Alaska's Equitable Share

Some Further Thoughts

30 October 2007

Topics

- **What is the risk of raising state revenue share on the existing producing reservoirs?**
  - Look at AOGA, BP and other industry data
- **What are the goals or drivers for Alaska's Petroleum Fiscal System?**
  - List what we have discerned since arriving in Juneau
- **From a 50,000 foot viewpoint, what fiscal system structure accomplishes the above goals with a minimal need for intervention?**

The Tipping Point

Where is the tipping point?

- **Quite legitimately several legislators have asked their advisors and the companies how far is just right and how far is too far?**
  - The companies have complex decision making processes with many external factors at play and can't articulate what impact a change in Alaska taxes will have
    - Rock (Prospectivity) trumps Scissors (Fiscal) - Chevron
    - *Scissors (Fiscal) cut Paper (Profit)*
    - *Paper (Buy Reserves) covers Rock (Develop Reserves)*
  - Consultants acknowledge 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

- **We can read lines, and between the lines, of industry testimony to construct a picture of the Alaskan investment climate**
  - 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

- **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.

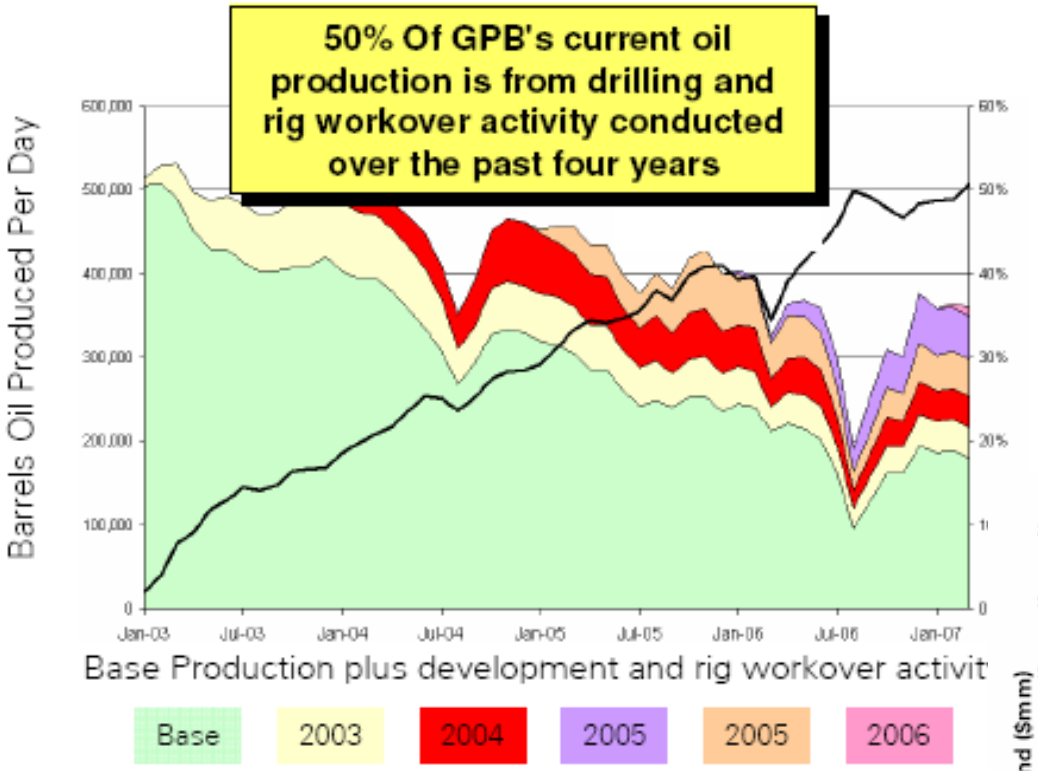
- **The fiscal system chosen must recognize the current and near-term importance of improving production from existing assets.**

AOGA Testimony – Recent Success

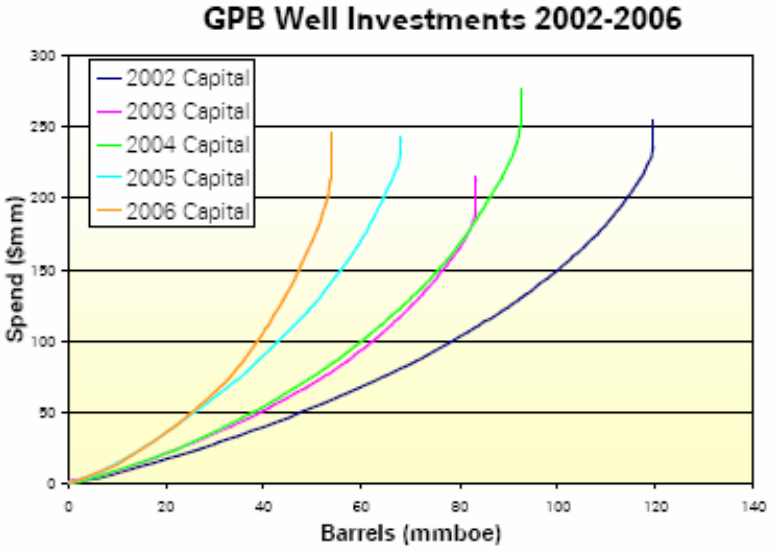
This gets us to investment in currently producing fields. Fortunately, there are investments that can be made, and are being made, in these fields to slow their decline. In the short term, this is in-fill drilling — that is, drilling new wells into the portions of a reservoir that are between the wells 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

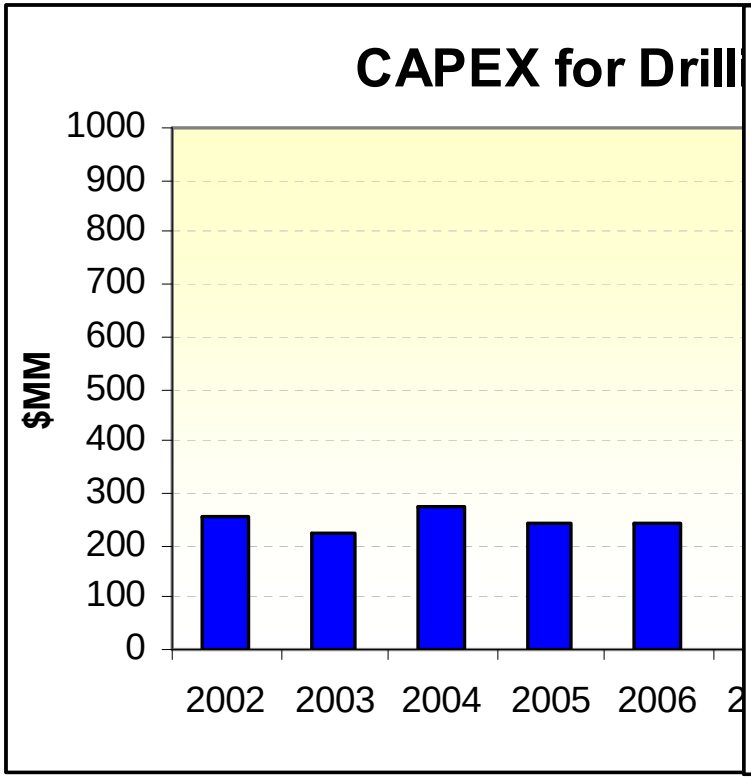
- **It is getting more expensive to develop a barrel of reserves (BP Infill program)**

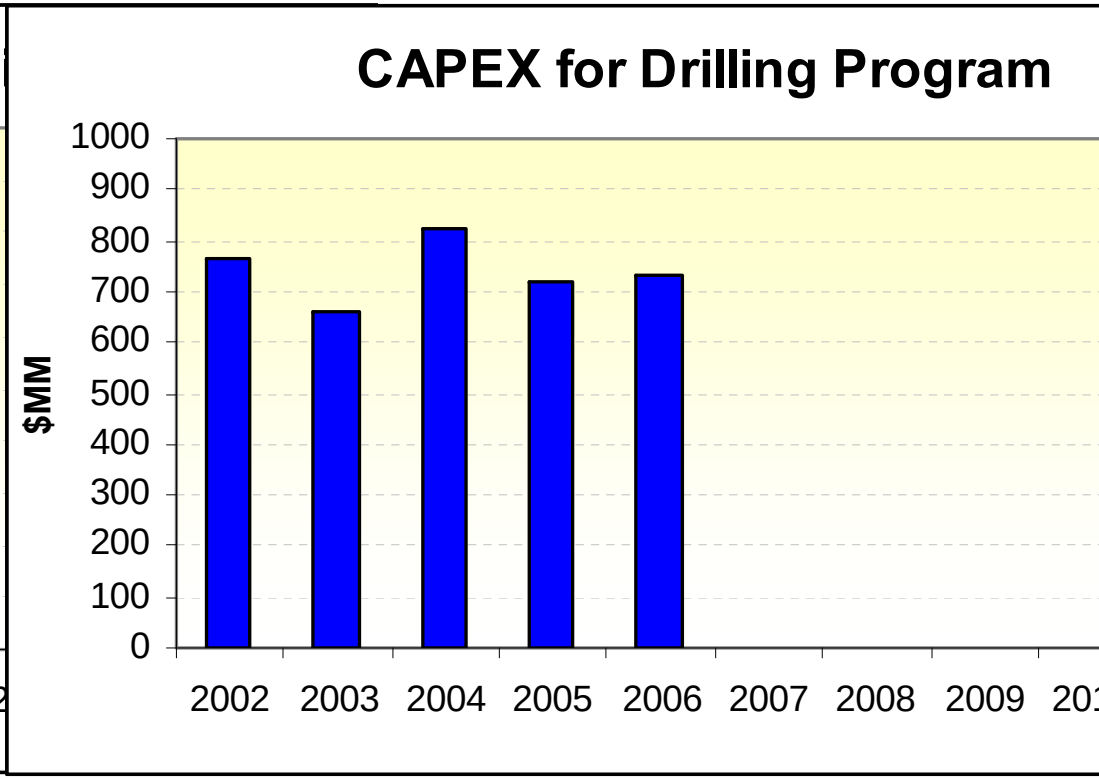
	2002	2003	2004	2005	2006
Capex	255	220	275	240	245
MMbls	120	90	80	60	50
$/bbl	2.13	2.44	3.44	4.00	4.90

- **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

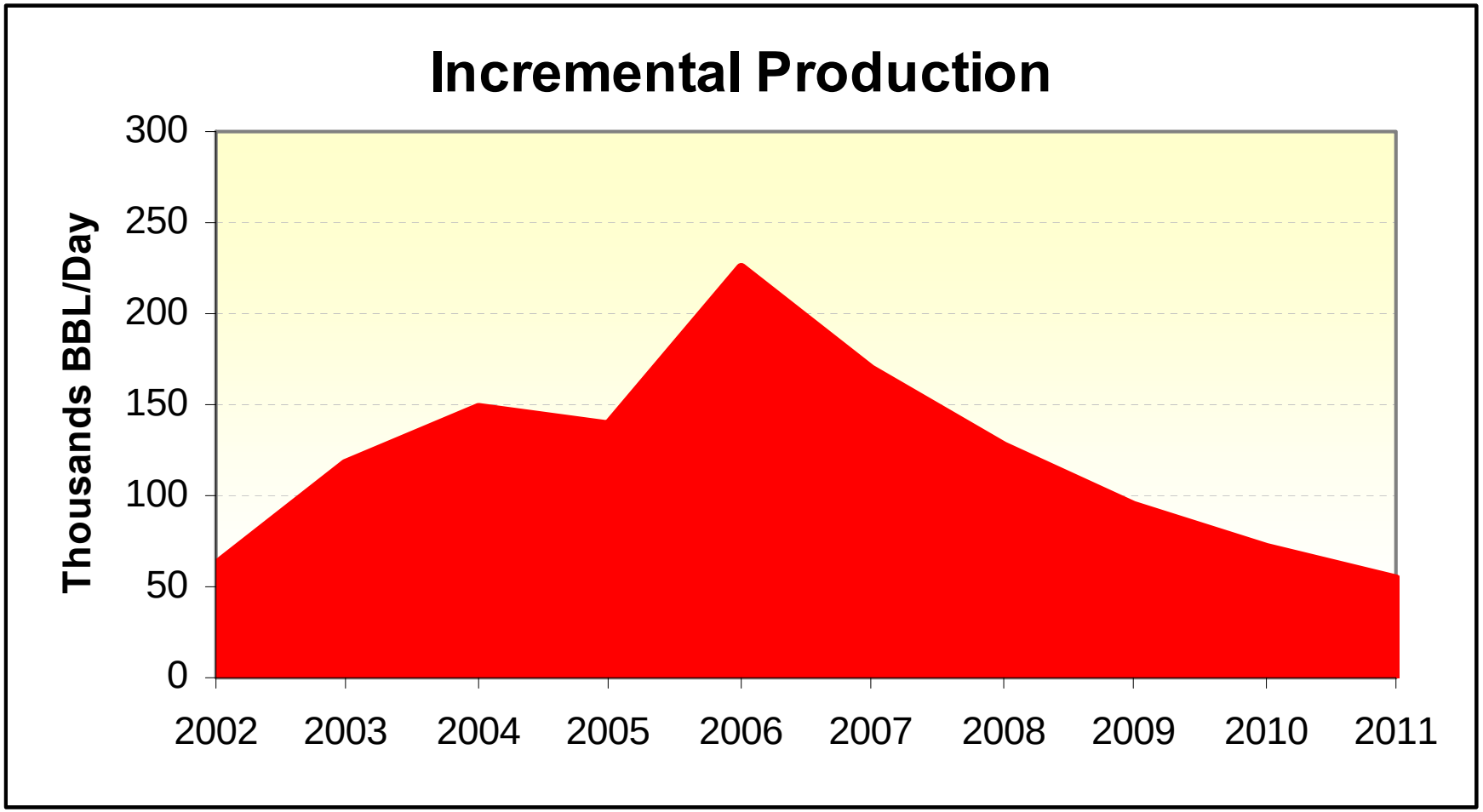
5 Year Prudhoe Drilling Program

- **Drilling capex – 300% for added facilities/injection**

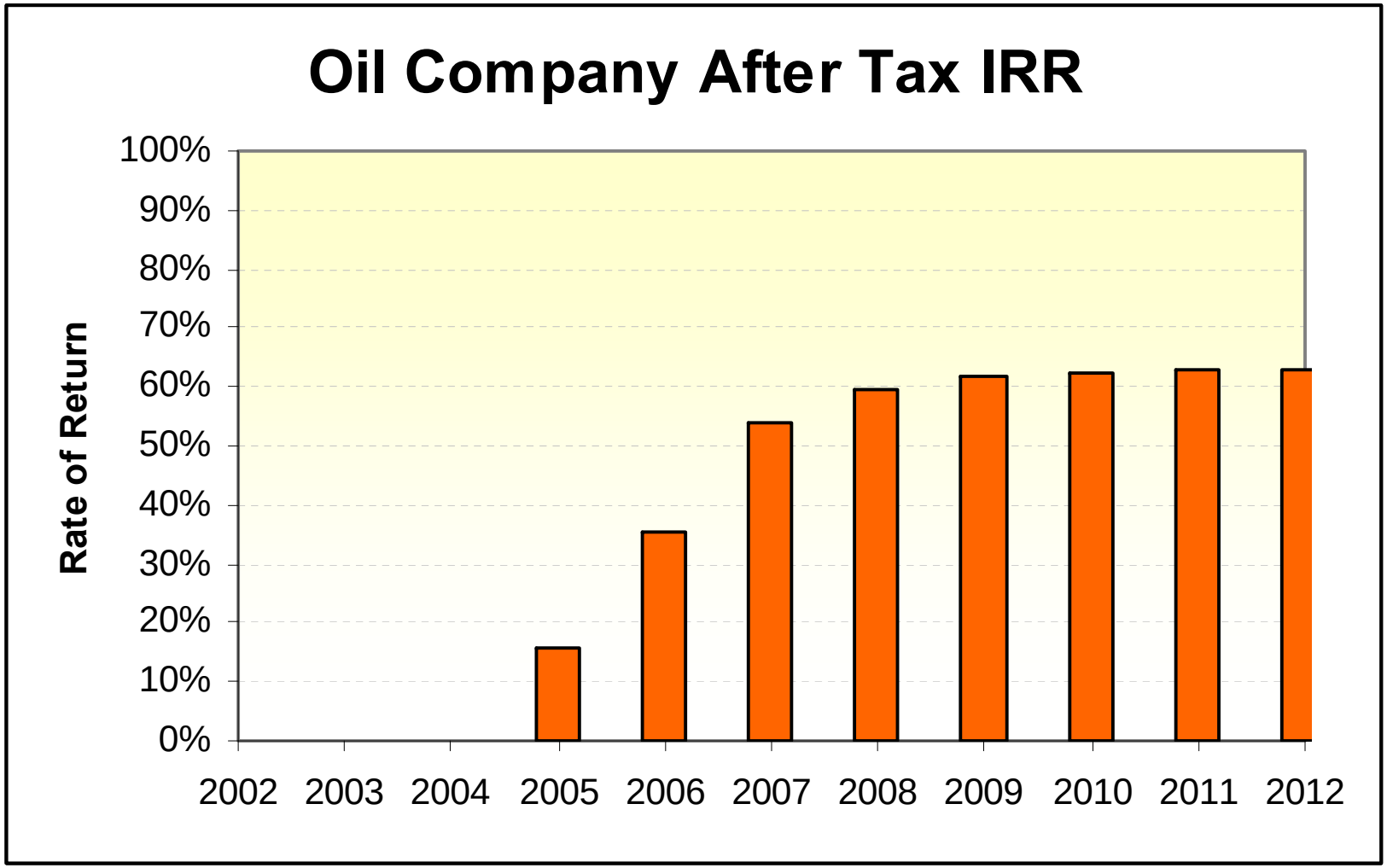




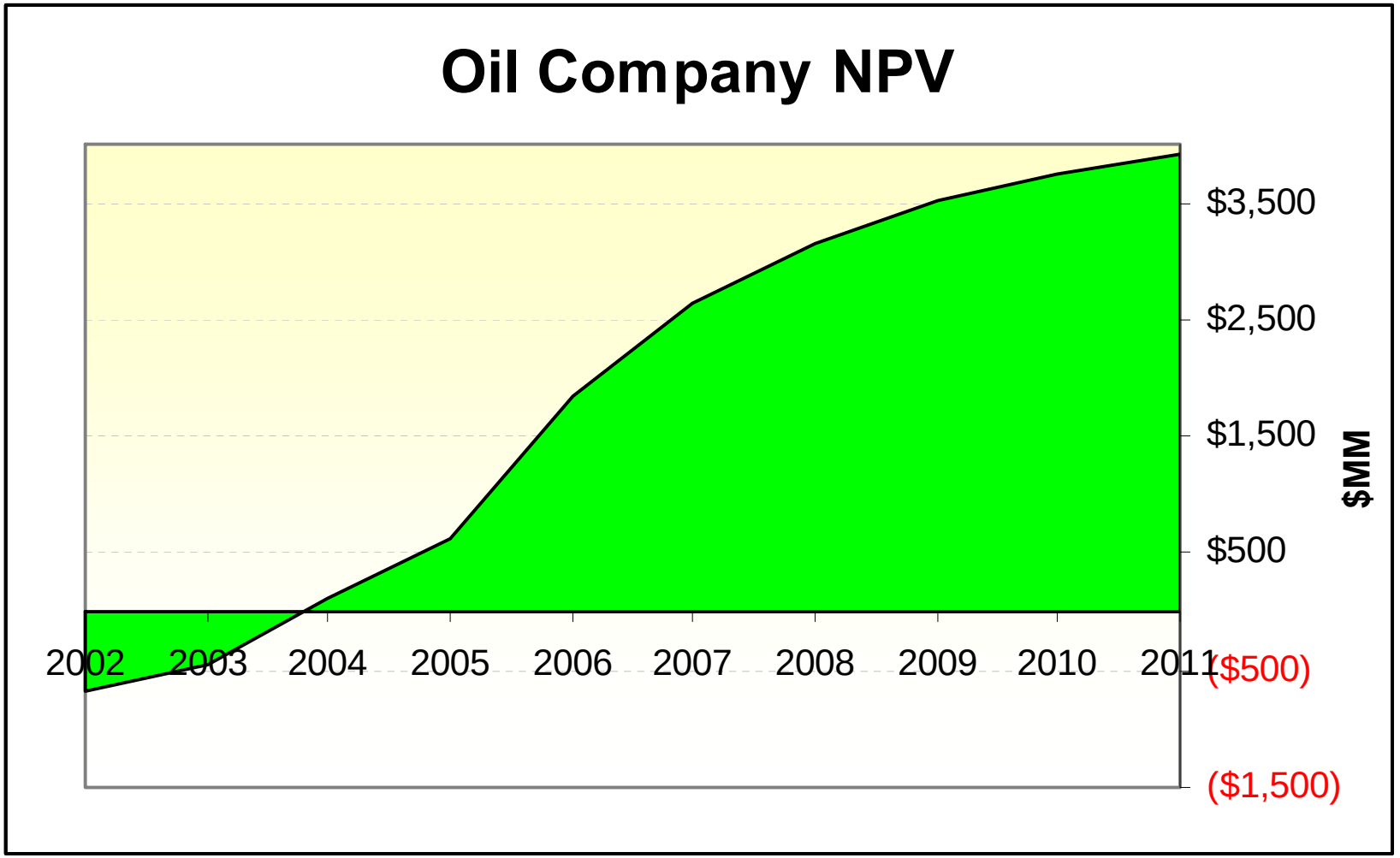
BP – Prudhoe Bay



BP Prudhoe Bay



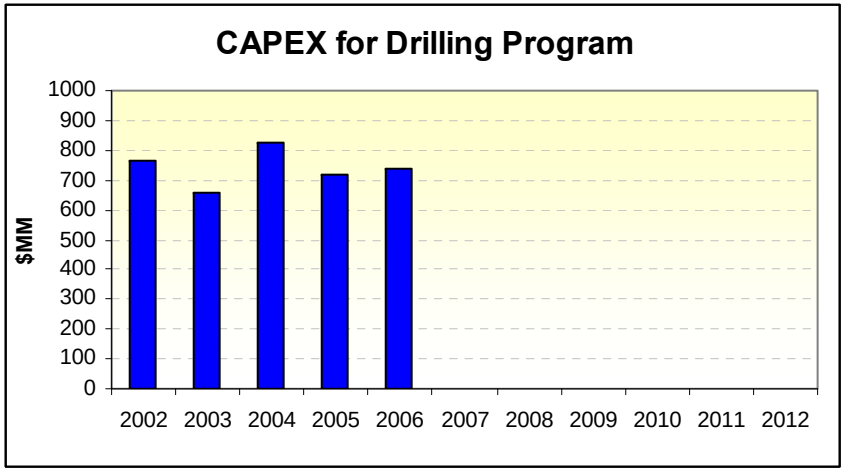
BP Prudhoe Bay

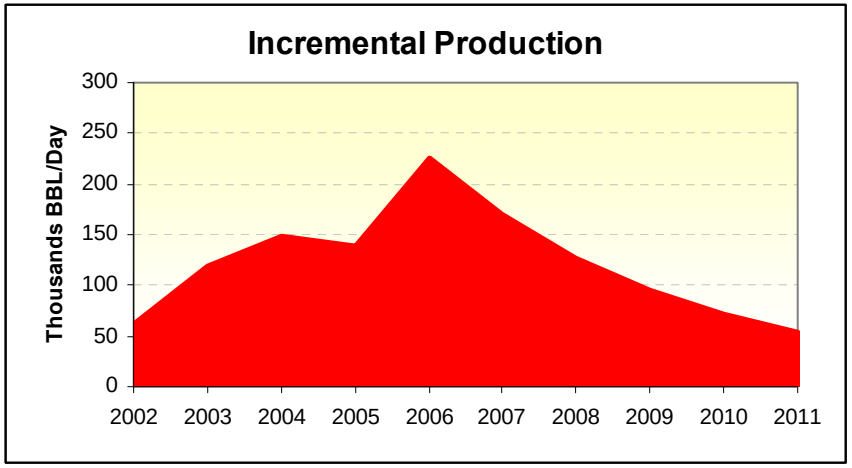


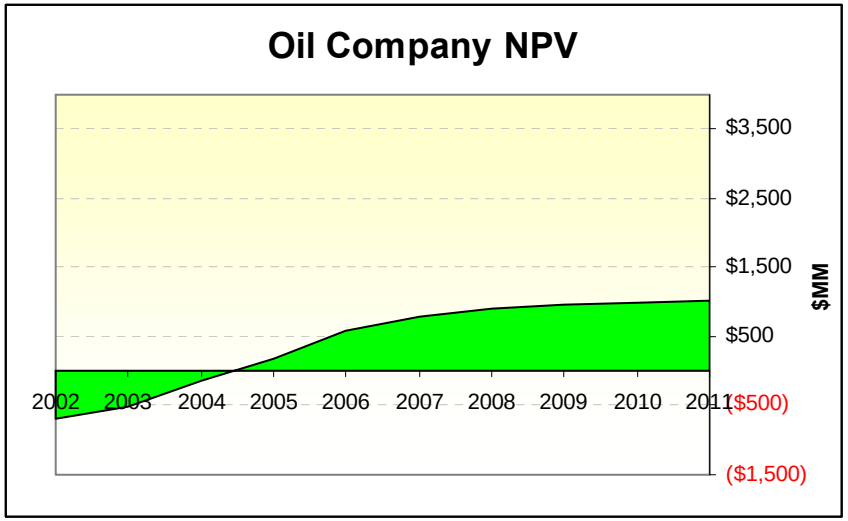
Robust drilling program

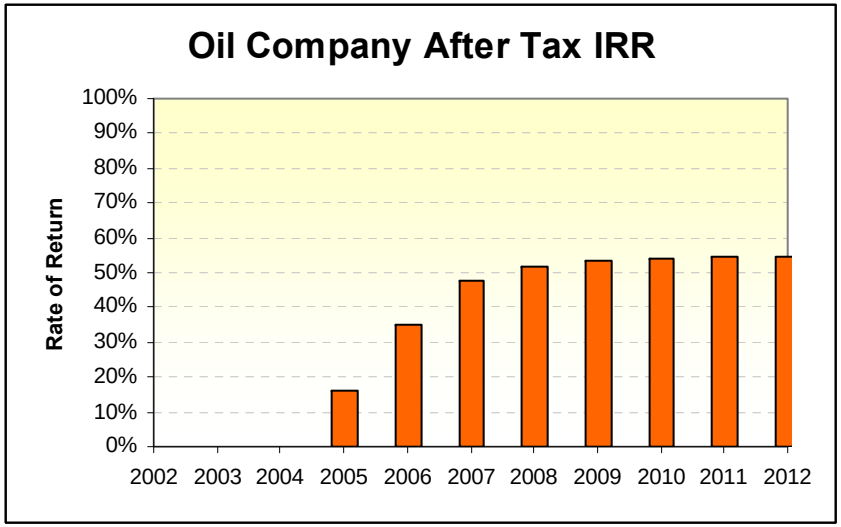
- **Remains profitable at:**
  - 300% capex
  - 200% opex
  - 25% discount rate
  - $50 ANS
  - High progressivity

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

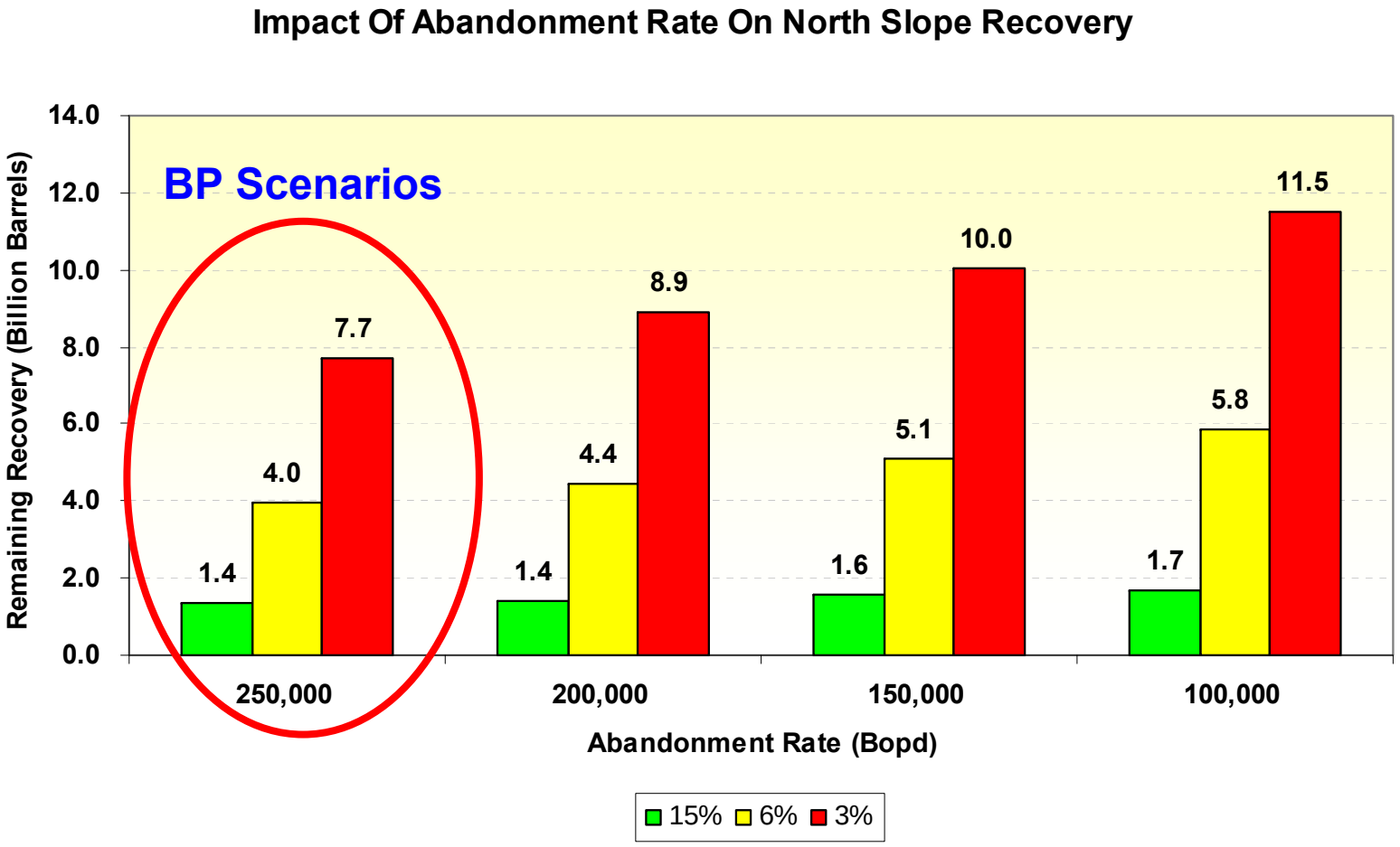
Production Drives Revenue

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



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

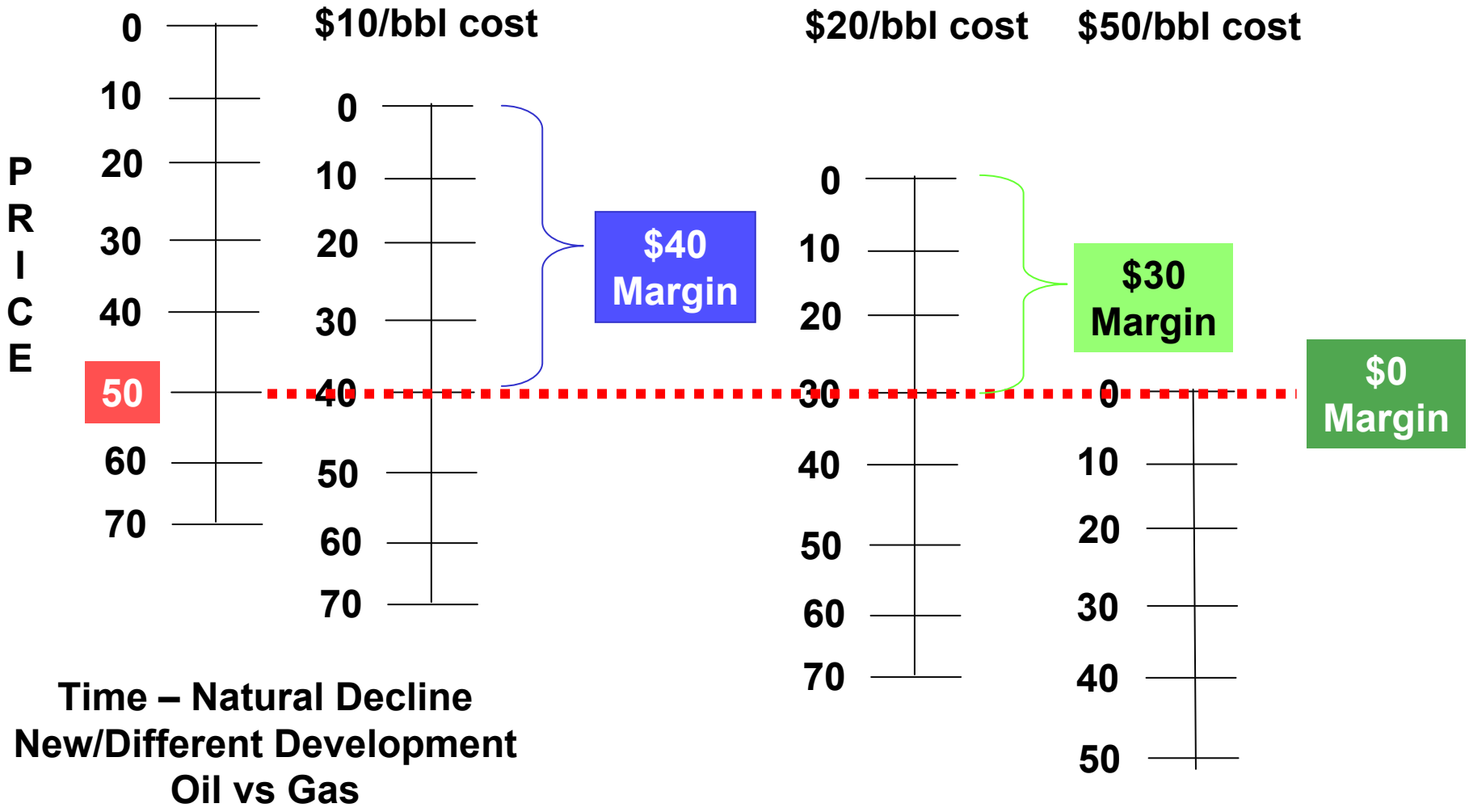
- **The Take**
  - Fair share of the high margins currently being realized
  - Progressive structure to adapt to changes in:
    - Price
    - Production
    - Cost

- **The Give Back**
  - Encouragement to reinvest profits for more development inside legacy units

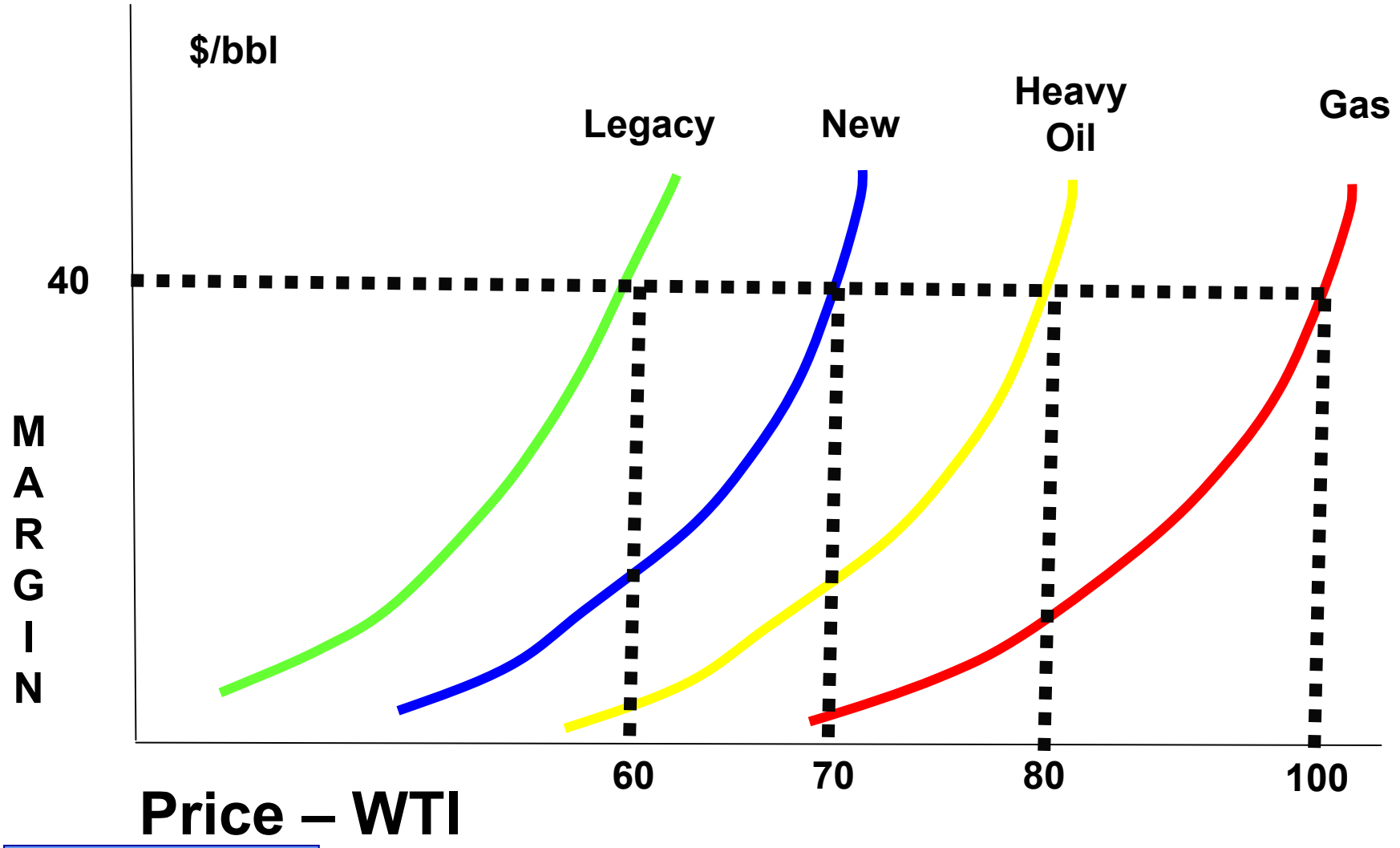
Key Point Easily Misunderstood

Price ≠ Margin

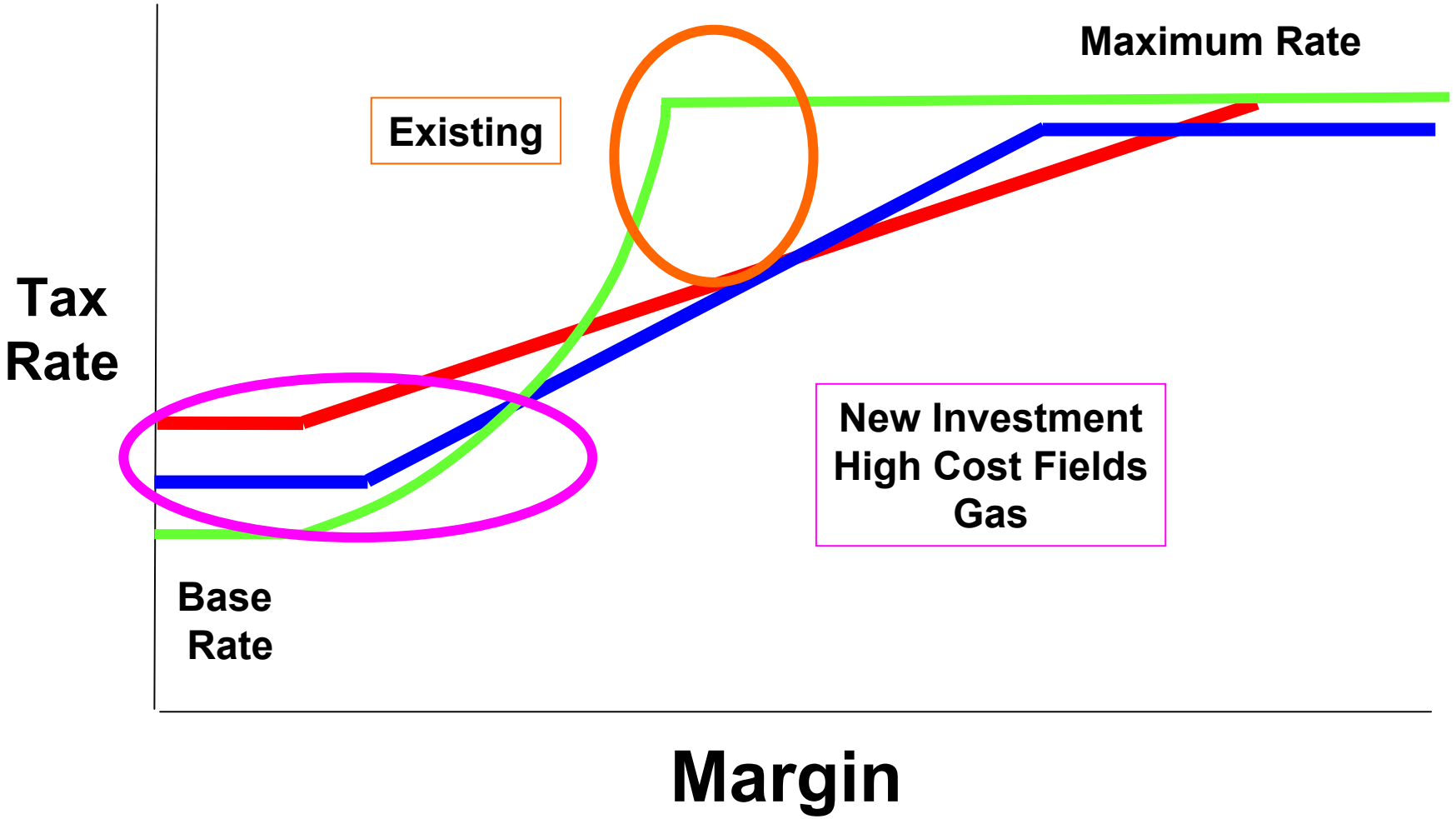
Price versus Margin



Margin versus Price



Pulled Into a single mechanism



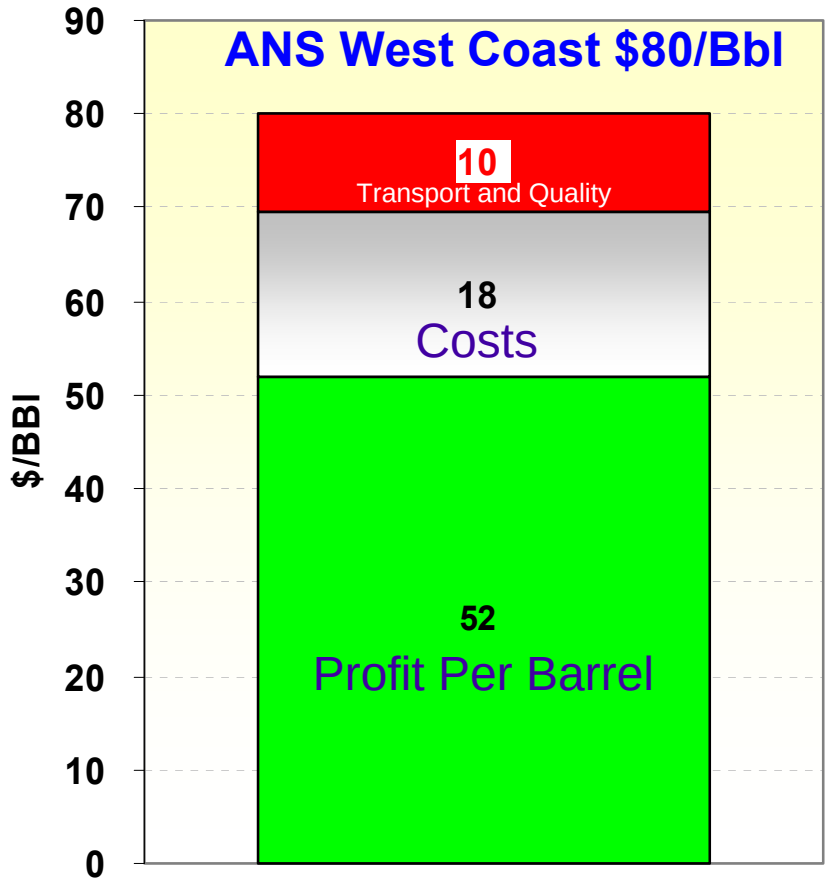
The Net Tax Story

PPT As Often Described

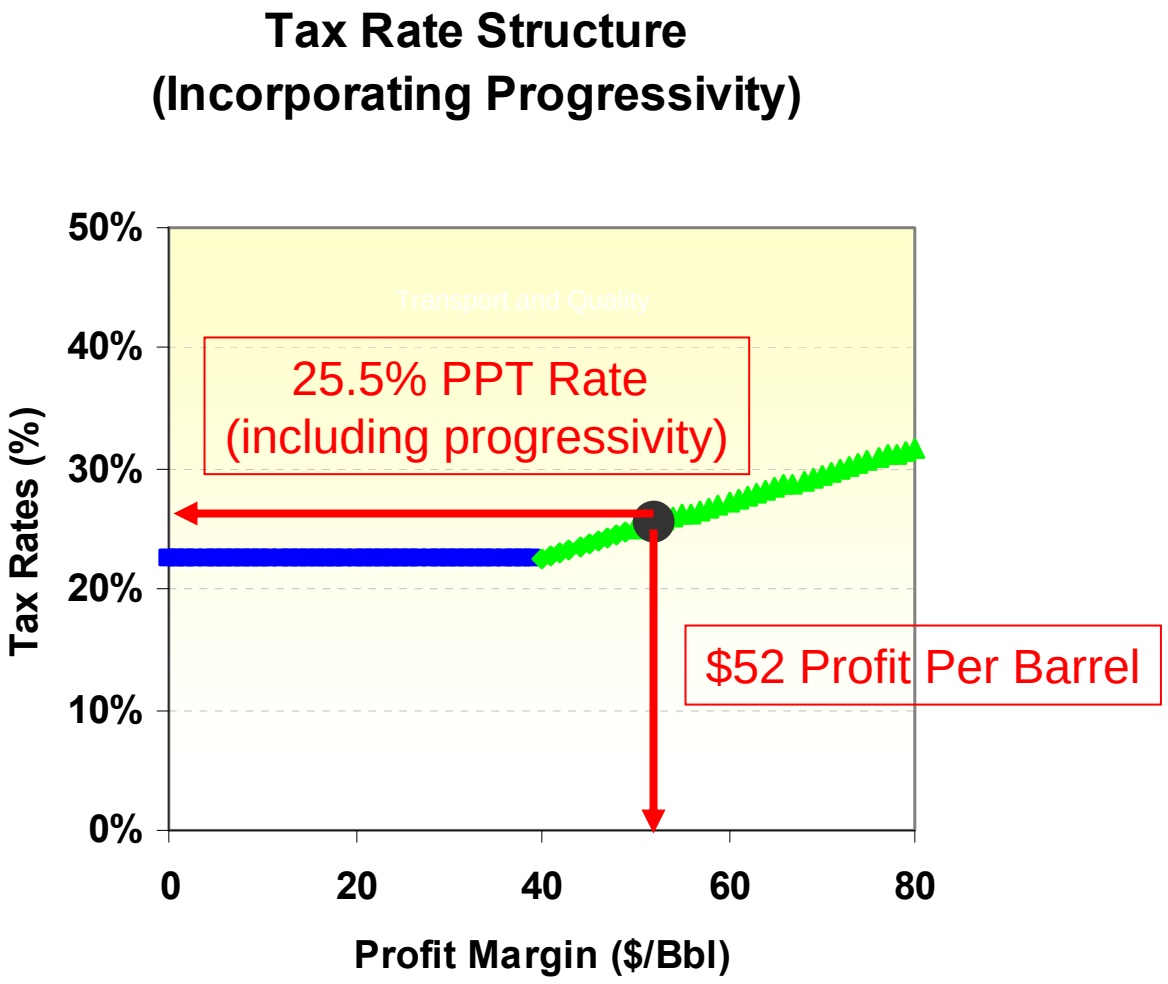
- Tax on net profits
- Contains progressivity feature that increases tax rate with increasing profitability per barrel
- Ringfenced so that profit per barrel reflects a company's entire portfolio

The Information Used

Portfolio Profitability



Based On $52/Bbl Profit …

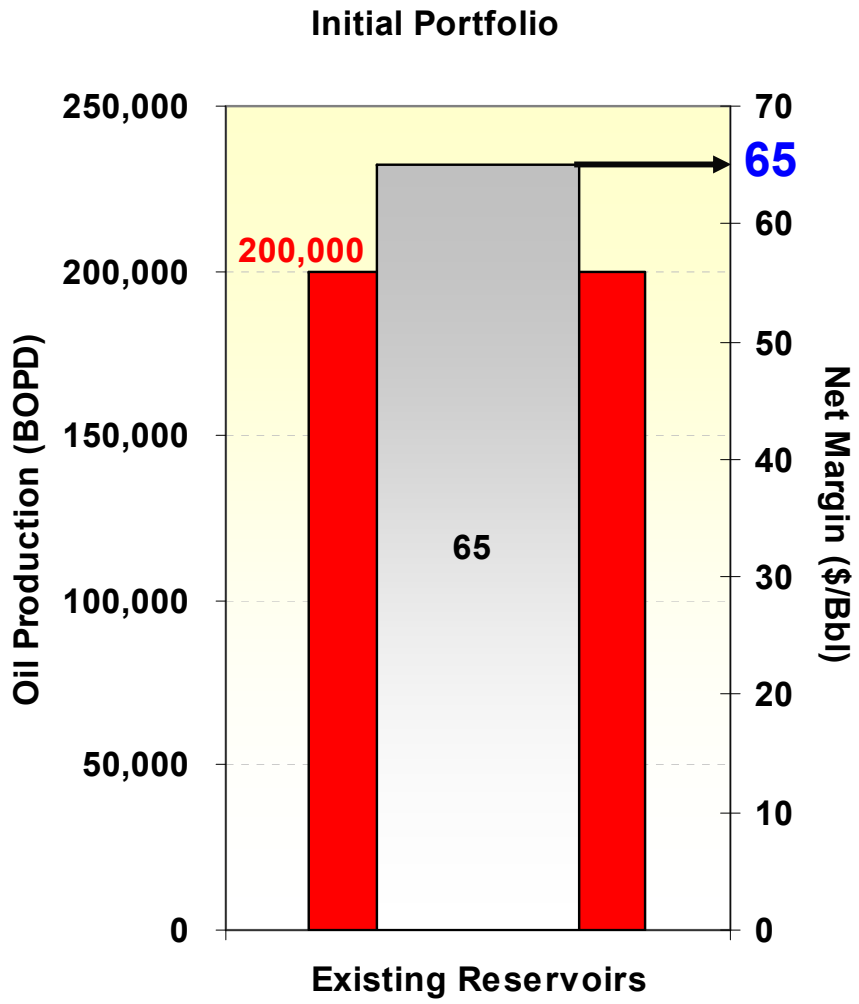


Progressivity

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

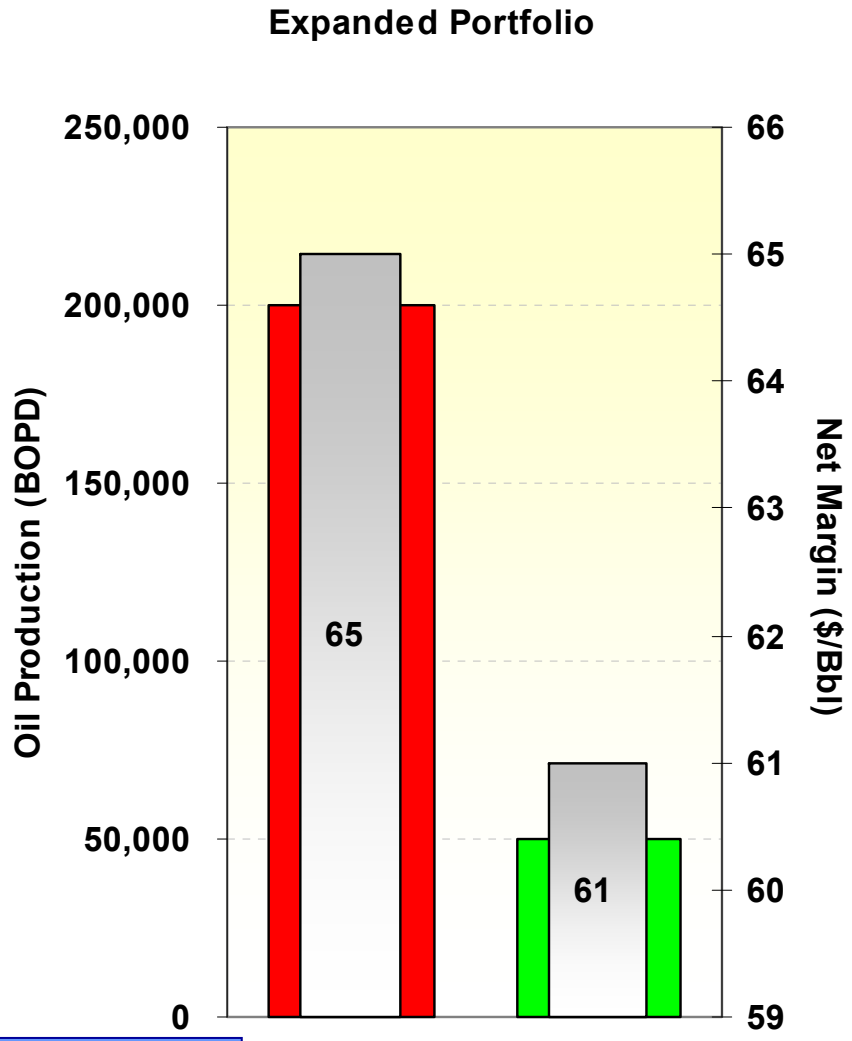
Understanding The Rate Structure

Start With A Portfolio Of One Investment



PPT Rate on this would be 28.4%

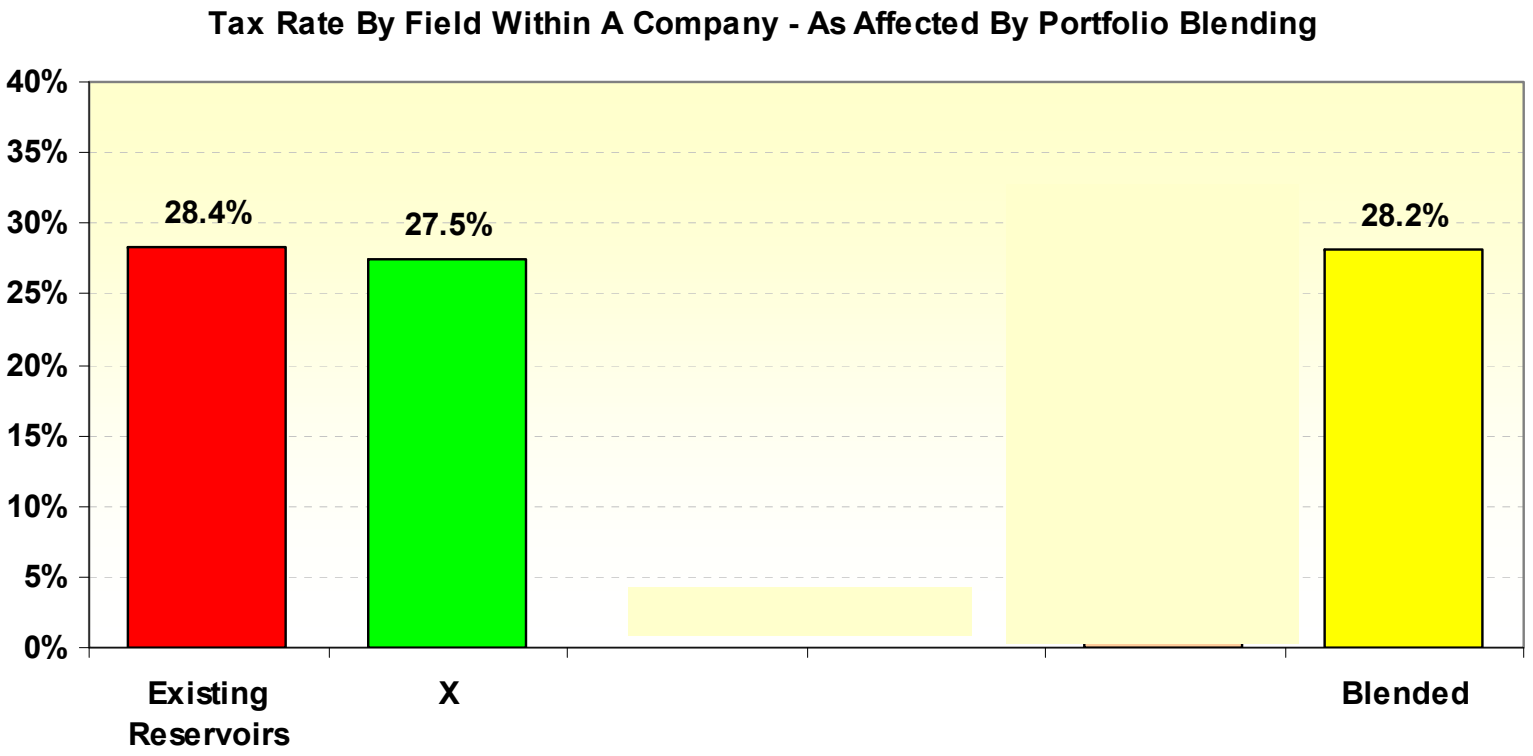
Now, Add Another Field



PPT Rate on these fields Combined would be 28.2%

Average Net Margin Is $64.20

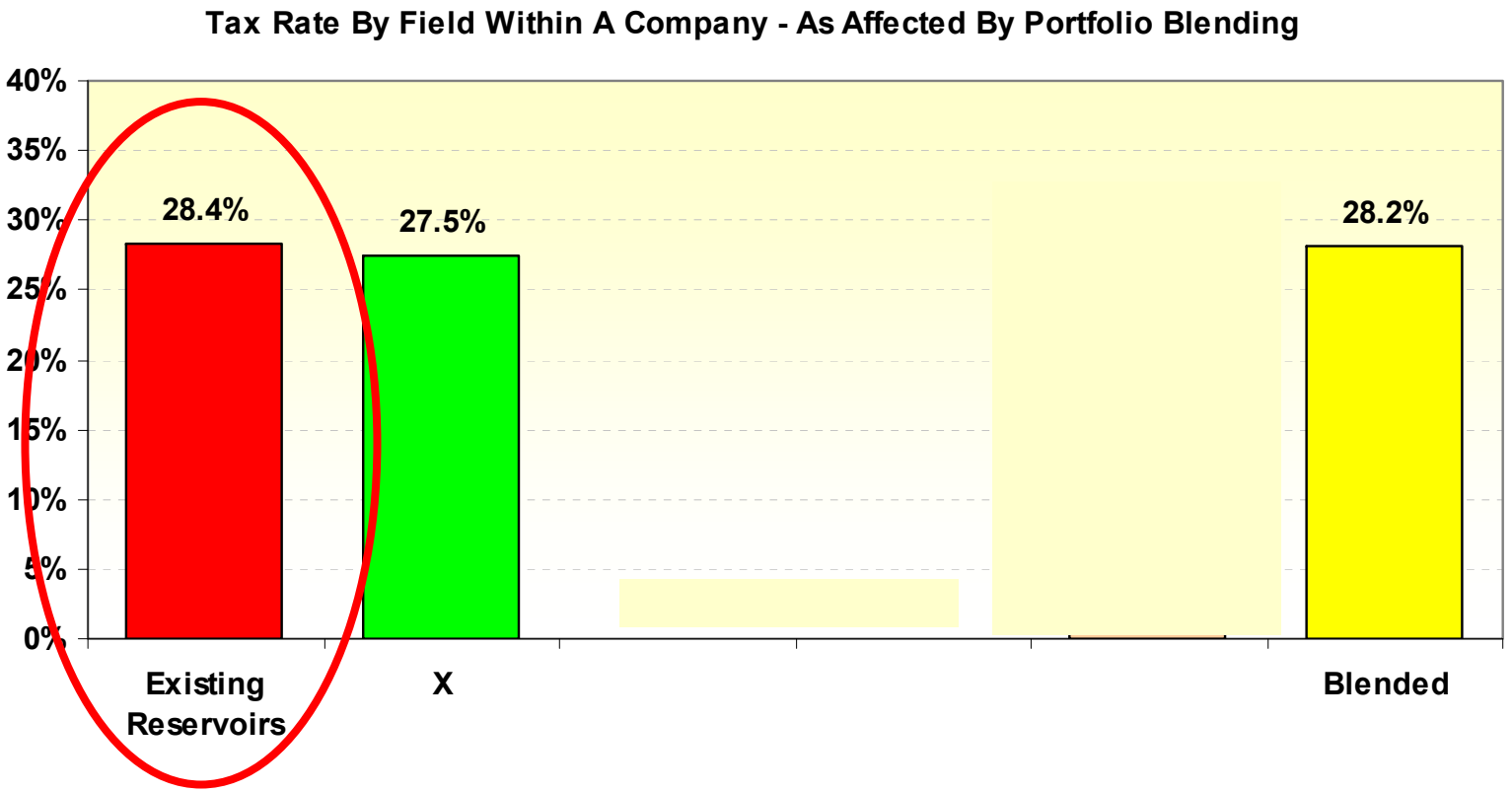
So, Does That Mean I Am Paying 28.2% On Each Field ?



No …..

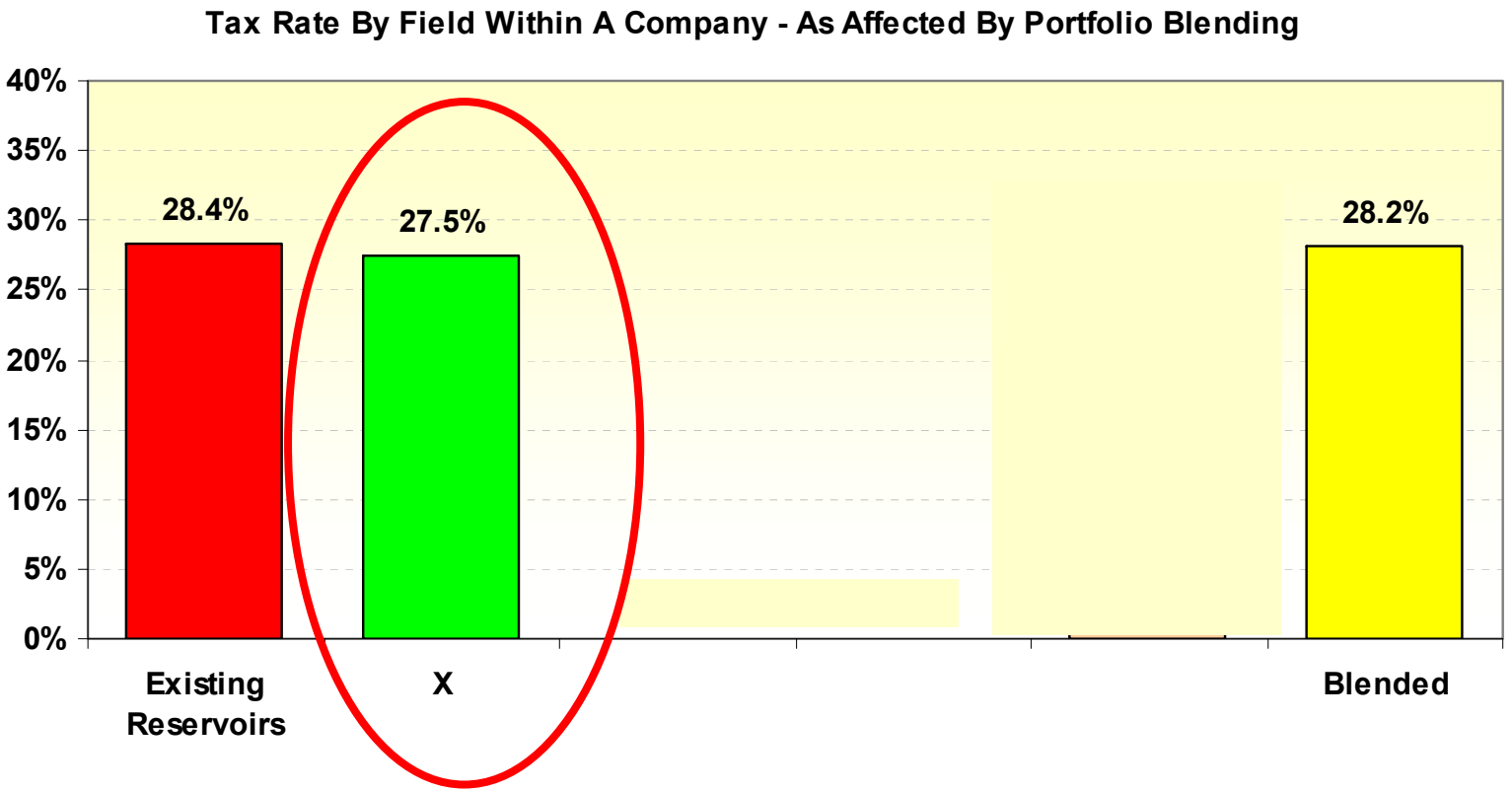
Look at this in the way that companies look at it when they make investment decisions

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



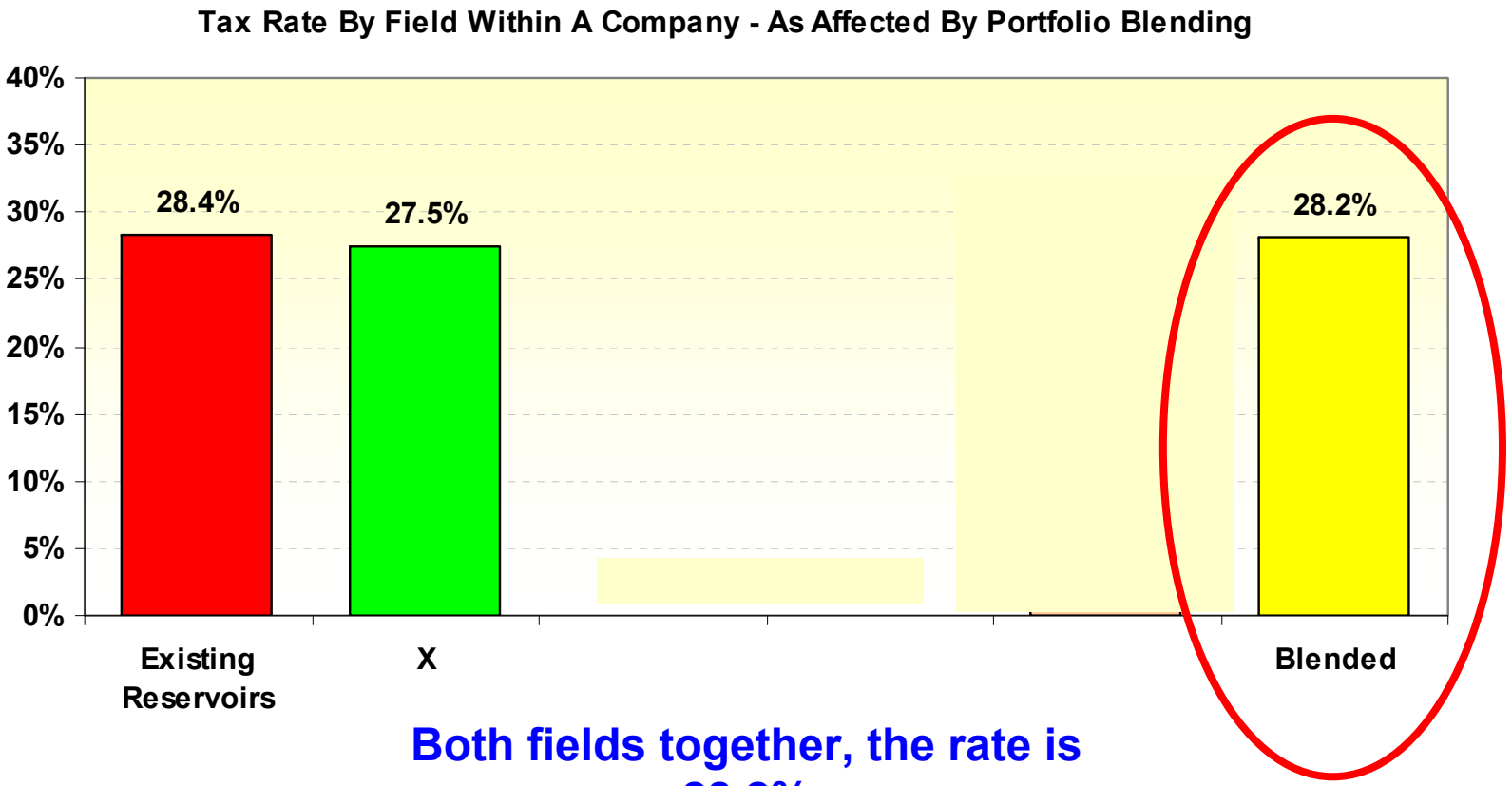
If I had just Existing Reservoirs, and did not develop anything new, I would pay tax on my profits at 28.4%

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



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

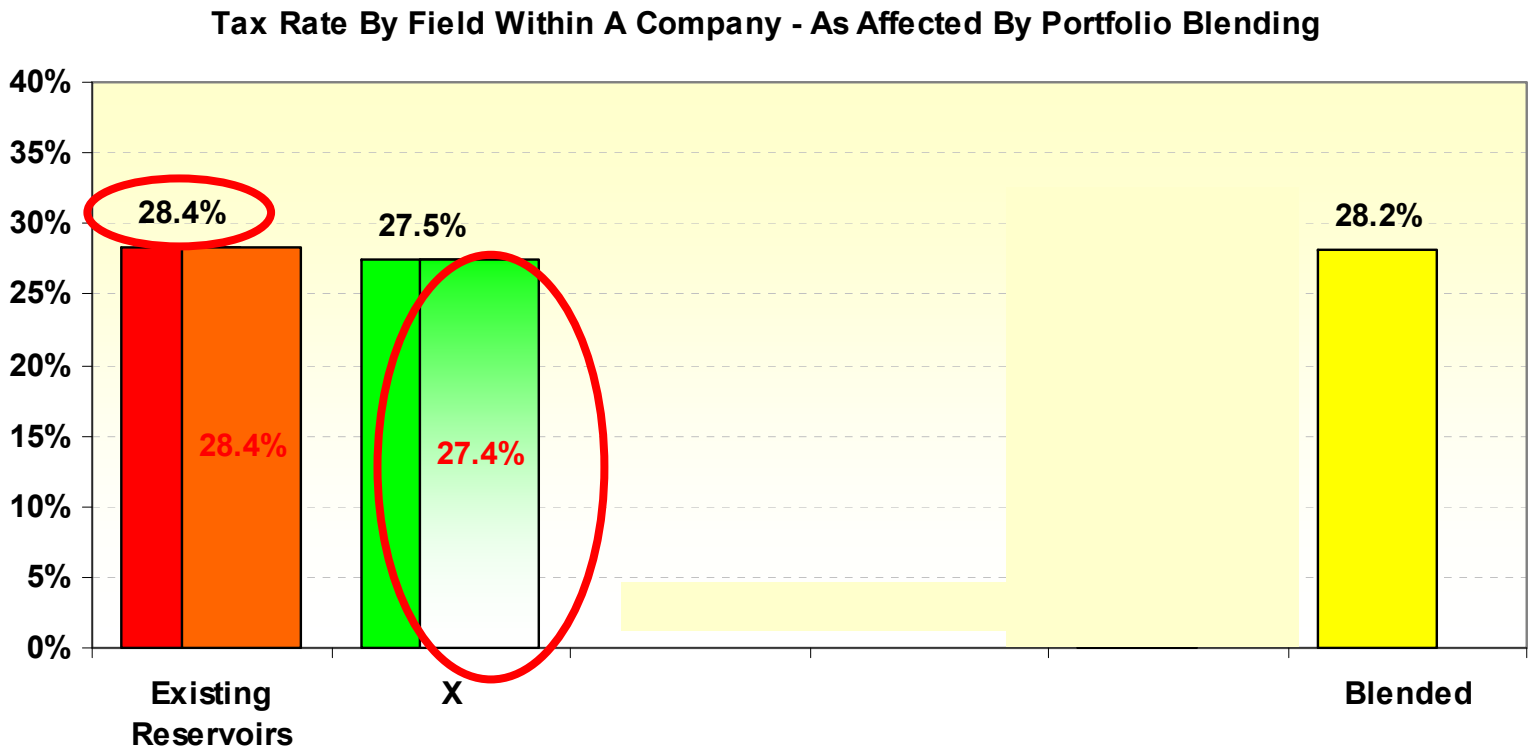
So, Does That Mean I Am Paying 28.2% On Each Field ?



Both fields together, the rate is 28.2%

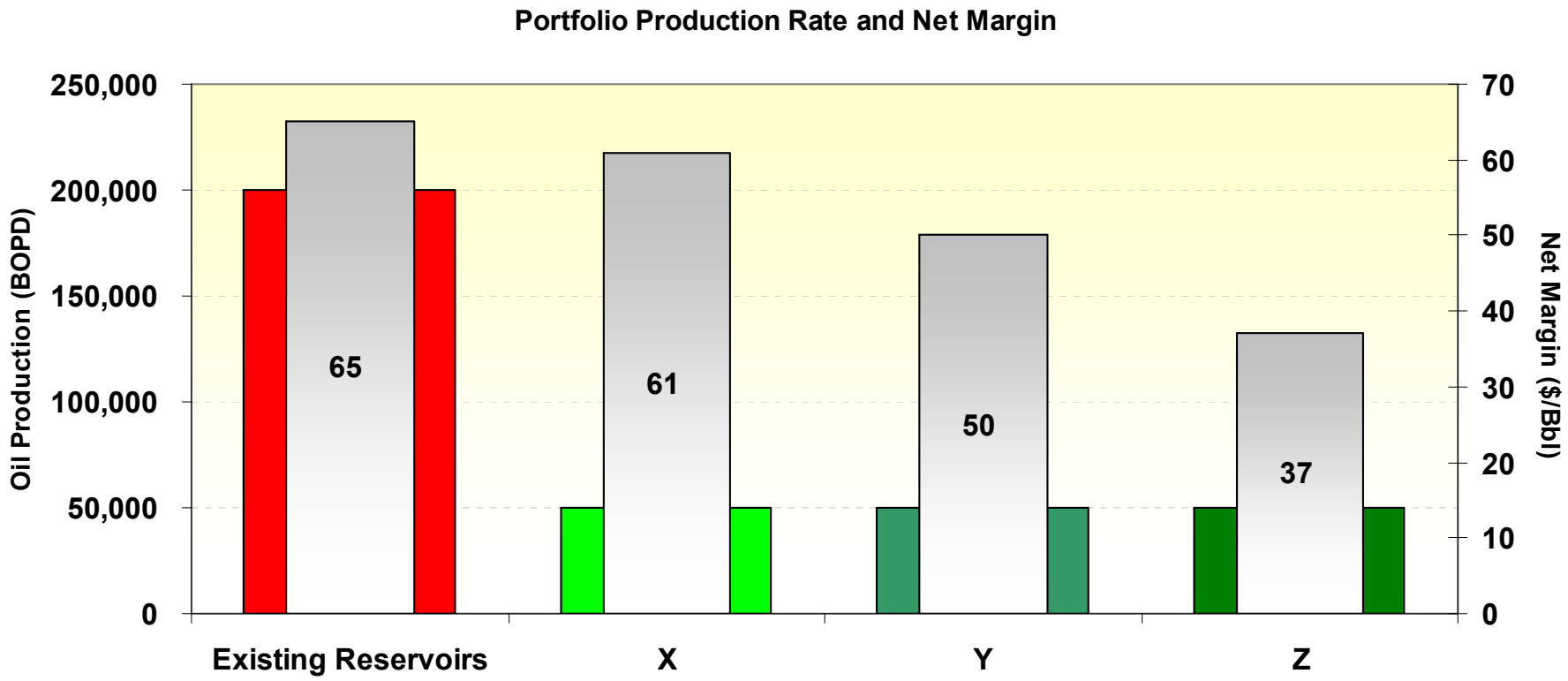
However, this is not all …

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



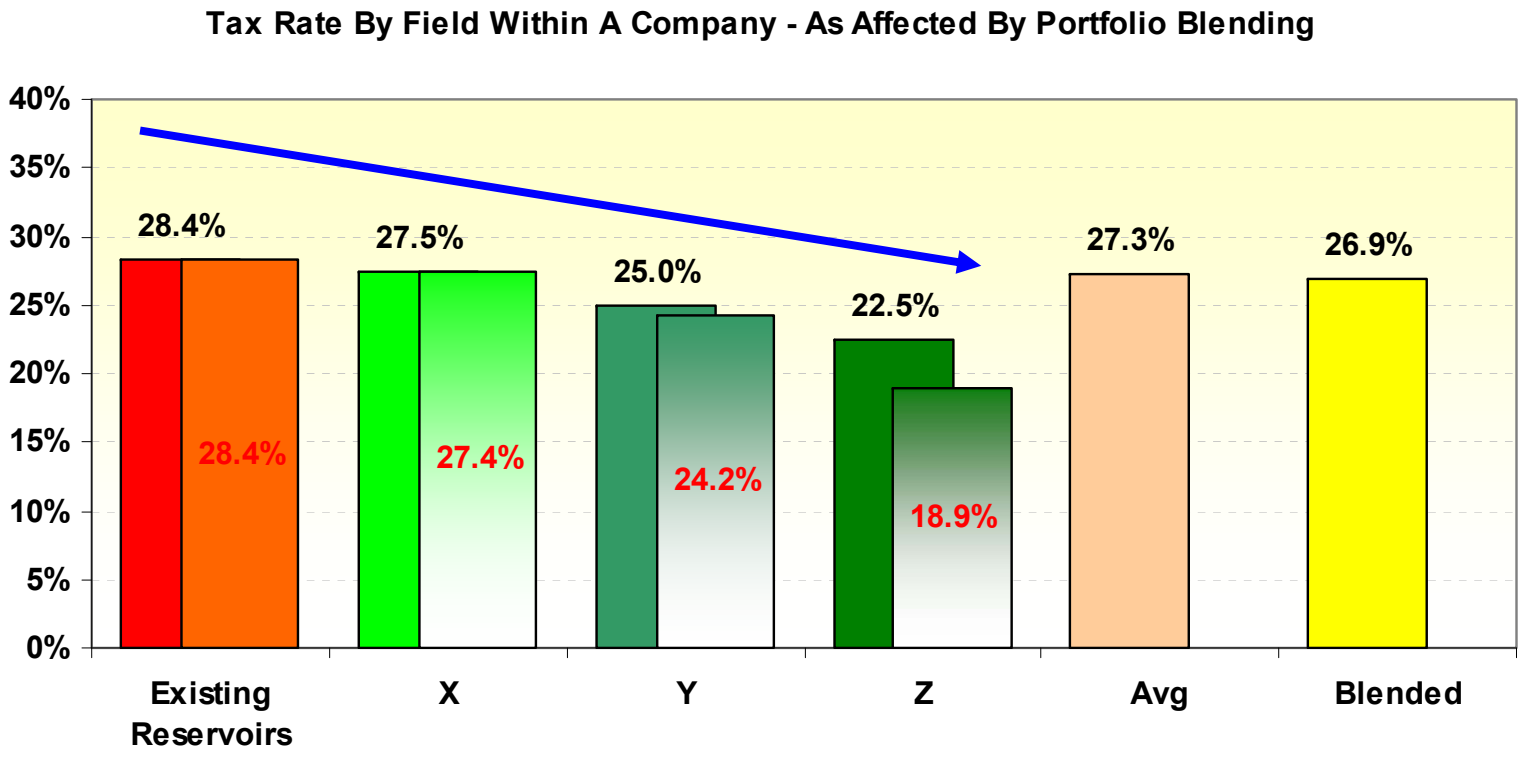
The mathematics of this reduction means that actually while Existing Reservoirs continue to pay tax at a rate of 28.4%, The effective rate on Field X is actually 27.4% …. … less than it would be if it were developed stand-alone

This Impact Can Be Seen In A Broader Portfolio



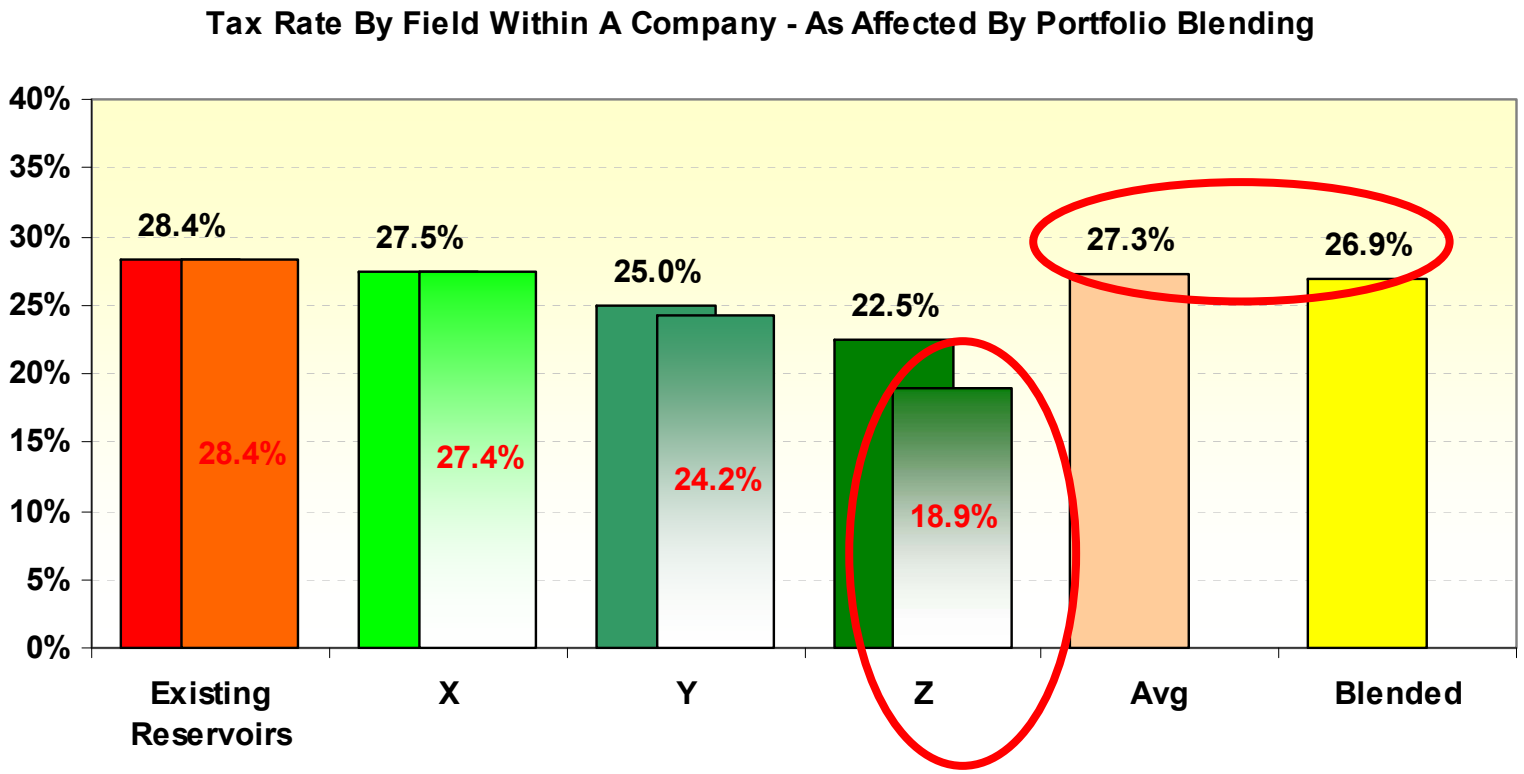
In this example we have four fields …
.. One producing 200,000 bopd and
three others each producing 50,000 bopd but of decreasing profitability

The Impact On The Lower Margin Fields Is More Noticeable



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



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

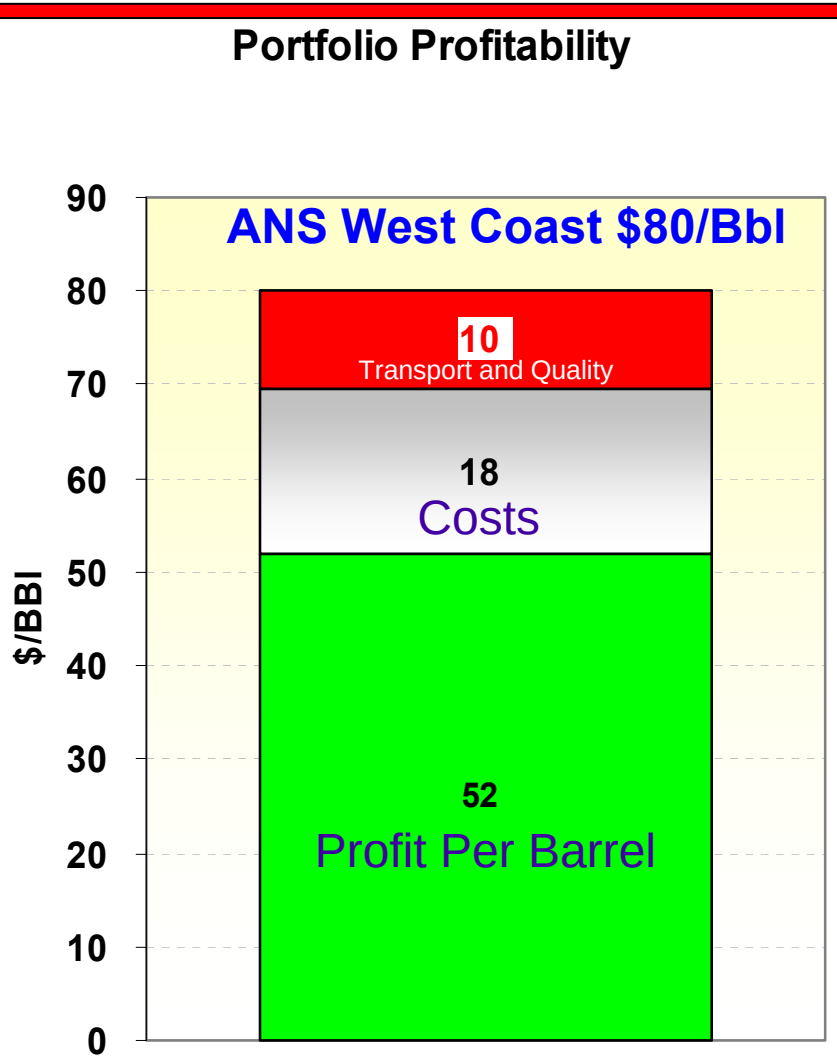
The Impact Of Capital Investment

Cash Flow, Not Profit

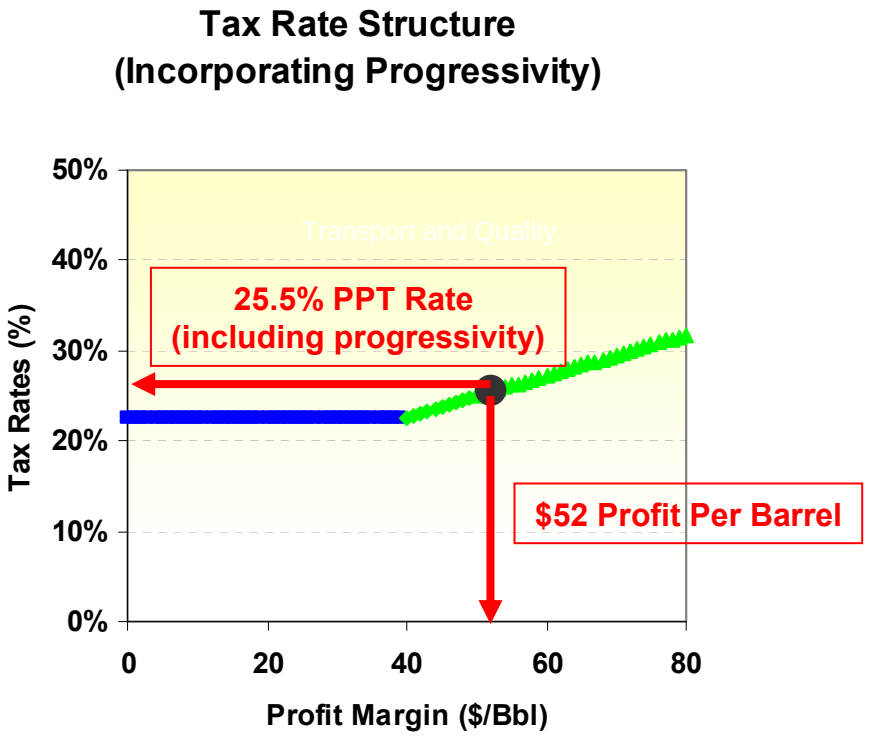
- **PPT taxes all fields at a single rate**
  - No, it taxes different fields or reservoirs based on their individual profitability

- **Is based on profit per barrel**
  - Not exactly, it is based on net cash flow per barrel after capital investment (for future production)

Remember These Slides ?



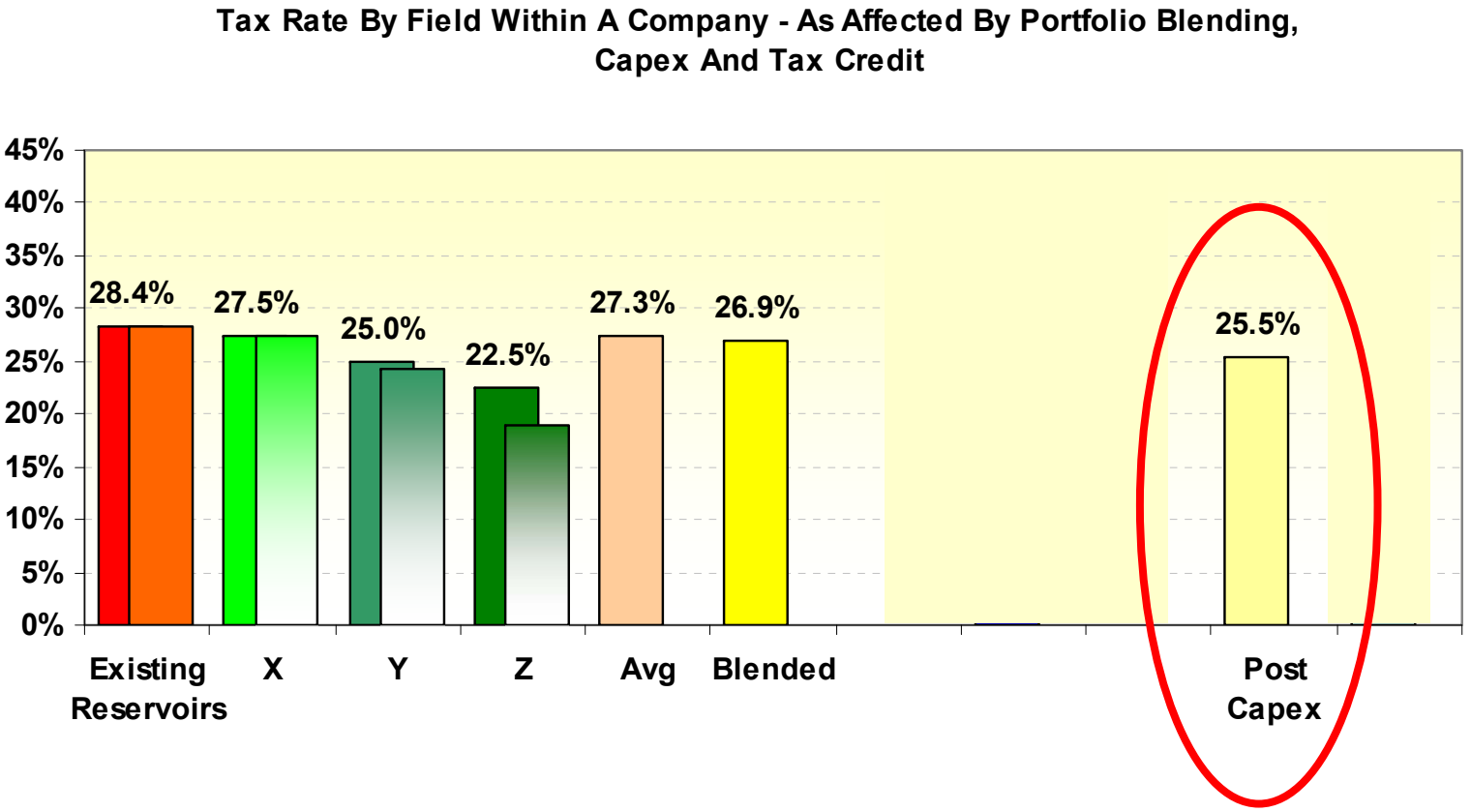
The portfolio on the previous slides had a blended rate of 26.9%, not 25.5% ….



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

… in this example $800 million

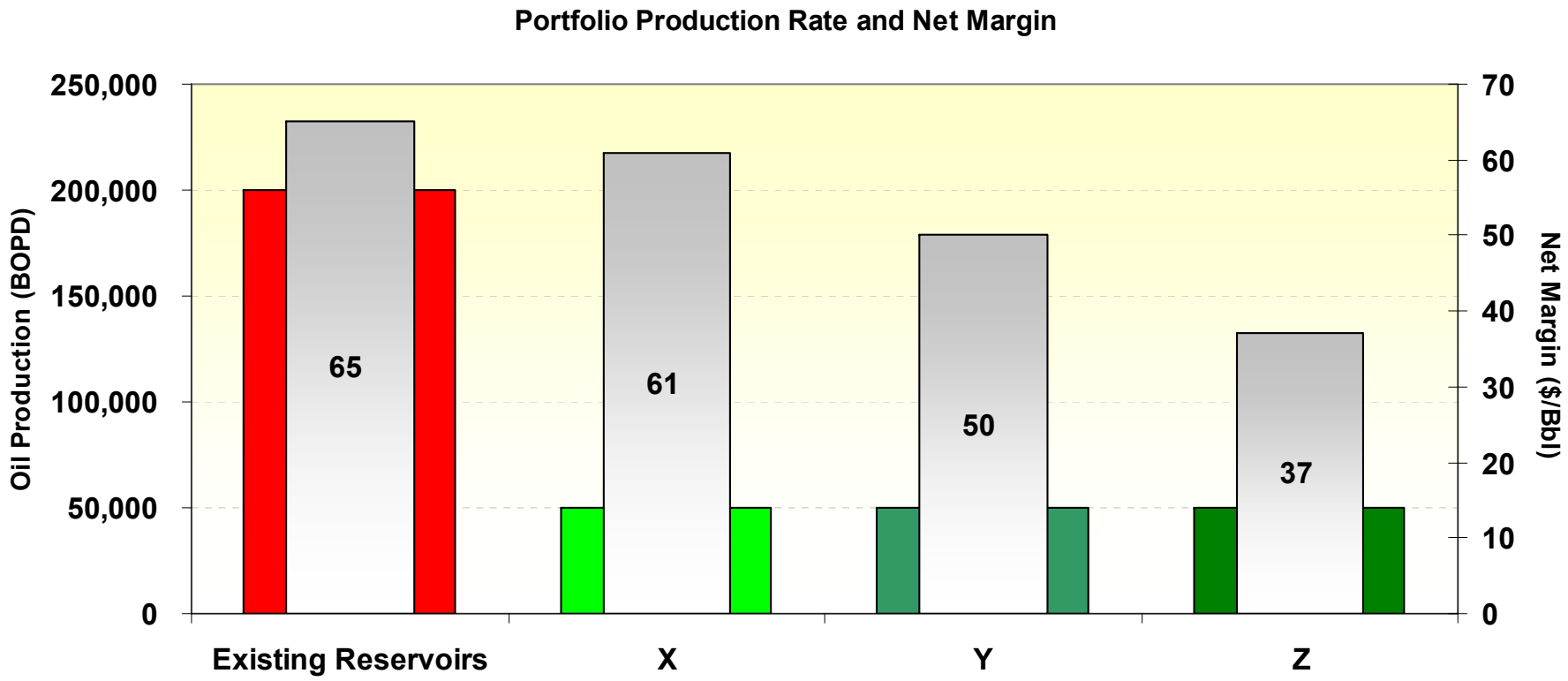
Capital Spending Has An Impact On Rate, Too ….



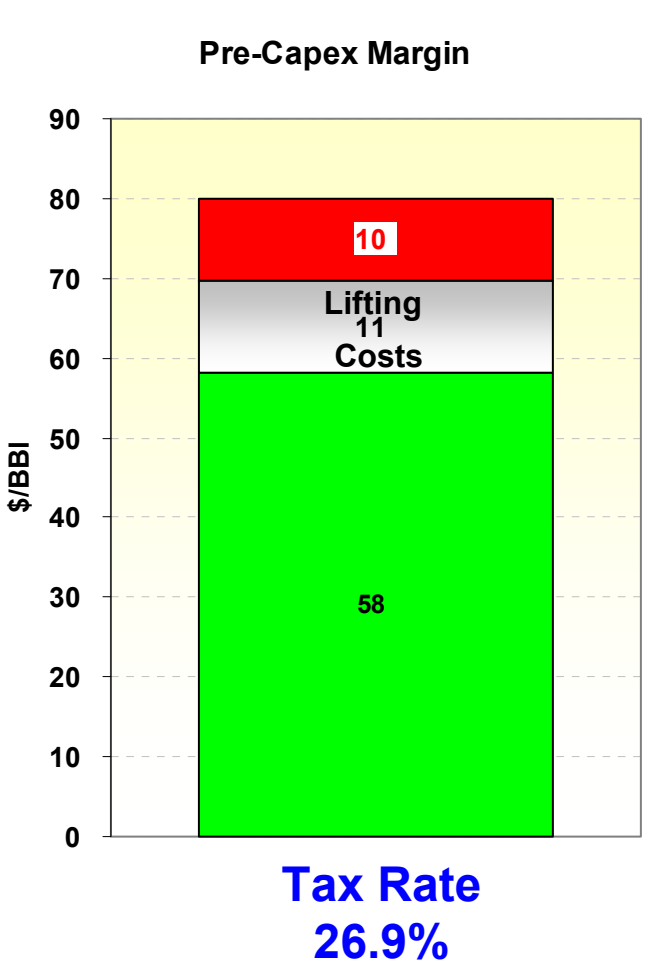
This reduces the rate payable to 25.5%

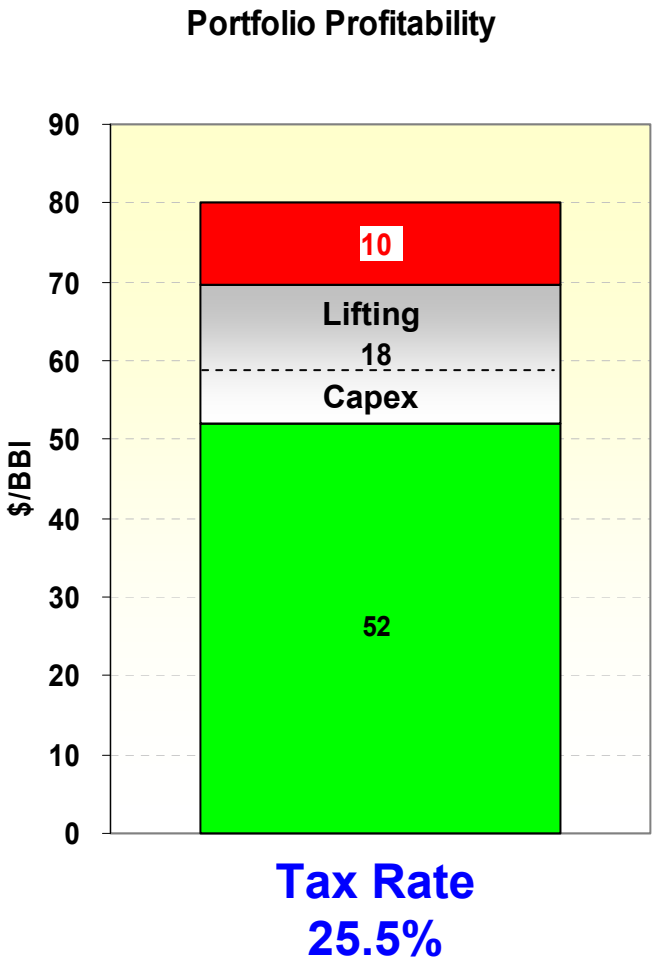
How ?

$800 million amounts to $6.26 Per Barrel Based On This Portfolio

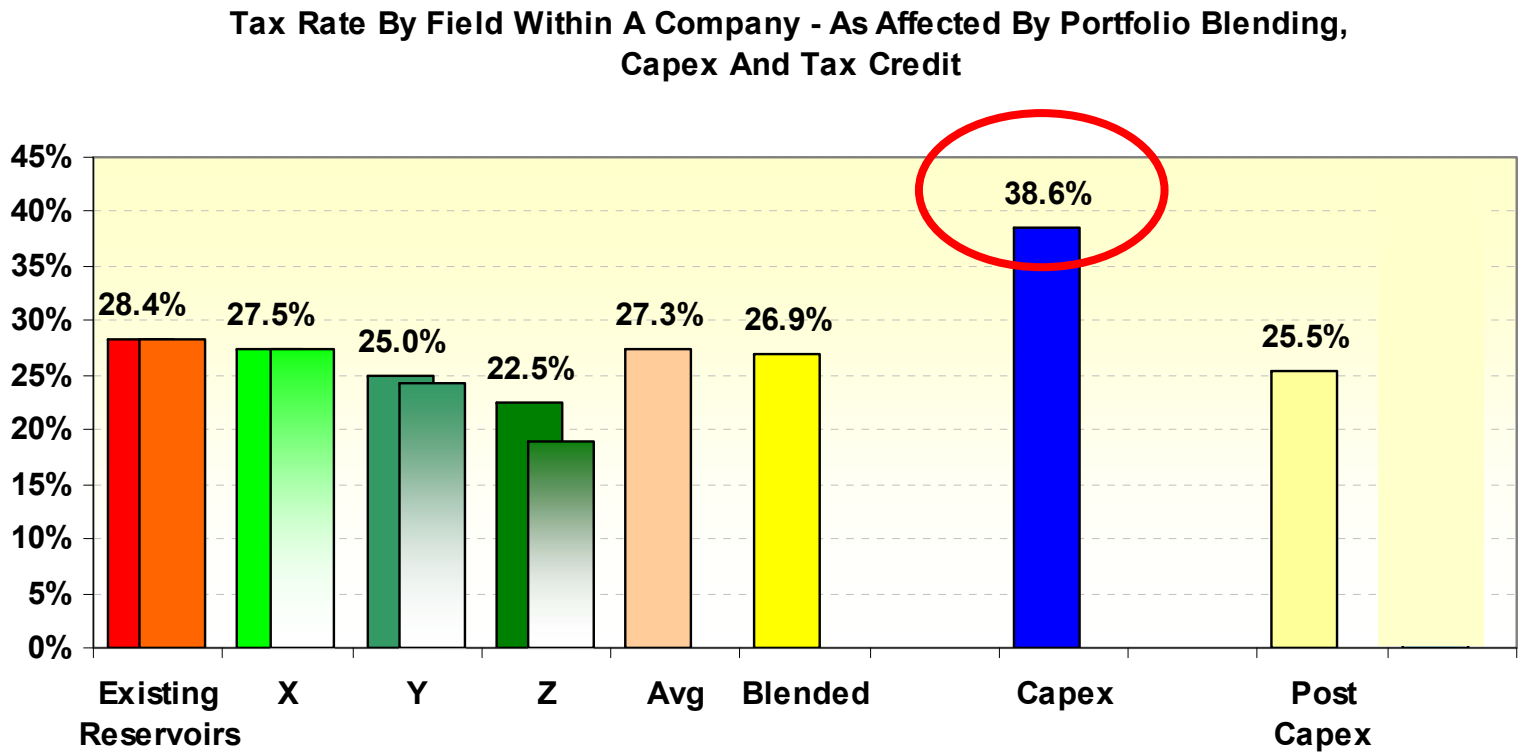


The $6.26 Per Barrel Capital Increases "Costs" And Lowers The Tax Rate





There Is Another Way To Look At This, Though ….

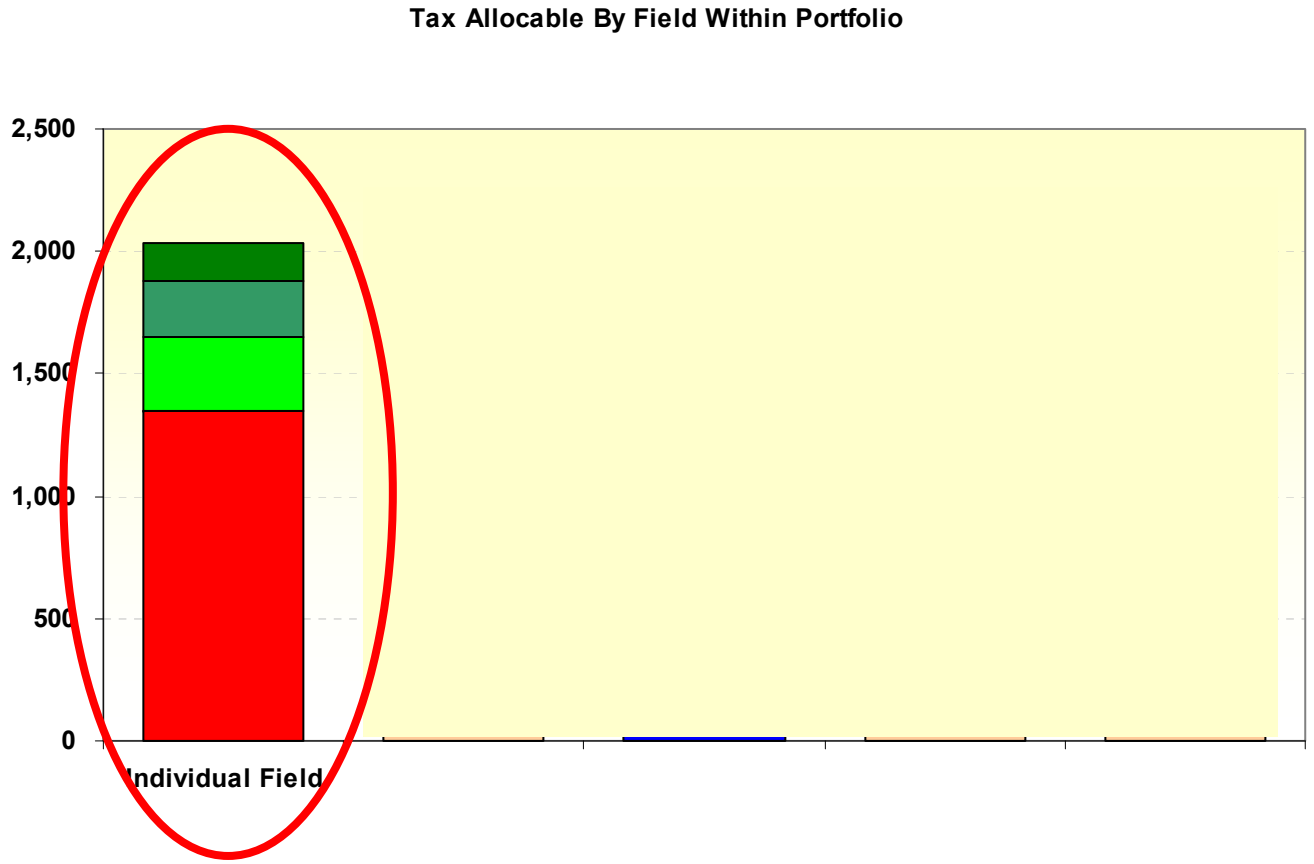


It is the same as still paying the blended rate of 26.9% on the portfolio production (or having an effective rate of 28.4% on Existing Reservoirs .. down to 18.9% on Field Z) and Alaska paying* 38.6% of that $800 million capital

This 38.6% 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

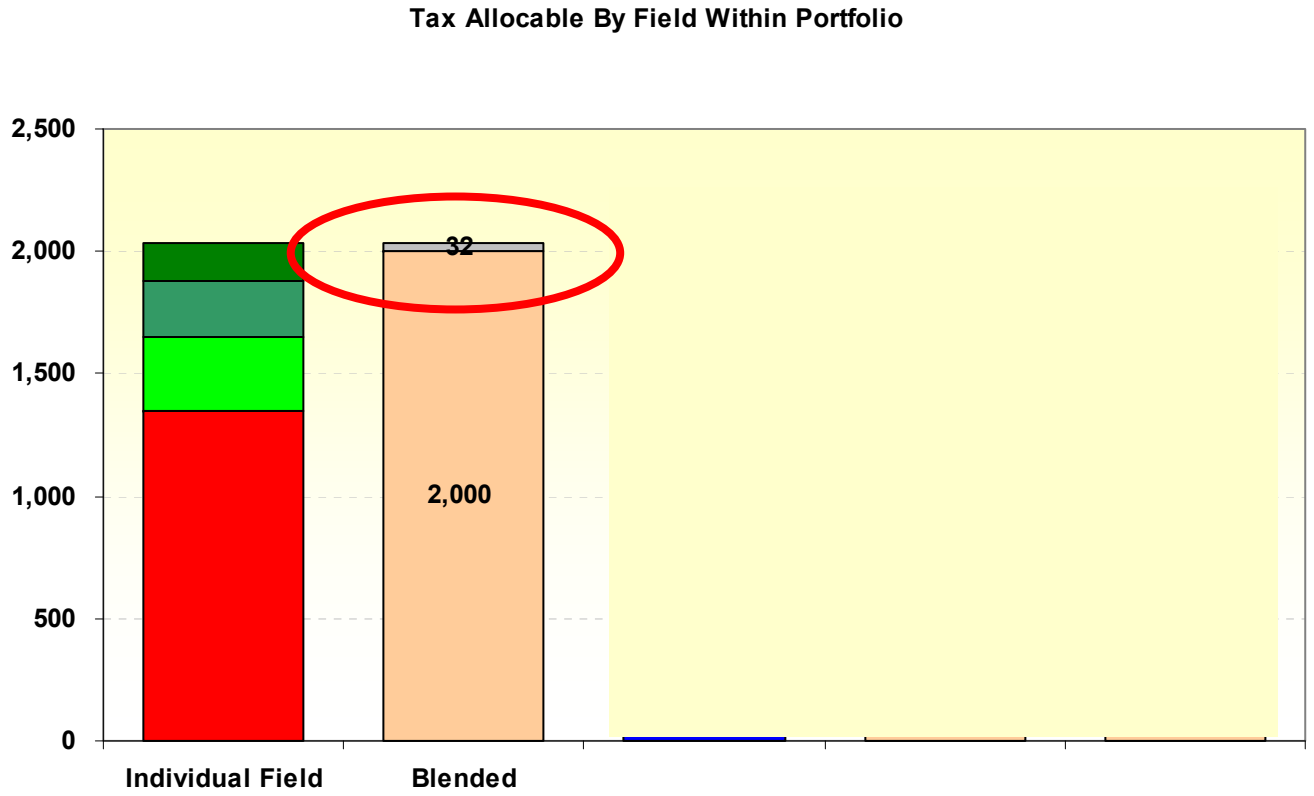
Look At The Tax System Through The Amount Of Tax Payable …



As individual fields, this portfolio would pay just over $2,032 million in PPT

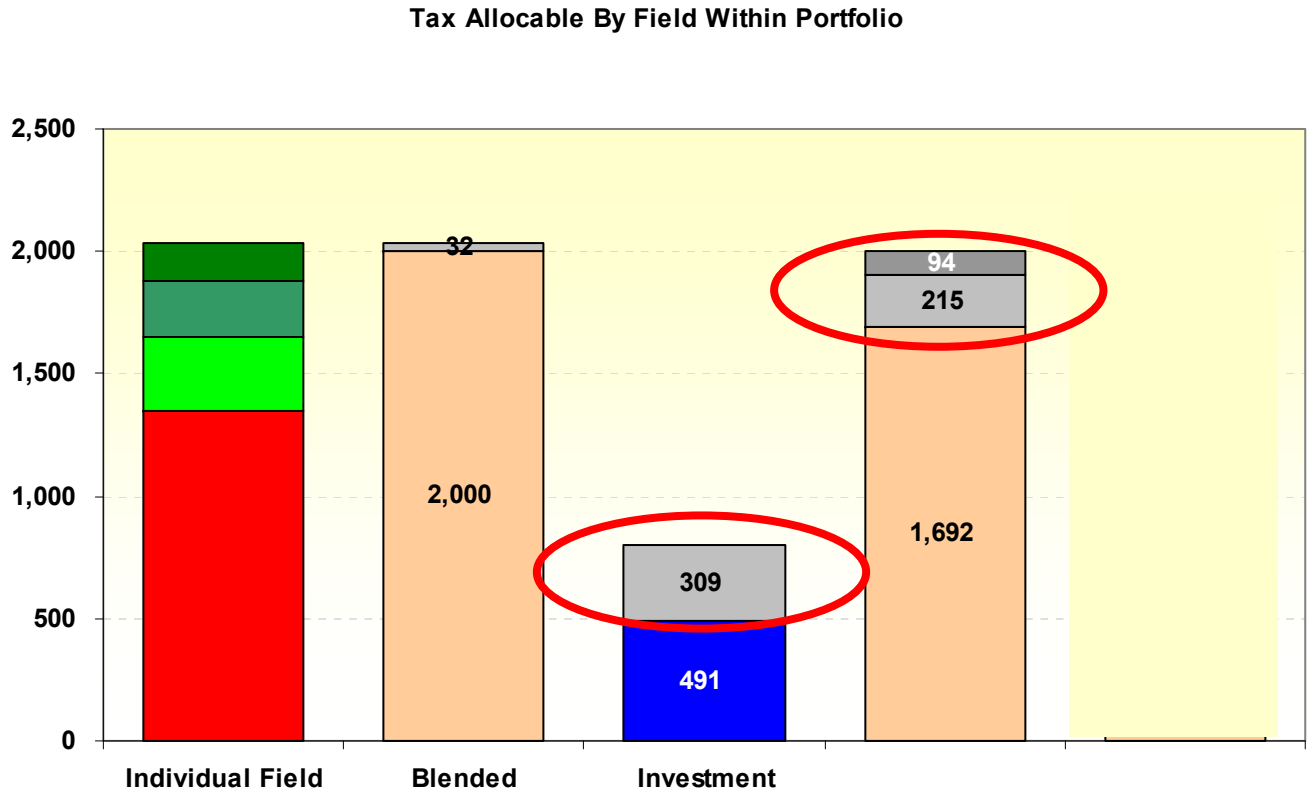
* from PPT only – does not include State and Federal tax effects

Portfolio Effects Lower Total Tax



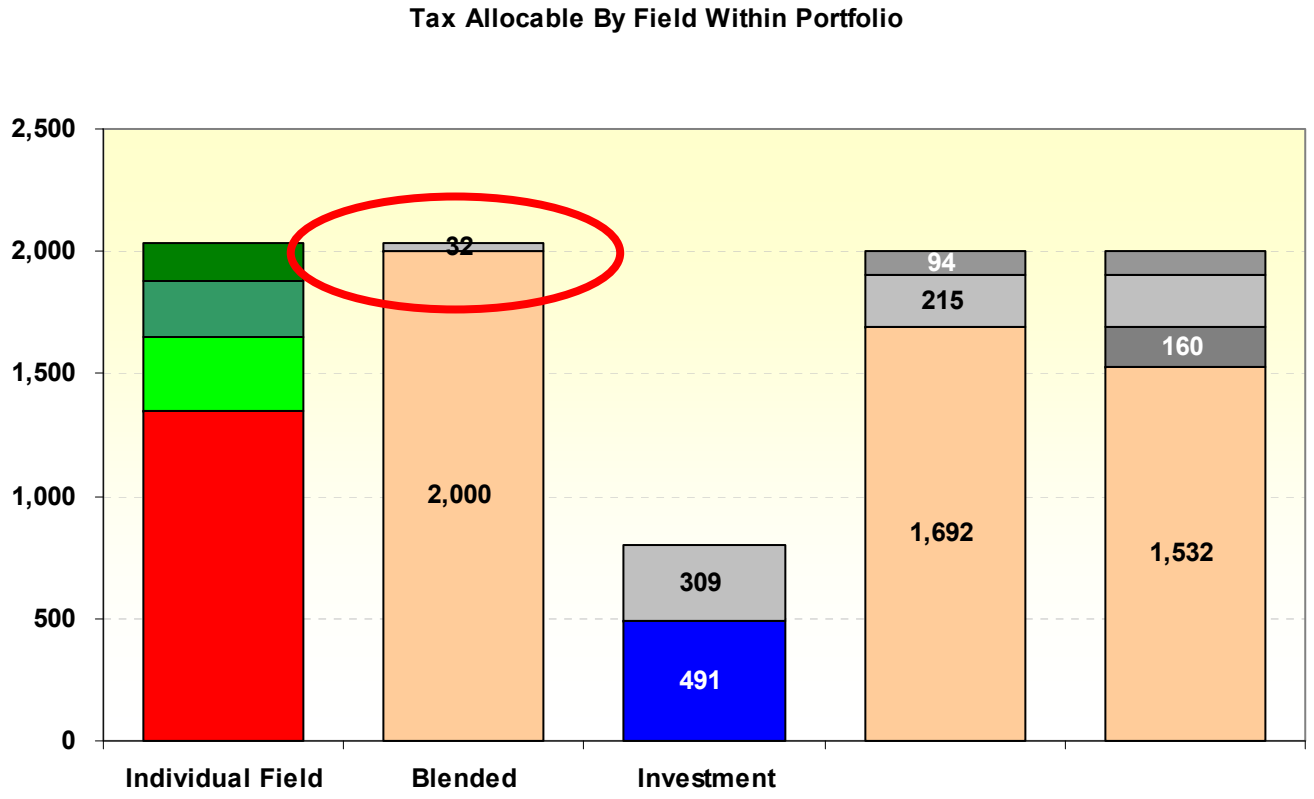
Putting all fields in one portfolio (company) lowers this to $2Bn …
… a saving of $ 32 million

The Big Winner Though Is Capex



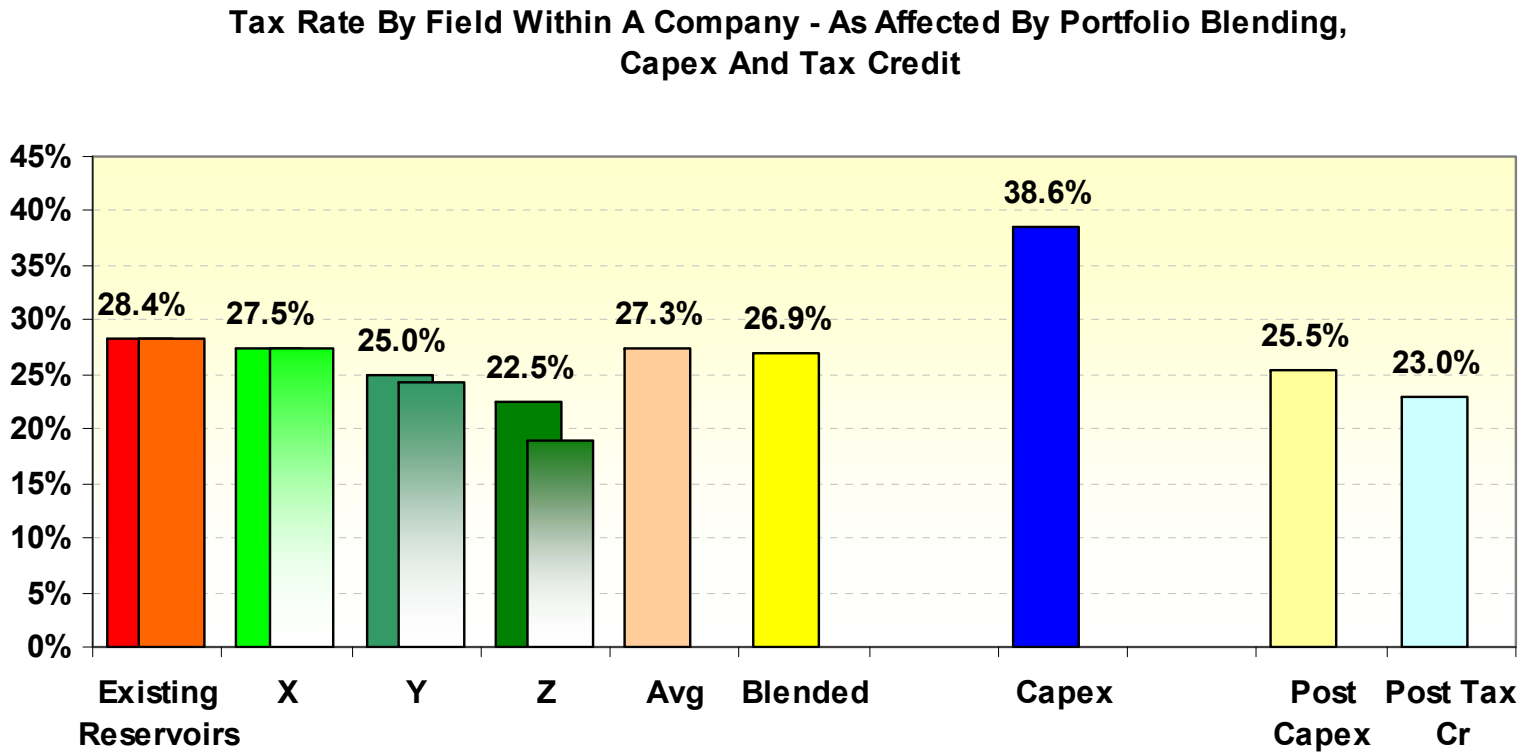
In this example the State pays $309 million (38.6%) of the capital (the percentage will vary based on overall portfolio net margin per barrel) The $309 million can be allocated as $215 million from reducing taxable income at 26.9% and $94 million from lowering the rate from 26.9% to 25.5%

But Wait ! That Is Not All ….



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

After Investment Credits …



… the effective tax rate is lowered further to 23%*

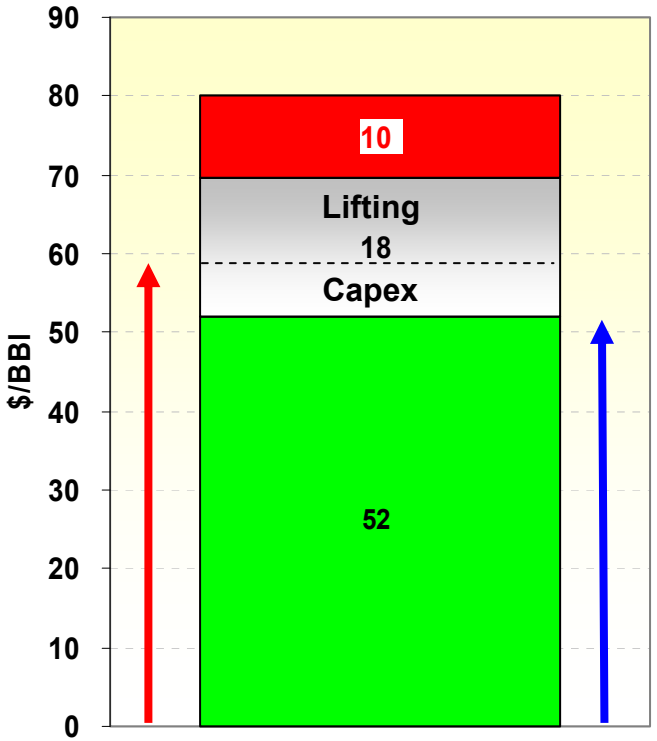
* In this example

PPT Is Really A Tax On Net Cash Flow Per Barrel

… or, a tax on net revenues that are not reinvested …

Operating Margin Per Barrel

$58



Net Cash Flow Per Barrel (after reinvestment)

$52

Tax Rate 25.5%

House Oil & Gas Committee

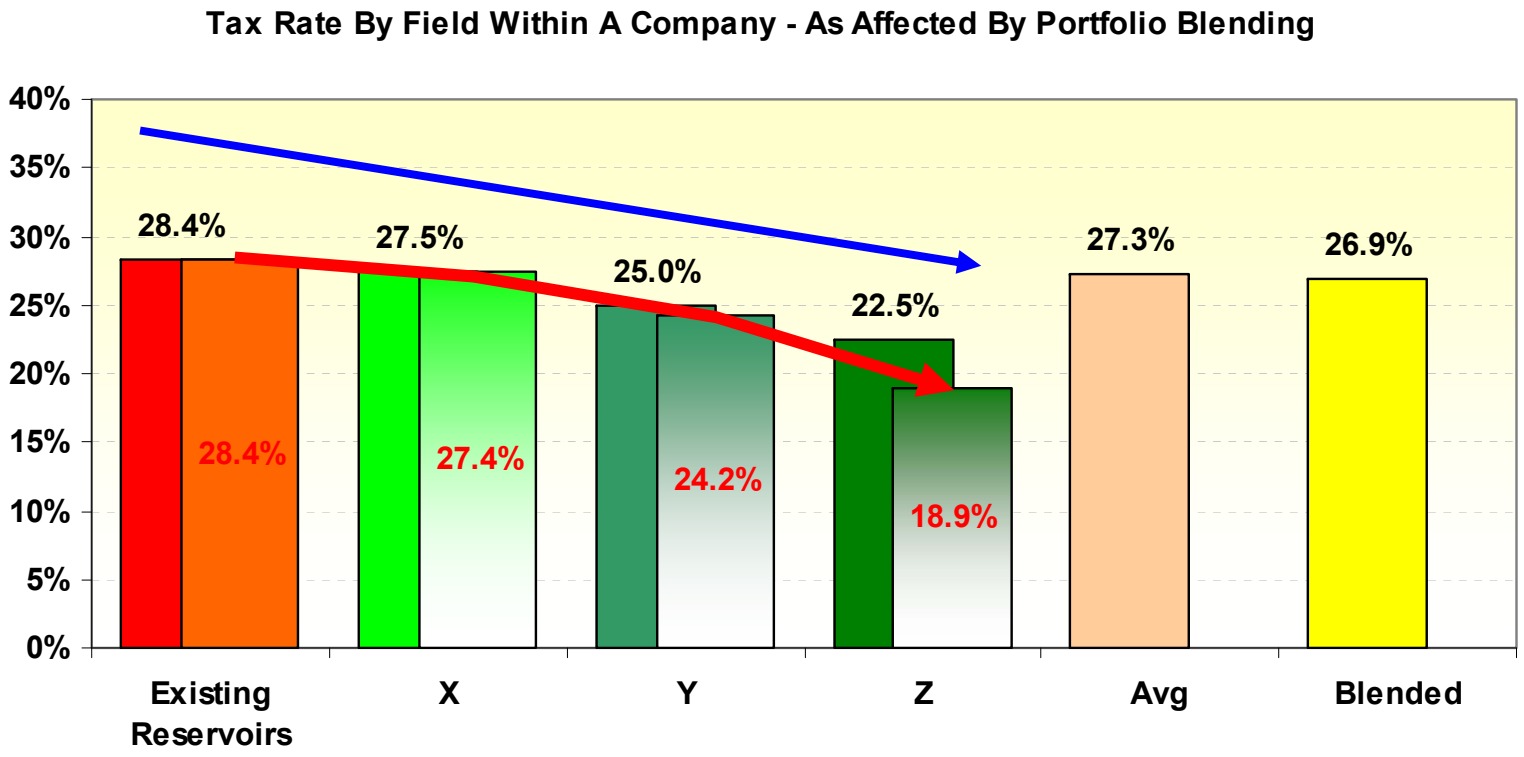
Gross Progressivity Amendment

Progressivity

- **PPT**
  - Tax rate increases 0.25% for every dollar that net cash flow per barrel exceeds $40

- **House O&G Amendment**
  - Maintains the PPT basic rate of 22.5%
  - Adds a tax of 0.225% for every dollar that the gross value at the point of production exceeds $50
  - Applied to the gross value at the point of production

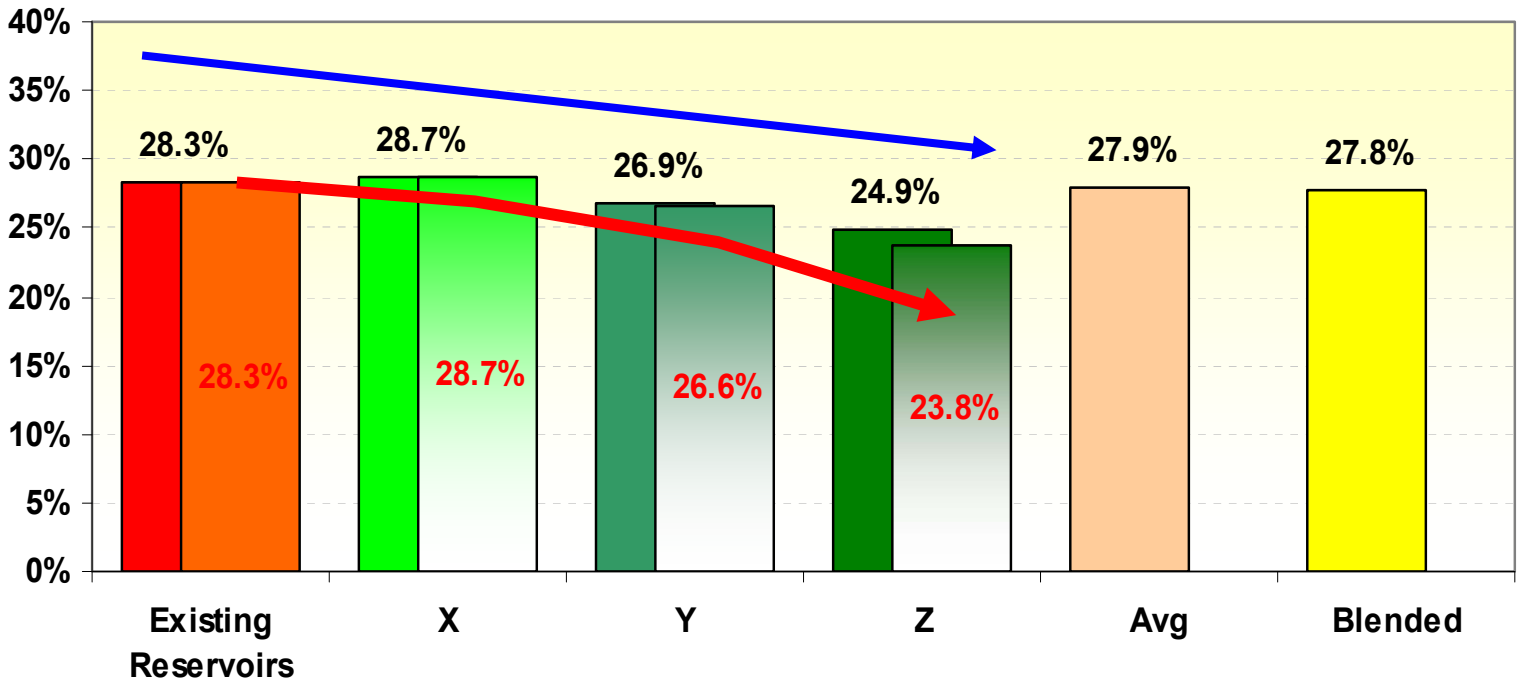
PPT Progressivity



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

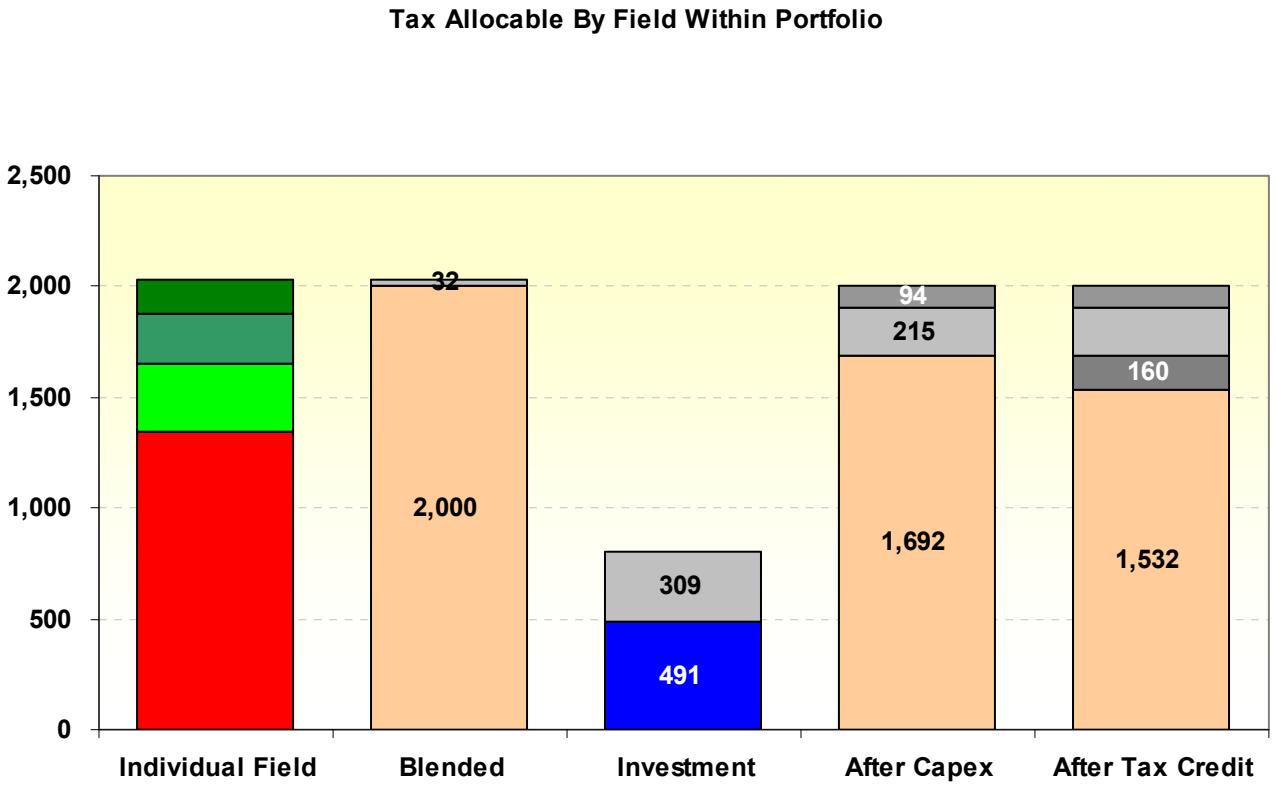
House Oil & Gas Progressivity

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



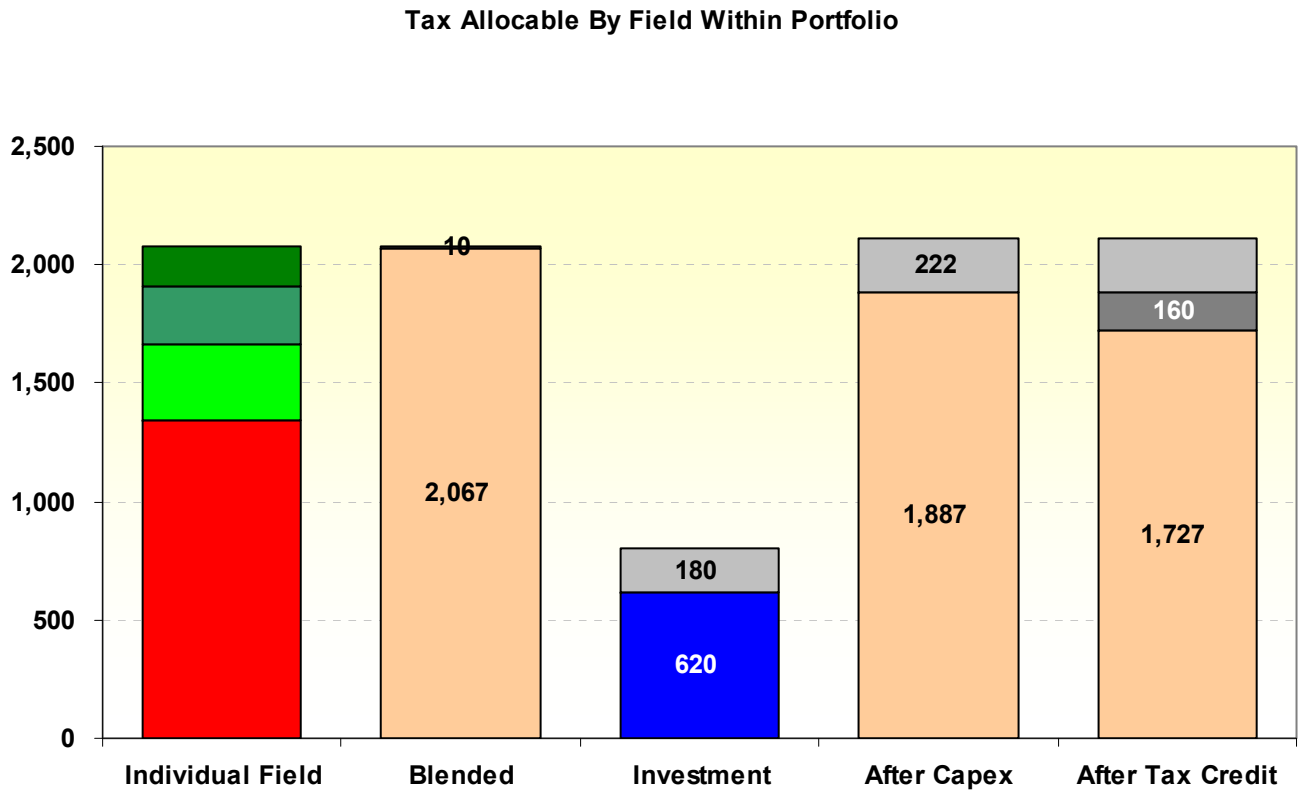
The bulk of the increased burden in this case is being borne by the lower margin fields …

PPT Progressivity



Under PPT progressivity this portfolio would pay $1,532 million at $80 ANS West Coast …..
$2 Bn before the capital investment

House Oil & Gas Progressivity



Under House O&G progressivity this portfolio would pay $1,727 million
-only $67 million before the capital investment
The net cost of the investment rises from $331 million to $460 million*

* Before State and Federal tax impacts

Conclusions

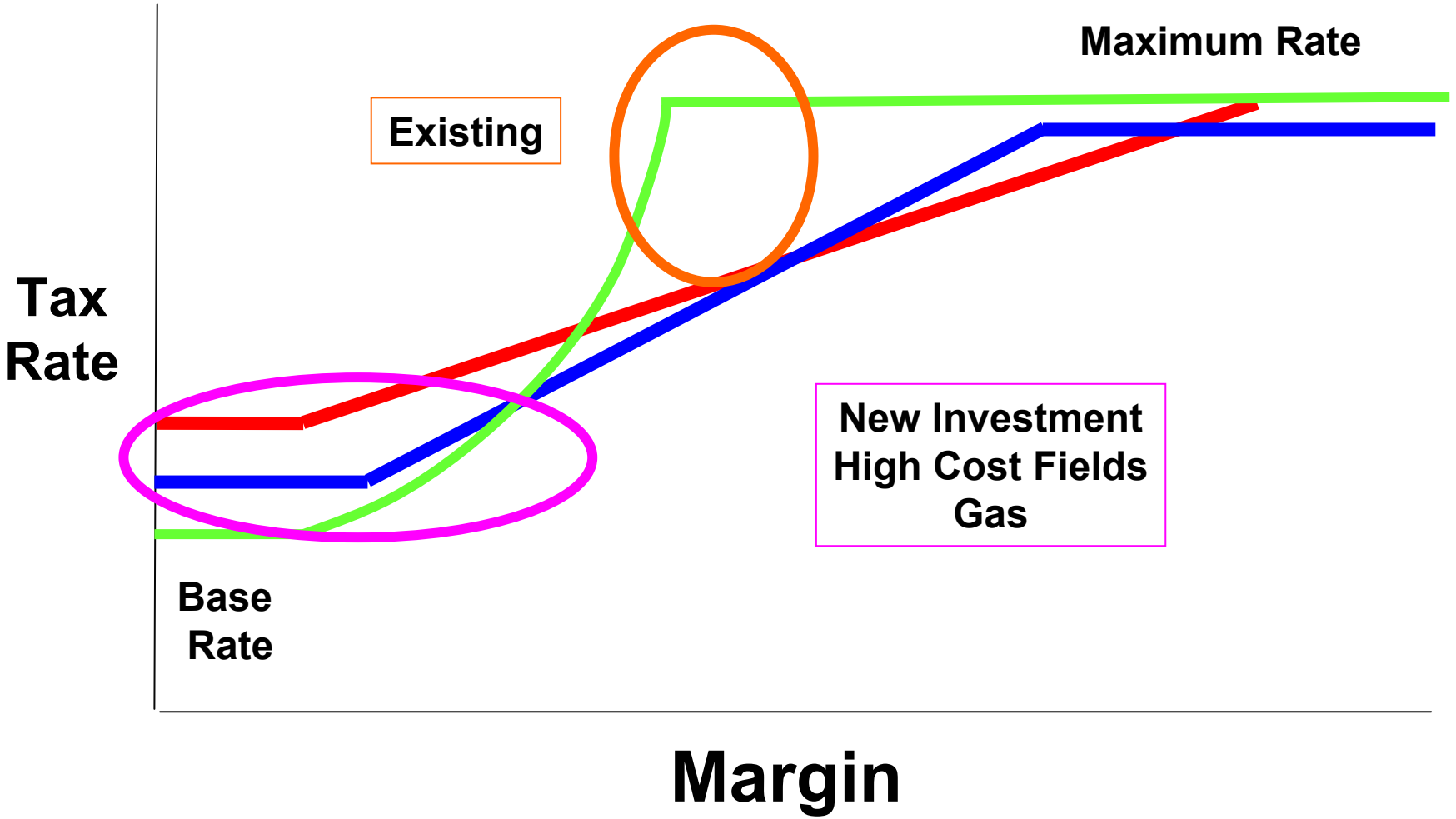
- **A net tax on the margin is a tax on the retained cash flow and not just a tax on simple profitability**
- **Corporate ring fence for production tax allows the effective rate to vary between more, and less, profitable fields**
- **More aggressive net progressivity provides a greater differentiation on the effective rate than simple gross progressivity**
  - Less/lower taxes at low margins
  - More/higher taxes at high margins

Progressivity

- **Progressivity, based on "net", as manifested in the PPT/ACES structure is more responsive to individual field profitability than that in a "gross" structure**

- **Greater progressivity (raising the maximum rate and / or slope) can achieve even greater differentiation**
  - More tax on legacy investments benefits from current higher prices – that will drop back if prices drop back
  - Lower tax rates on higher cost / lower margin new investments

Aggressive Progressivity



Not The End
But a New Beginning

30 October 2007