

ALASKA LEGISLATURE COMMITTEE FILES 2007-2008 RES 12712



Overall Observations

- **We agree with industry that there is significant upside in reducing the decline from existing producing assets**
- **The economics of reinvestment in 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.**



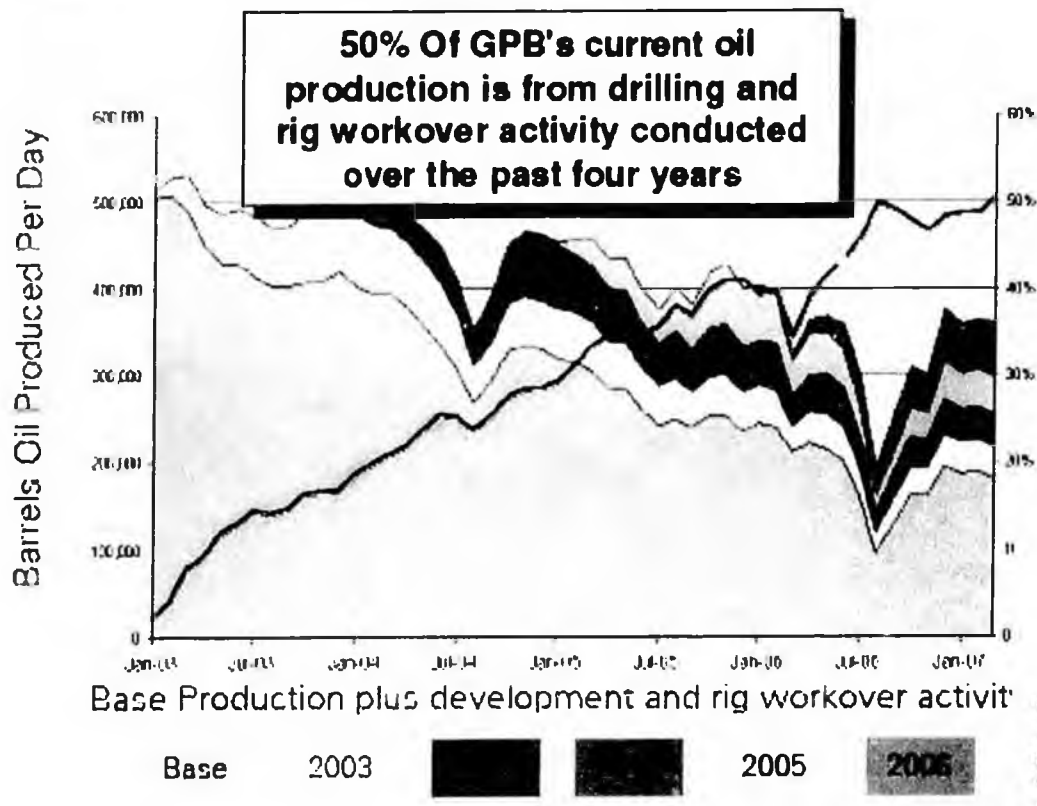
AOGA Testimony – Recent Success

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 4th largest stand-alone field on the North Slope today.

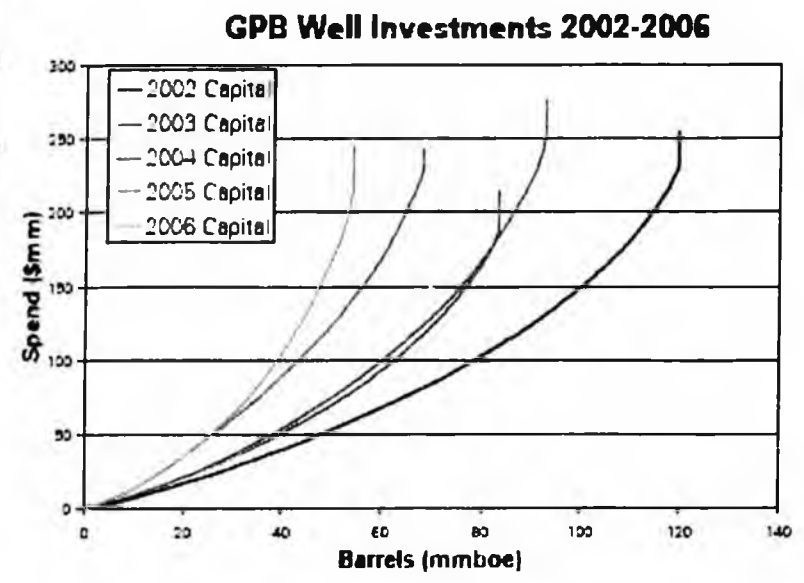
- **AOGA noted that North Slope field life could be extended up to another 25 years with continued investment**
- **The oil companies achieved 70,000 bpd of additional production from the 2006 drilling program in Prudhoe Bay.**



BP's infill drilling program



Observations?



BP House testimony page 12



Costlier Development

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

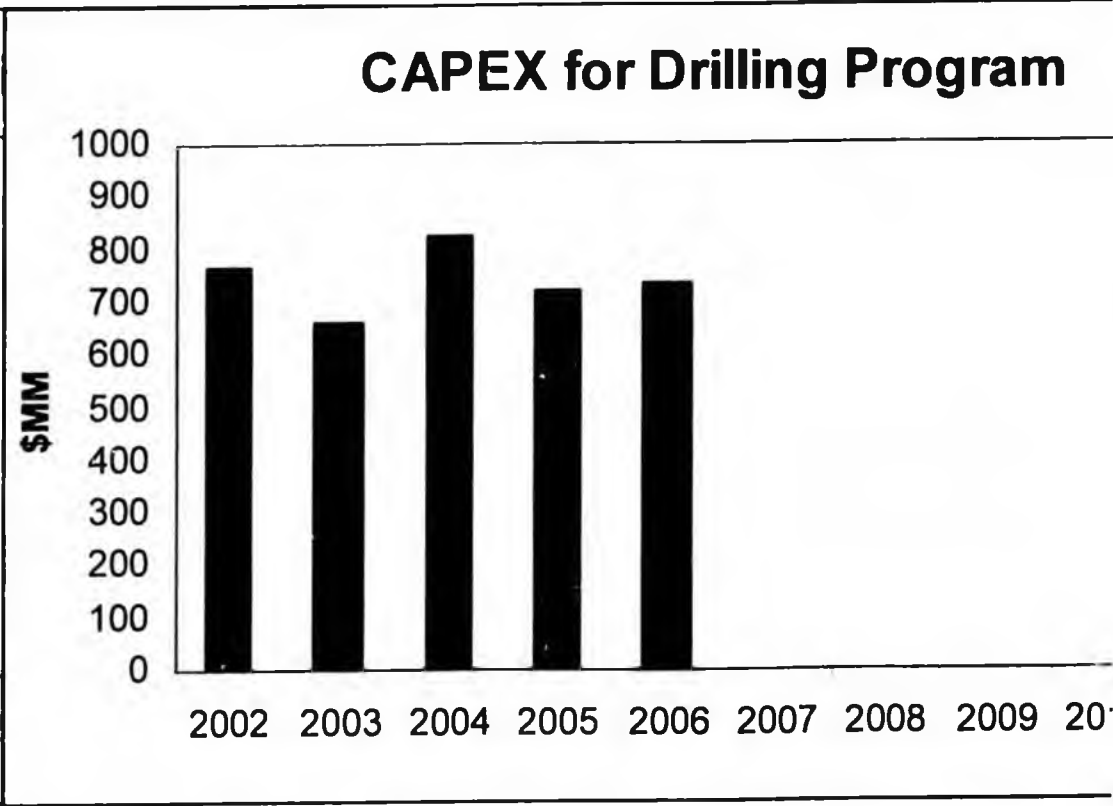
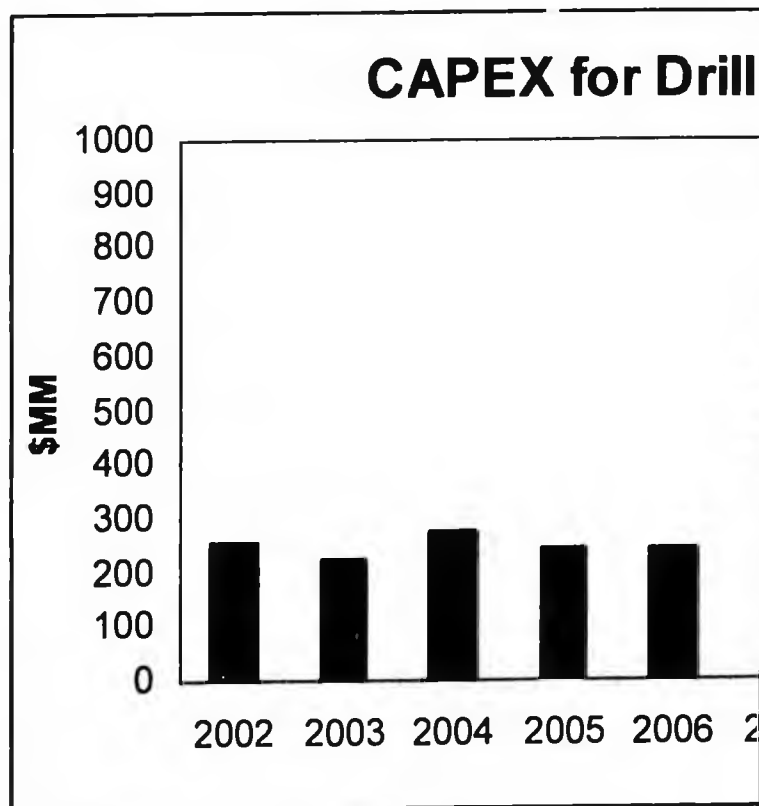
	2002	2003	2004	2005	2006
Capex	255	220	275	240	245
MMbbls	120	90	80	60	50
\$/bbl	2.13	2.44	3.44	4.00	4.90

- 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



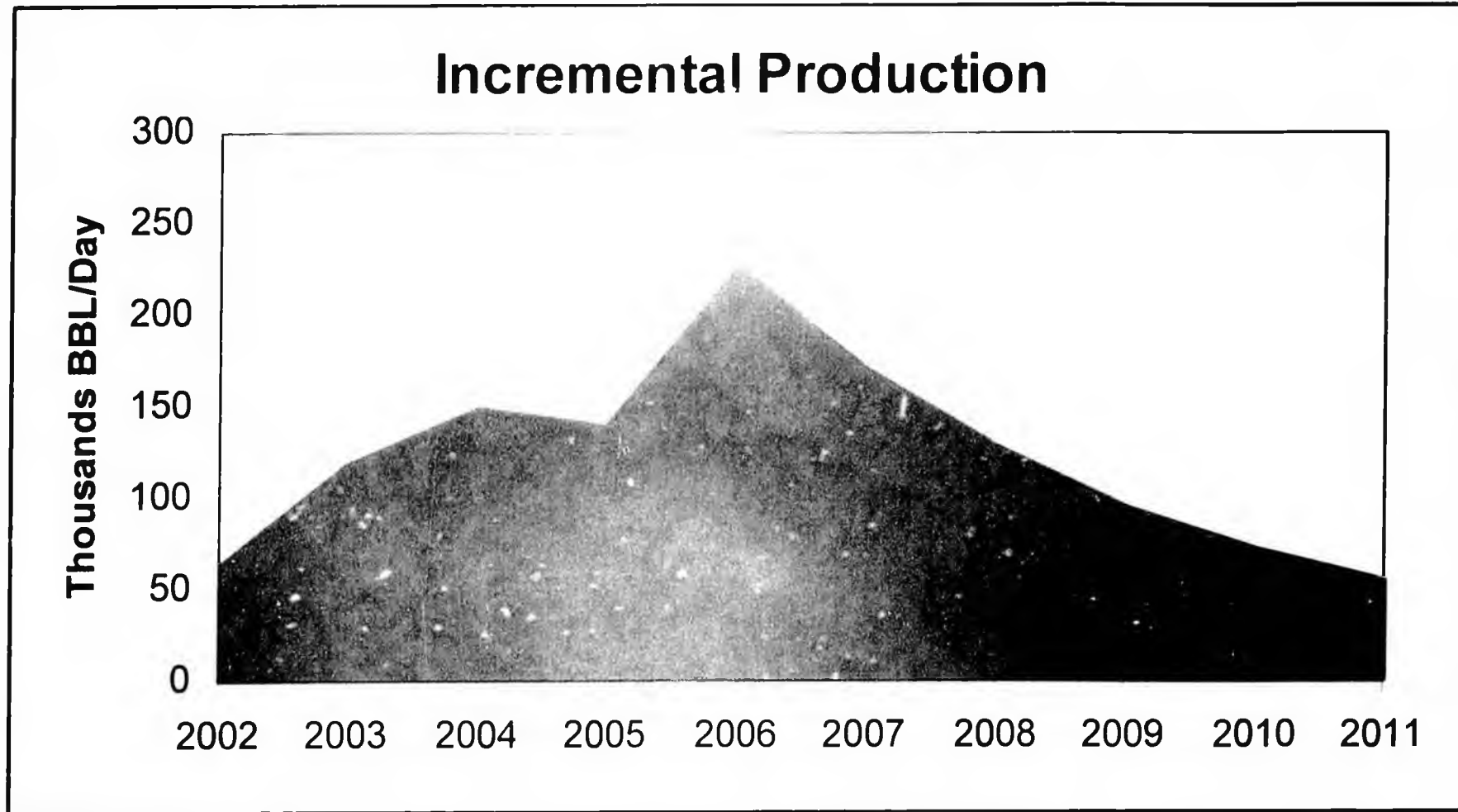
5 Year Prudhoe Drilling Program

- Drilling capex – 300% for added facilities/injection





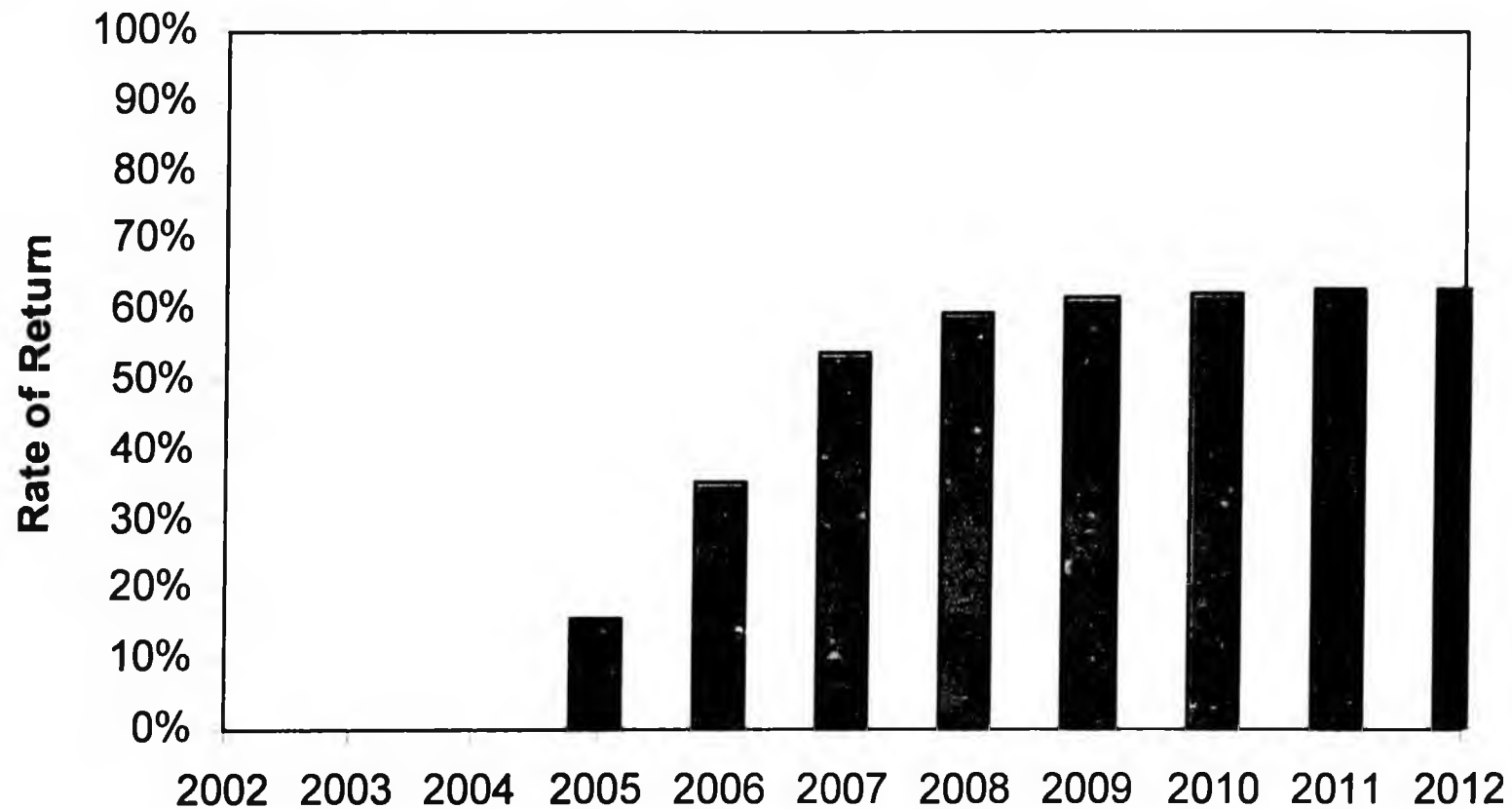
BP – Prudhoe Bay



BP Prudhoe Bay

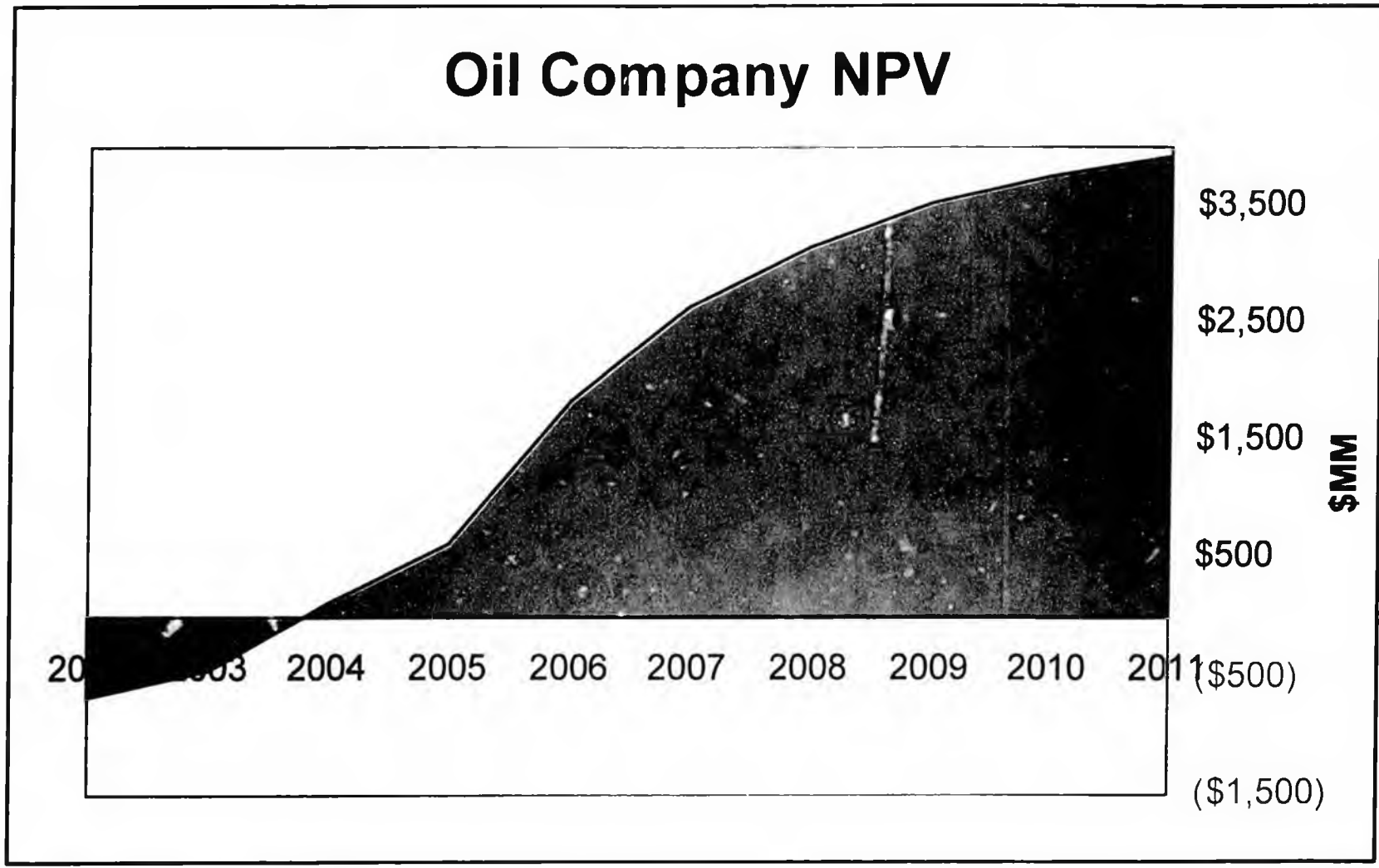


Oil Company After Tax IRR



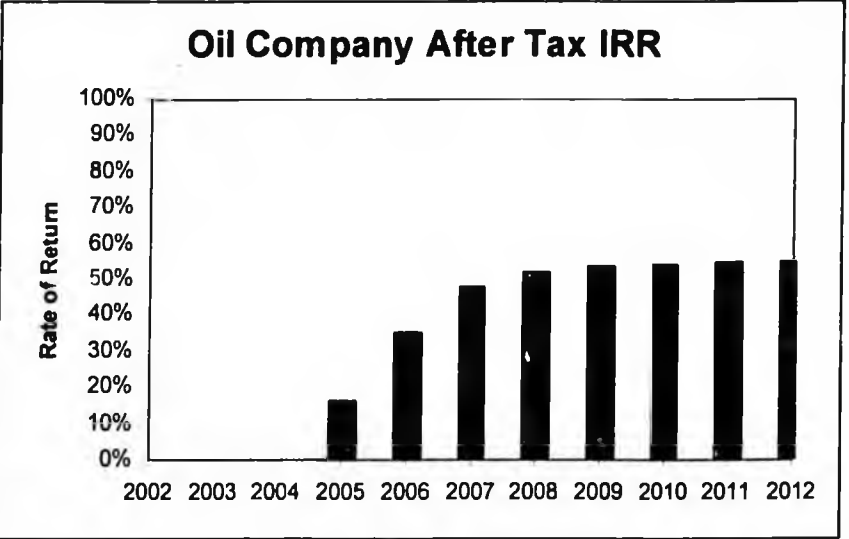
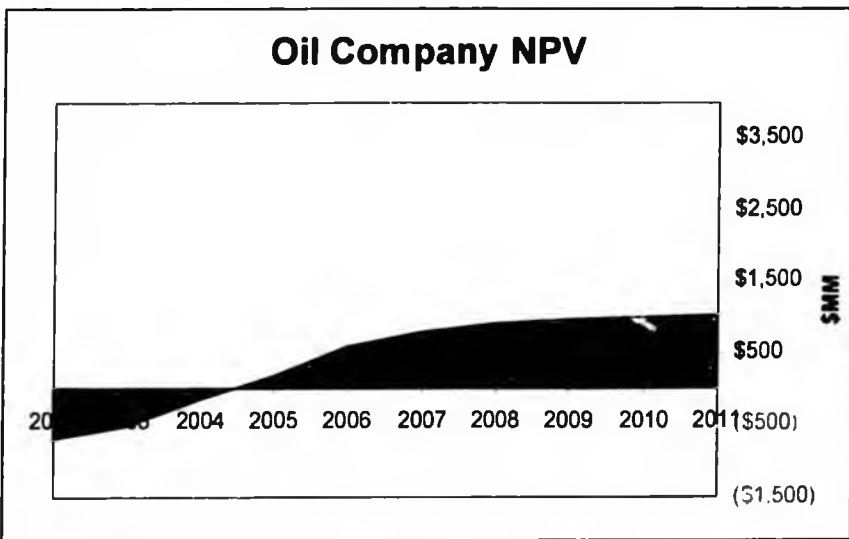
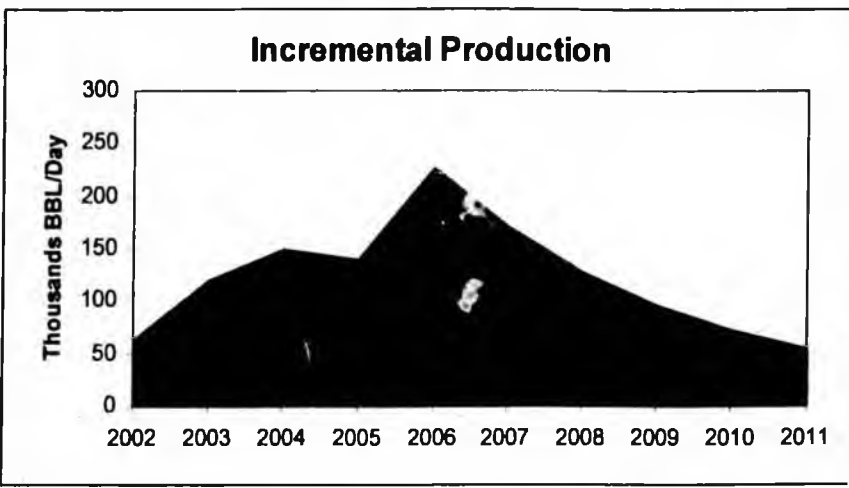
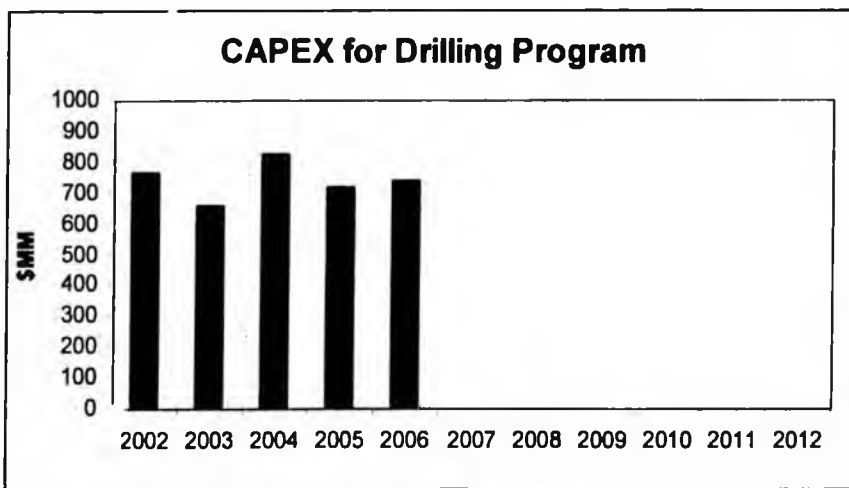


BP Prudhoe Bay





Overly Stressed Case



Model





North Slope Potential

Production Drives Revenue



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

- **Built a generic model based on the above barrels and investments**
 - Used indicated decline rates
 - 250,000 bpd abandonment rate

Under PPT



Production Drives Revenue



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

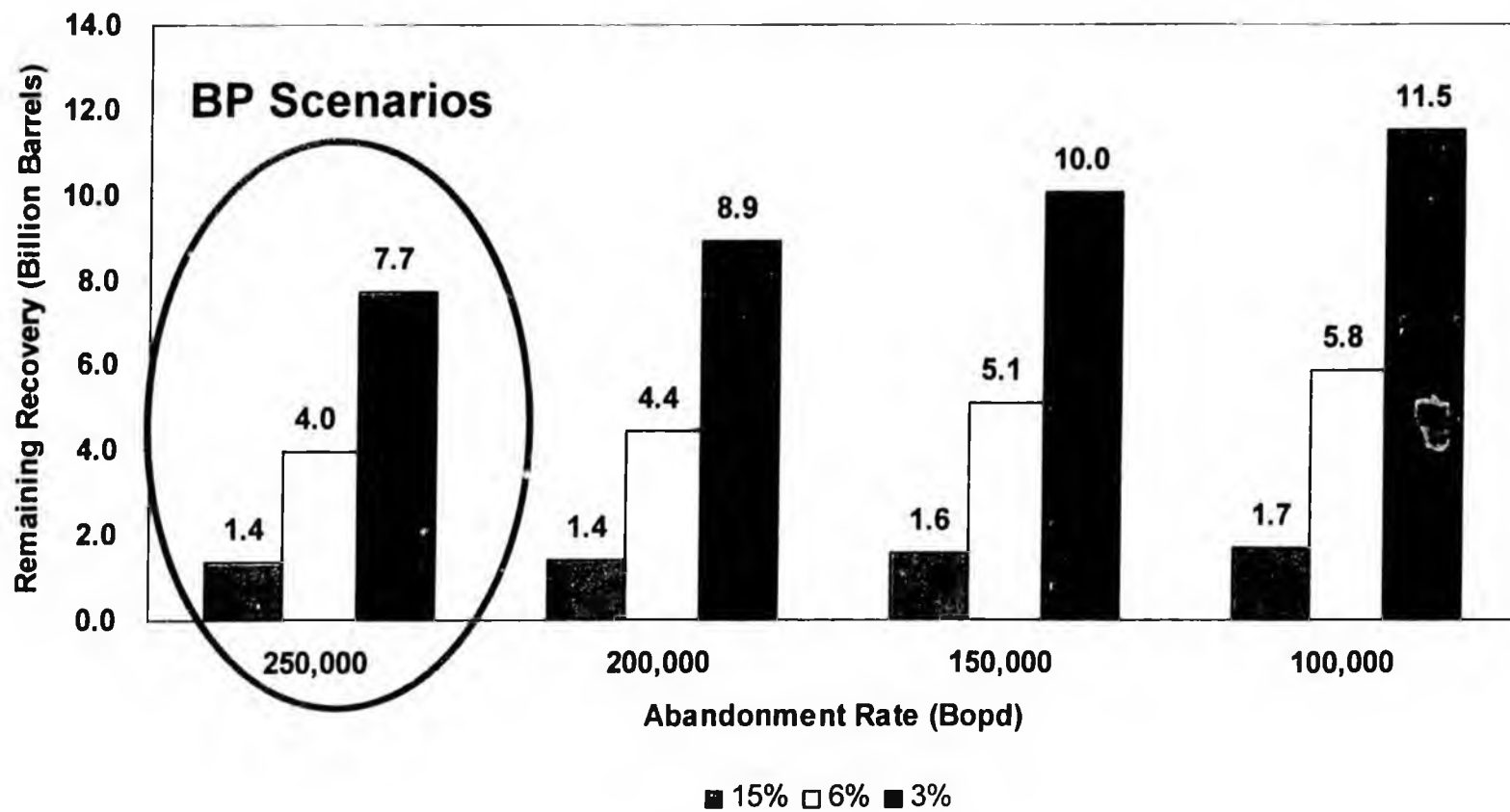
- | | | | |
|-----------------|---------------|---------------|----------------|
| • NPV10 = \$Bn | • \$15 - \$20 | • \$30 - \$40 | • \$35 - \$45 |
| • NPV0 = \$Bn | • \$22 - \$27 | • \$55 - \$75 | • \$90 - \$125 |
| • NPV0 = \$/bbl | • \$15 - \$20 | • \$14 - \$19 | • \$12 - \$17 |

~ \$80/bbl WTI, \$70/bbl NS



North Slope Abandonment

Impact Of Abandonment Rate On North Slope Recovery





Summary

- **Oil Company must show “reasonable certainty” about future spending to be able to book reserves**
 - There is pressure in the market place to declare ‘proved reserves’ as soon as feasible -- important to shareholder and analyst growth expectations
 - If the production volumes associated with the 6% and 3% decline scenarios have already been booked as proved reserves, then to **not** undertake the continuing investments would require a significant write down of reserves
- **Drilling program is so profitable that under even the most extreme net tax structure, oil companies would want to continue their reinvestment program.**

Goals



Goals for Fiscal Design

- **Based on hearings, discussions and other dialog we see the following as the goals you are trying to achieve in this special session:**
 - Fields with larger **profitability** should be paying more taxes
 - Encourage investment in existing units
 - Reinvestment in producing assets
 - Investment in new developments
 - ❖ Conventional
 - ❖ Unconventional (i.e. heavy oil)
 - Encourage new investment outside legacy units
 - Level playing field for incumbents and new entrants
 - Durability
 - Don't want to be back 'fixing' things
 - Build on prior tax dialogue



Encourage New Investment

- **Fiscal system should encourage investment in new fields**
 - Investment credits
 - Net Operating Loss credits
 - Aid to new entrants with no existing tax base
 - Lower tax rate for fields with higher cost structure
 - More distant from infrastructure
 - Heavy Oil
 - Gas
- **Is base rate low enough?**
 - Additional barrels down TAPS extends production from existing reservoirs



The Fiscal Design Challenge

- **The Take**

- Fair share of the high margins currently being realized
- Progressive structure to adapt to changes in:
 - Price
 - Production
 - Cost

- **The Give Back**

- Encouragement to reinvest profits for more development inside legacy units

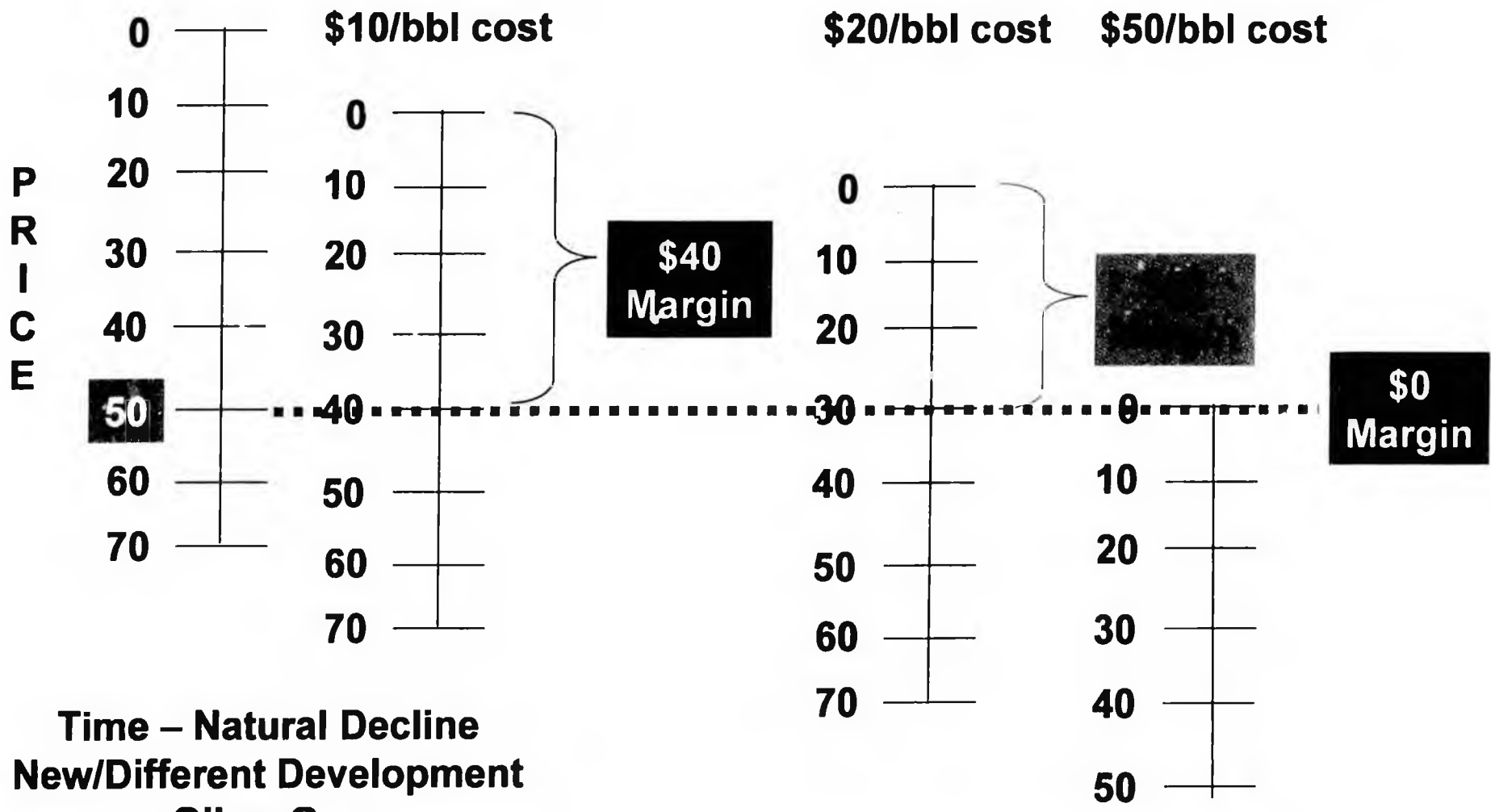


Key Point Easily Misunderstood

Price \neq Margin

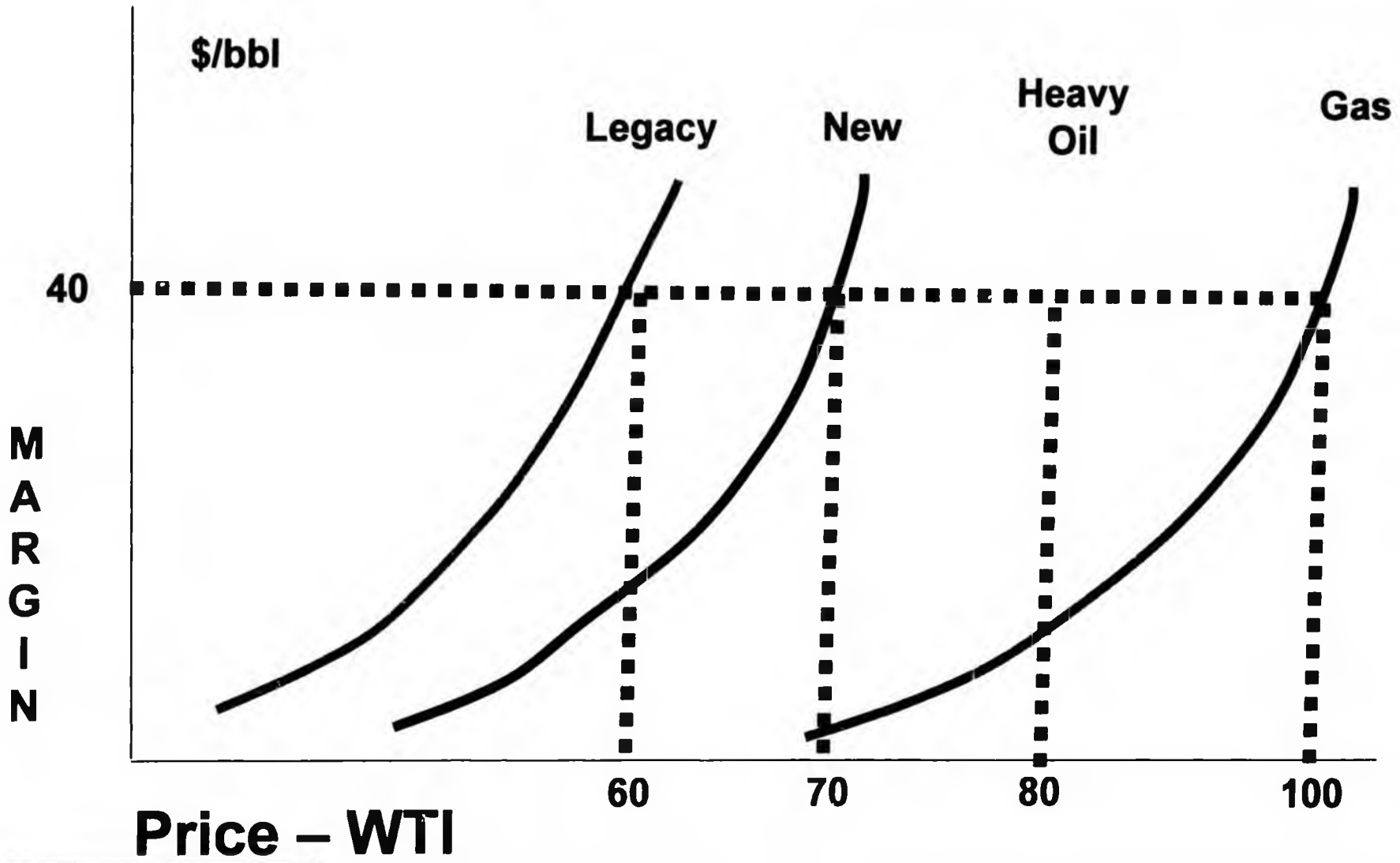


Price versus Margin



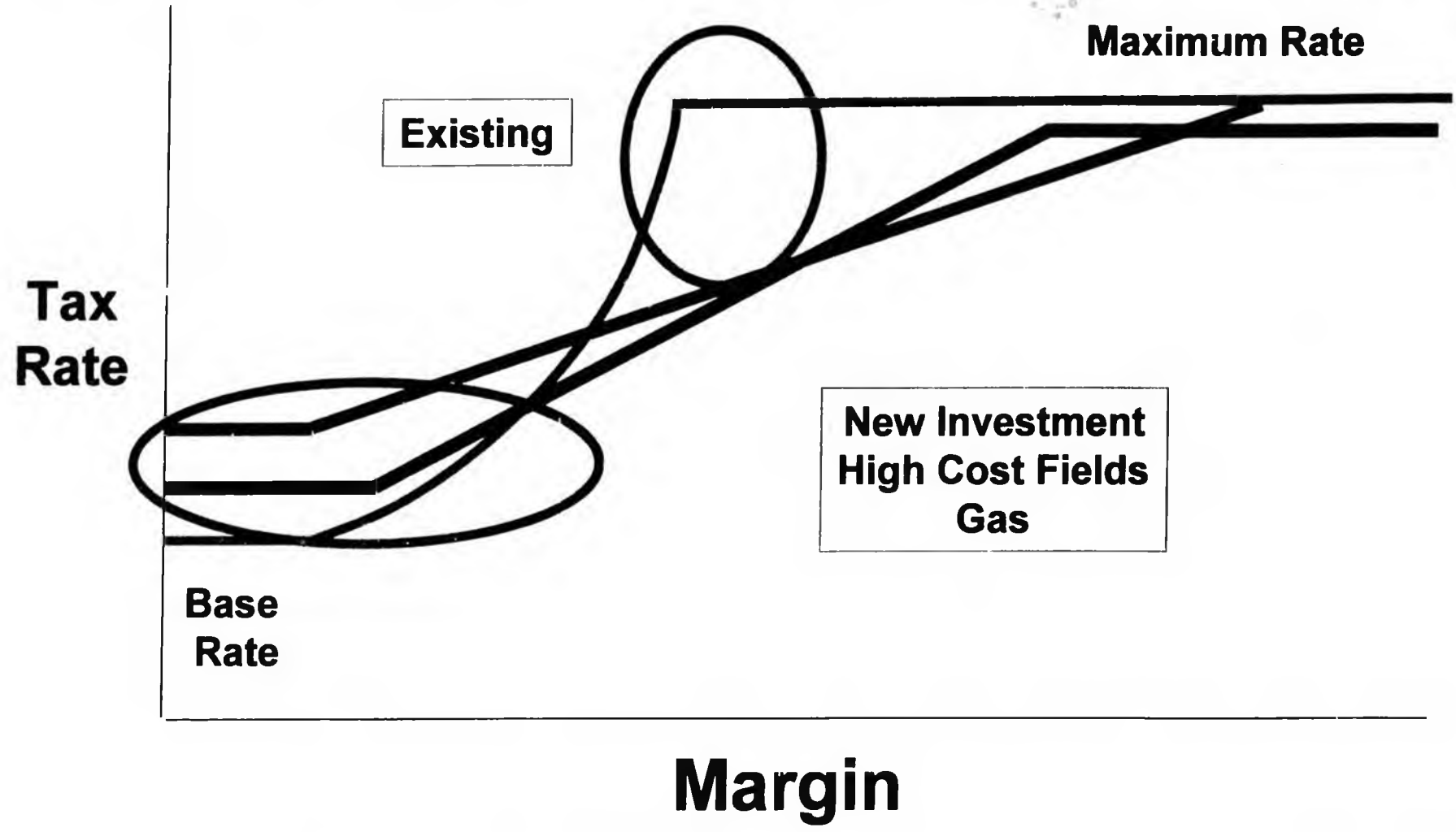


Margin versus Price





Pulled Into a single mechanism



The Net Tax Story



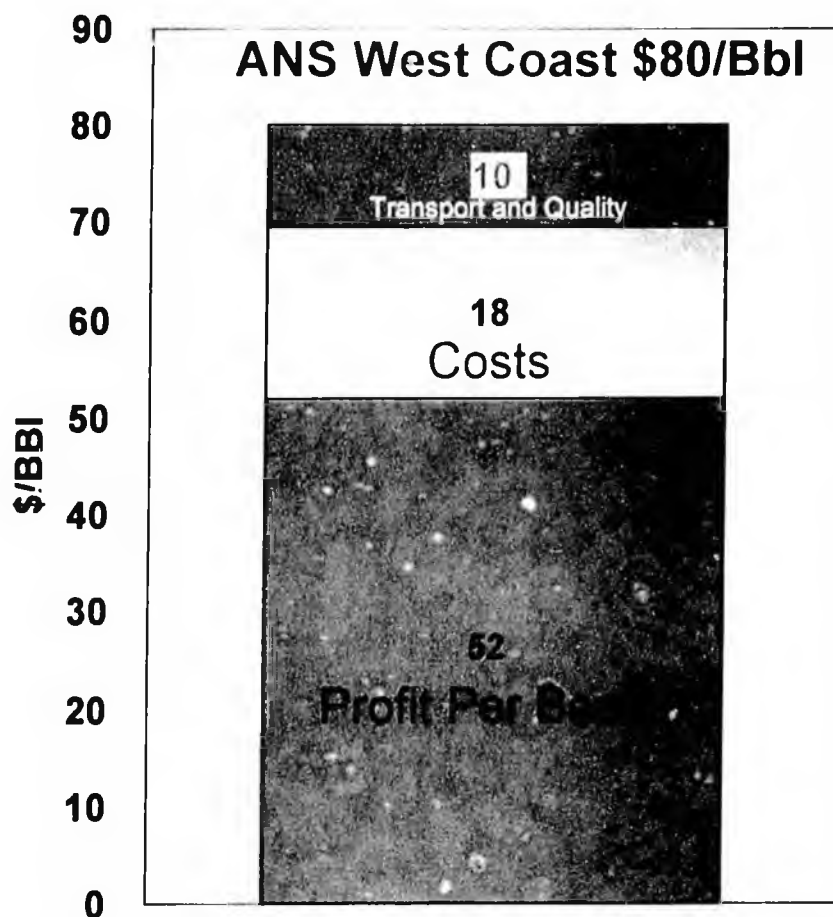
PPT As Often Described

- **Tax on net profits**
- **Contains progressivity feature that increases tax rate with increasing profitability per barrel**
- **Ringfenced so that profit per barrel reflects a company's entire portfolio**



The Information Used

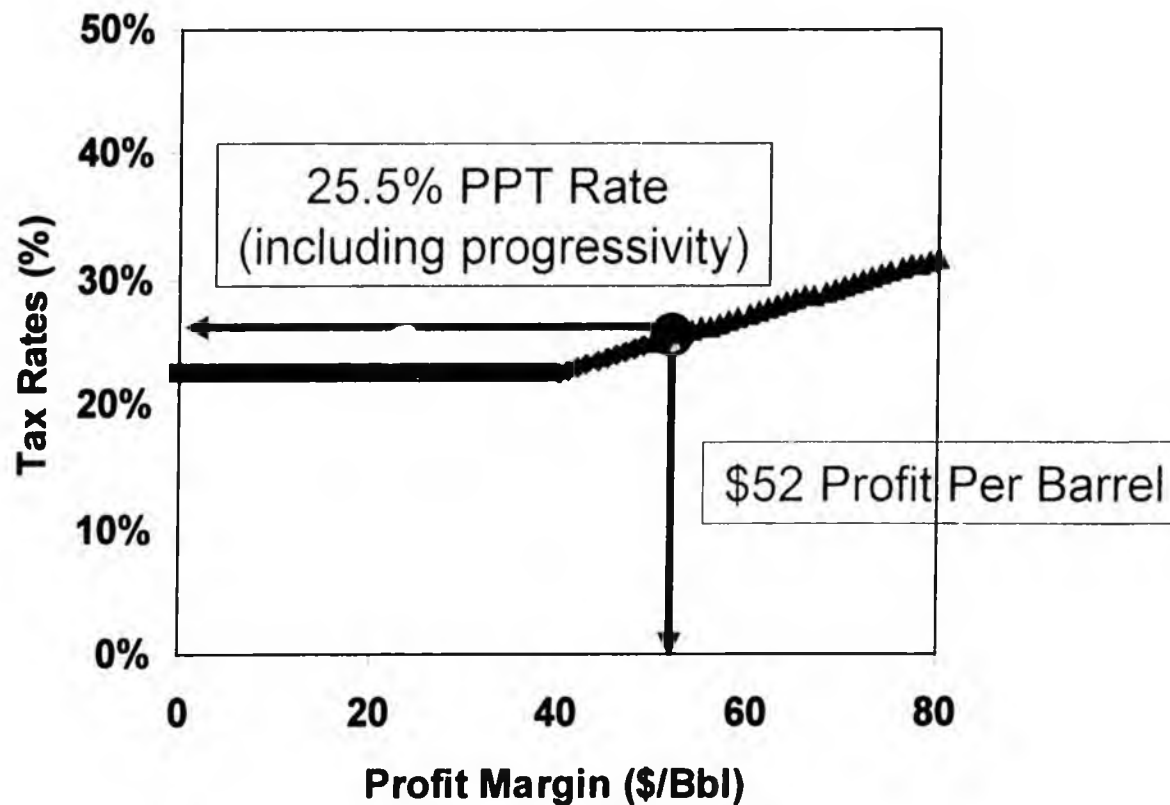
Portfolio Profitability





Based On \$52/Bbl Profit ...

Tax Rate Structure (Incorporating Progressivity)





Progressivity

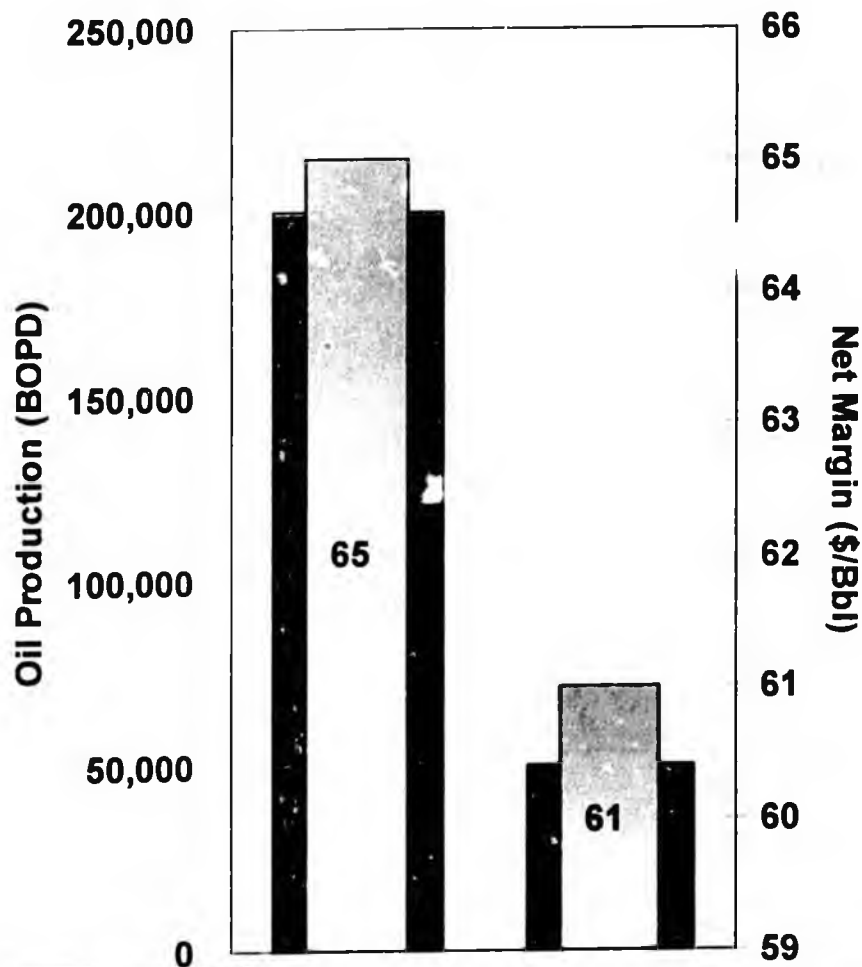
- **“Net” taxes all fields at a single rate**
 - No, it taxes different fields or reservoirs based on their individual profitability

Understanding The Rate Structure



Now, Add Another Field

Expanded Portfolio



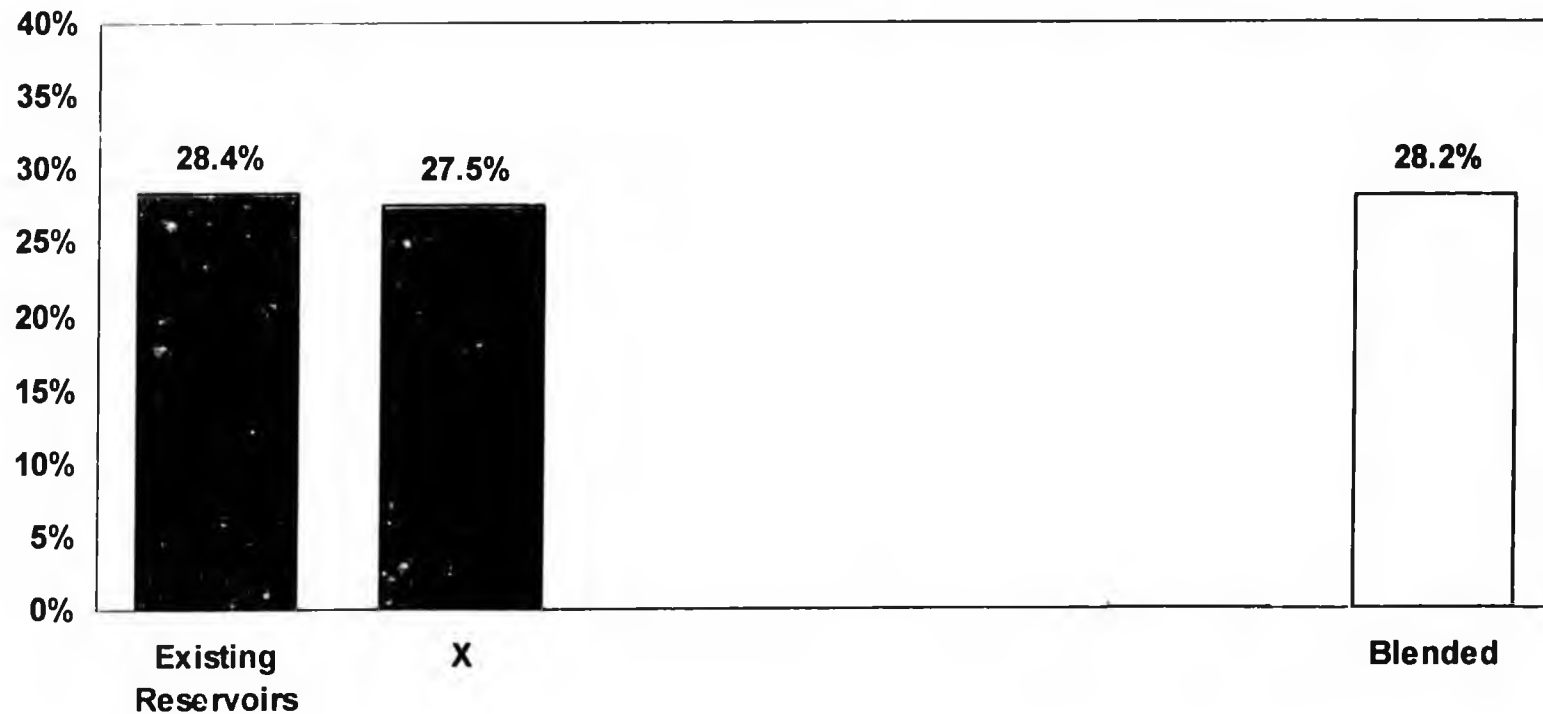
**PPT Rate on these fields
Combined would be
28.2%**

**Average Net Margin Is
\$64.20**

So, Does That Mean I Am Paying 28.2% On Each Field ?



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



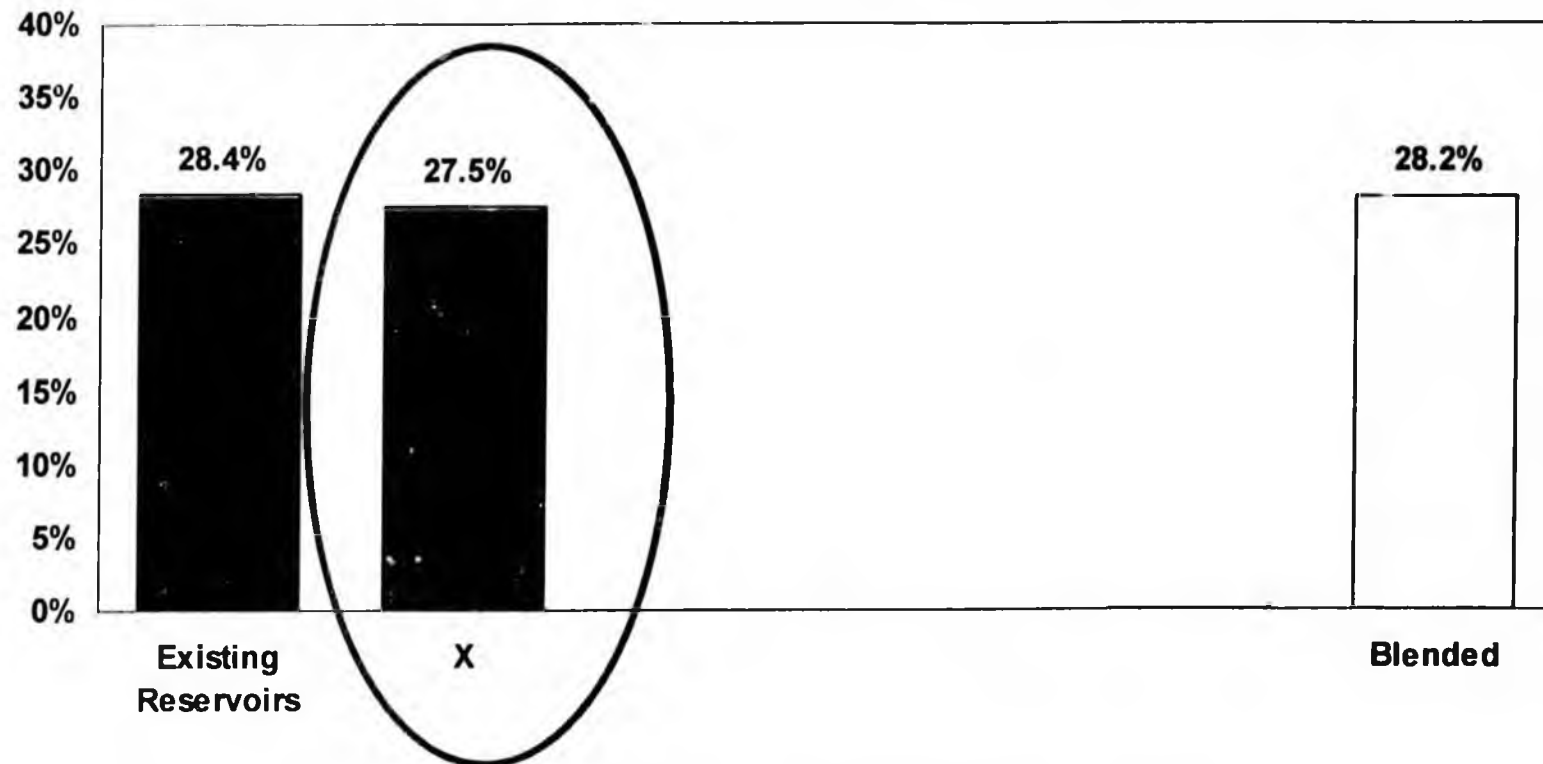
No

Look at this in the way that companies look at it when they make investment decisions

So, Does That Mean I Am Paying 28.2% On Each Field ?



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

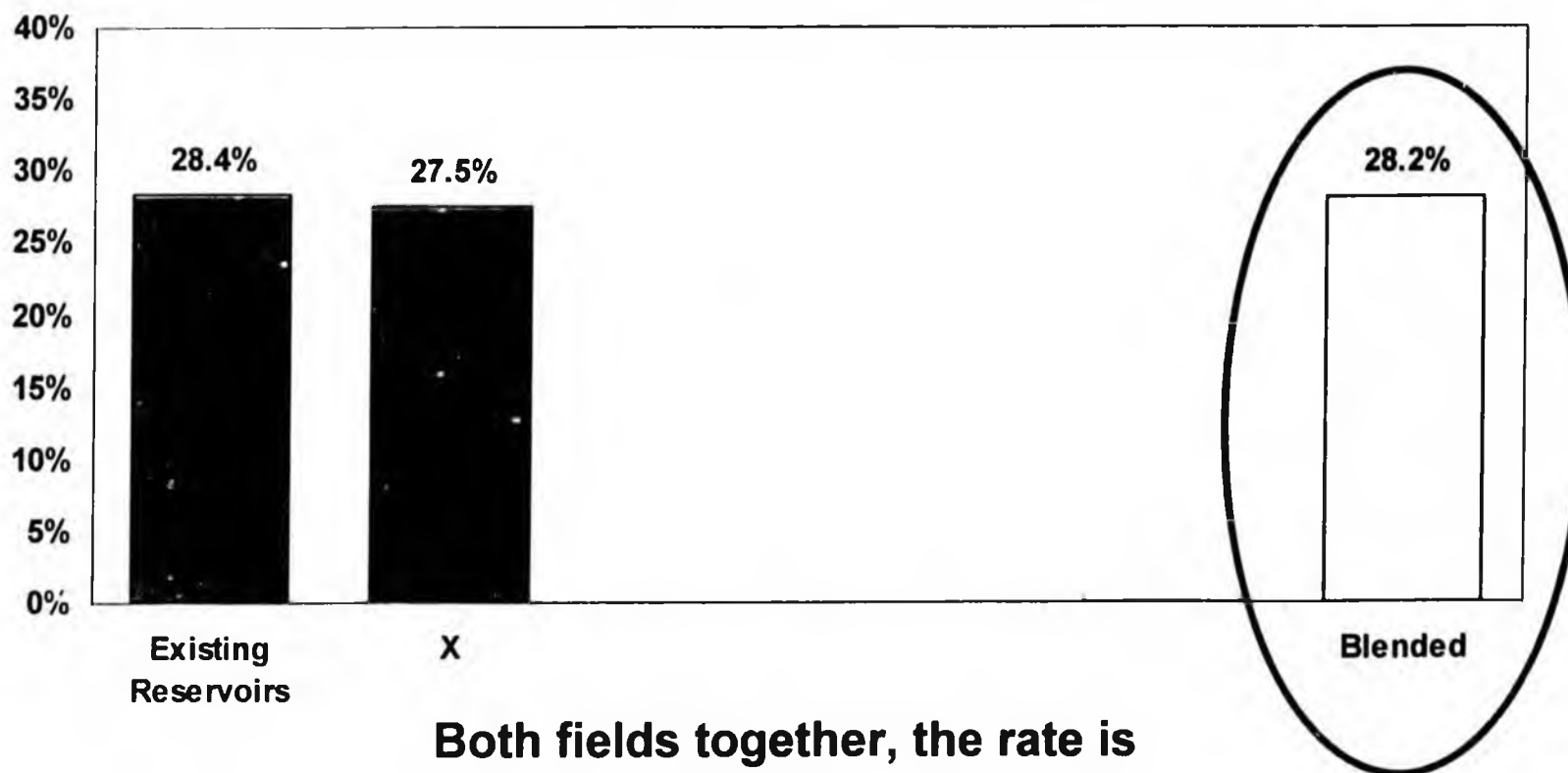


If I had just Field X, I would pay tax on my profits at 27.5% - its margin is slightly lower

So, Does That Mean I Am Paying 28.2% On Each Field ?



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



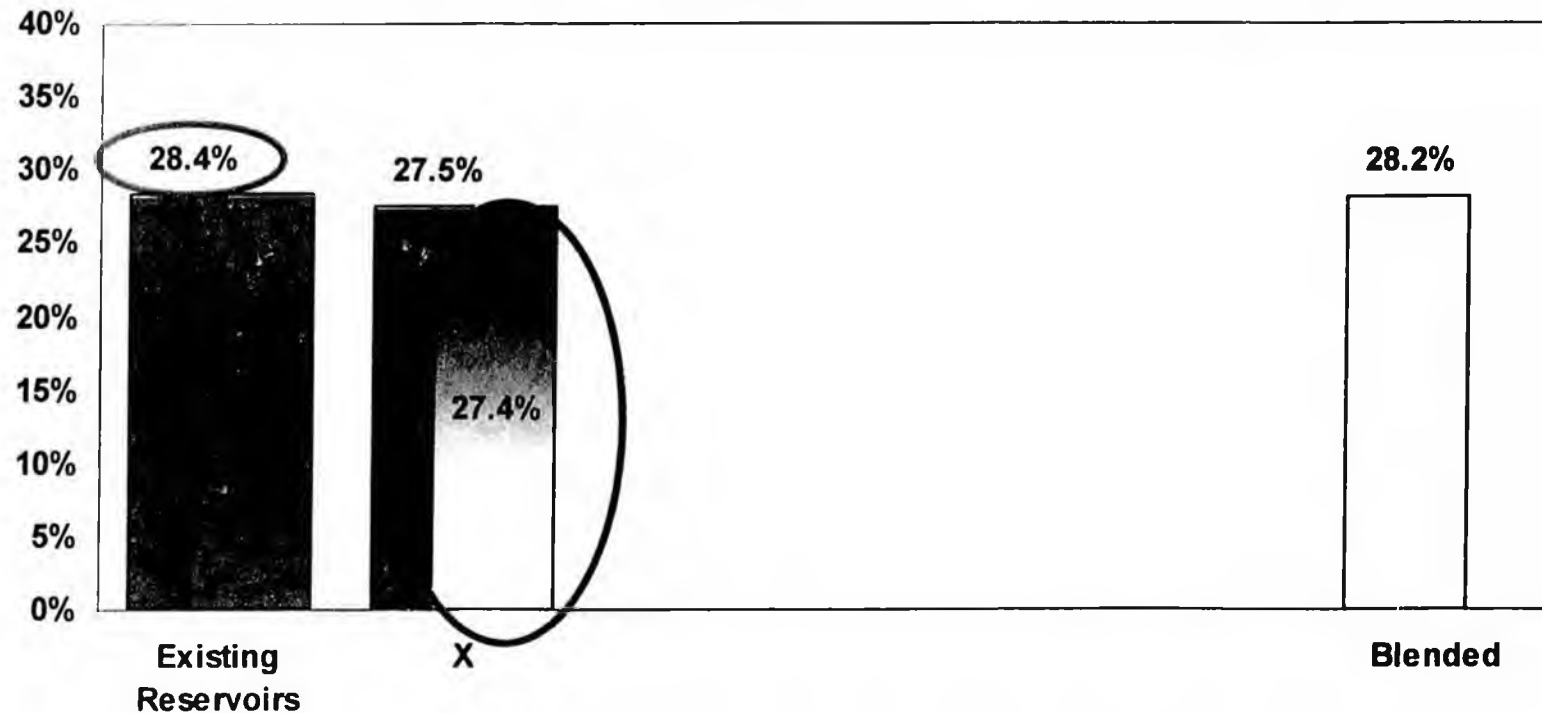
Both fields together, the rate is
28.2%

However, this is not all ...

So, Does That Mean I Am Paying 28.2% On Each Field ?



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

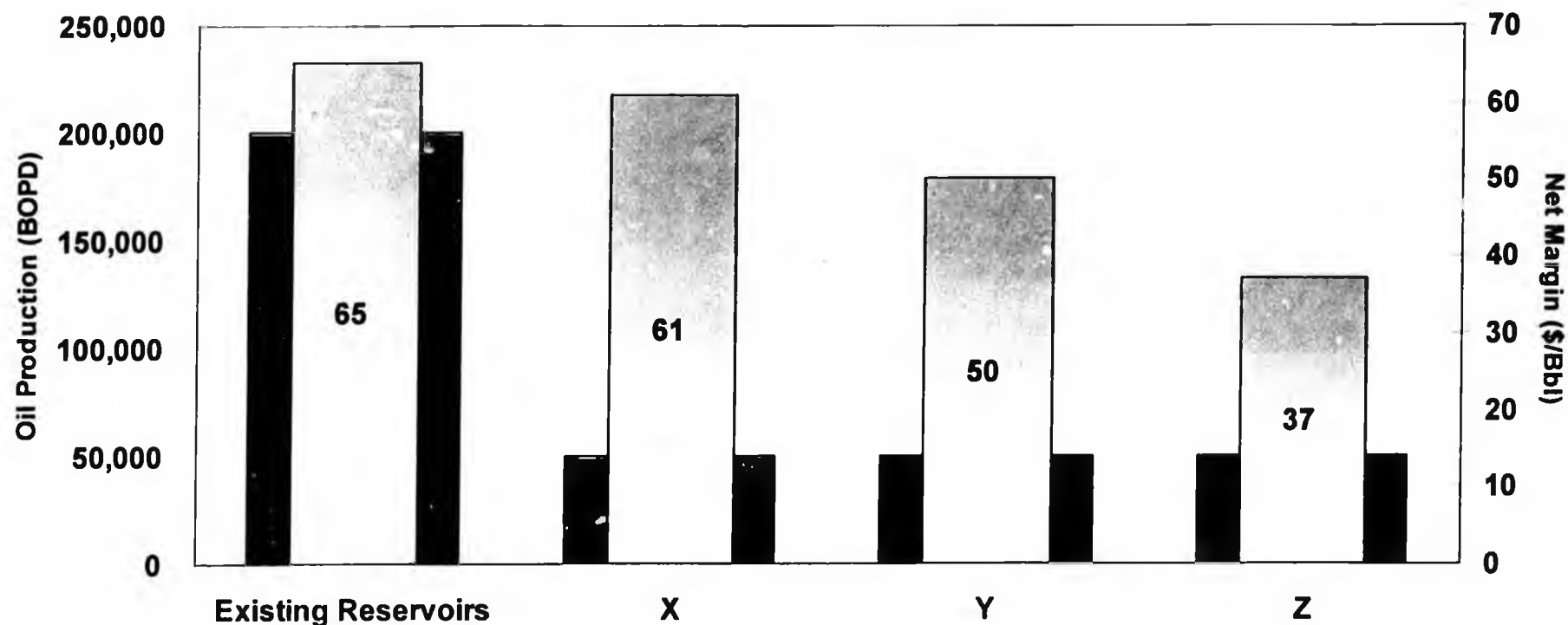


The mathematics of this reduction means that actually while Existing Reservoirs continue to pay tax at a rate of 28.4%,
The effective rate on Field X is actually 27.4%
... less than it would be if it were developed stand-alone

This Impact Can Be Seen In A Broader Portfolio



Portfolio Production Rate and Net Margin

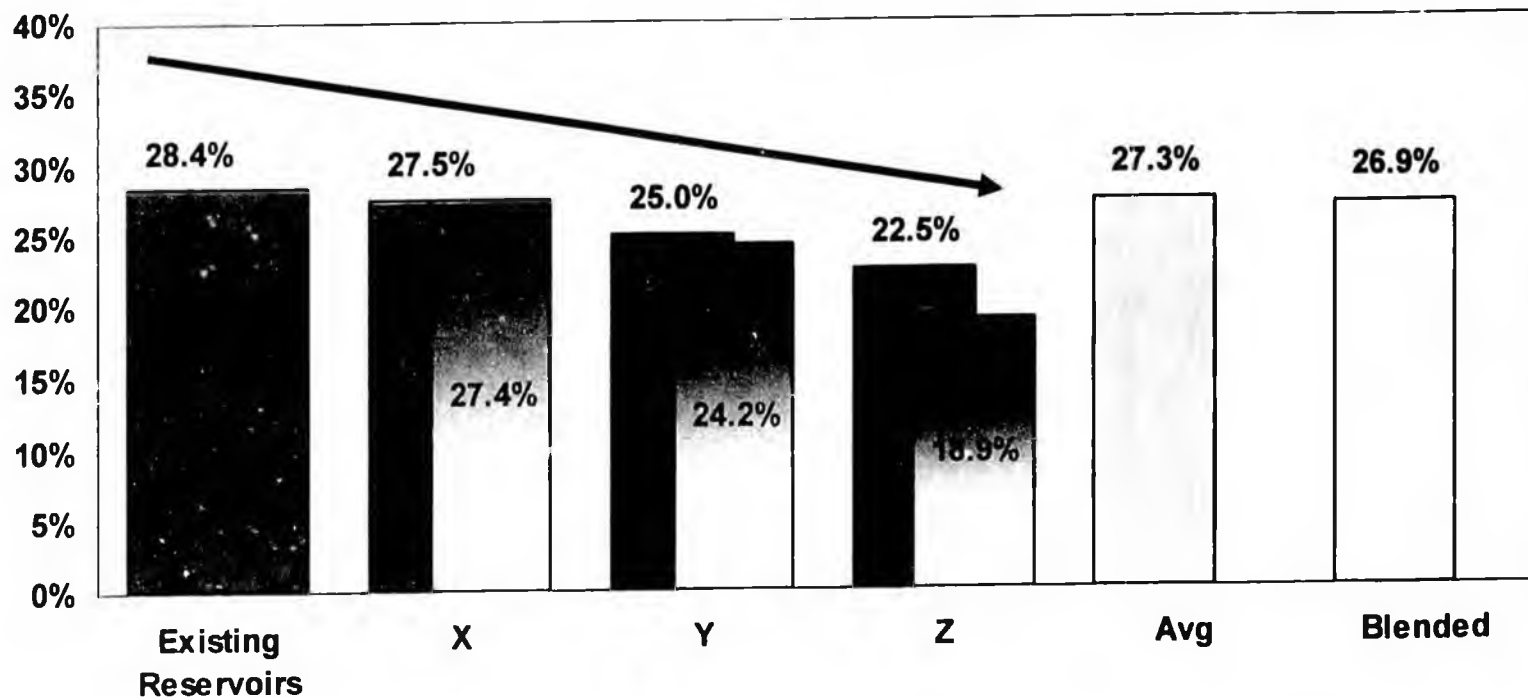


In this example we have four fields ...
.. One producing 200,000 bopd and
three others each producing 50,000 bopd but of decreasing profitability

The Impact On The Lower Margin Fields Is More Noticeable



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

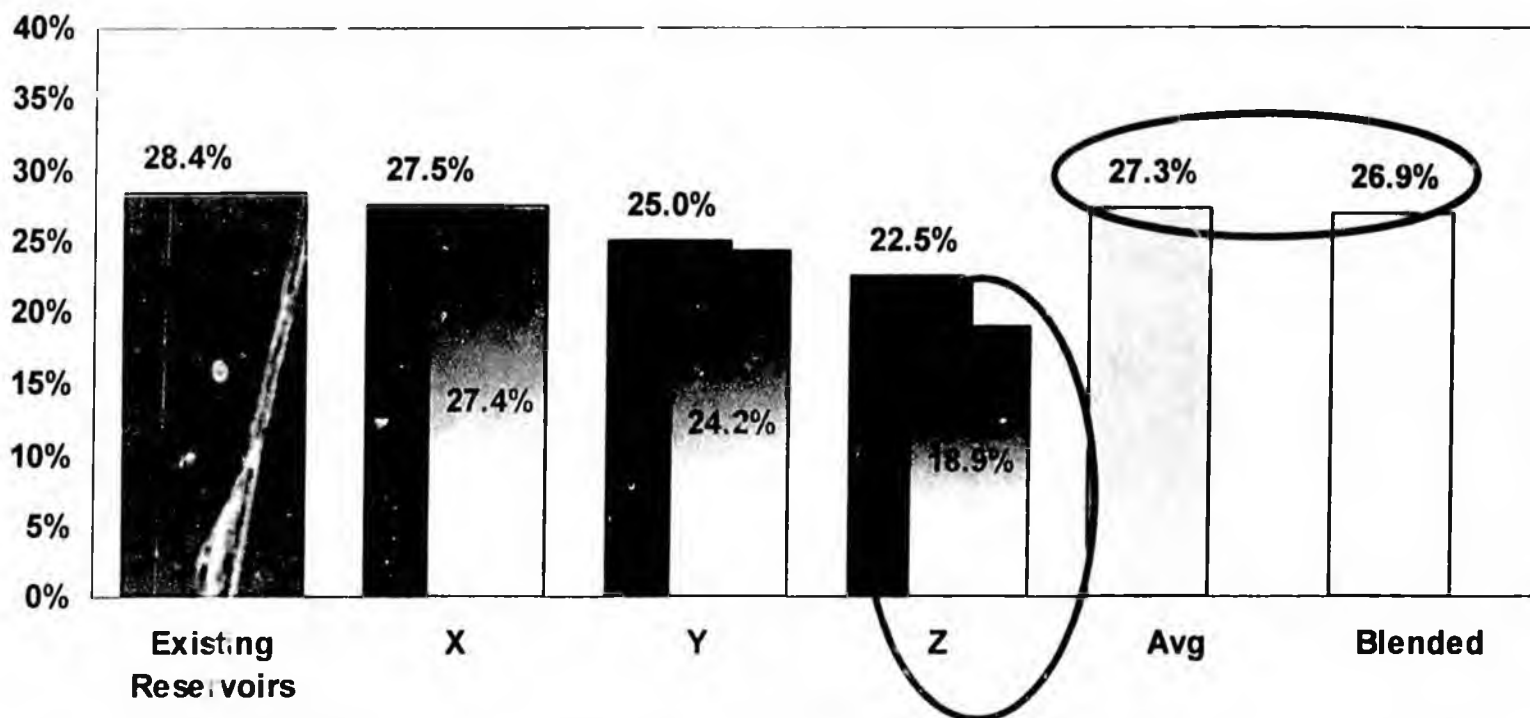


The progressivity can be seen through the lower effective tax rate on lower margin fields

The Impact On The Lower Margin Fields Is More Noticeable



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



The effective rate on some lower-margin fields may even be lower than the basic rate (22.5% in PPT)

This is manifested in the blended rate being lower than the weighted average rate

The Impact Of Capital Investment



Cash Flow, Not Profit

- PPT taxes all fields at a single rate
 - No, it taxes different fields or reservoirs based on their individual profitability
- **Is based on profit per barrel**
 - Not exactly, it is based on net cash flow per barrel after capital investment (for future production)

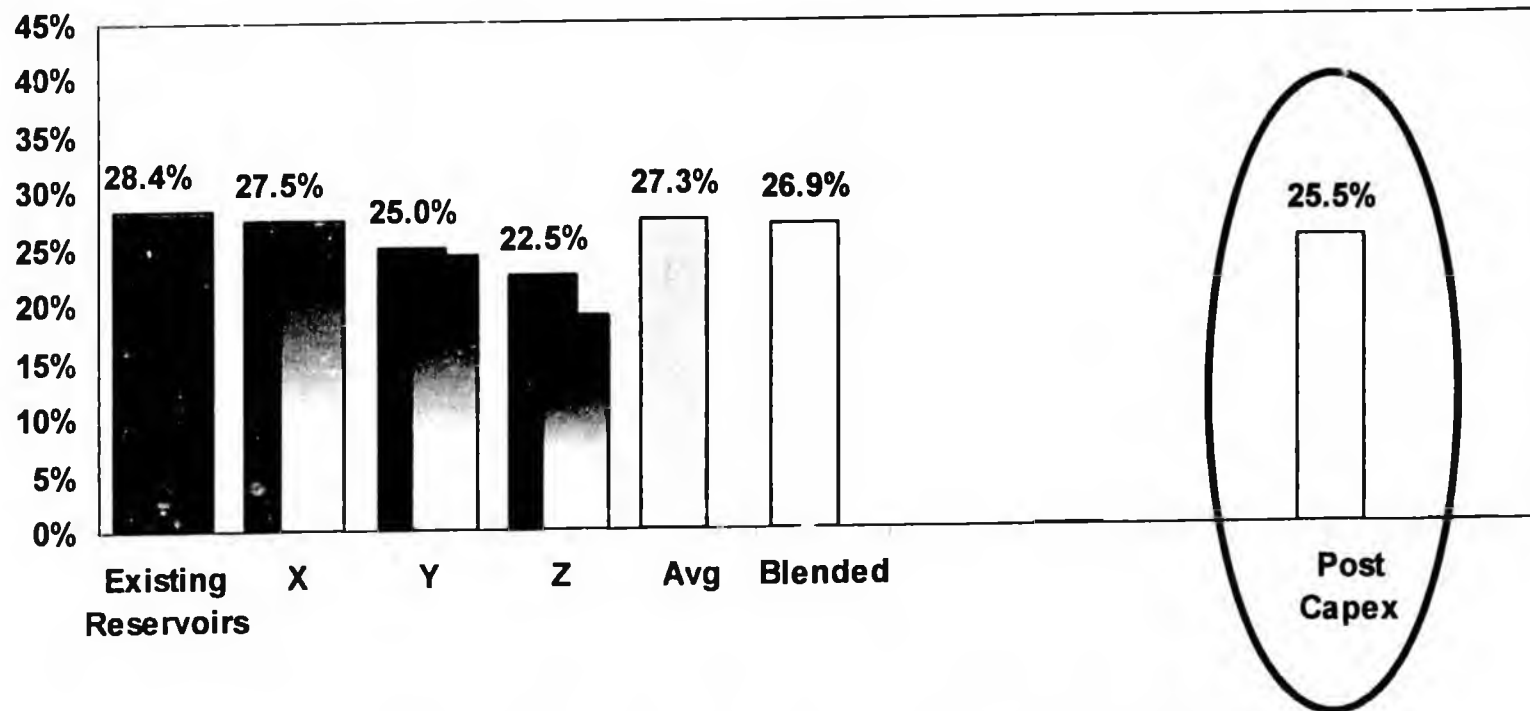
**Assume that 26.9% is the rate that will
be payable before further capital
investment decisions are made ...**

... 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 to 25.5%

How ?