
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**



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.**



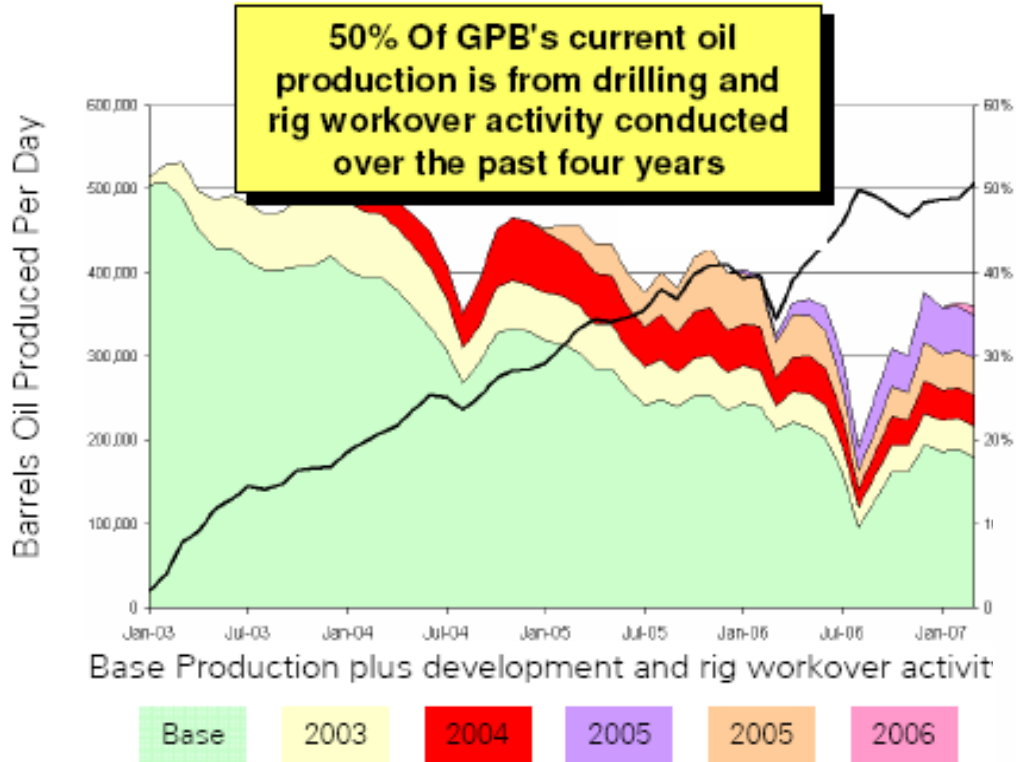
AOGA Testimony – Recent Success

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.

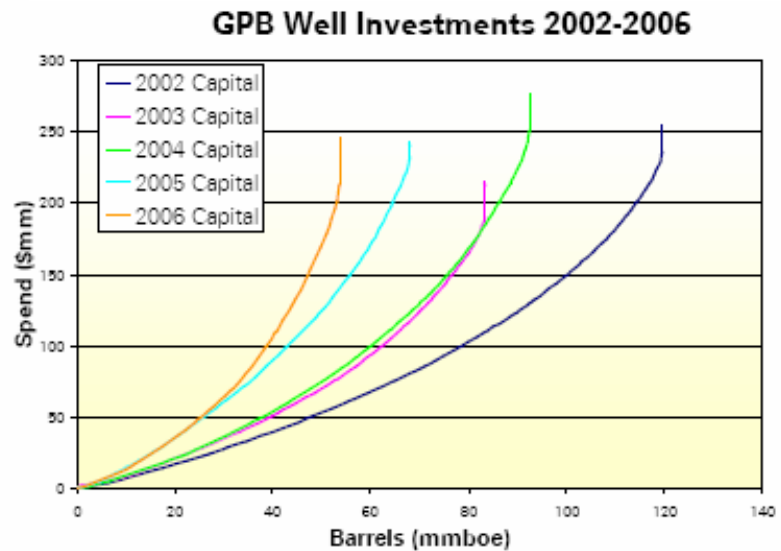
- **AOGA noted that North Slope field life could be extended up to another 25 years with continued investment**
- **The oil companies achieved 70,000 bpd of additional production from the 2006 drilling program in Prudhoe Bay.**



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)

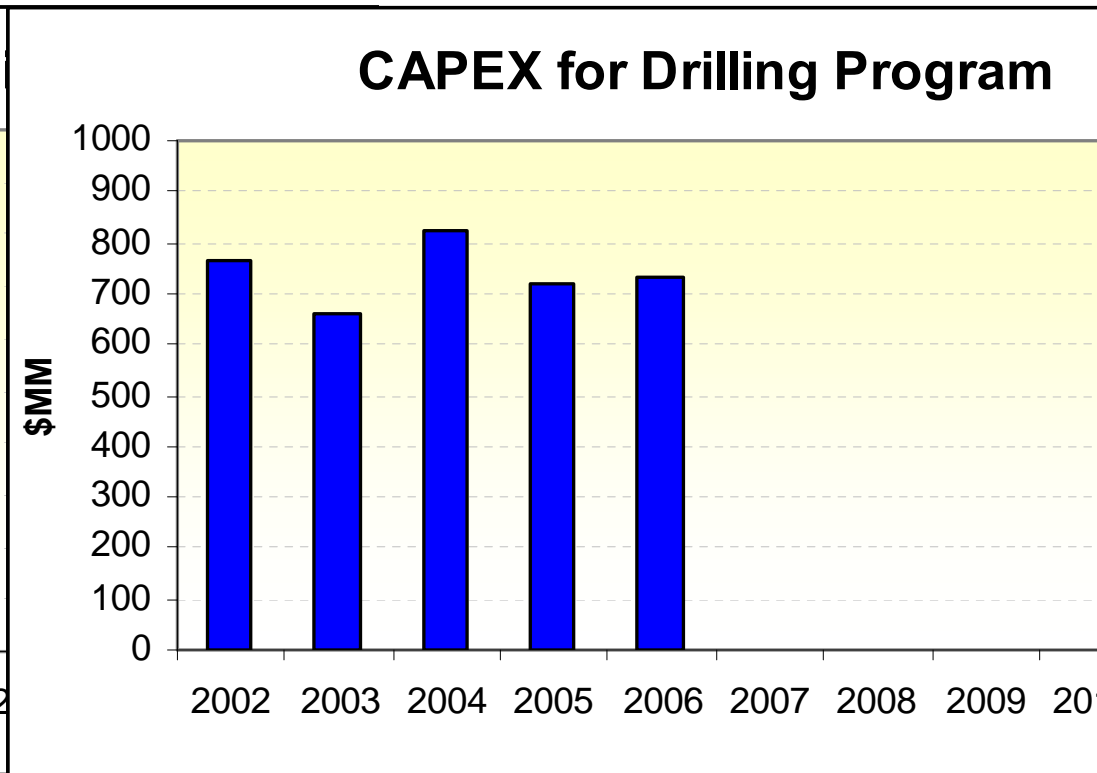
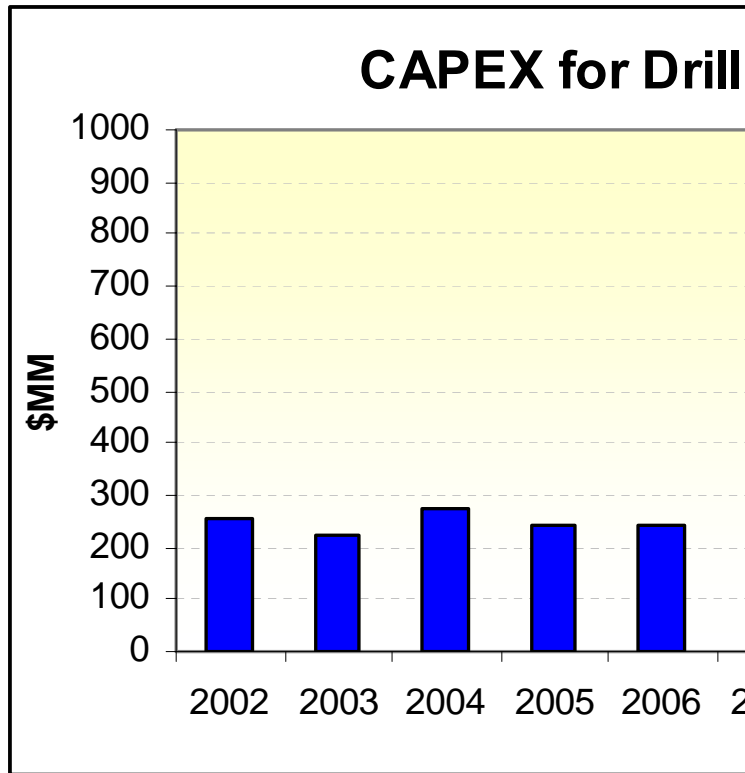
	2002	2003	2004	2005	2006
Capex	255	220	275	240	245
MMbbls	120	90	80	60	50
\$/bbl	2.13	2.44	3.44	4.00	4.90

- 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

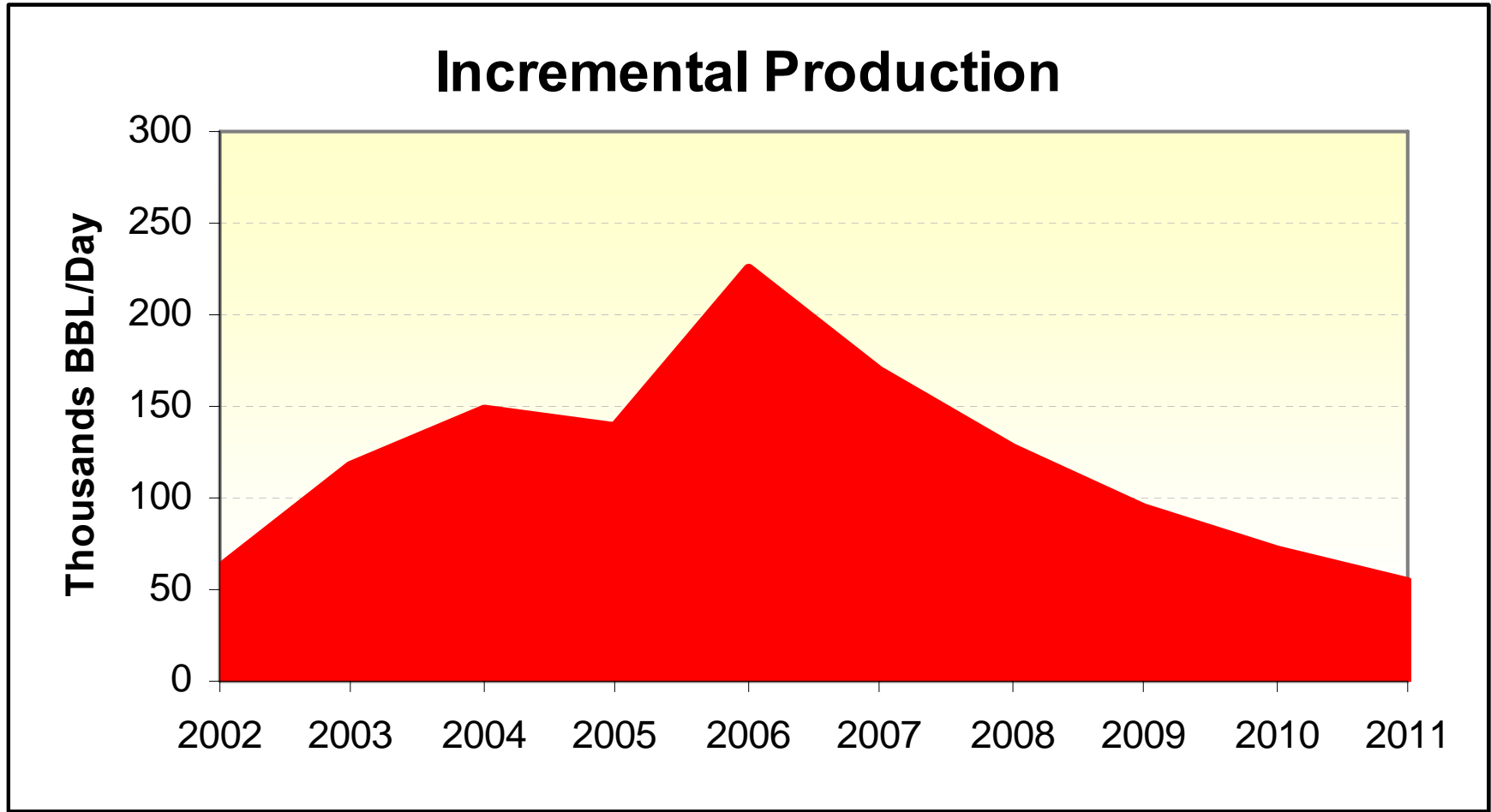


5 Year Prudhoe Drilling Program

- Drilling capex – 300% for added facilities/injection



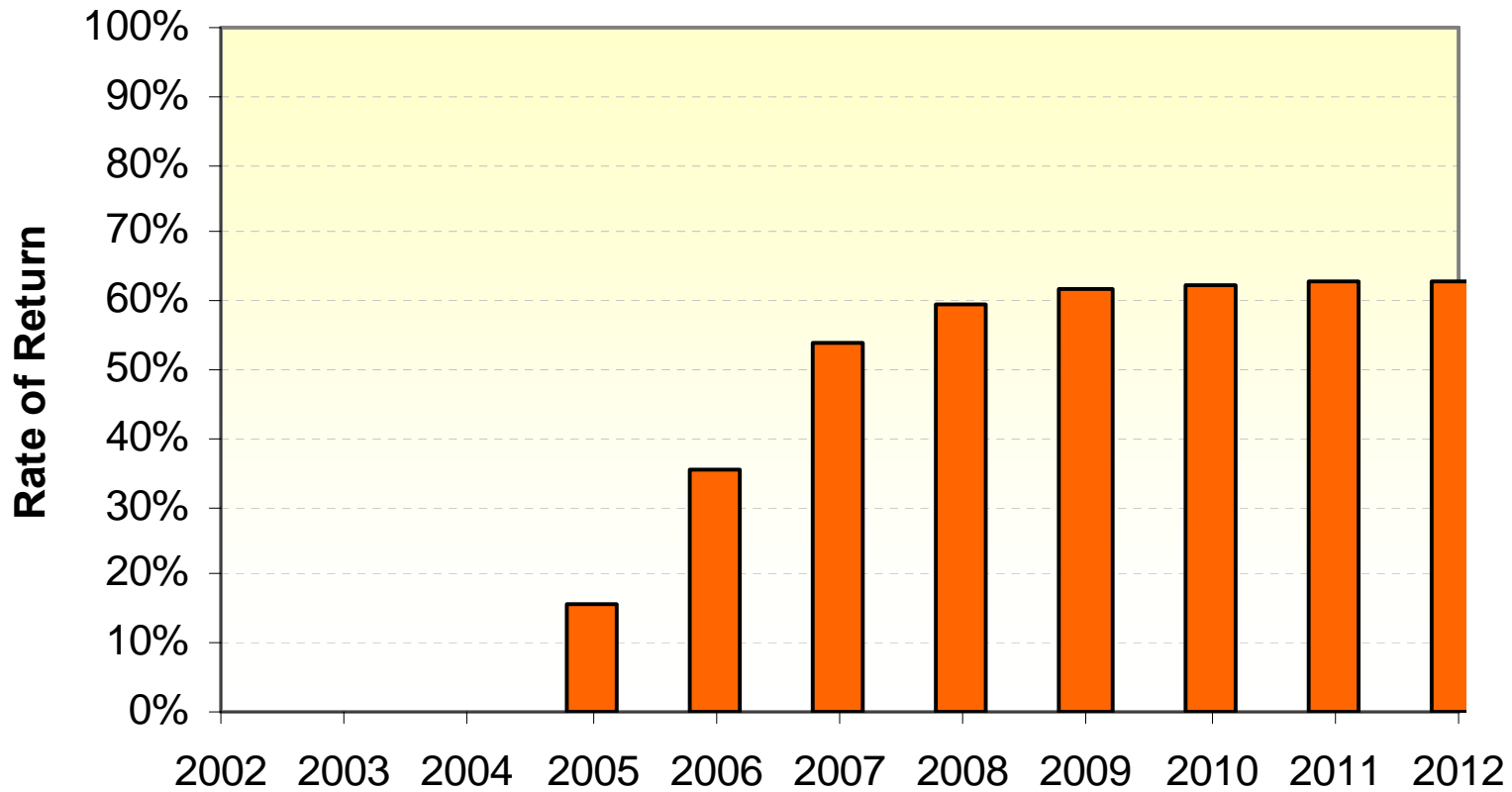
BP – Prudhoe Bay



BP Prudhoe Bay



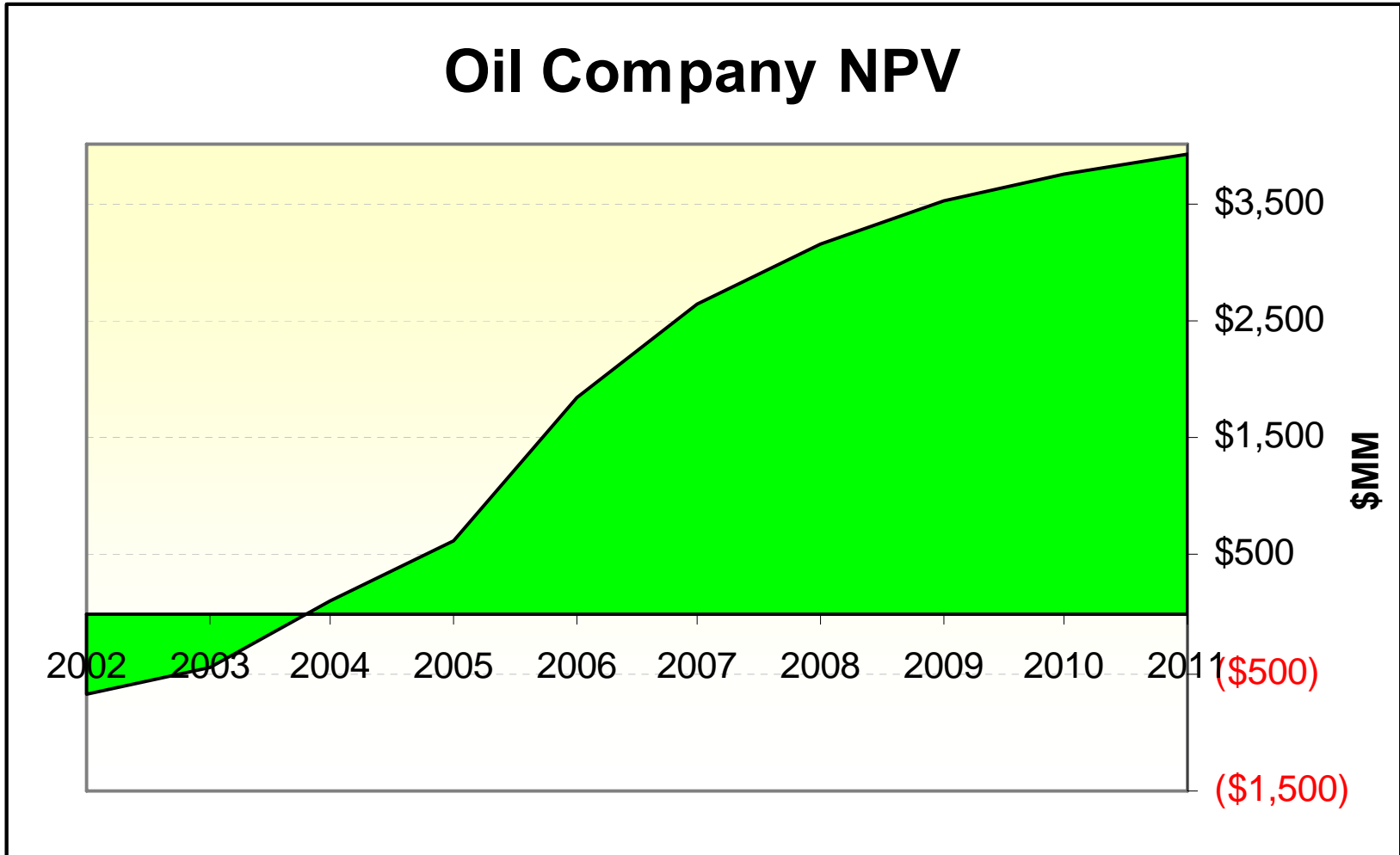
Oil Company After Tax IRR



BP Prudhoe Bay



Oil Company NPV



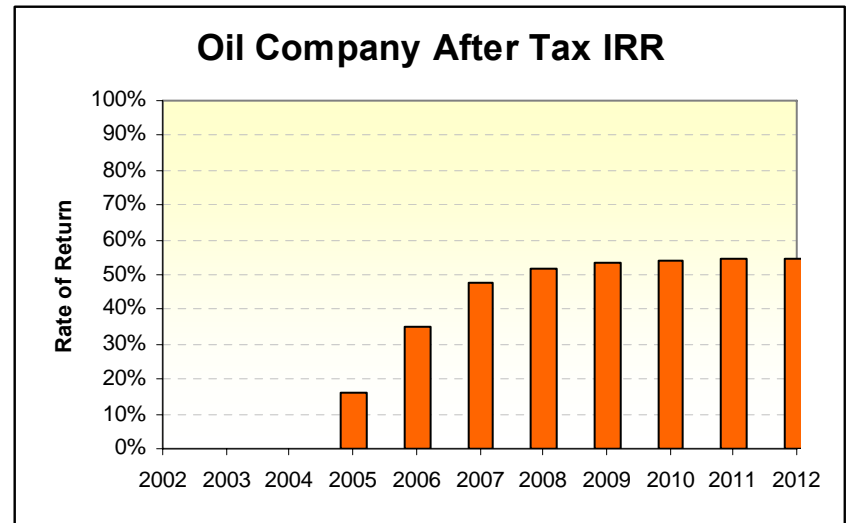
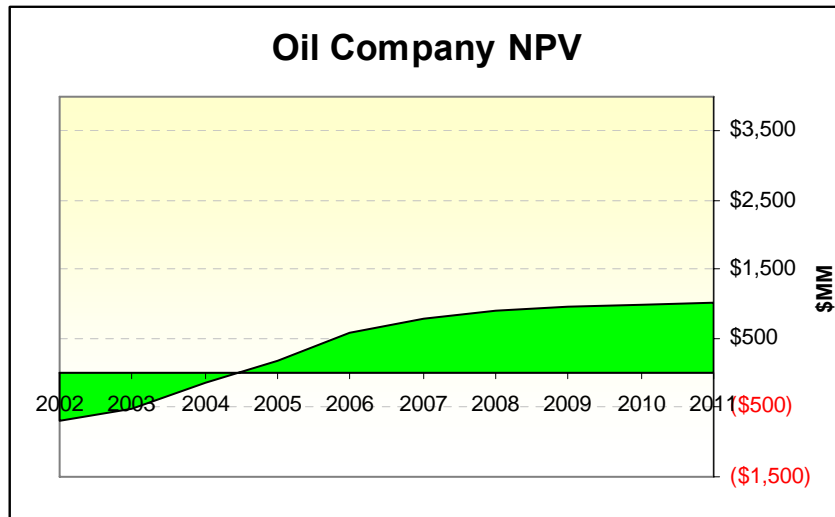
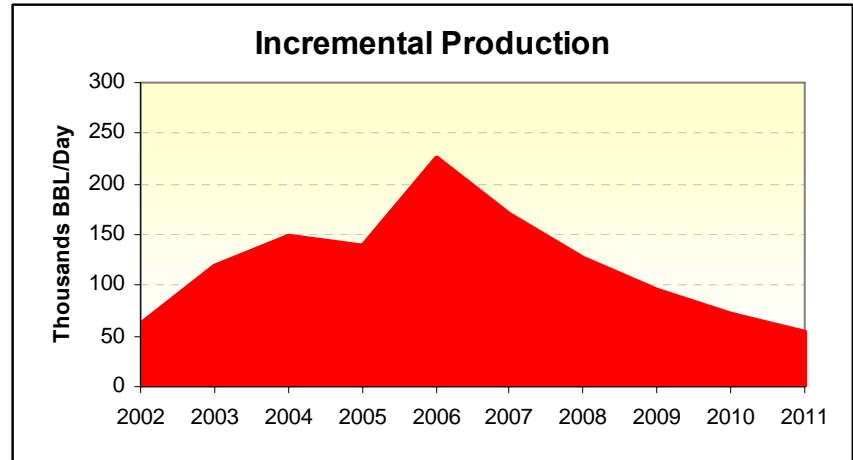
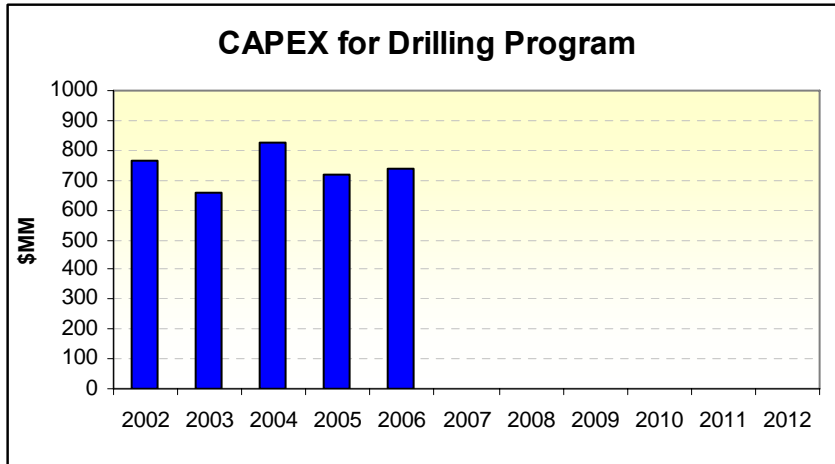


Robust drilling program

- **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



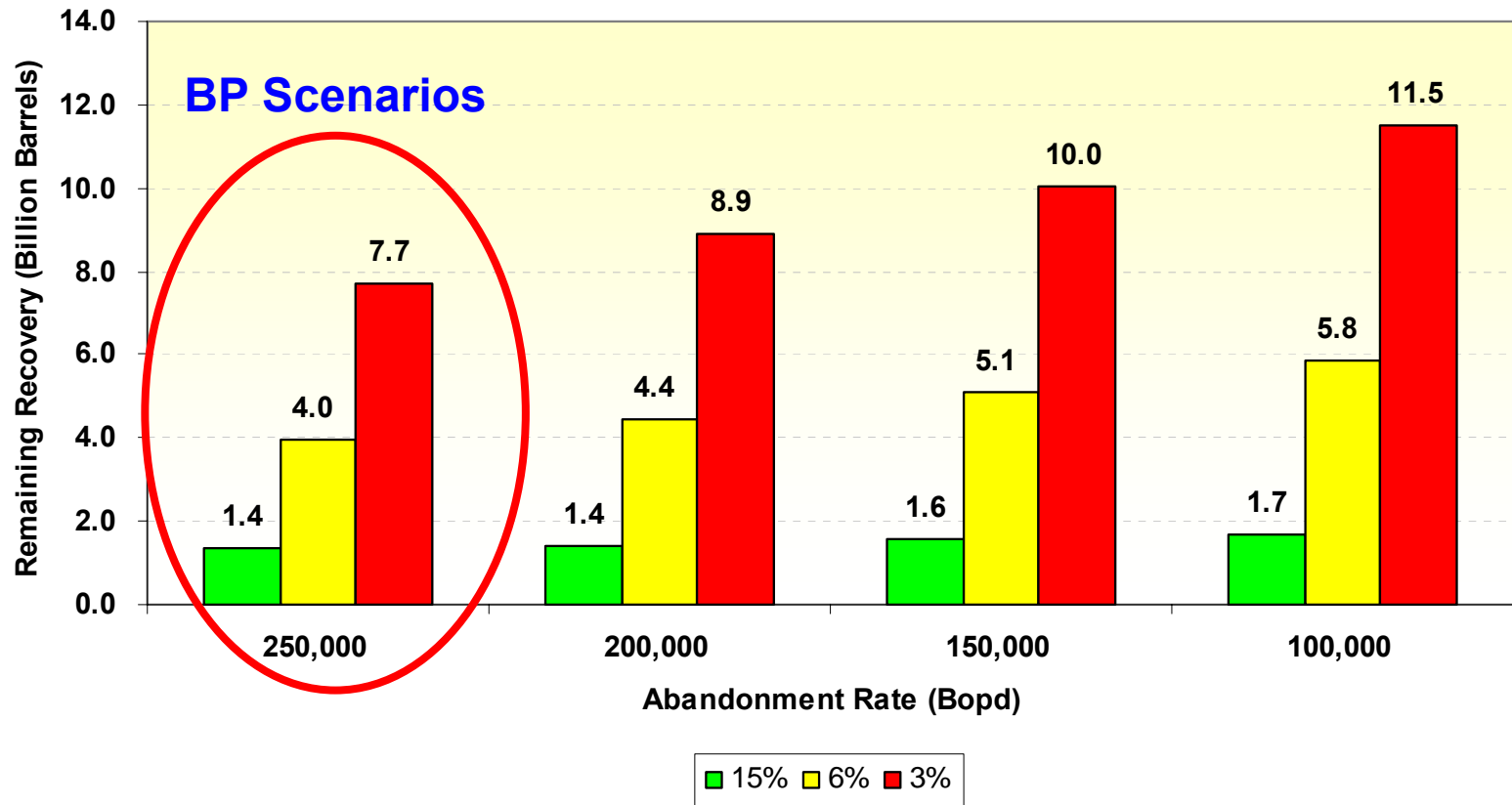
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- | | | | |
|-----------------|---------------|---------------|----------------|
| • NPV10 = \$Bn | • \$15 - \$20 | • \$30 - \$40 | • \$35 - \$45 |
| • NPV0 = \$Bn | • \$22 - \$27 | • \$55 - \$75 | • \$90 - \$125 |
| • NPV0 = \$/bbl | • \$15 - \$20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

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

North Slope Abandonment

Impact Of Abandonment Rate On North Slope Recovery



Goals



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

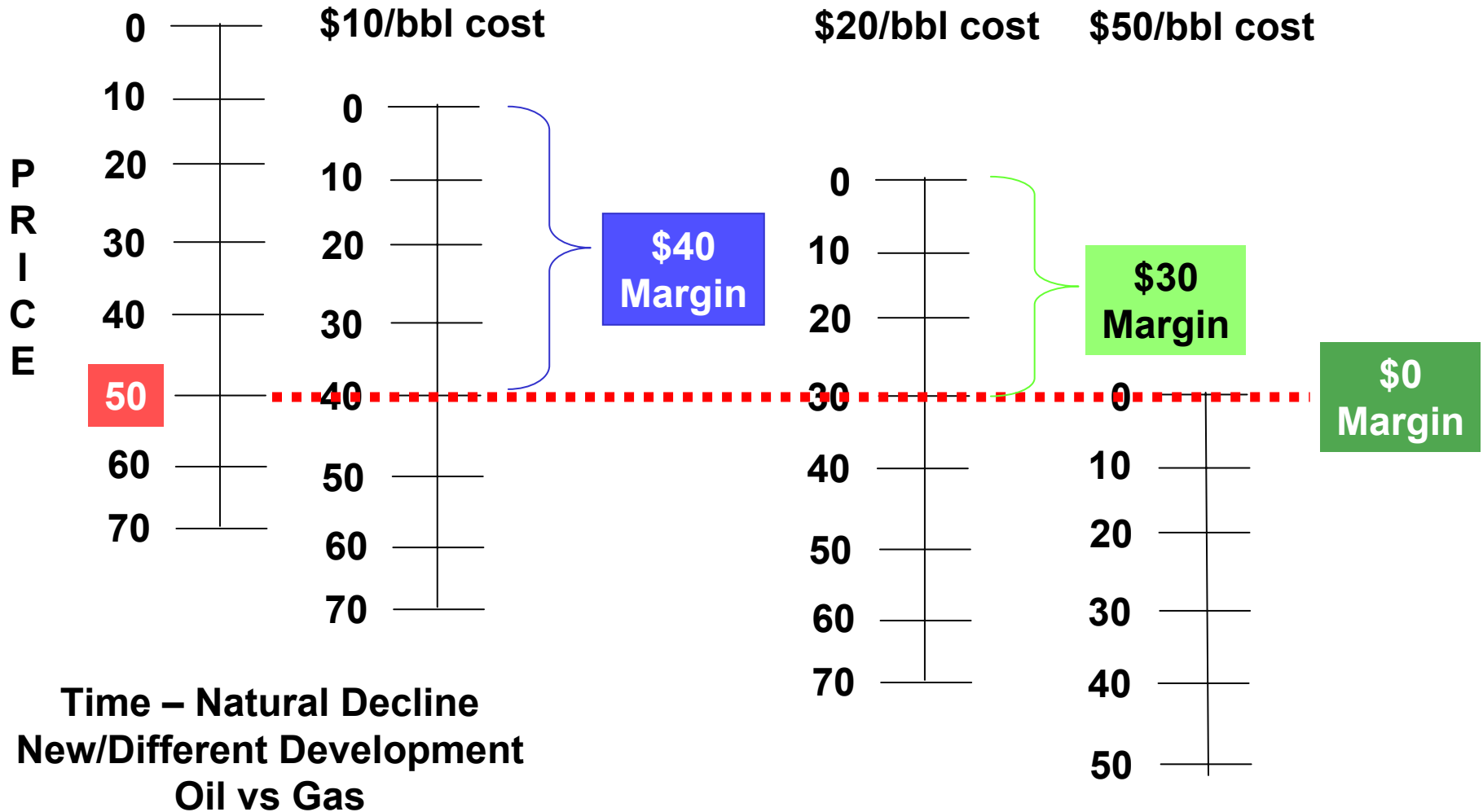


Key Point Easily Misunderstood

Price \neq Margin

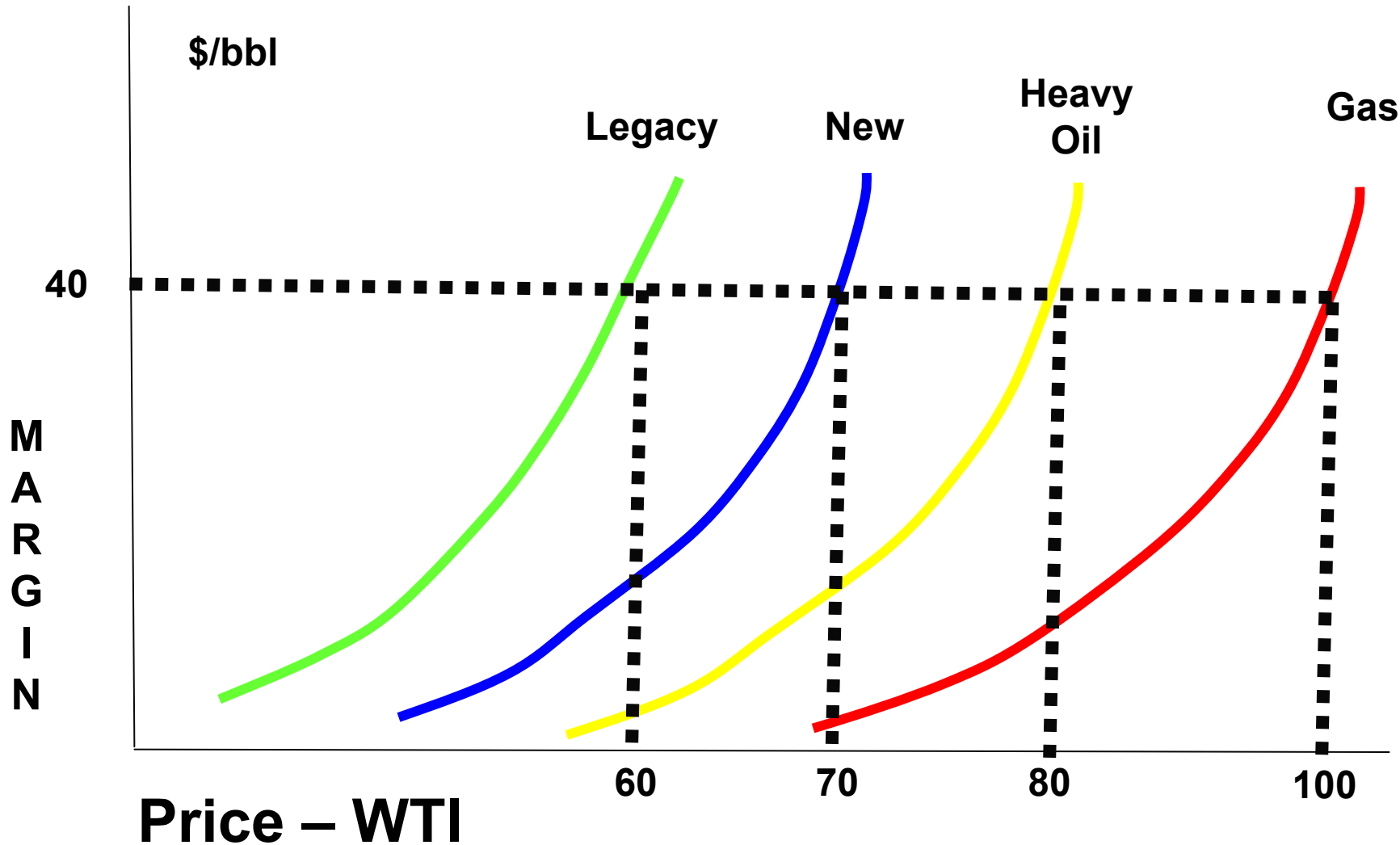


Price versus Margin





Margin versus Price



The Net Tax Story



Progressivity

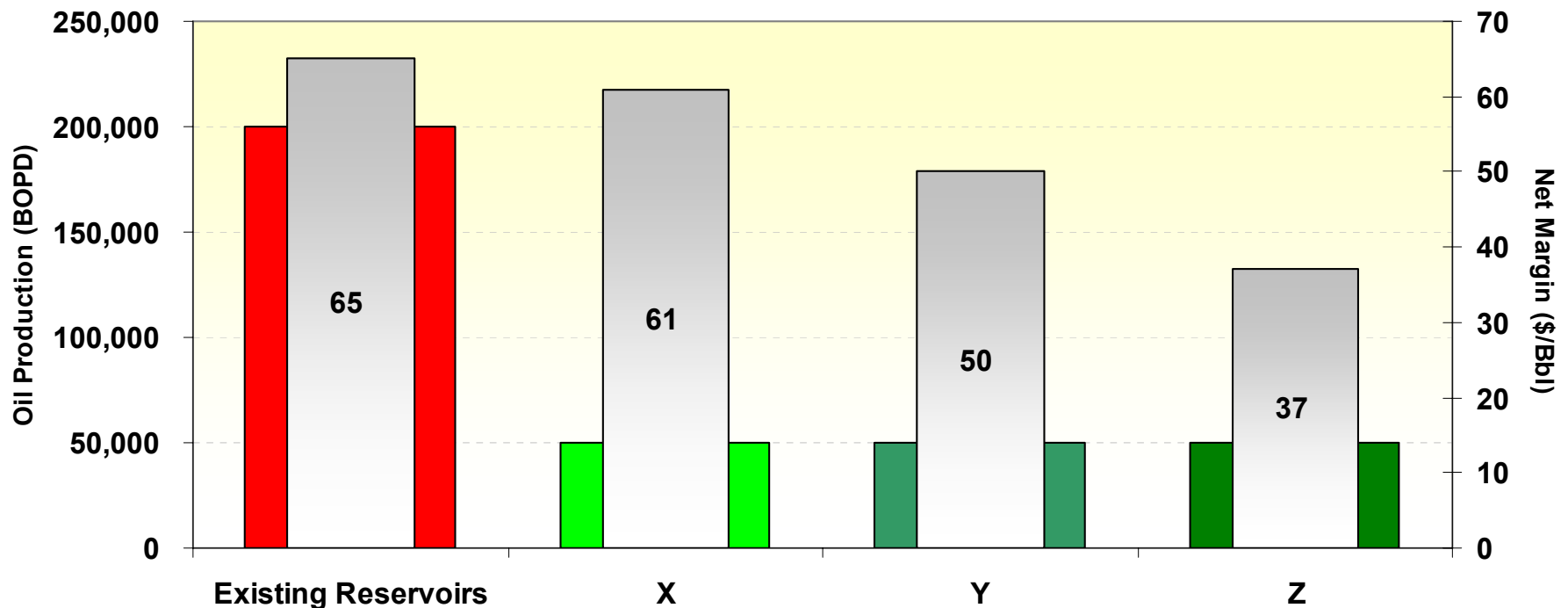
- **“Net” taxes all fields at a single rate**
 - No, it taxes different fields or reservoirs based on their individual profitability

Understanding The Rate Structure

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 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)

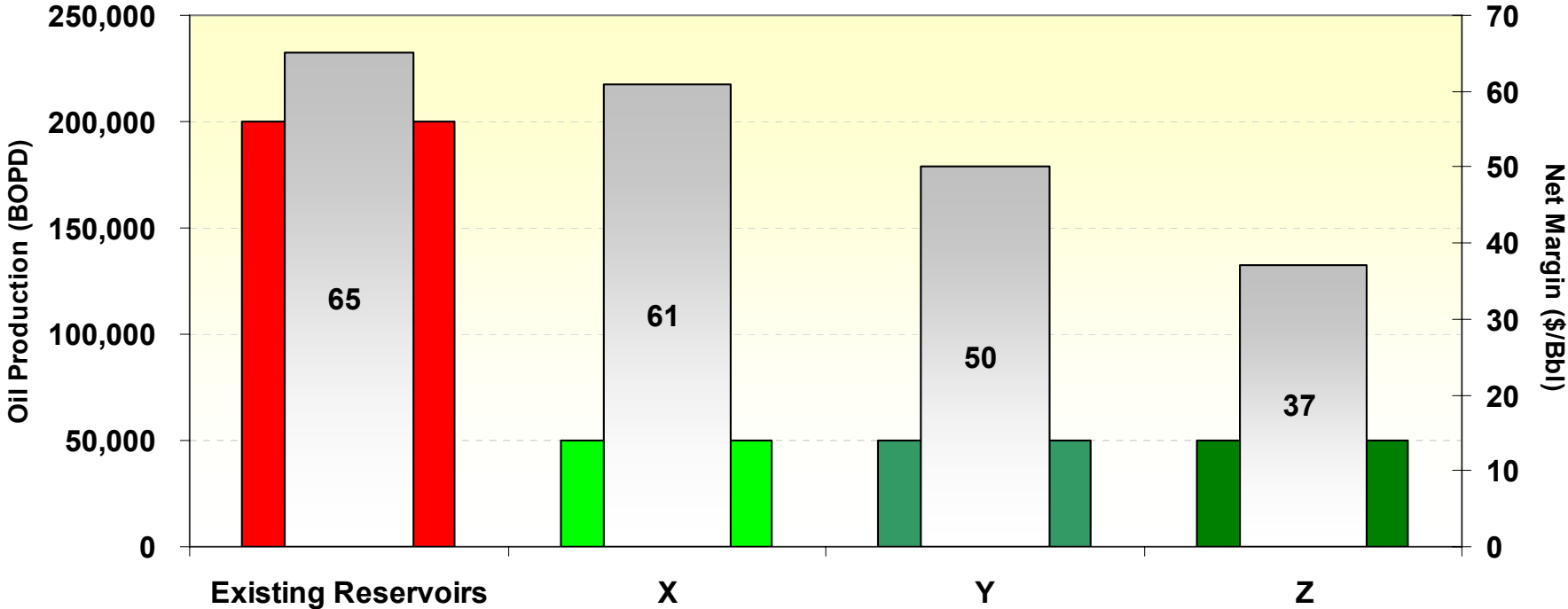
**Assume that 26.9% is the rate that will
be payable before further capital
investment decisions are made ...**

... in this example \$800 million

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



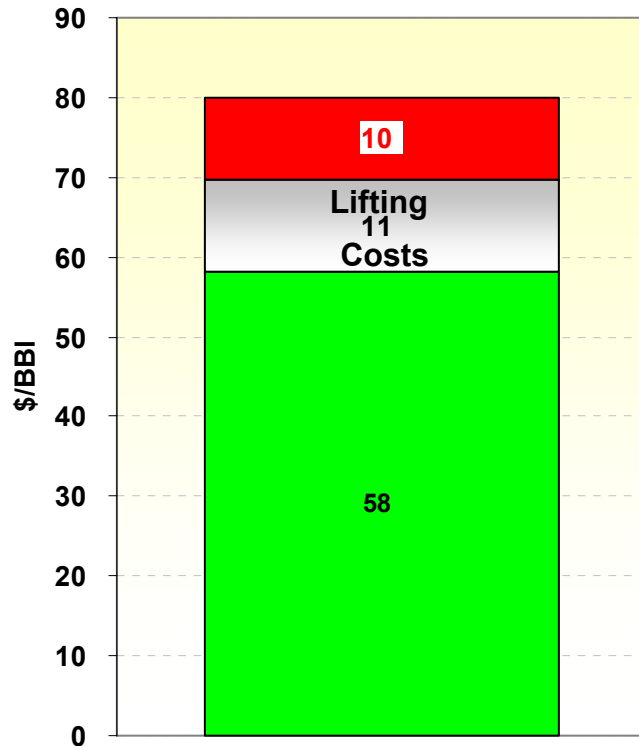
Portfolio Production Rate and Net Margin



The \$6.26 Per Barrel Capital Increases “Costs” And Lowers The Tax Rate

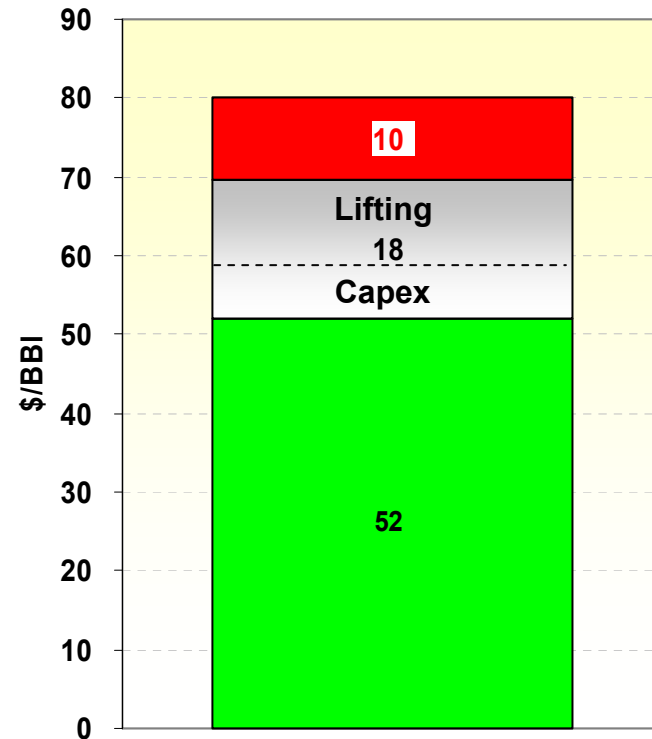


Pre-Capex Margin



**Tax Rate
26.9%**

Portfolio Profitability

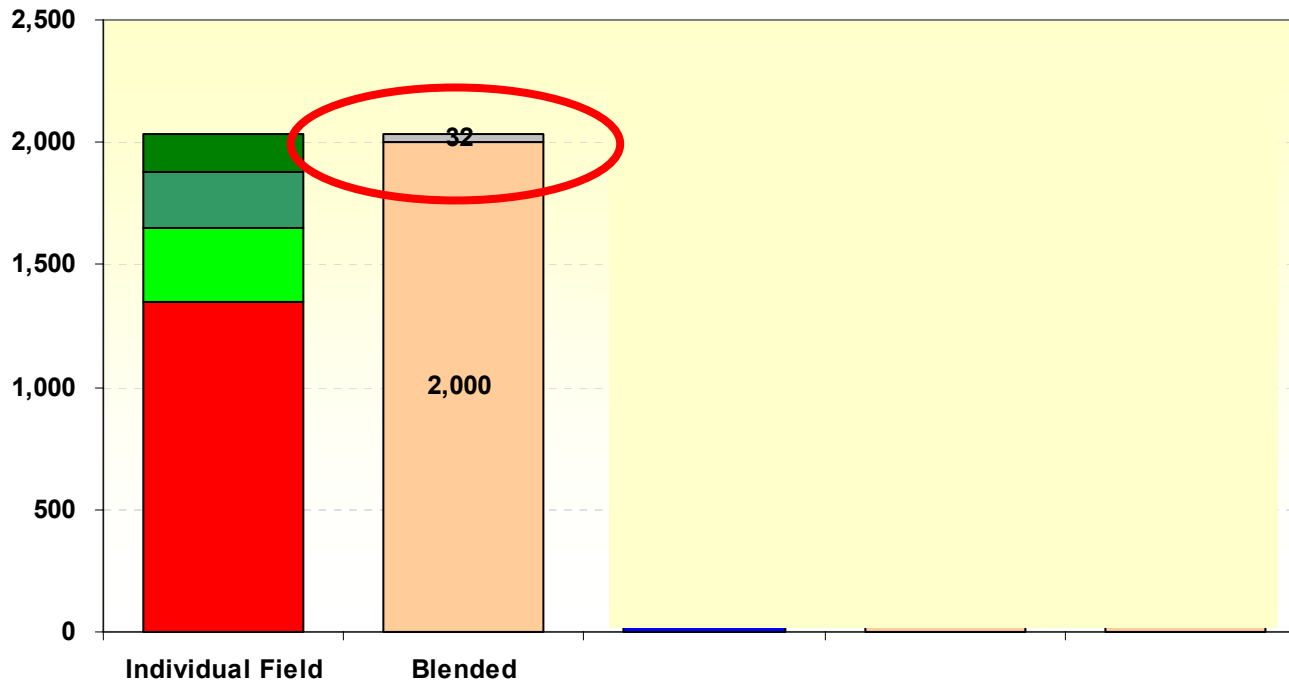


**Tax Rate
25.5%**



Portfolio Effects Lower Total Tax

Tax Allocable By Field Within Portfolio

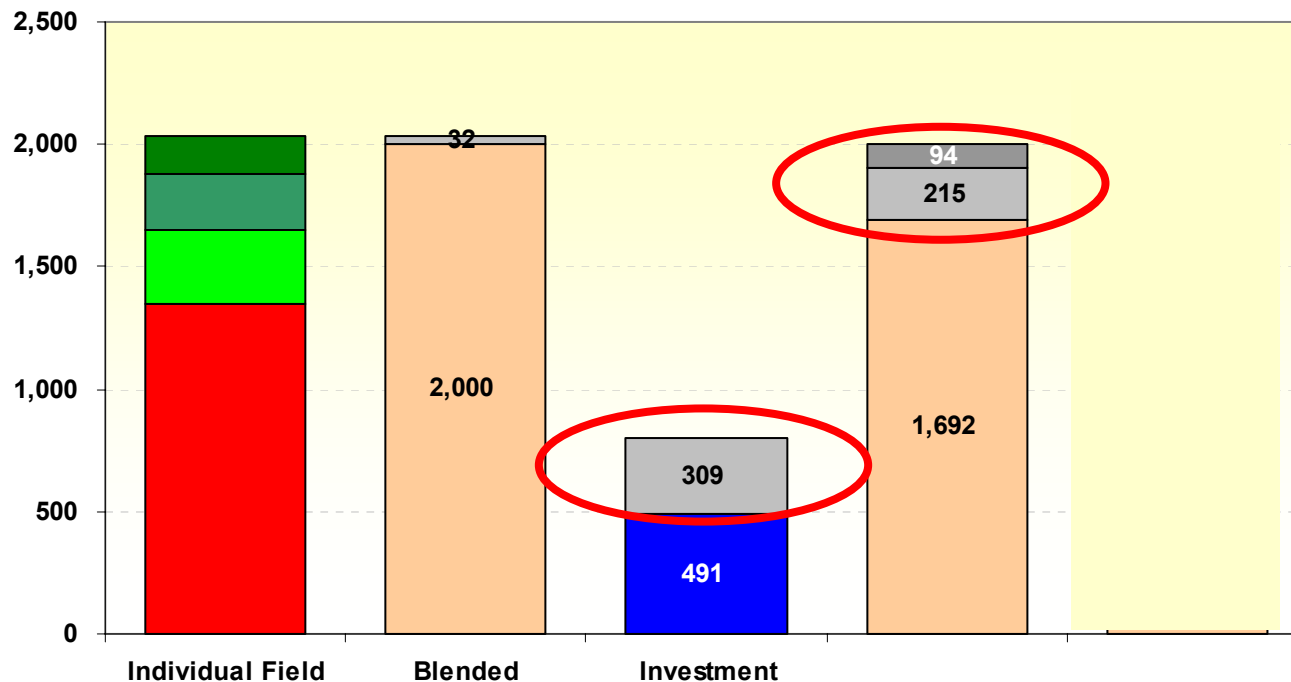


Putting all fields in one portfolio (company) lowers this to \$2Bn ...
... a saving of \$ 32 million



The Big Winner Though Is Capex

Tax Allocable By Field Within Portfolio

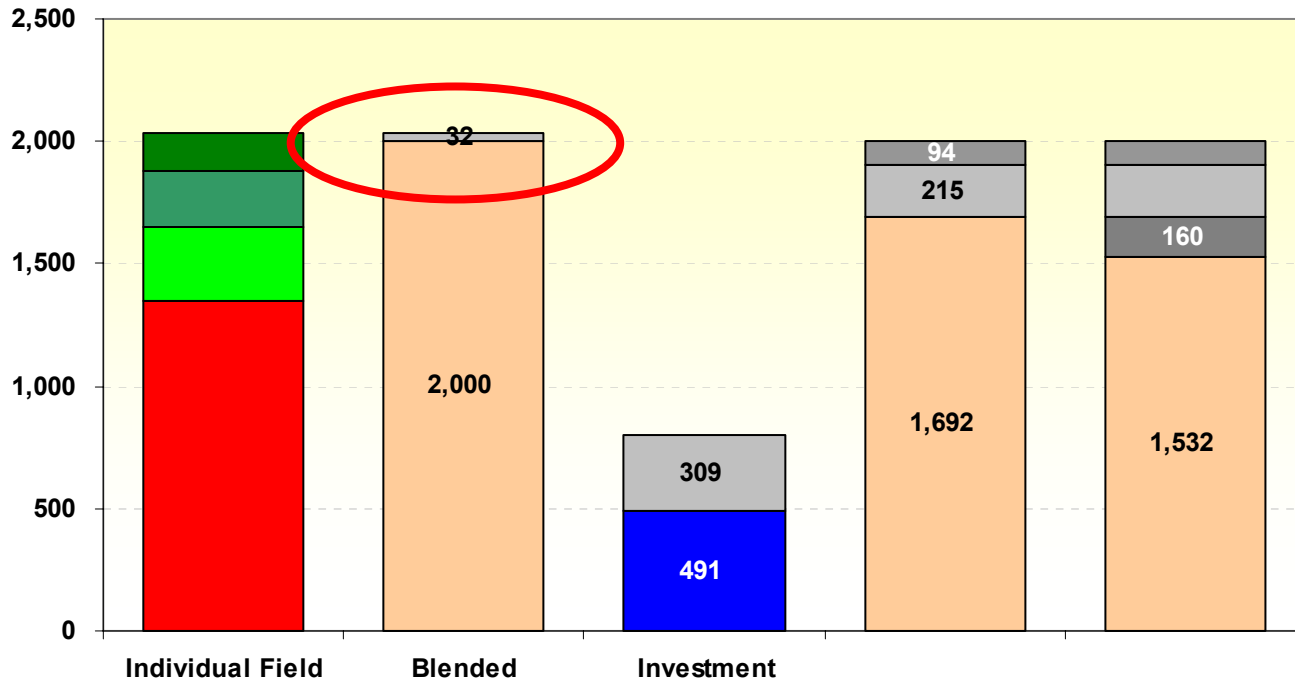


In this example the State pays \$309 million (38.6%) of the capital (the percentage will vary based on overall portfolio net margin per barrel)
The \$309 million can be allocated as \$215 million from reducing taxable income at 26.9% and \$94 million from lowering the rate from 26.9% to 25.5%



But Wait ! That Is Not All

Tax Allocable By Field Within Portfolio



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

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

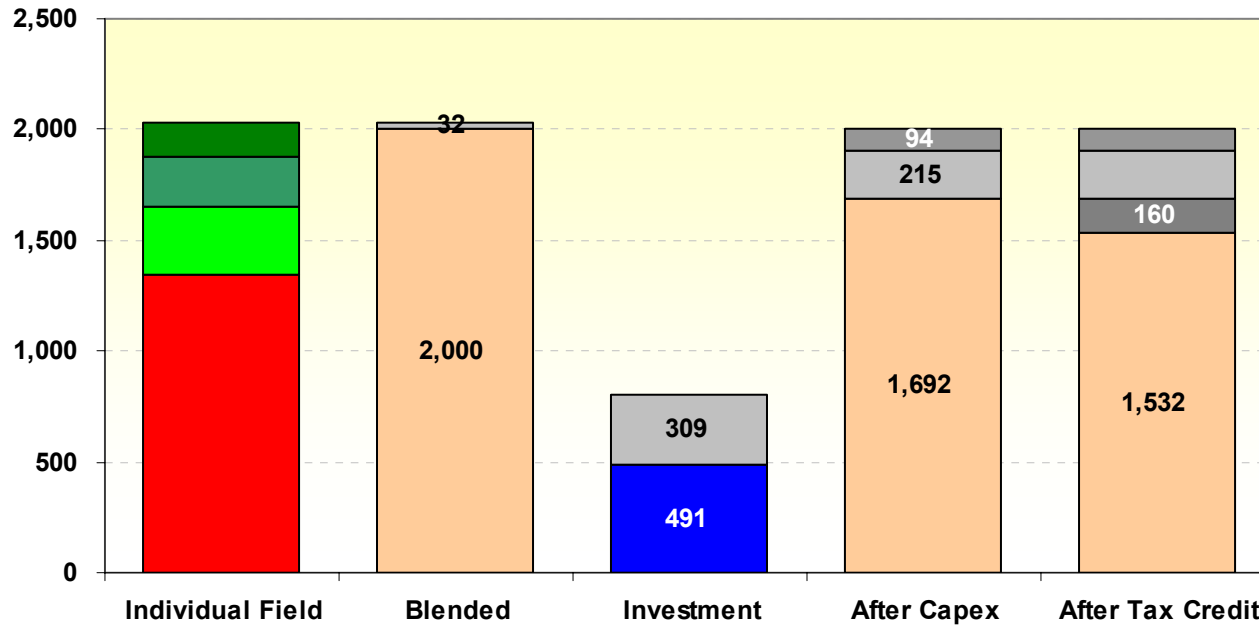
- **House O&G Amendment**

- 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



Tax Allocable By Field Within Portfolio



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



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

Not The End But a New Beginning

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