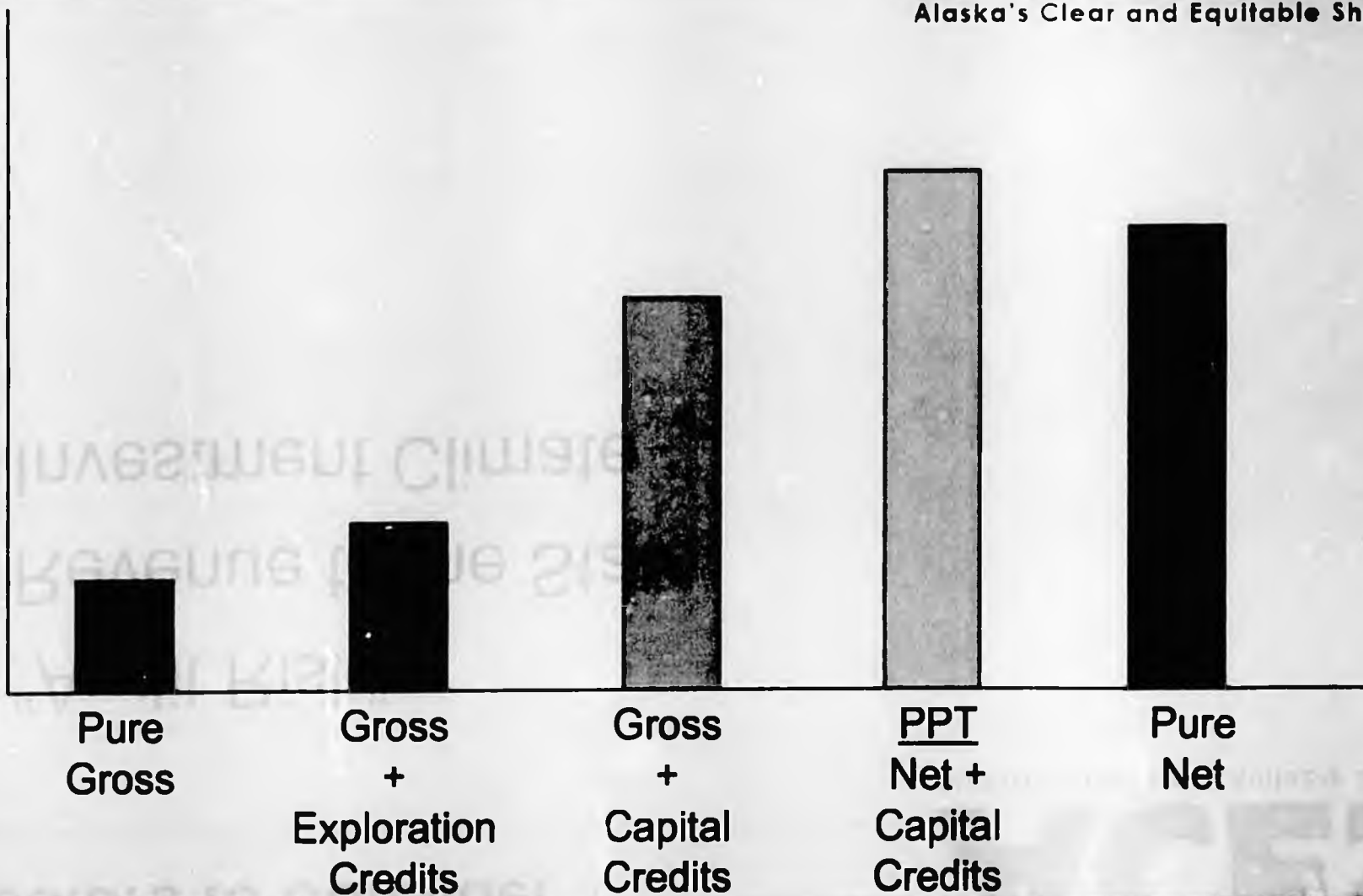


ALASKA LEGISLATURE COMMITTEE FILES 2007-2008 SJUD 12568

"Audit Risk"

ACES

Alaska's Clear and Equitable Share



“Audit Risk”

How Do You Measure It?



- Experience of Other Jurisdictions
 - No Record of Someone Going from Net to Gross due to frustration over “audit risk”
- Similar Experiences In Alaska
 - Analogous to royalty disputes?
 - Net Profit Share Leases?
 - Distinction between contract and tax disputes
- “Trust Factor”
- Can You Mitigate the Risk?
 - Need the ACES Tools

Revenue to the State



- Revenue Model with field costs and production assumptions
- Can Calibrate Any Tax System to Hit a Revenue Target
- How Sensitive is the System to Changes in Assumptions?

How do you measure it?

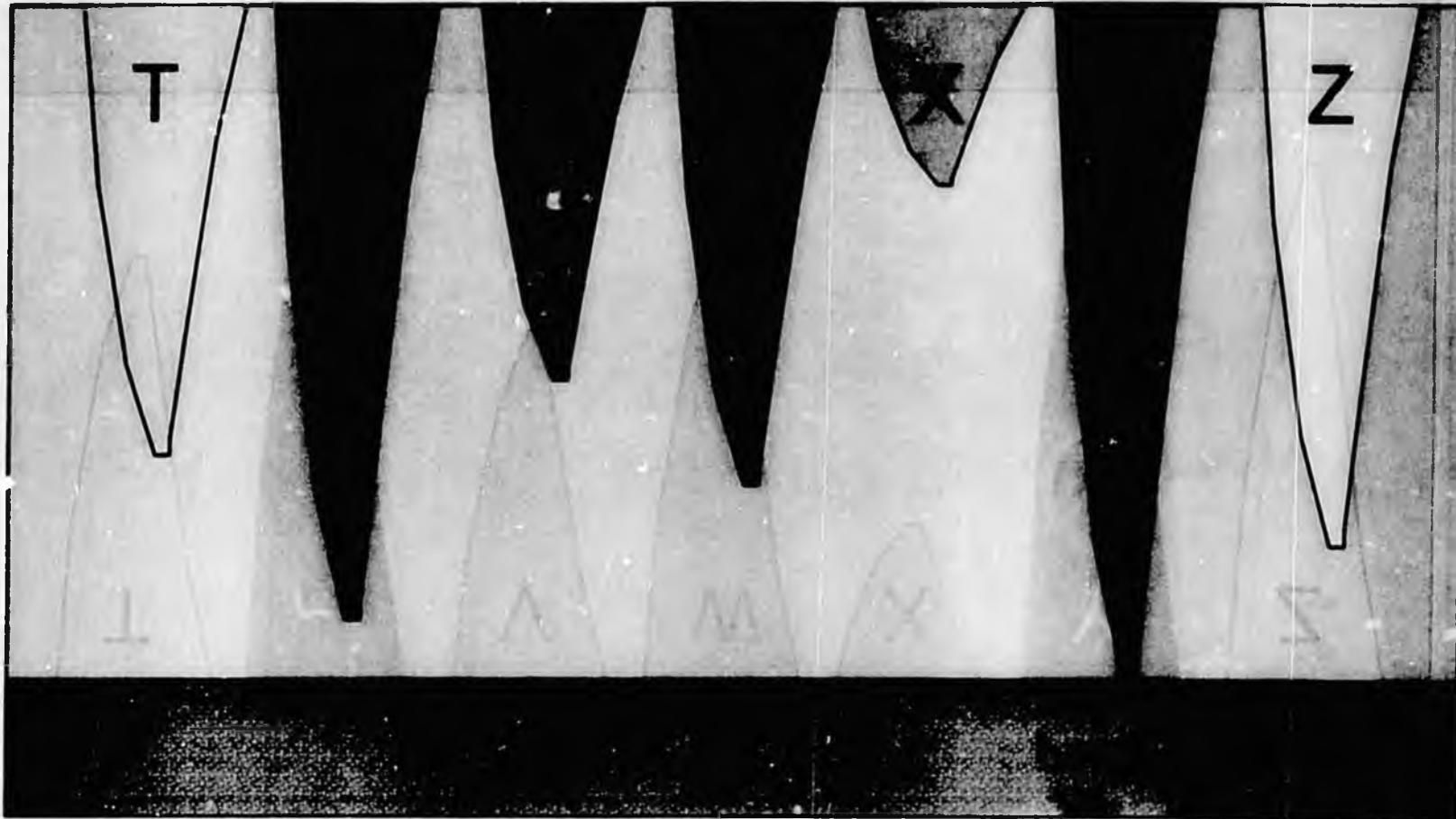
"Audit Risk"



Revenue vs. Investment

ACES

Alaska's Clear and Equitable Share



Revenue vs. Investment

ACES

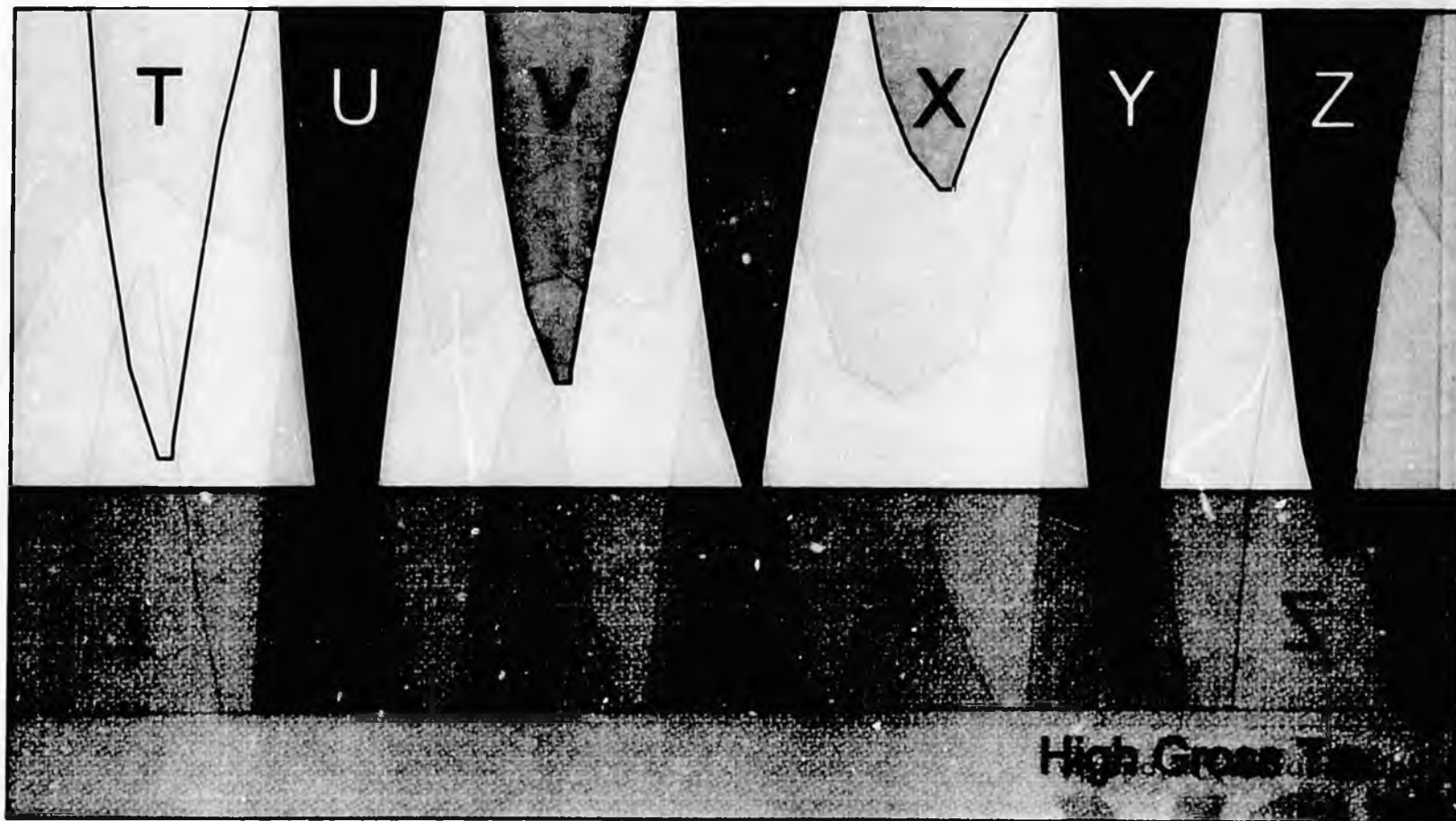
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Revenue vs. Investment

ACES

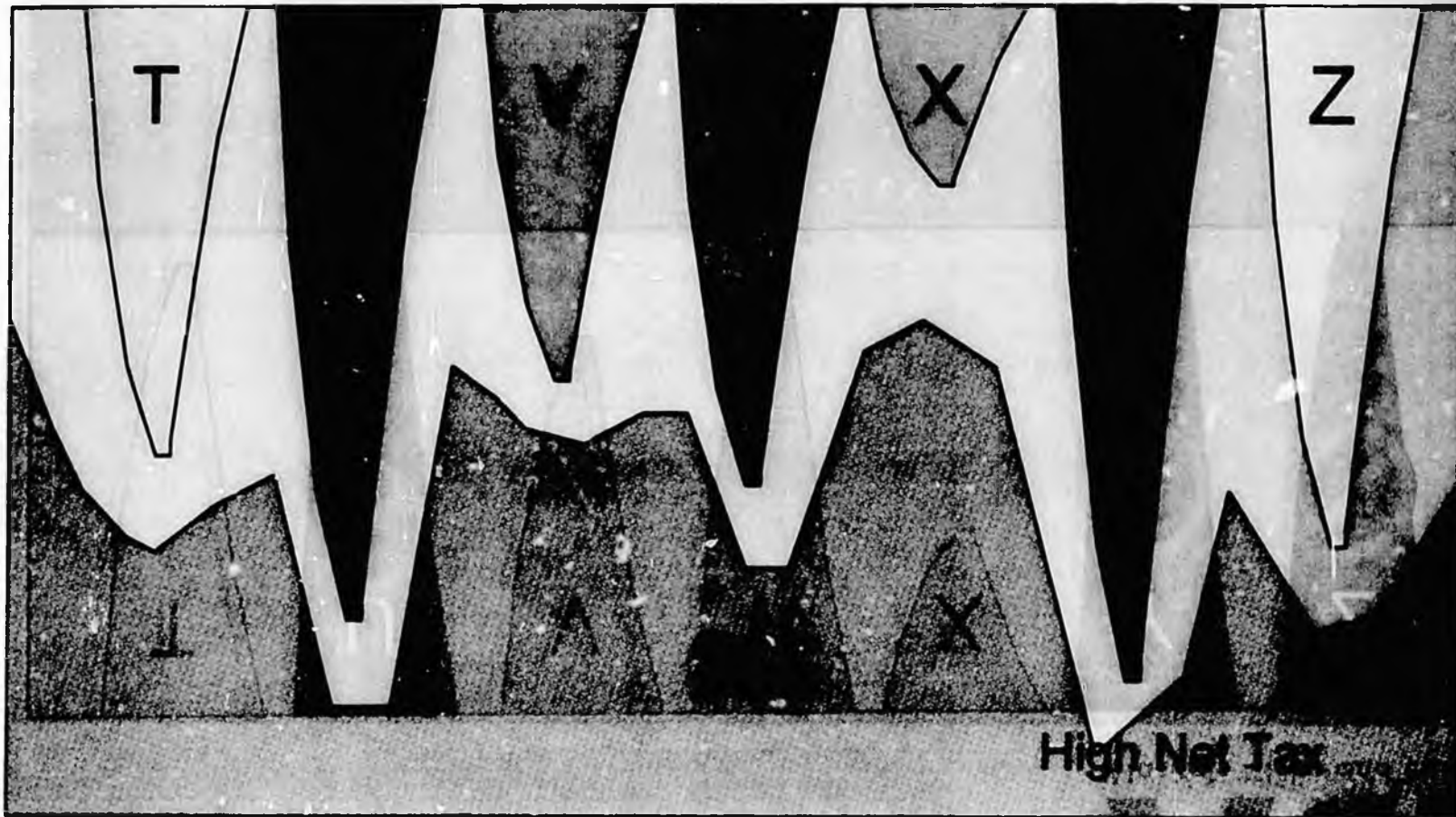
Alaska's Clear and Equitable Share



Revenue vs. Investment

ACES

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Investment Climate - Tests



- **New Fields (7 Field Models)**
 - Actual project data - costs, production profile
 - NPV, IRR, Profitability Index at prices \$30 to \$100, and discount rates of 10% and 15%
 - Sensitivity Analysis to changes in cost assumptions
- **“Legacy” Fields**
 - Reinvestment Option analysis 3%, 6%, and 15% decline scenarios

ACES

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New Field Tax Analysis - NPV Impact

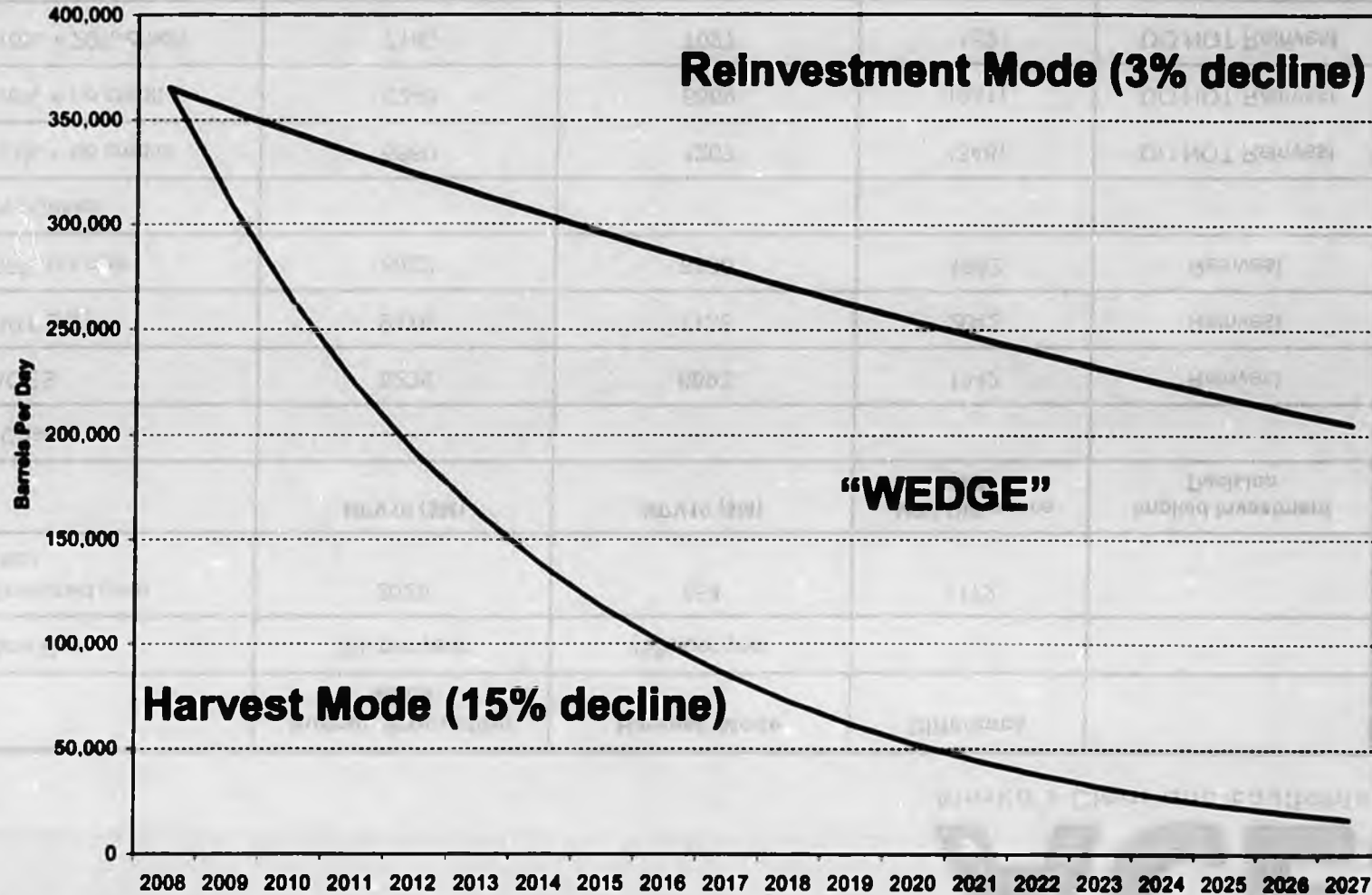
Scenario	Rate		Progressivity		Capital	Industry NPV @ 10% at \$40/bbl real ANS WC (mm\$)						
	Master	Other	Trigger	Rate	Investment Credit	Field A	Field B	Field C	Field D	Field E	Field F	Field G
	Fields	Fields										
ACES - 10% Floor	25.0%	25.0%	\$30	0.0020	20%	10	60	40	40	(500)	210	1,000
ACES - NO Floor	25.0%	25.0%	\$30	0.0020	20%	120	60	40	40	(300)	210	1,000
PPT Status Quo	22.5%	22.5%	\$40	0.0025	20%	160	60	60	18	(500)	220	1,180
High Net Tax	35.0%	22.5%	\$30	0.0020	20%	160	60	60	0	(200)	140	1,100

Scenario	Rate	Other Incentives	Progressivity		Capital	Industry NPV @ 10% at \$40/bbl real ANS WC (mm\$)						
	(All Fields)		Trigger	Rate	Investment Credit	Field A	Field B	Field C	Field D	Field E	Field F	Field G
Low Rate - No Credits	13%		\$40	0.0020	None	(30)	(40)	(30)	(500)	(600)	80	700
Medium rate	16%		\$40	0.0020	20%	30	0	0	(300)	(500)	130	800
Former Tax no ELF	16%		NA	NA	none	(40)	(50)	(30)	(400)	(600)	80	800
High Rate Flat Tax	19%		NA	NA	20%	20	(10)	0	(300)	(500)	130	800
Sliding Scale	Tax Table	5 Yr Holiday	NA	NA	20%	130	40	40	20	(400)	180	1,180

Legacy Field Scenarios

ACES

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Legacy Field Reinvestment Comparison @ \$40

ACES

Alaska's Clear and Equitable Share

	Sustain Production Mode	Harvest Mode	Difference	
Decline Rate	3% per year	15% per year		
Oil Produced (mm Barrels)	2026	854	1172	
	NPV10 (\$M)	NPV10 (\$M)	NPV Difference (\$M)	Implied Investment Decision
Net Cases:				
ACES	8235	6893	1342	Reinvest
PPT(SQ)	9176	7133	2042	Reinvest
35% tax rate	8022	6130	1892	Reinvest
Gross Cases:				
13% + no credits	6860	7207	(348)	DO NOT Reinvest
16% + no credit	6248	6889	(641)	DO NOT Reinvest
16% + 20% credit	7180	7027	152	DO NOT Reinvest
19% + no credit + no progressivity	6246	6706	(460)	DO NOT Reinvest

Assumes: 20 year horizon, OPEX+CAPEX=\$5/BOE for Harvest, \$15/BOE for Reinvestment. All cases assume 10% progressivity unless noted.

Investment Climate Summary

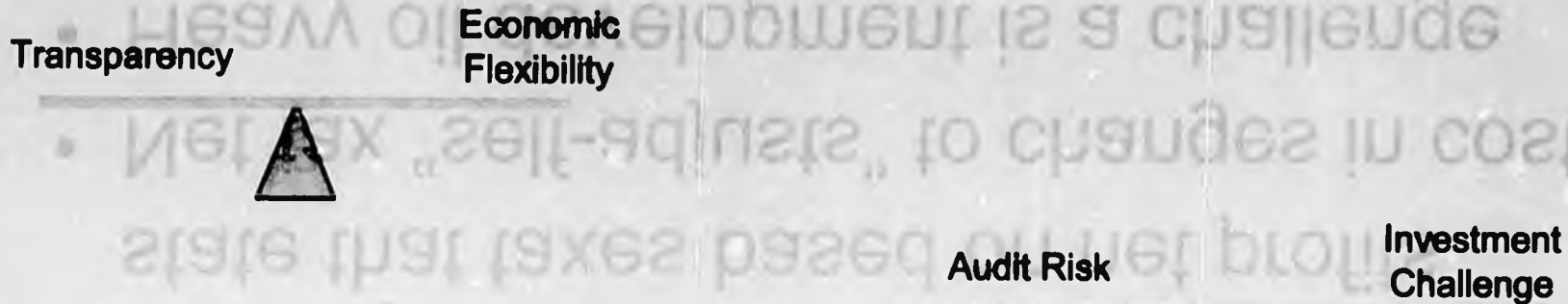
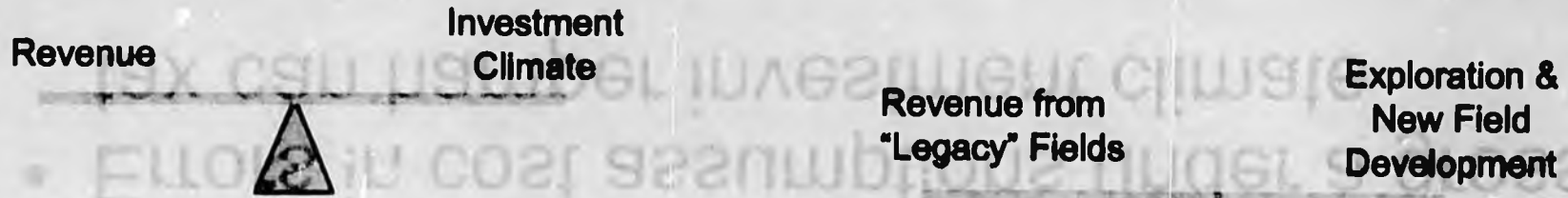


- Industry is more comfortable investing in a state that taxes based on net profits
- Net tax “self-adjusts” to changes in costs
- Heavy oil development is a challenge under a gross tax system
- Errors in cost assumptions under a gross tax can hamper investment climate

Balancing Act

ACES

Alaska's Clear and Equitable Share



Alaska's Equitable Share

Some Further Thoughts
31 October 2007

Topics





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?**



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 Tipping Point

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



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



AOGA Testimony – Recent Success

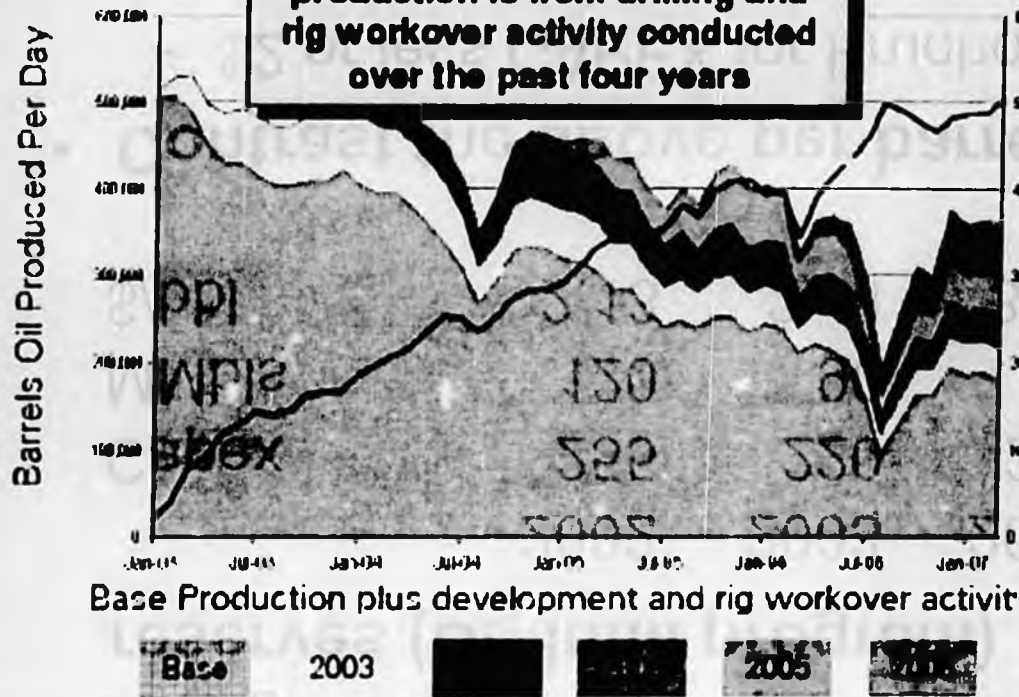
This gets us to investment in currently producing fields. Fortunately, there are investments that can be made, and are being made, in these fields to slow their decline. In the short term, this is in-fill drilling — that is, drilling new wells into the portions of a reservoir that are between the wells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



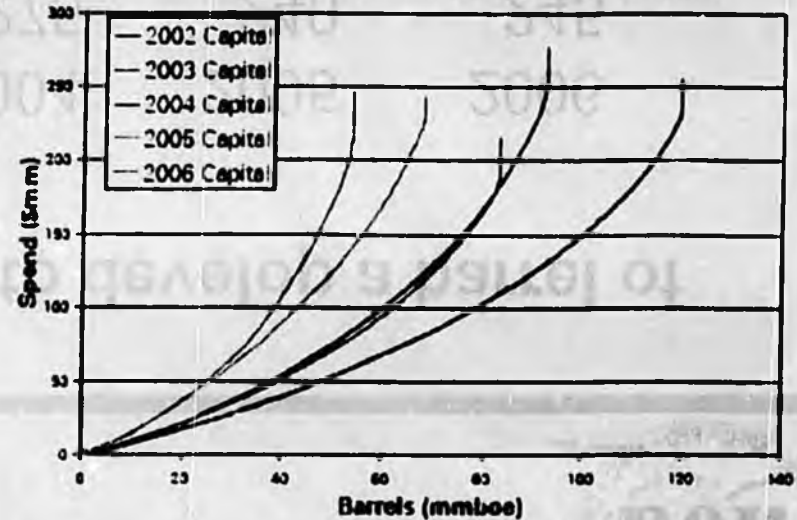
BP's infill drilling program

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



Observations?

GPB Well Investments 2002-2006





Costlier Development

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

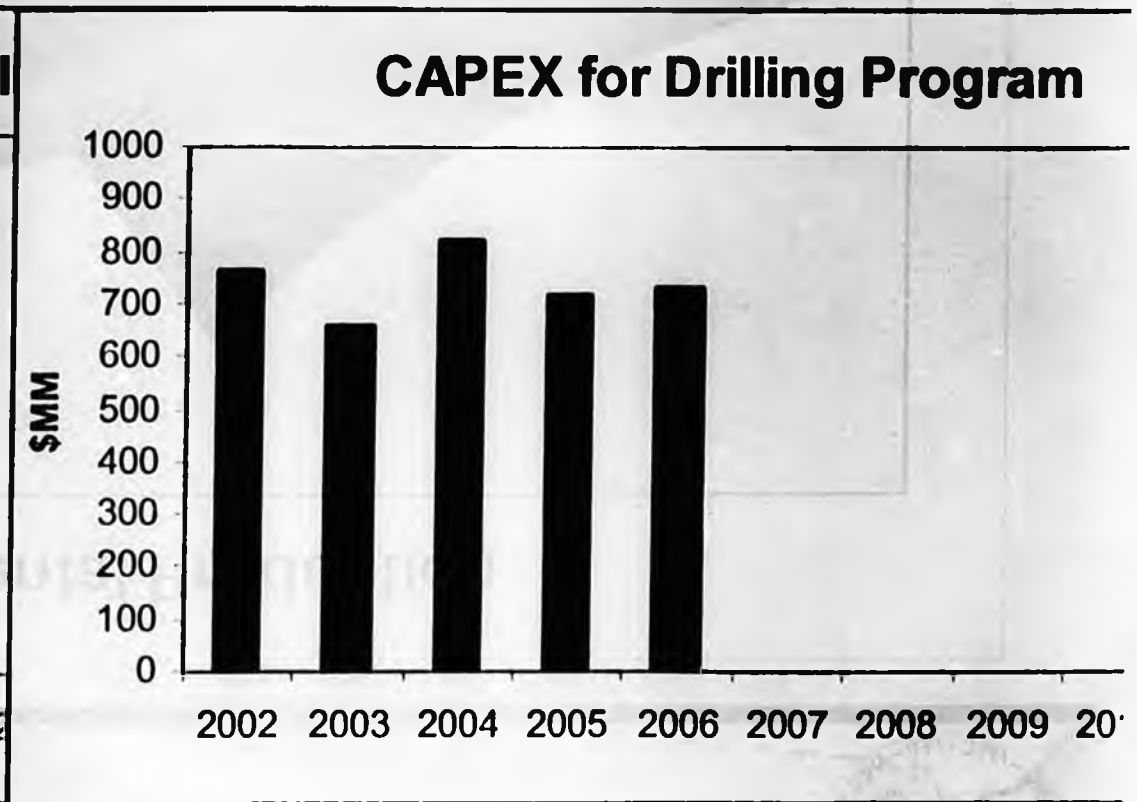
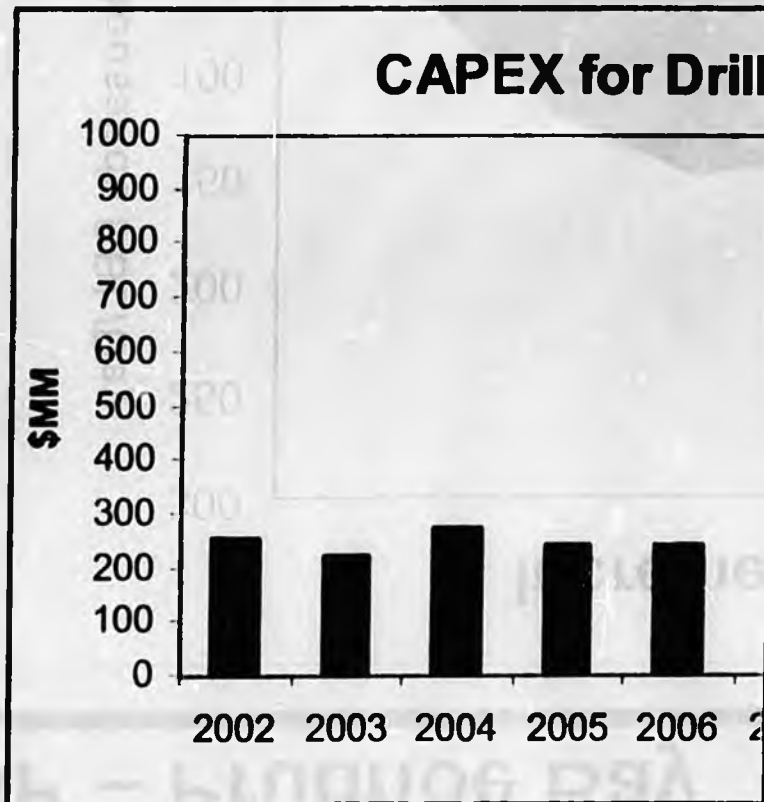
	2002	2003	2004	2005	2006
Capex	255	220	275	240	245
MMbls	120	90	80	60	50
\$/bbl	2.13	2.44	3.44	4.00	4.90

- **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



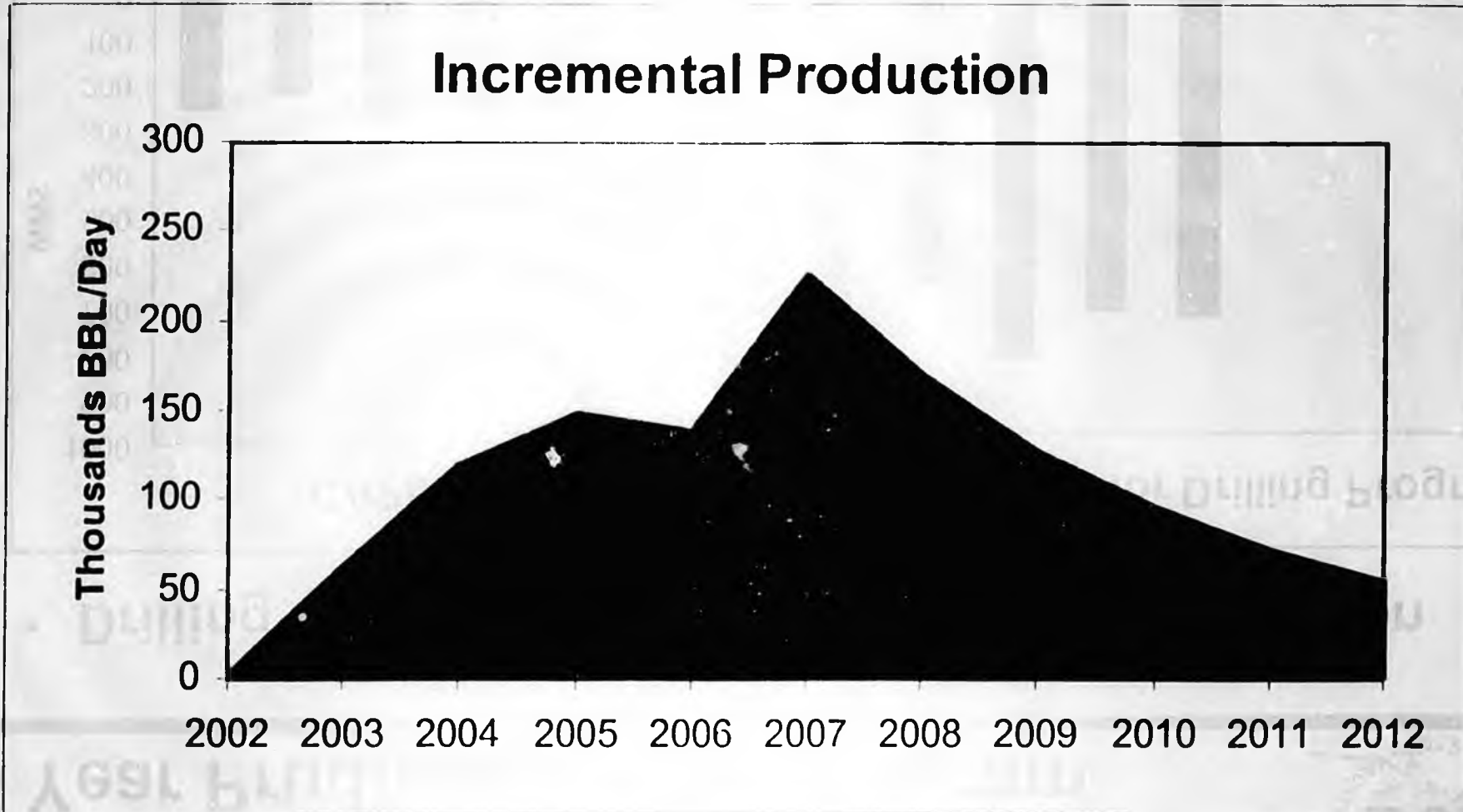
5 Year Prudhoe Drilling Program

- Drilling capex – 300% for added facilities/injection





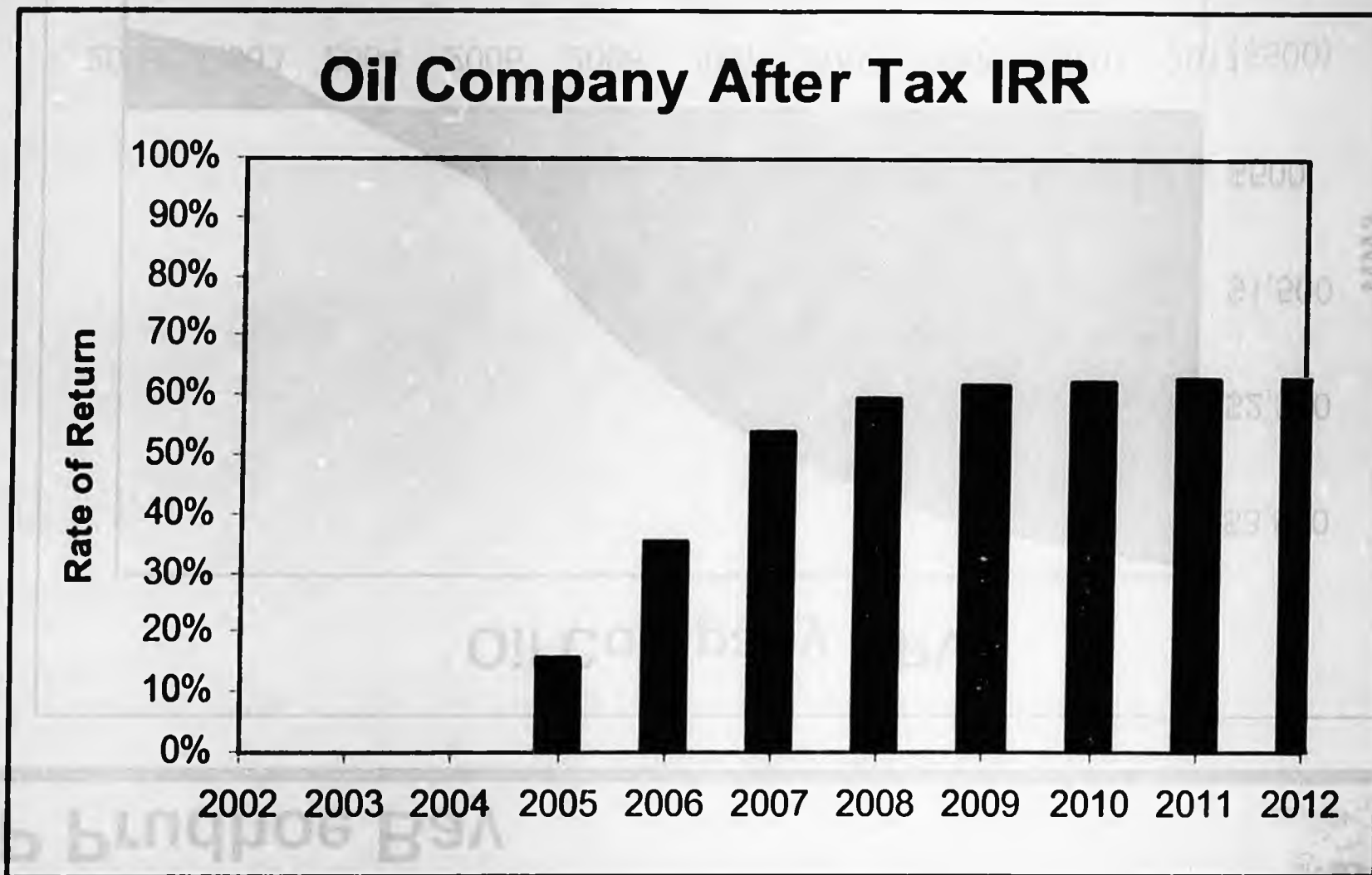
BP – Prudhoe Bay



Revised from House version to fix plotting error
– underlying financial data/results are unaffected

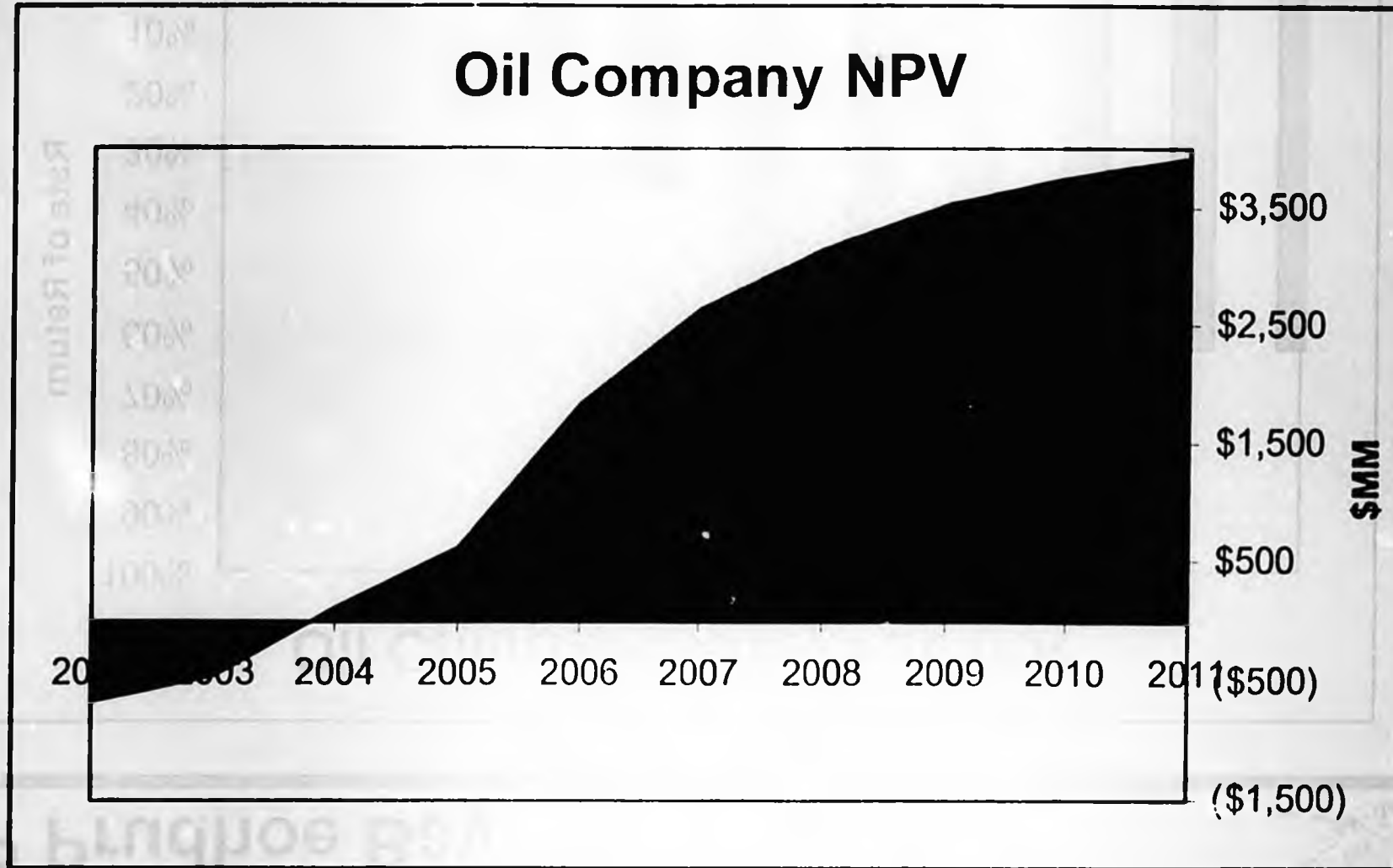


BP Prudhoe Bay





BP Prudhoe Bay





Robust drilling program

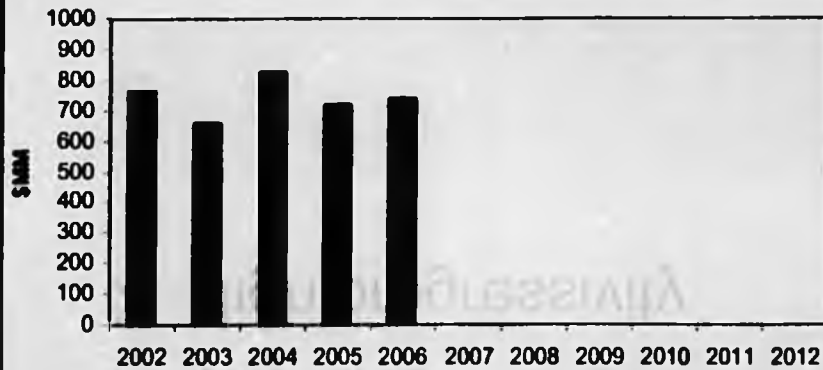
- **Remains profitable at:**
 - 300% capex
 - 200% opex
 - 25% discount rate
 - \$50 ANS
 - High progressivity

Overly stressed case

Overly Stressed Case



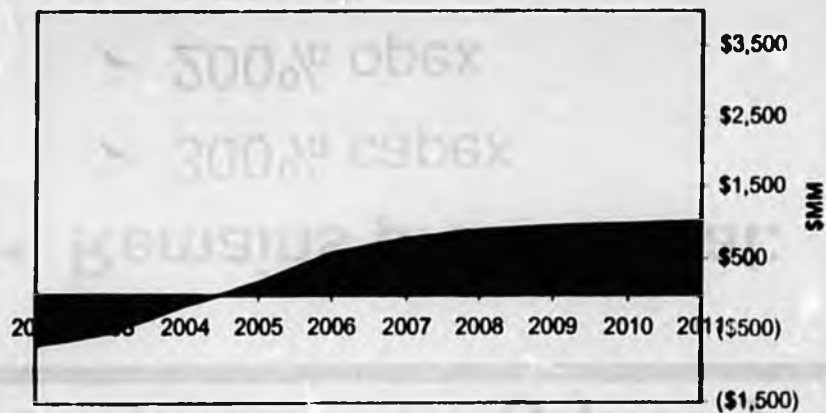
CAPEX for Drilling Program



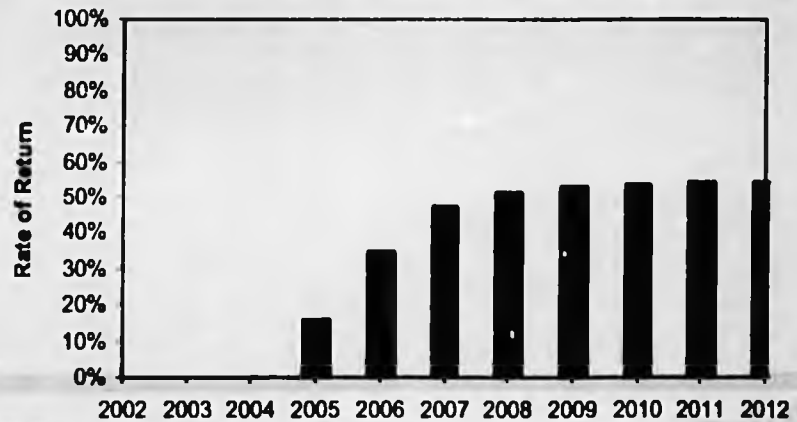
Incremental Production



Oil Company NPV



Oil Company After Tax IRR





Model Demonstration

- > 250,000 pop abandonment rate
- > Used indicated decline rates and investments
- Built a generic model based on the above parameters

		2000	2010
Industry Investment	\$2 pu	\$32 pu	\$10 pu
Produced Barrels	13 pu	32 pu	12 pu
Decline Rate	12%	8%	3%

Produced Barrels (Million Barrels)



North Slope Potential





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	

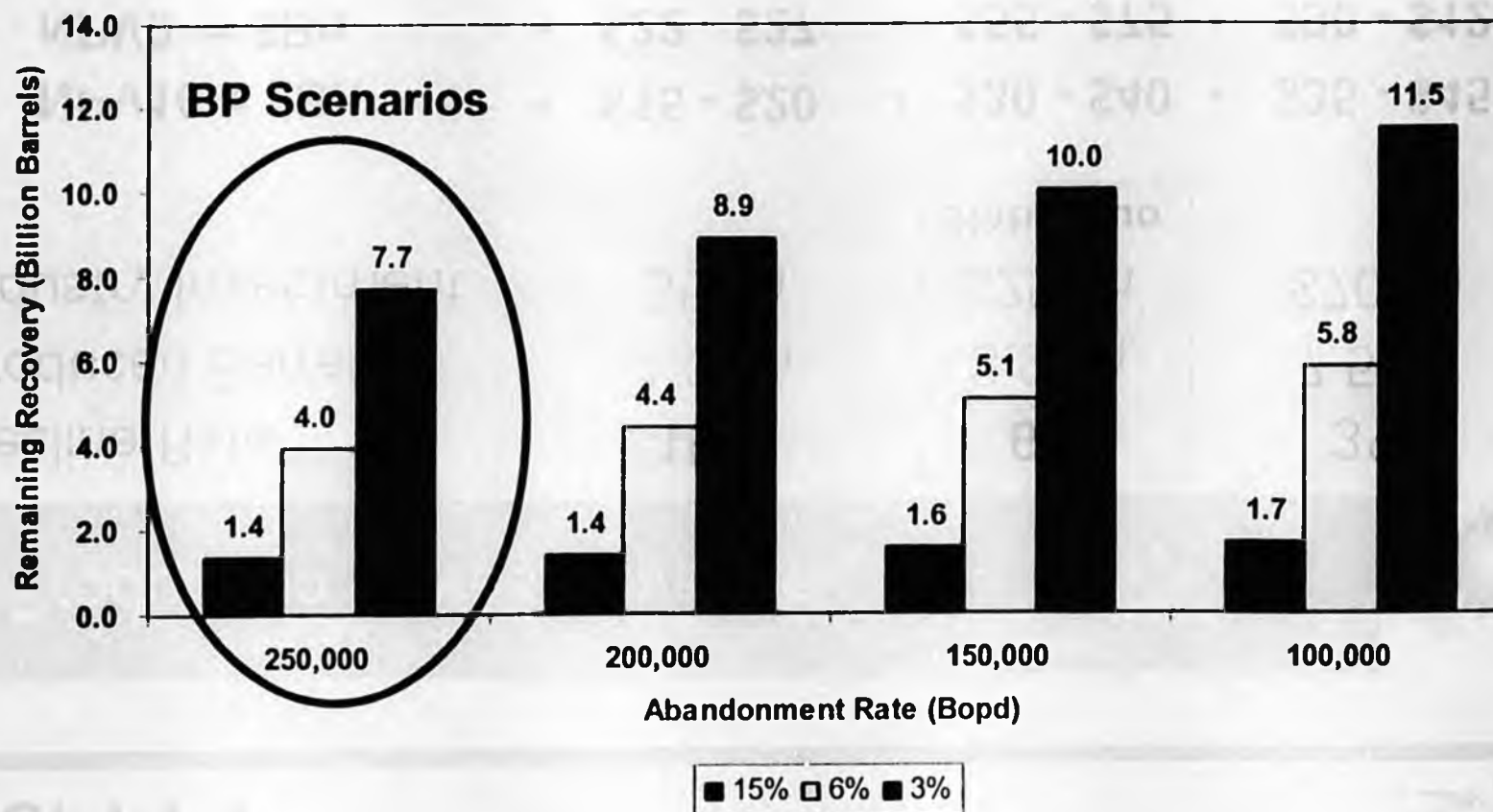
- NPV10 = \$Bn • \$15 - \$20 • \$30 - \$40 • \$35 - \$45
- NPV0 = \$Bn • \$22 - \$27 • \$55 - \$75 • \$90 - \$125
- NPV0 = \$/bbl • \$15 - \$20 • \$14 - \$19 • \$12 - \$17

~ \$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.**

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



(3) 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**

- (1) Fair share of the high margins currently being realized
- Progressive structure to adapt to changes in:

- Price
- Production
- Cost

- **The Give Back**

- (2) Encouragement to reinvest profits for more development inside legacy units



Key Point Easily Misunderstood

- (S) Encouragement to reinvest profits for more
- THE GIVE BACK

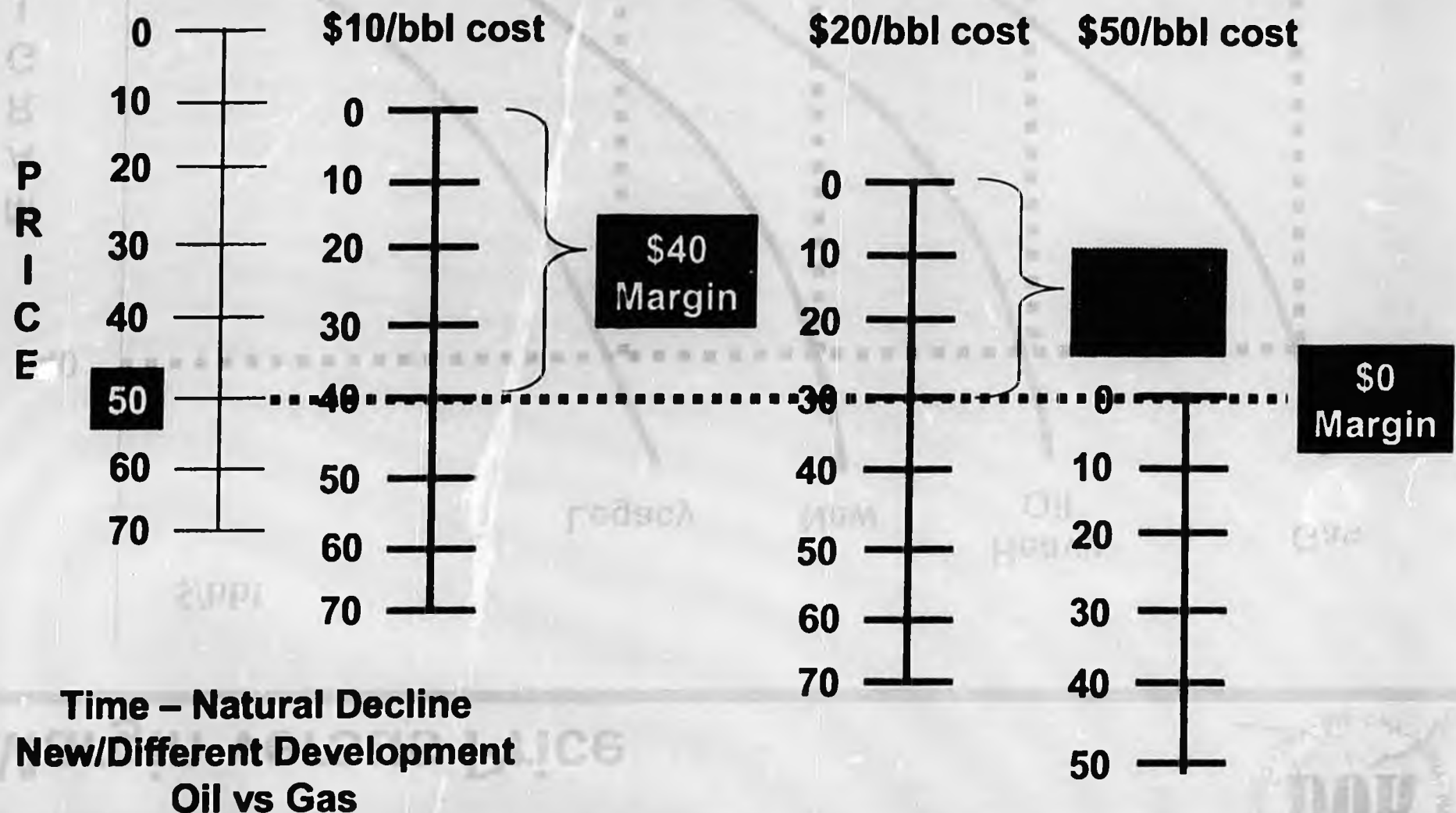
Price \neq Margin

- Progressive structure to adapt to changes in:
- (1) Fair share of the high margins currently being realized
- THE TAKE

The Fiscal Design Challenge

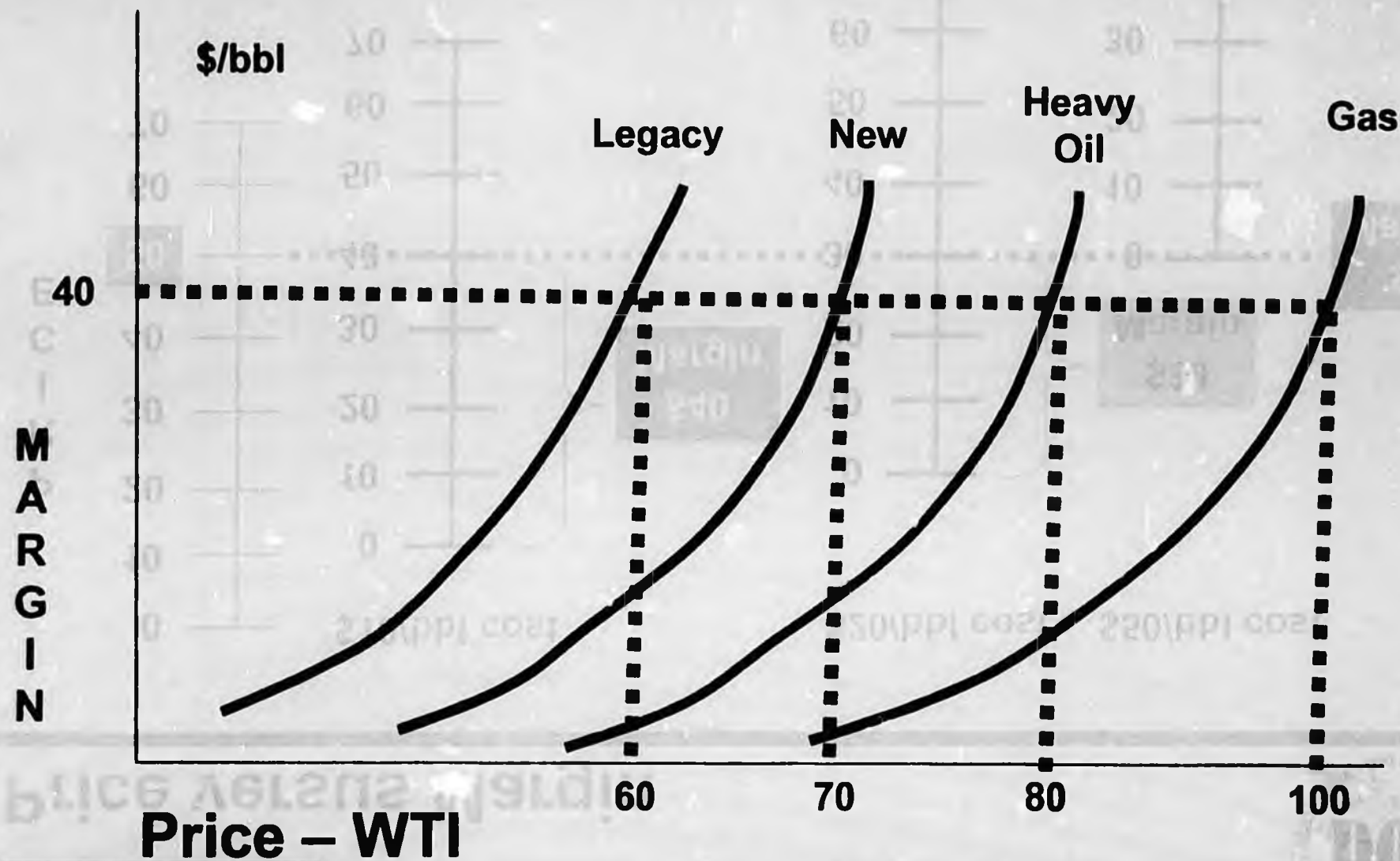


Price versus Margin



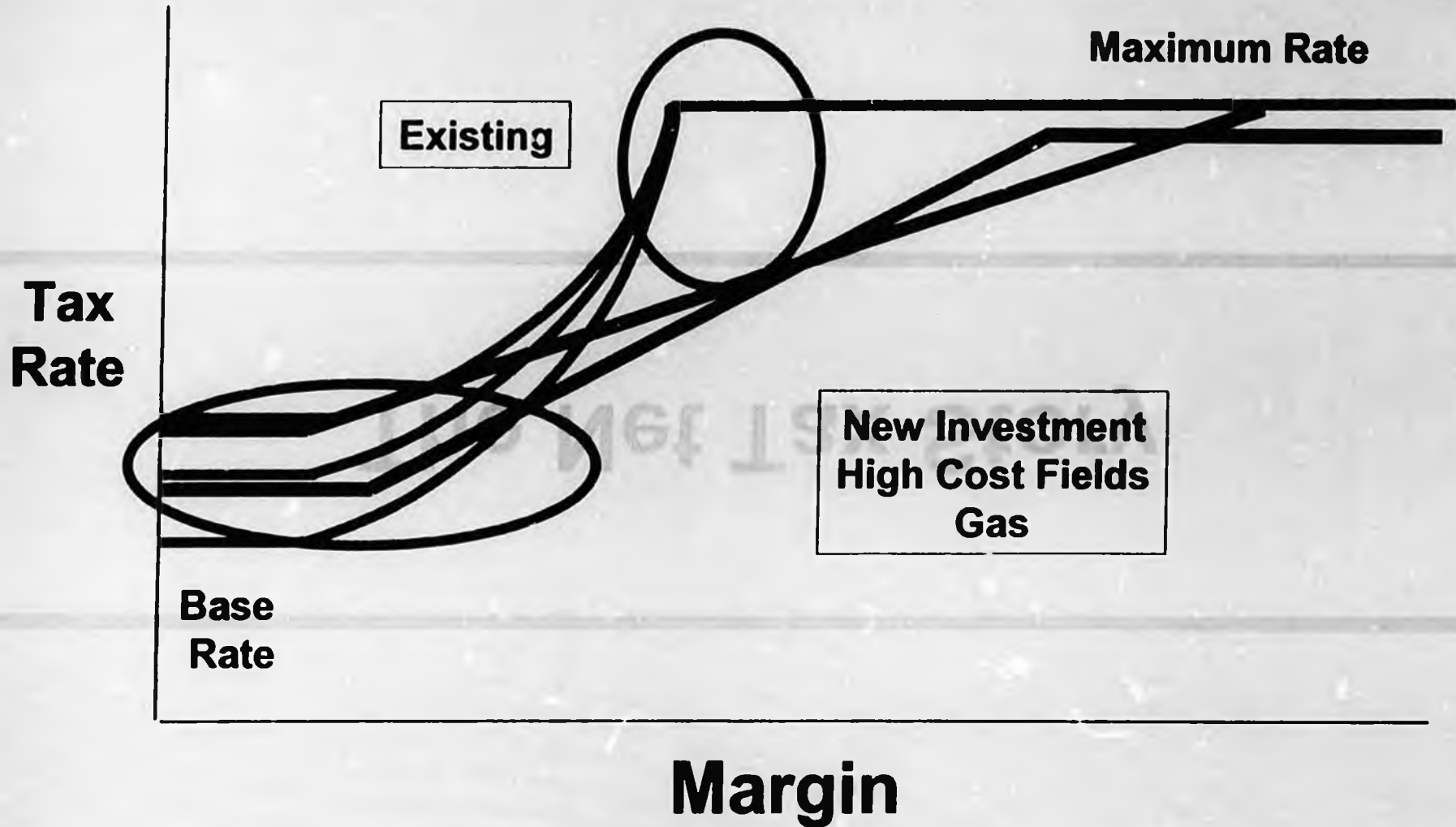
Time - Natural Decline
New/Different Development
Oil vs Gas

Margin versus Price





Pulled Into a single mechanism



Margin



The Net Tax Story

Pulled into a single mechanism





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





The Information Used

Portfolio Profitability

