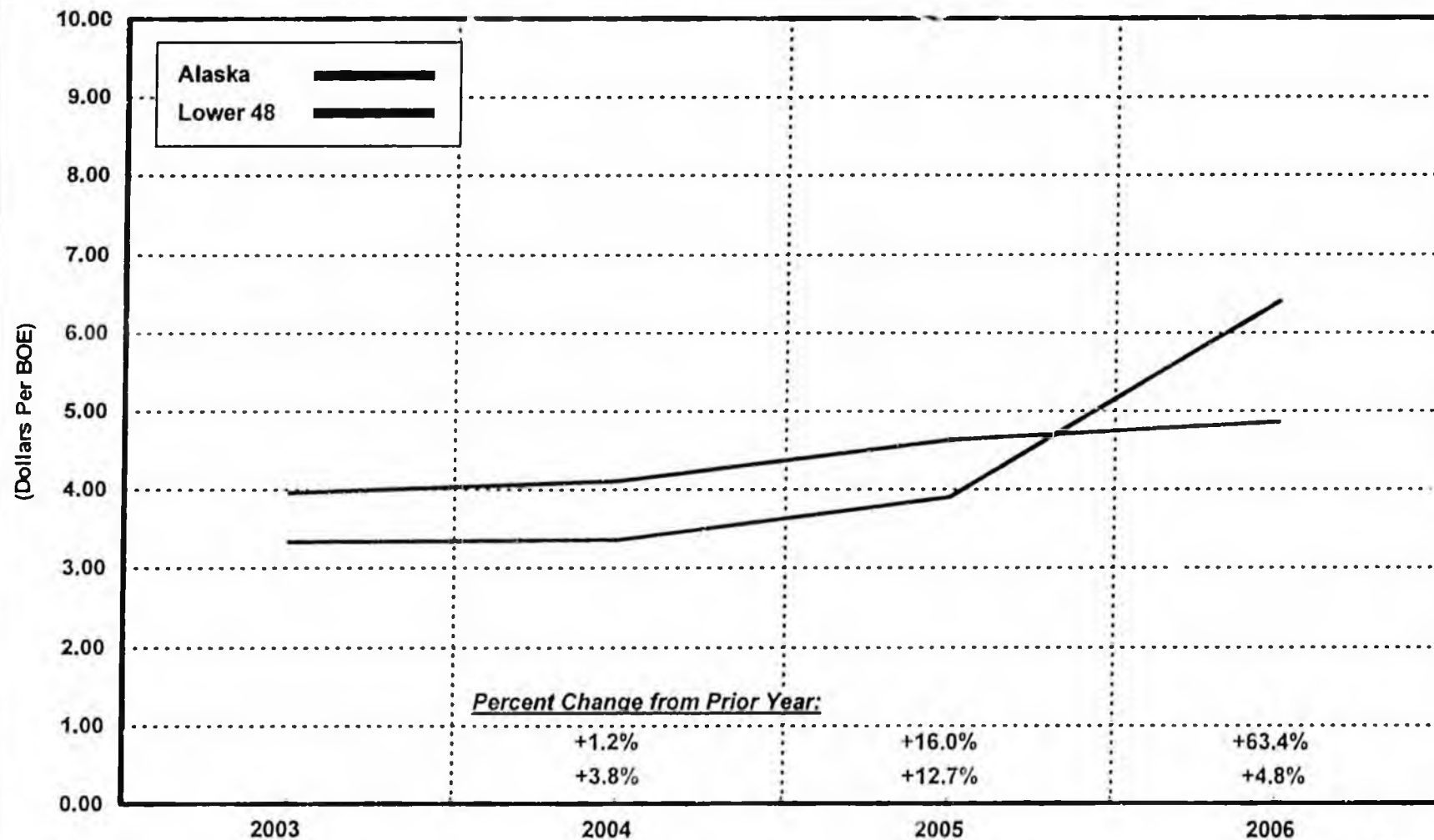


\* Average of California, Oklahoma, South Louisiana, South Texas, West Texas, and Rocky Moutains.

Source: Costs from EIA; Prices from Platt's.

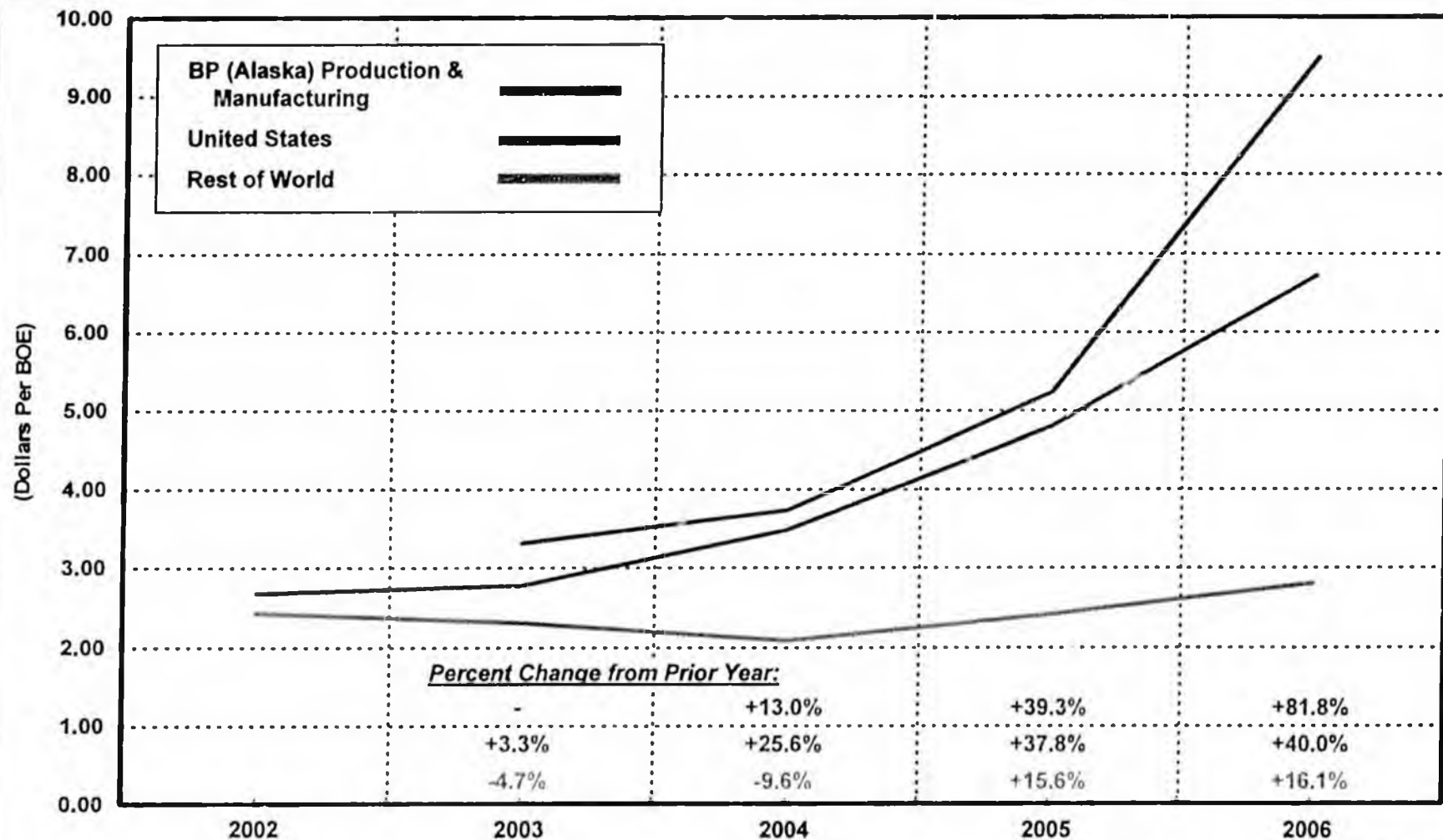


# ConocoPhillips Reported Production Costs Per BOE 2003 - 2006



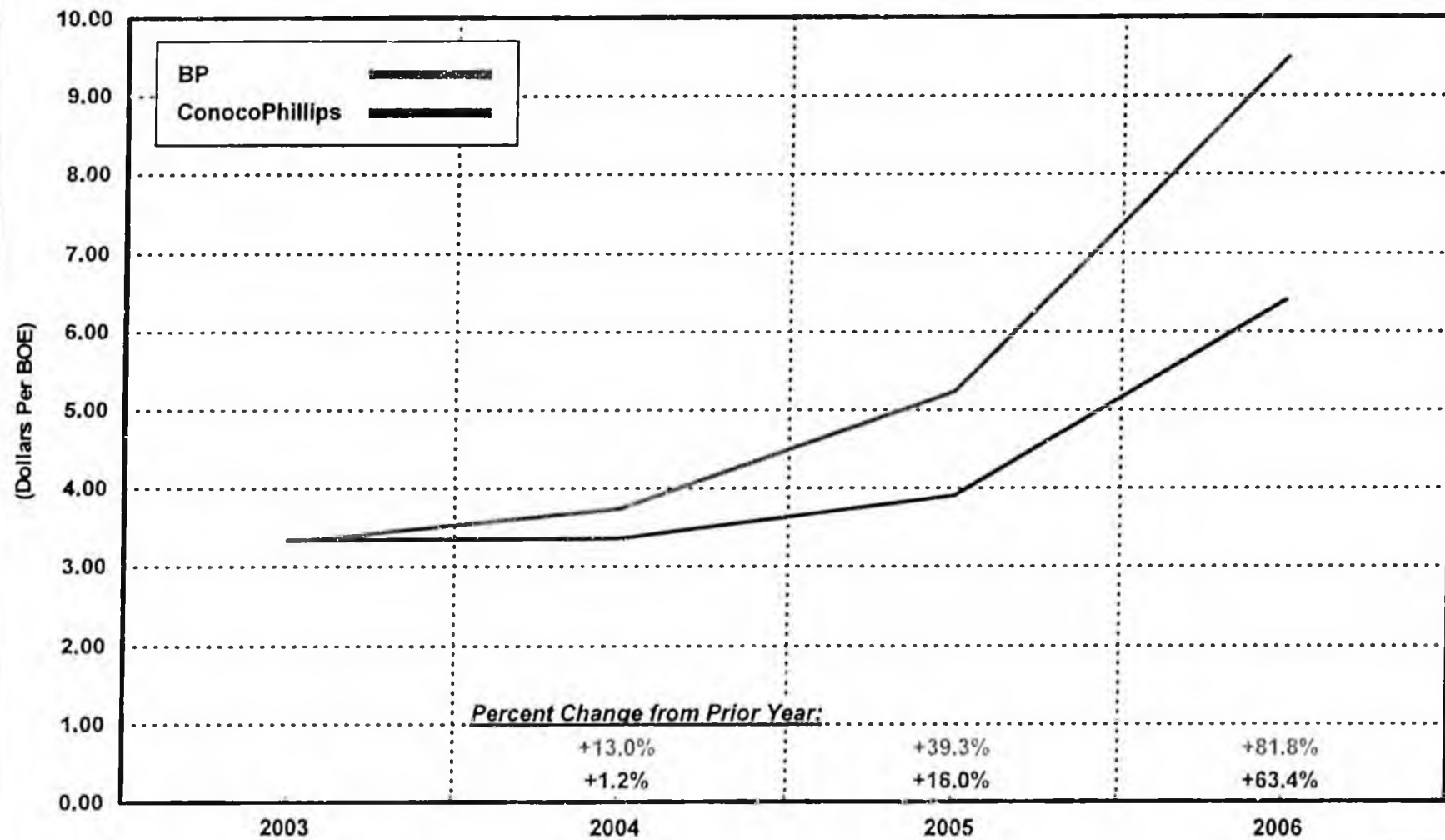
Source: ConocoPhillips 10-K filings.

# BP Reported Production Costs Per BOE 2002 - 2006



Source: BP Financial and Operating Information, 2002-2006.

# BP and ConocoPhillips Reported Alaska Production Costs Per BOE 2003 - 2006



Source: ConocoPhillips 10-K filings, BP Financial and Operating Information, 2002-2006.

## **Corrosion / Integrity Management Costs**

- **\$260M for OTL Replacement**
- **\$550M Net for Integrity Management 2007-2008**  
(BP Form 20-F, pg. 18)
- **Likely Increase in Costs for Other Production-Related Activities**
- **Probably Reflected in DOR Cost Forecasts**

# Conclusions

- **DOR Current Forecasts are Based on Unaudited Taxpayer Returns Under the PPT. These Costs May be Reduced After Review and Audit.**
- **Forecast Costs Used in DOR's Fiscal Note to HB 3001 are in Line with Publicly Reported Information Specific to Alaska During the 2002-2005 Period.**
- **Costs Have Increased in Recent Years with Increases in Expectations of Future Crude Oil Prices. The Level of Increase is Likely to be Mitigated Over the Long Run.**
- **The Increases in Costs Filed with the SEC for Alaska Relative to the Lower 48 and Elsewhere Reflect in Part, Expenses Associated with Corrosion Repair and "Integrity Management" Efforts in Alaska.**