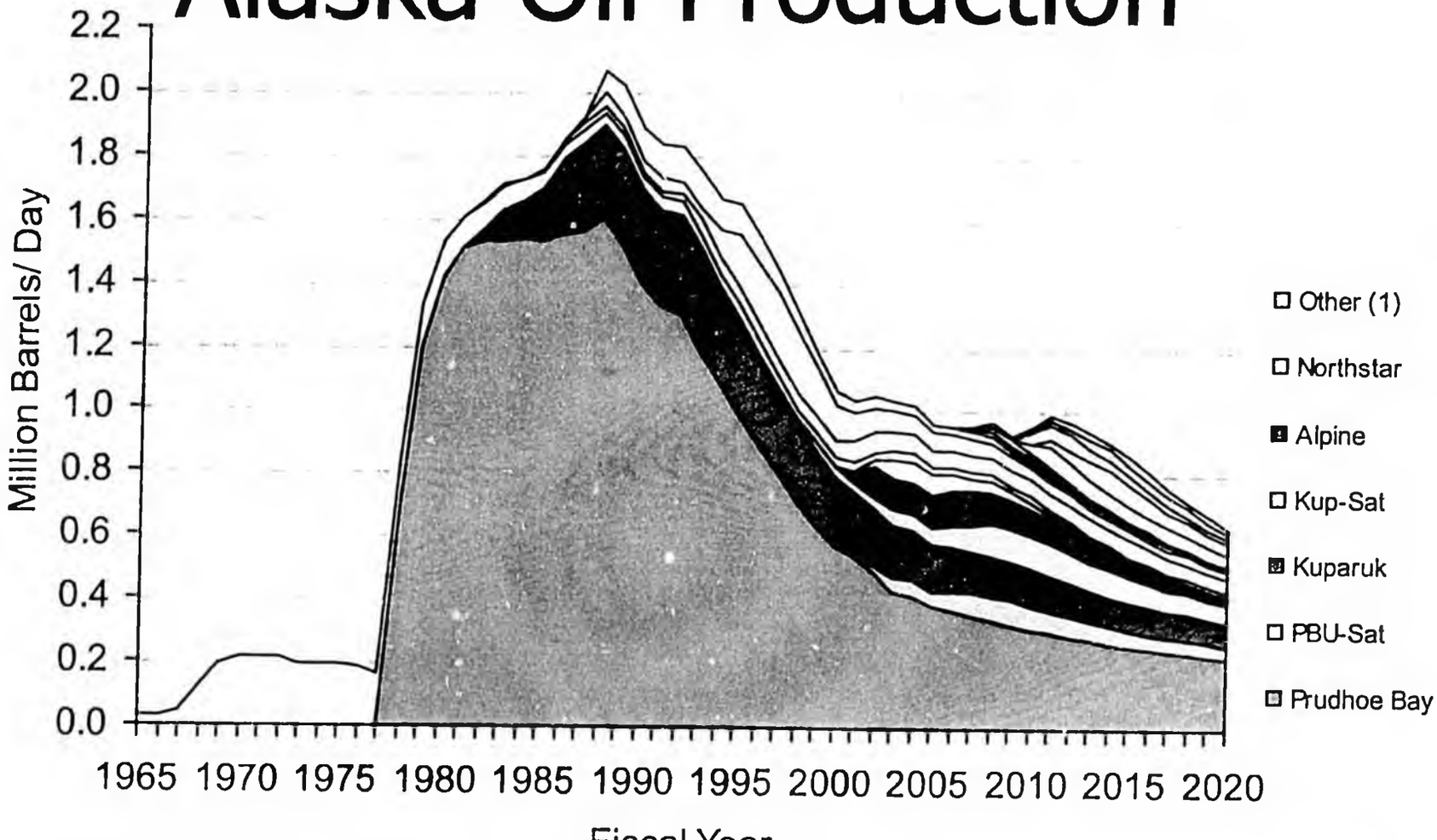
Alaska Oil Production



Source: Fall 2005 Revenue Sources Book; Alaska Department of Revenue, Tax Division

(1) Cook Inlet, Duck Island, Milne Point, Greater Point McIntyre, Liberty, Known On & Offshore, Fiord and N-PRA.

The Governor's 3 Big Ideas

- Idea Two: We need to use the Tax system to encourage investment
- Investment leads to more production
- More production leads to more revenue
- Four ways the bill recognizes investment

4 ways of encouraging investment

- Net vs gross – all investment is a deduction
- 20% credits for capital investments
- Up to a $73 million Annual Allowance
- Recognition of Transition Investment Expenditures

4 ways of encouraging investment

- Net vs gross – all investment is a deduction
  cs preserves
- 20% credits for capital investments
  cs preserves
- Up to a $73 million annual allowance
  CS has a similar feature with up to 12 million dollar annual credit
- Recognition of Transition Investment Expenditures
  CS has reduced from 5 years to 3 months of investment

Tax Based on Net Profits

- Governor's bill provided a tax based on Net Profits

- CS maintains this approach

Gross vs. Net

Current Tax on Gross	
Value at wellhead	$50.00
Times: tax rate	15%
Tax before ELF	$7.50

PPT on Net	
Value at wellhead	$50.00
Less:	
Lease op exps	(12.50)
Net taxable	$37.50
Times: tax rate	20%
Tax before credits	$7.50

Tax Base

Gross value at point of production

Determining value under current system

West coast value

$

Gross Value under PPT

Dept. of Revenue can allow a producer to elect the use of:

- Royalty value
- DOR formula that estimates a value at a specific location such as point of delivery into a common carrier pipeline

Tax Based on Net Profits

Gross value at point of production

Less: Lease expenditures

- operating costs
- capital expenditures
- allowance for overhead

Equals: Net Profits

Non-deductible expenses

- Depreciation
- Royalty payments
- Taxes based on net income
- Interest & financing charges
- Lease acquisition costs
- Other costs

Governor's Bill: Credits to Encourage Investment

- **20%** of qualified capital expenditures

- May be taken on:
  - Exploration costs
  - Capital costs **incurred on lease**

- Credits are transferable

CS: Credits to Encourage Investment

- CS maintains credits
  - CS also allows the State to purchase up to $10M worth of credits
- Credits may not be taken on:
  - Abandonment costs

Friendly to New Investors

- Ability to monetize credits and losses
- Base allowance
  - Governor's bill: $73M deduction
  - CS: converts this to a credit of up to $12M (equivalent to $60M deduction)

Effect of Standard Credit

	none	$5M	$12
net income	$100.0	$100.0	$100.0
times:	20%	20%	20%
tax before credits	$20.0	$20.0	$20.0
capex credit	0.0	(1.0)	(2.4)
standard credit	0.0	(5.0)	(12.0)
net due	$20.0	$14.0	$5.6

How are losses handled?

Gross value	$50.00
less:	
Lease op exps	(12.50)
Capital exp's	(60.00)
Net loss (NOL)	($22.50)

Net Operating Losses (NOL's)

- Can be converted to Credits
- 20% of loss

Transition Provision

- Governor's bill allowed deductions for recent capital expenditures
  - Last five years' capital expenditures
  - Allowed over 5 years
  - Allowable on when price of oil exceeded $40

Transition Provisions in CS

- Allows cost recovery of assets placed in service 1/1/06—3/31/06

- Deduction of 1/9 of cost in each of 9 months after effective date

The Governor's 3 Big Ideas

- Idea Three: We ought to get a fair share of tax revenues when prices re high, especially if reinvestment is low
- With high prices we are not getting a fair share
- We should be treated as fairly as other jurisdictions while remaining competitive with them for investment

Fair Tax Rate

Governor's bill: 20%

Fair Tax Rate

Governor's bill: 20%

CS maintains general tax rate of 20% and adds progressive feature

Progressivity Surcharge

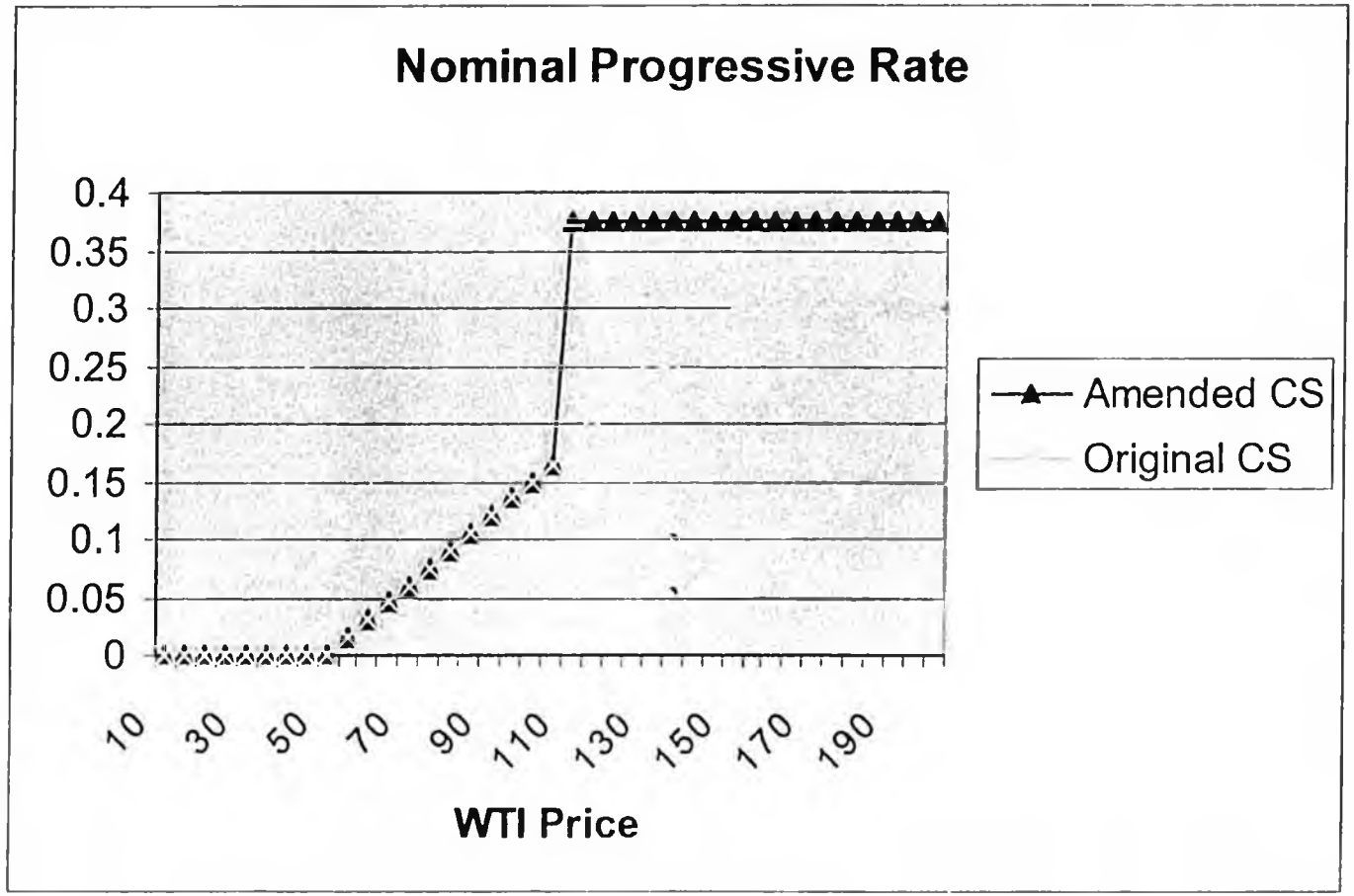
- Oil surcharge applies when oil price (WTI) exceeds $50/bbl
- Gas surcharge applies when gas price (HH) exceeds $8
- Deductible from PPT

Progressivity Surcharge

- Oil surcharge adds 3% tax based on gross value of oil, for each $10 increase in oil price

- Gas surcharge adds 2% tax based on gross value of gas, for each $1 increase in HH gas price

Progressivity Feature as Amended



How does progressivity Feature Work?

	Governor's Bill
WTI Price:	$ 70.00
ANS (Assume $2 less)	68.00
Downstream Transportation	(7.00)
Wellhead Value (gross)	*61.00*
Upstream Production Costs	(7.00)
Production Tax Value (net)	*54.00*
	20%
	10.80
Percentage Gross	17.7%
Percentage Net	20.0%

How Does Progressivity Feature Work?

	House Resources CS		
	PPT	Progressivity	Total
WTI Price:	$ 70.00	$ 70.00	
ANS (Assume $2 less)	68.00	68.00	
Downstream Transportation	(7.00)	(7.00)	
Wellhead Value (gross)	*61.00*	*61.00*	*61.00*
Progressivity		6%	
Progressivity Amount	(3.66)	3.66	
Upstream Production Costs	(7.00)		
Production Tax Value (net)	*50.34*		*54.00*

How Does Progressivity Feature Work? (Cont.)

House Resources CS

	PPT	Progressivity	Total
Production Tax Value (net)	*50.34*		*54.00*
PPT Rate	20%		
Total Tax	10.07	3.66	**13.73**
Percentage Gross	16.5%		22.5%
Percentage Net	20.0%		25.4%

Governor's Bill: Other Provisions

- Monthly return filing
- 90% payment safe harbor
- Yearly true-up on 3/31

Other Provisions in CS

spill fee remains the same in total

--suspended fee (AS 43.55.201)

--2 cents changed to 1 cent

--non-suspended fee (AS 43.55.300)

3 cents changed to 4 cents

No Longer Creditable as in Governor's Bill

Other Provisions in CS

- SB 185 40% credits extended for 10 years
- Private royalty oil tax rate set at 5%
- Penalty applies if 90% safe-harbor not met
- Effective date changed from 7/1/06 to 4/1/06

PPT: A Tax for Alaska's Future

PPT REVENUE STUDIES

Presentation to
House Finance

Alaska Department of Revenue
Tax Division
March 27, 2006

3-27-06

OVERVIEW

- Description of tax
- Description of model
- Long-term cumulative revenues
- Annual revenues
- Effective tax rate
- State take
- Cook Inlet

PPT

- Start with ***WELLHEAD VALUE*** (market value less transportation) (net of royalty)
- Compute ***PROGRESSIVE SURCHARGE***
- Subtract ***UPSTREAM COSTS*** (capital, operating, property tax, progressive surcharge)
- This is ***TAXABLE PROFIT***
- Multiply taxable income by ***TAX RATE***
- This is the ***TAX BEFORE CREDITS***
- Credits are capital costs multiplied by ***CREDIT RATE***
- Subtract additional **STANDARD CREDIT** of $12 million (first 10 years)
- This is subtracted from the tax before credits and progressive surcharge is added to yield the ***PPT PAID***

Progressive Surcharge

- 0.3% of difference between WTI and $50
- Applies to wellhead value
- Deductible for PPT calculation
- Over $110 jumps up to 37.5% and stays constant

FIGURE 1

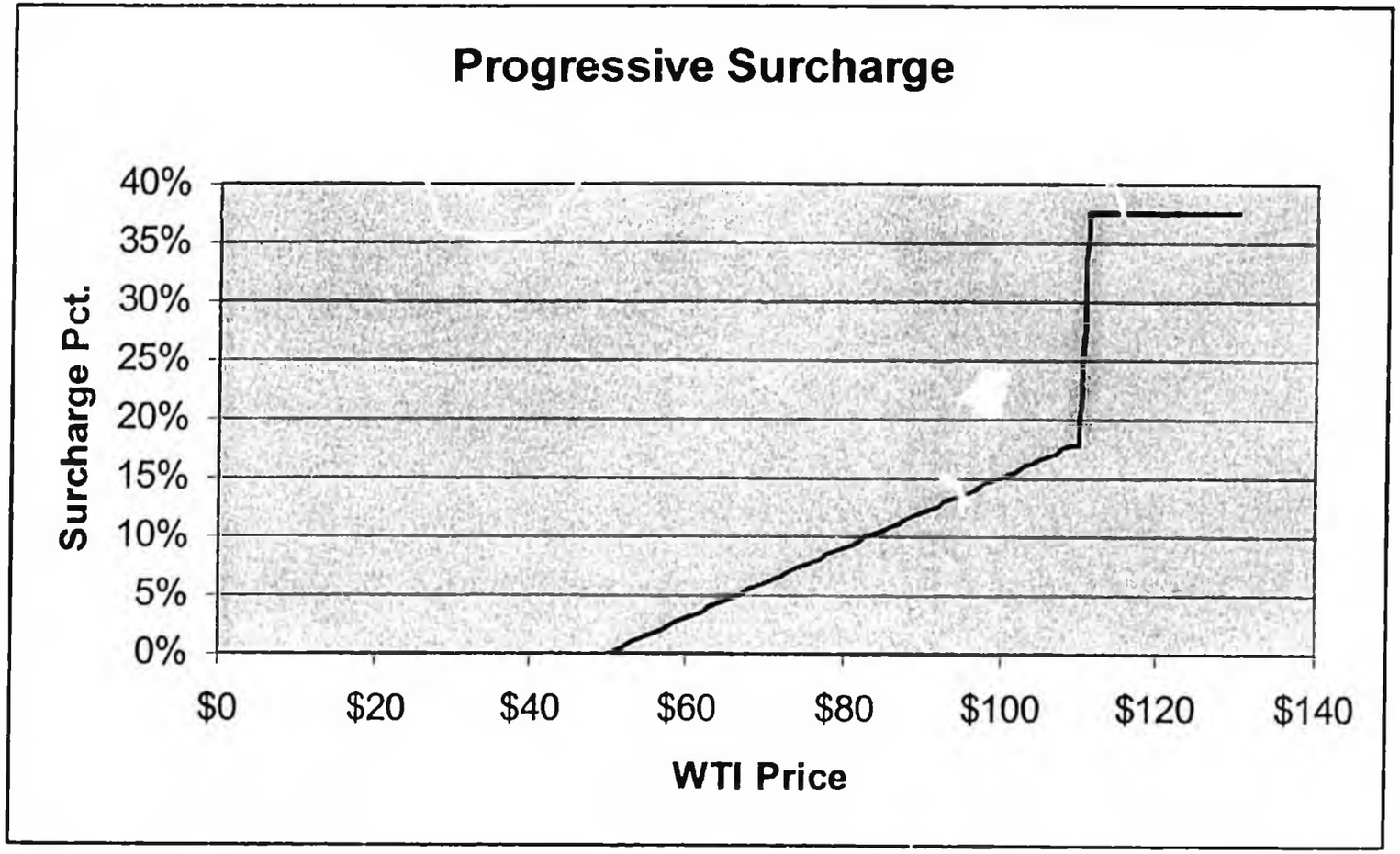

Progressive Surcharge
Surcharge Pct.
40%
35%
30%
25%
20%
15%
10%
5%
0%
$0
$20
$40
$60
$80
$100
$120
$140
WTI Price

FIGURE 2A

WTI & ANS Crude Prices: Jan 1988-Feb 2006

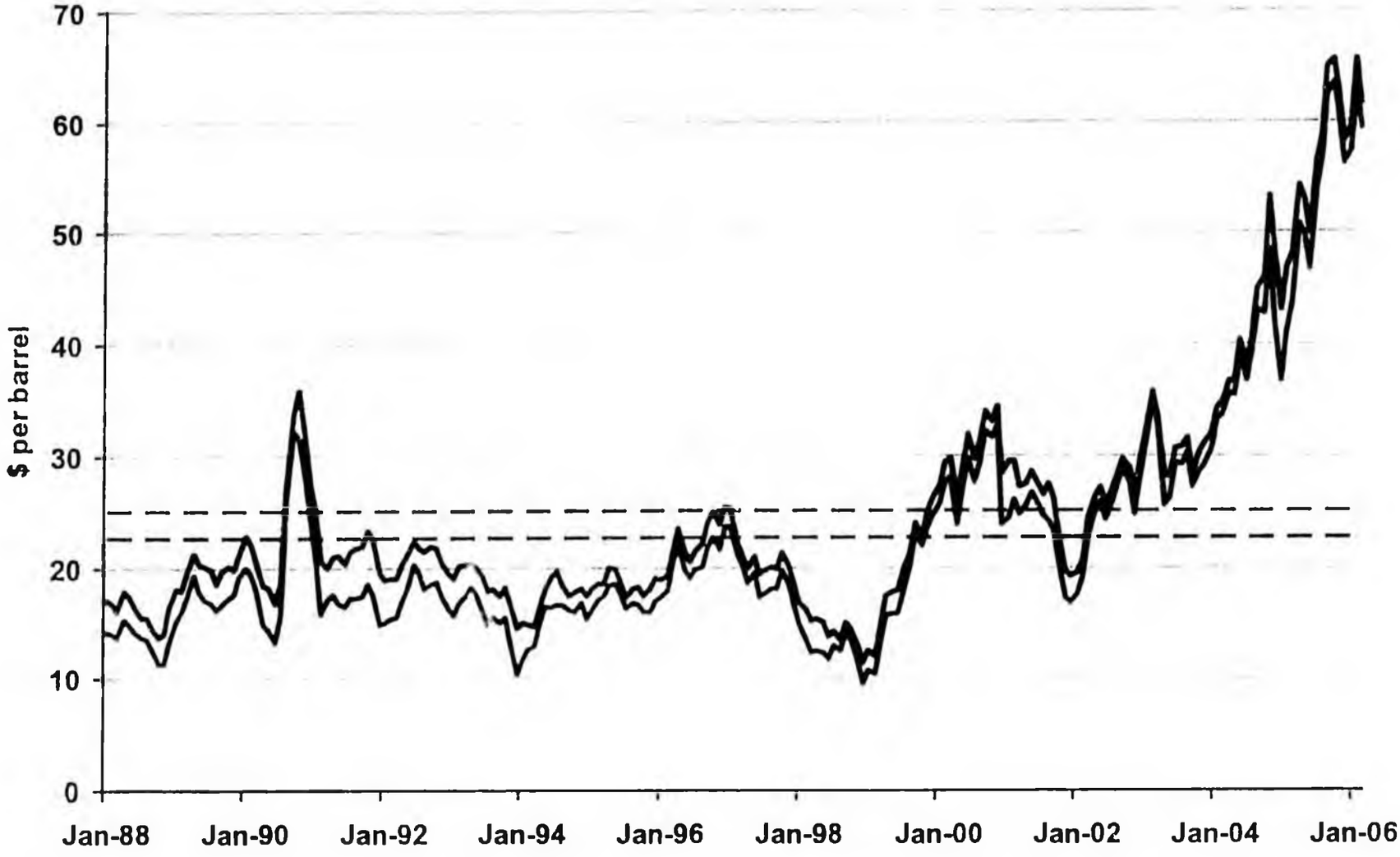
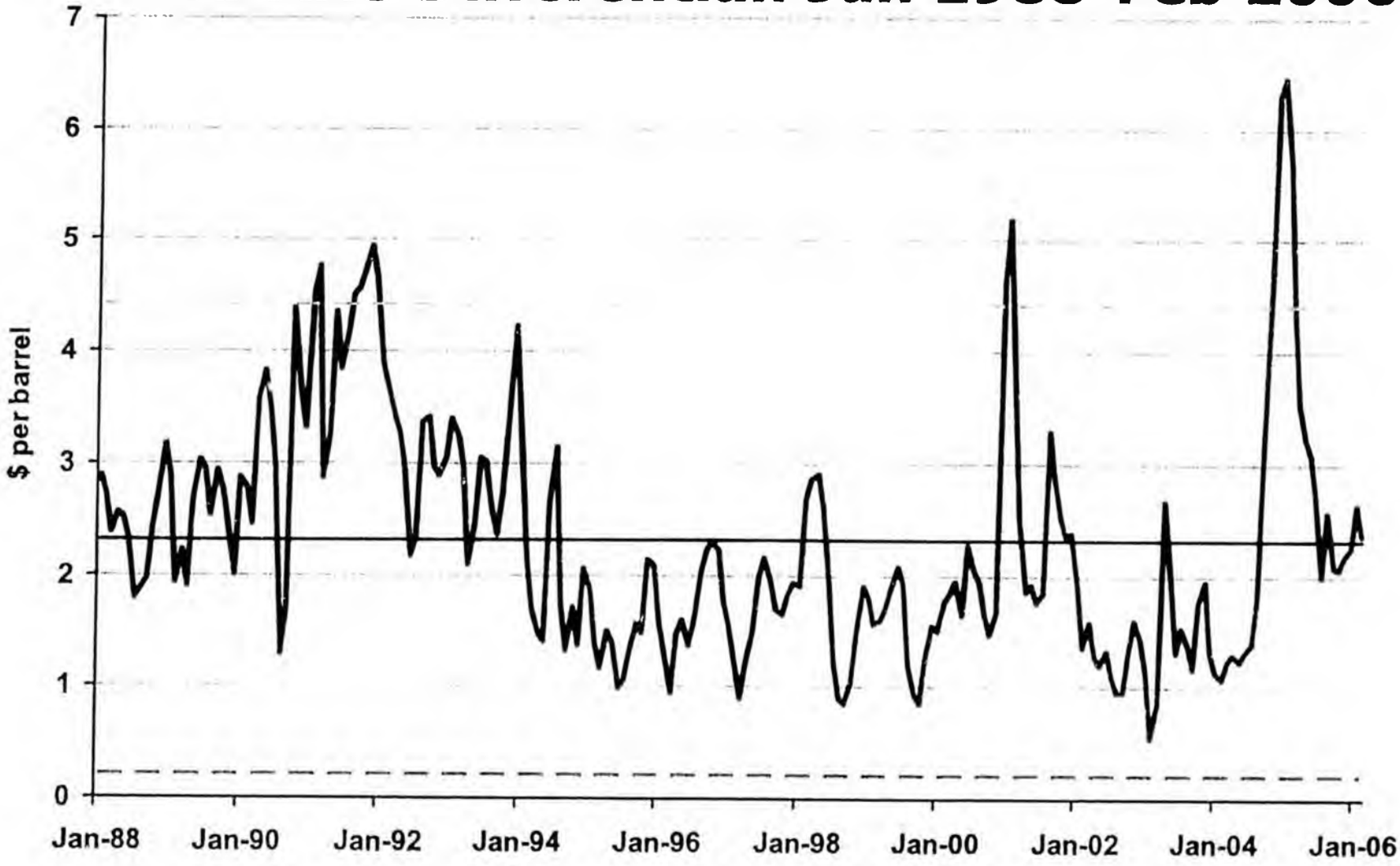


FIGURE 2B

WTI-ANS Differential: Jan 1988-Feb 2006



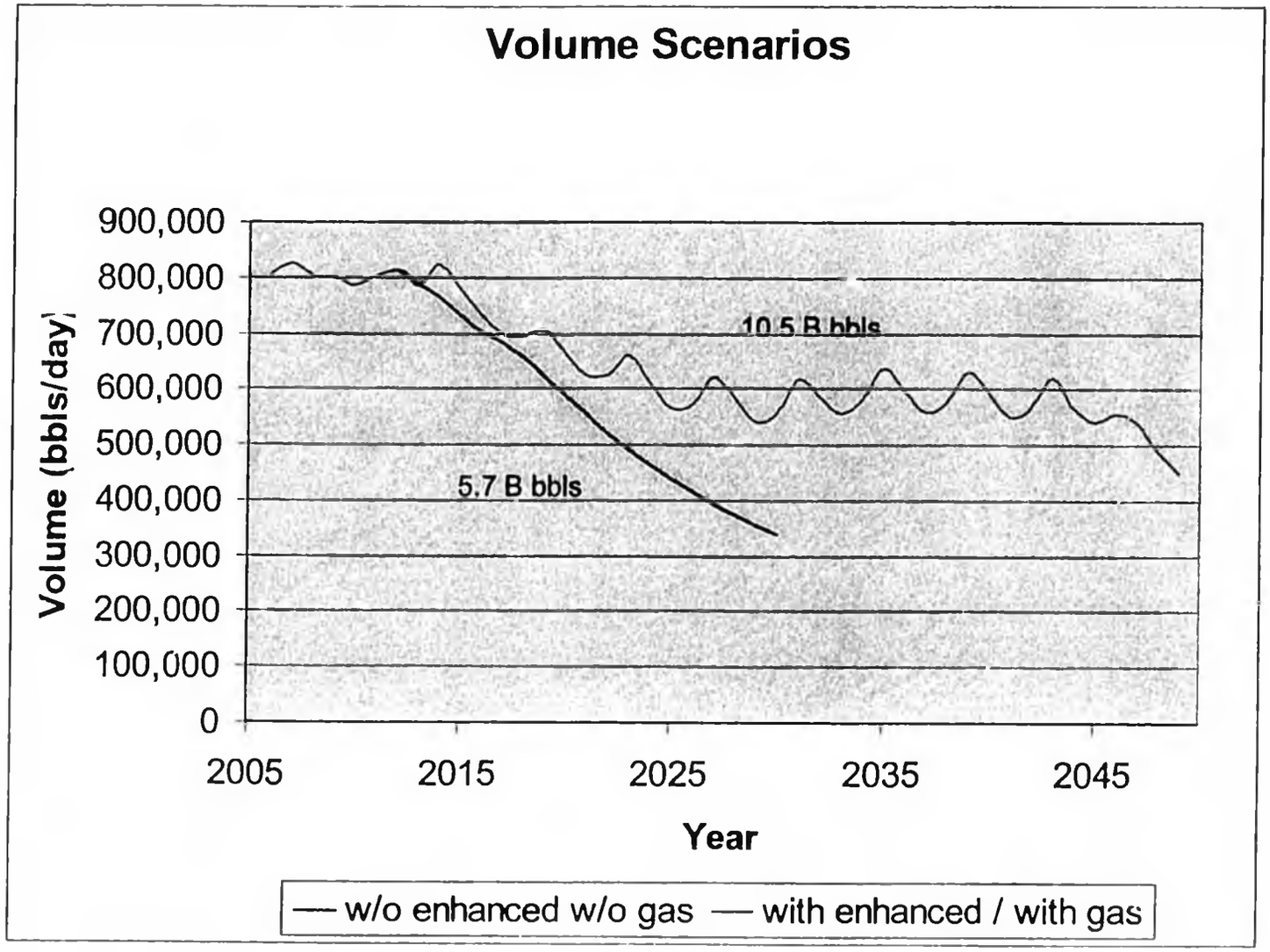
PPT Example

- 20 million taxable barrels @ $60/bbl ANS West Coast = MARKET VALUE of $1,200 million (excludes royalty)
- $2/bbl shipping + $3/bbl TAPS = $5/bbl = $100 million
- WELLHEAD VALUE = $1,100 million
- PROGRESSIVE SURCHARGE = 3% X $1,100 = $33 million
- UPSTREAM COST = Capital + Operating + Property Tax + Progressive Surcharge = $300 million
- TAXABLE PROFIT = $1,100 - $300 -$33 = $767
- If TAX RATE = 20%, TAX BEFORE CREDITS = 20% X $767 = $153 million
- If capital = $200 million and the CREDIT RATE = 20%, credit = $40 million
- Additional STANDARD CREDIT of $12 million (first 10 years)
- PPT PAID = $153 + $33 - $12 - $40 = $134 million

Volume Scenarios

- No enhanced volumes / No gasline
  - Totals 5.7 billion barrels through 2030
    - Including 0.6 billion barrels of heavy oil
      - No additional heavy oil at prices under $30
- Gasline and enhanced volumes
  - Totals 10.5 billion barrels through 2050
    - Includes additional 3.1 billion barrels conventional
      - 700 million barrels net stemming from gasline
    - Including additional 1.7 billion barrels heavy oil
      - No additional heavy oil at prices under $30

FIGURE 3


Volume Scenarios
900,000
800,000
700,000
600,000
500,000
400,000
300,000
200,000
100,000
0
Volume (bbls/day)
10.5 B bbls
5.7 B bbls
2005
2015
2025
2035
2045
Year
— w/o enhanced w/o gas — with enhanced / with gas

Costs and Prices

- Costs
  - $100 mm/yr exploration through 2040
  - $1/bbl on-going capital on all barrels
  - $3.50/bbl developmental capital on 2/3 of existing conventional oil
  - $8/bbl developmental capital on 2/3 of existing heavy oil
  - $3.50/bbl developmental capital on new conventional oil
  - $8/bbl developmental capital on new heavy oil
  - $3/bbl operating costs on conventional oil
  - $5/bbl operating costs on heavy oil
- Costs, prices, and revenues are all real $2005 dollars
- Heavy oil discounted 8% for quality
- 10 full equivalent standard $12 million credits

Feedback Effects Not Modeled

- Production depends on investment
  - More investment with incentives
  - Credits are incentive
- More investment with higher prices
- Less investment with higher taxes
- Investment driven by competitive international opportunities … which are always evolving

Cumulative Revenues

- Without enhanced volumes / without gasline (through 2030)

- With enhanced volumes / with gasline (through 2050)
  - Does not include gasline severance taxes
  - Includes gasline costs

FIGURE 4

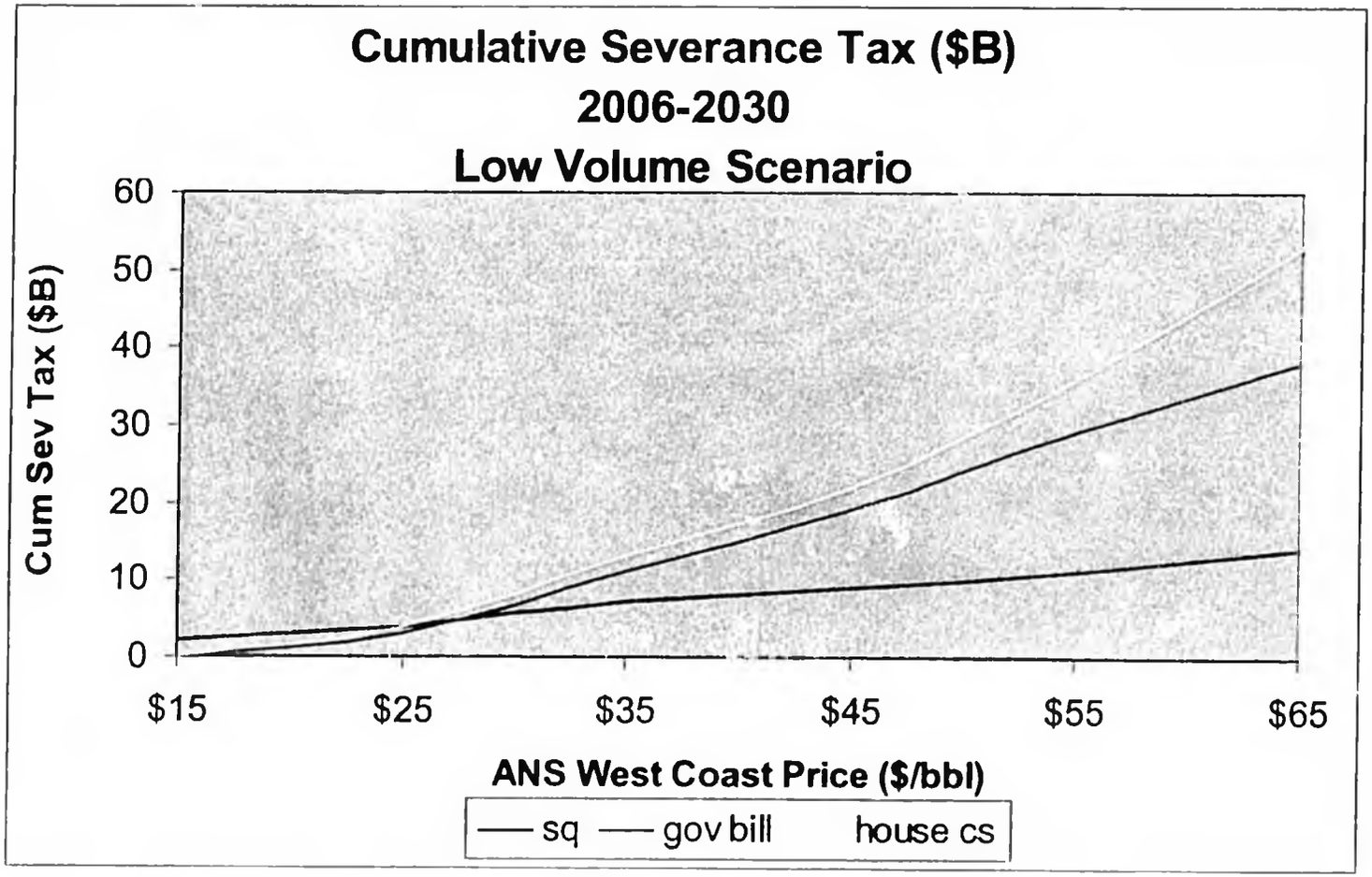

Cumulative Severance Tax ($B)
2006-2030
Low Volume Scenario
Cum Sev Tax ($B)
60
50
40
30
20
10
0
$15
$25
$35
$45
$55
$65
ANS West Coast Price ($/bbl)
sq
gov bill
house cs

Figure 5

Crossover Point and Slope

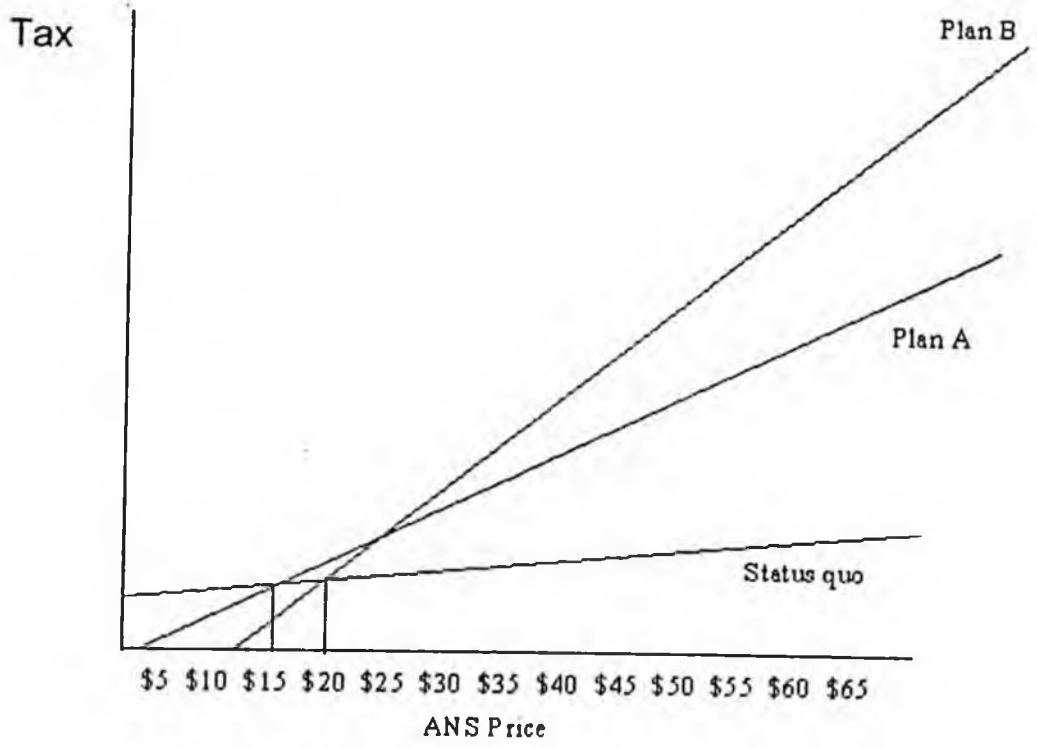
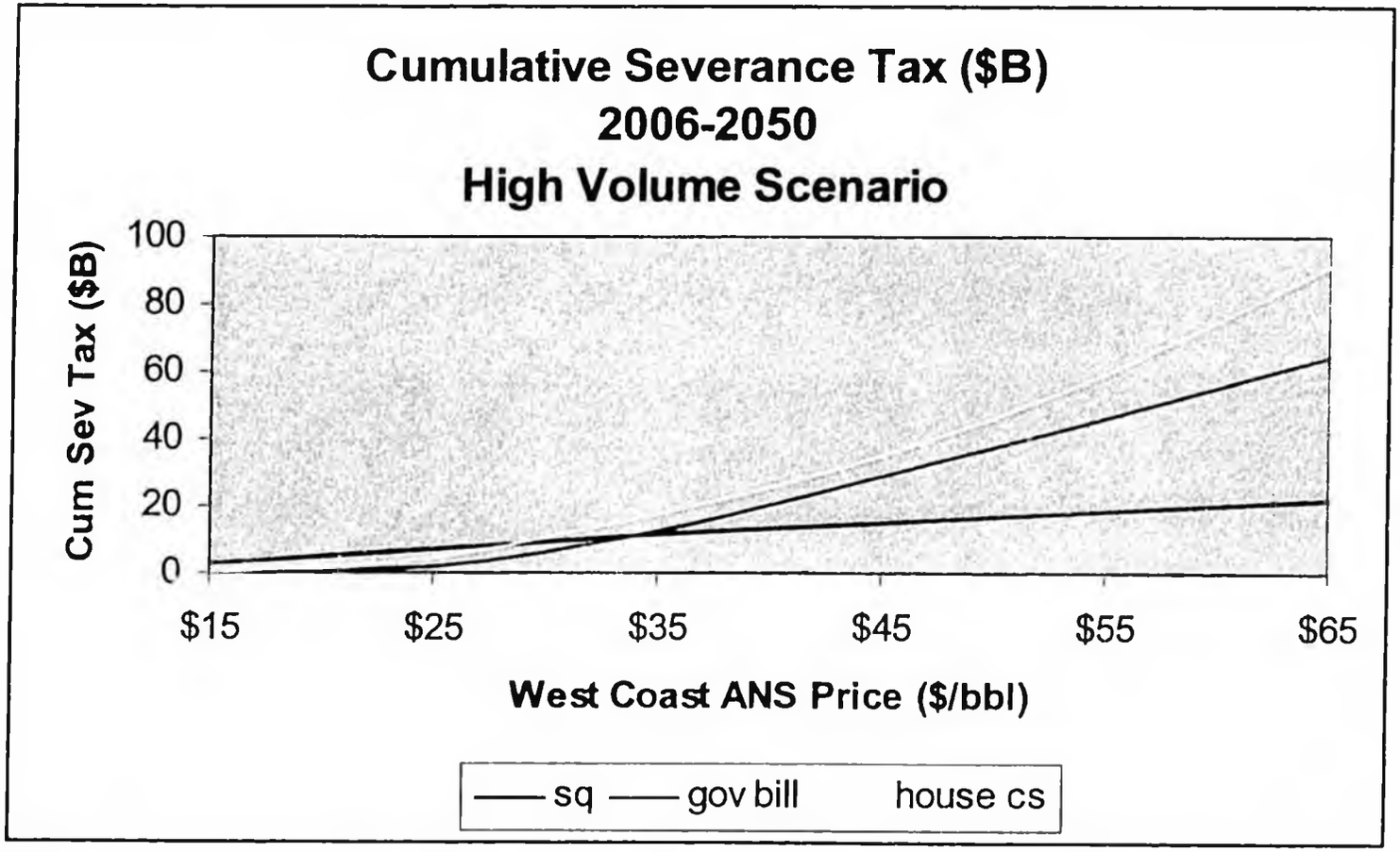


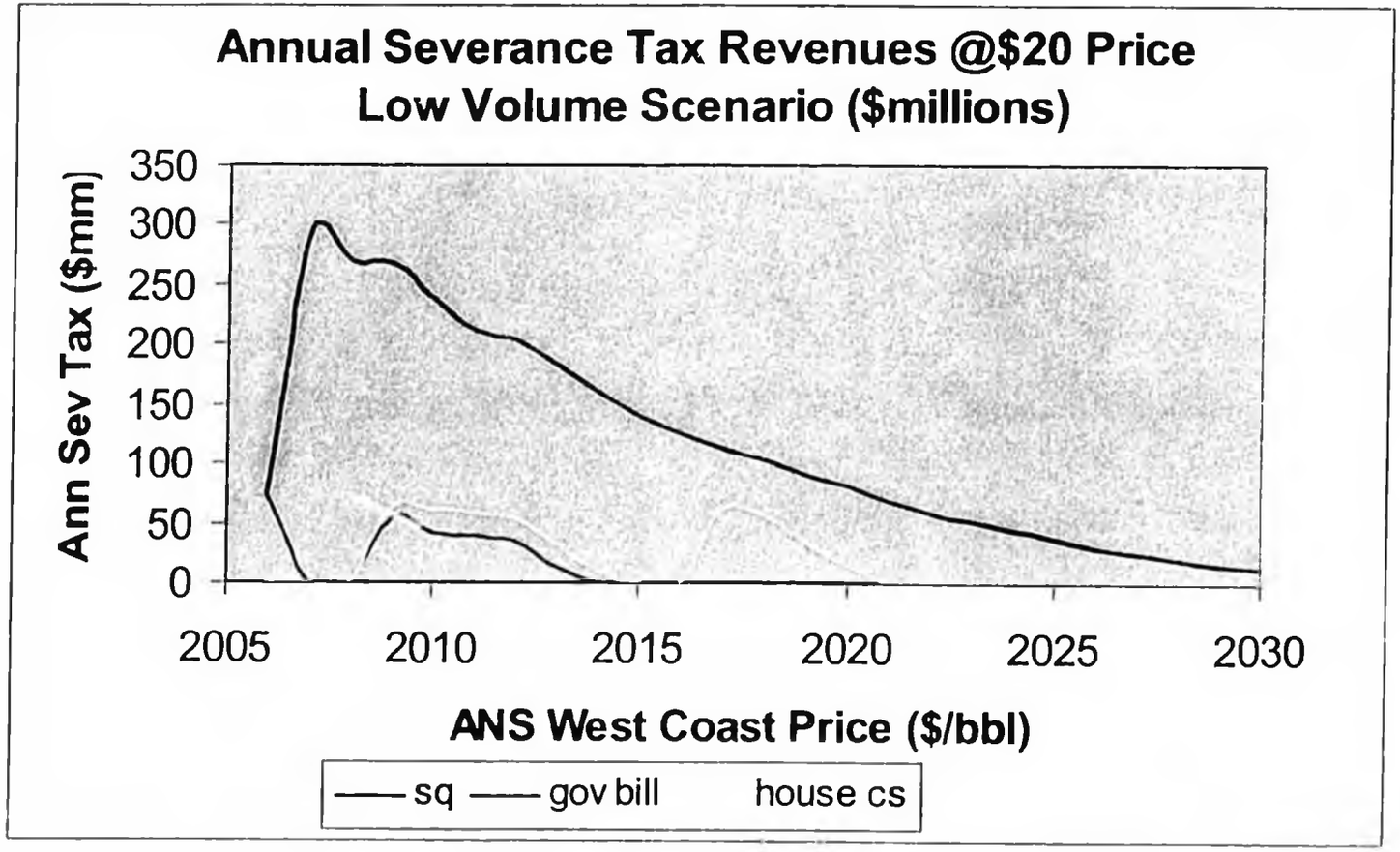
Figure 6


Cumulative Severance Tax ($B)
2006-2050
High Volume Scenario
Cum Sev Tax ($B)
100
80
60
40
20
0
$15
$25
$35
$45
$55
$65
West Coast ANS Price ($/bbl)
sq
gov bill
house cs

Annual Revenues

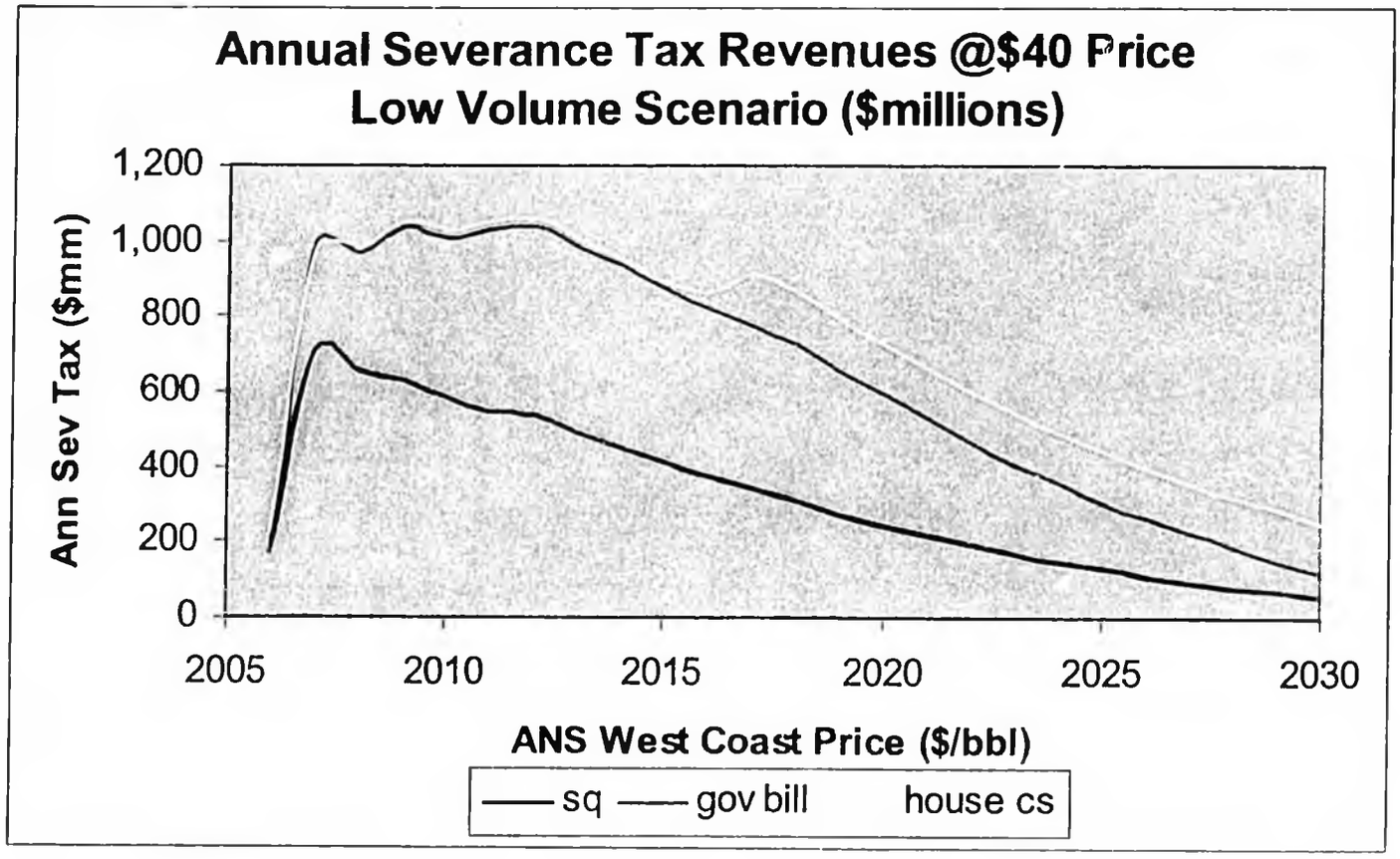
- Without enhanced volumes / without gasline (through 2030)
  - $20
  - $40
  - $60
- With gasline / with enhanced volumes (through 2050) (does not include gasline severance taxes; includes gasline costs)
  - $20
  - $40
  - $60

Figure 7



Average annual revenues $100 million less than status quo (both proposals)
Note: Status quo averages $116 million annually

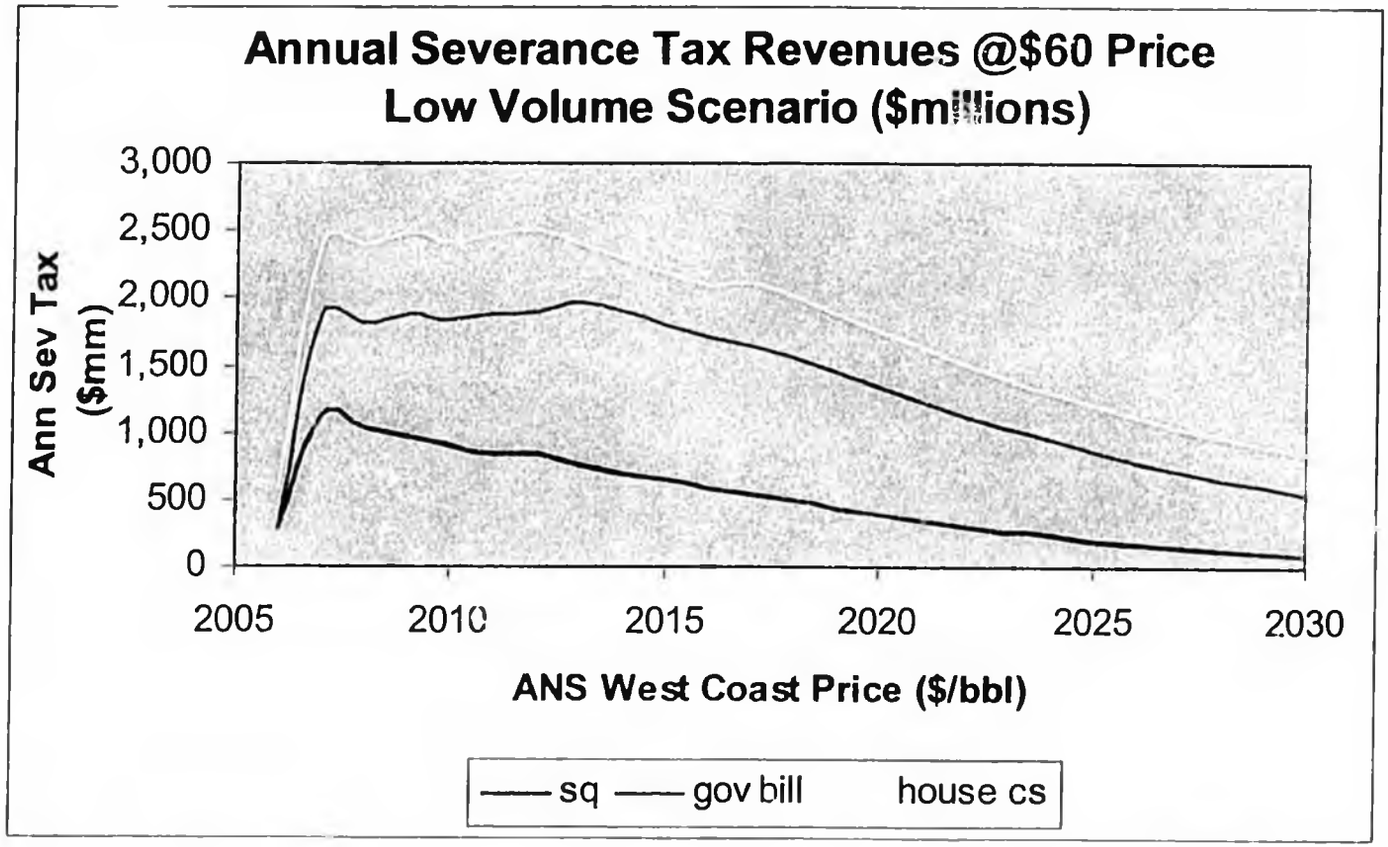
Figure 8



House CS has average annual revenues $400 million more than status quo and $100 more than Governor's bill

Note: 2017 is when $12 million allowance expires under House CS

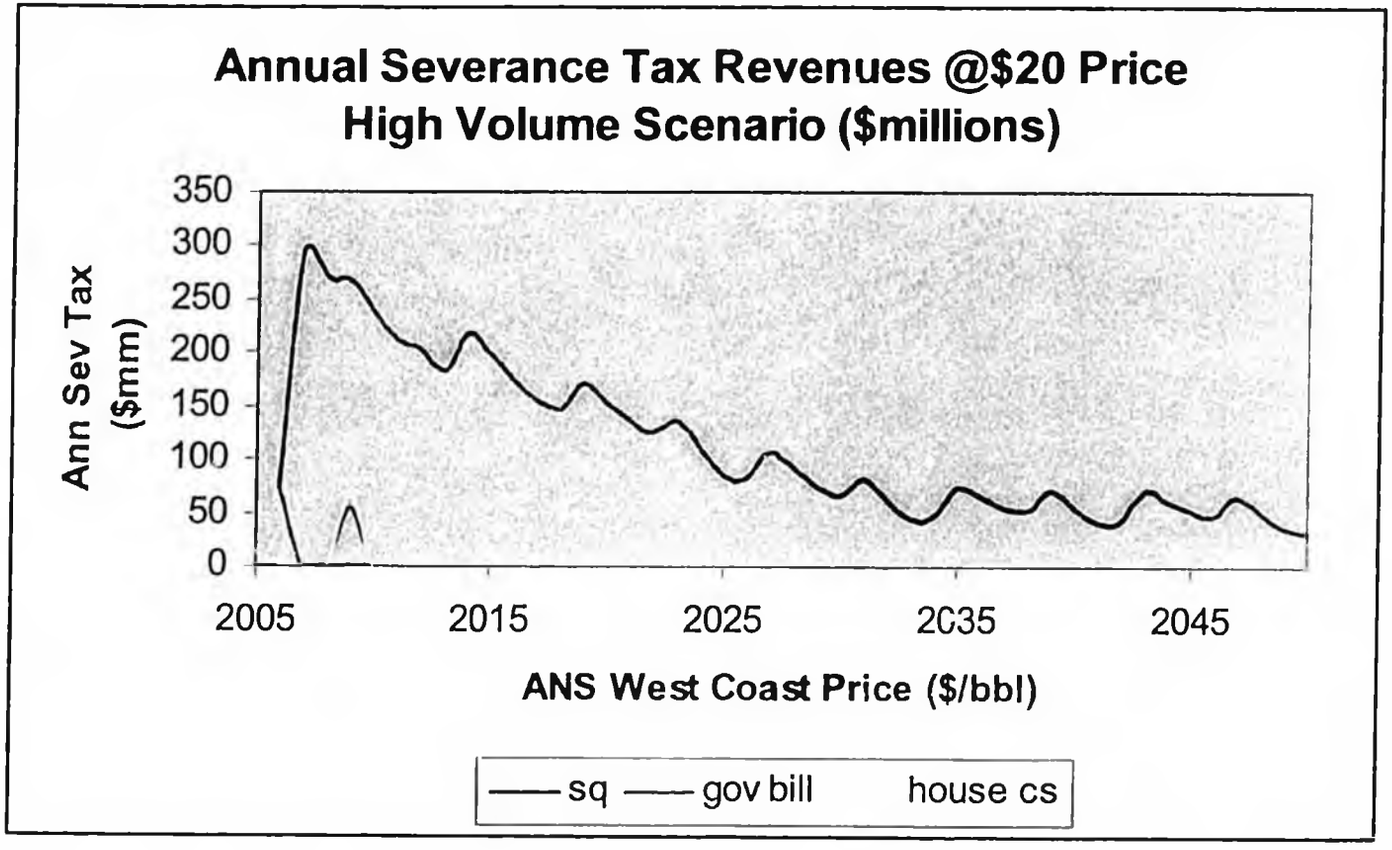
Figure 9



House CS has average annual revenues $1.3 billion more than status quo and $400 million more than Governor's bill. Net annual progressive surcharge $200-$400

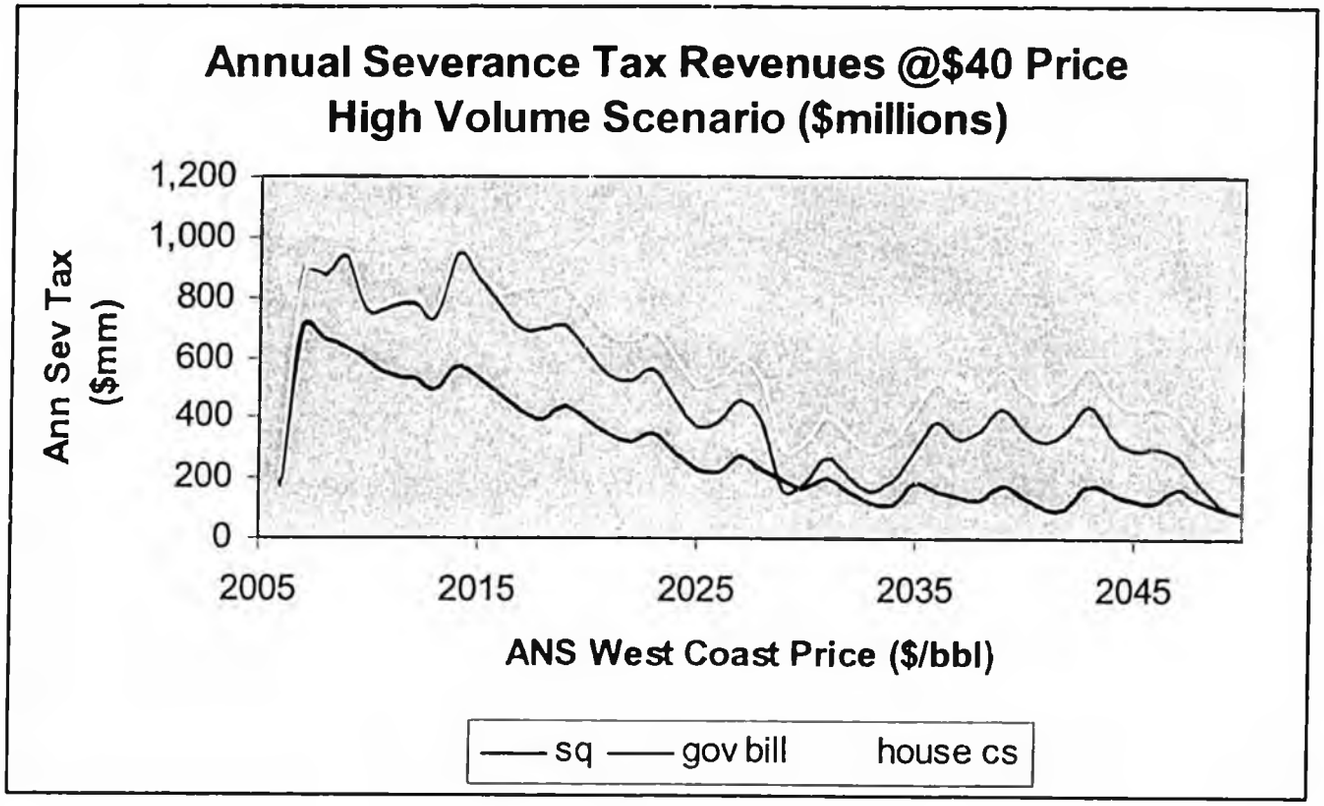
Note this is equivalent to State gasline revenues at $5.00/mmbtu Chicago price without the gasline.

Figure 10



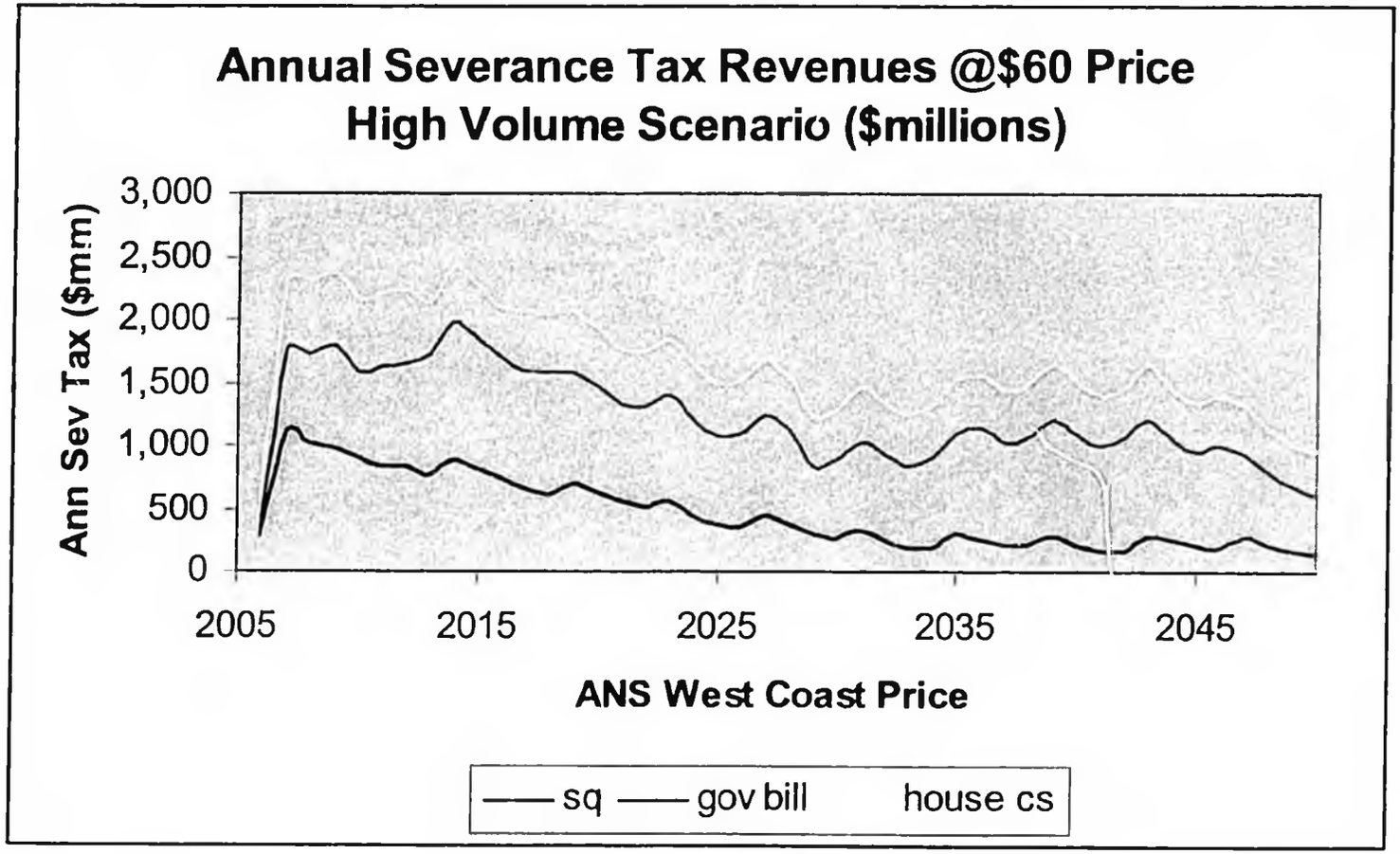
Average annual revenues $100 million less than status quo (both proposals)
Note: Status quo averages $112 million annually

Figure 11



House CS has average annual revenues $300 million more than status quo and $100 more than Governor's bill
Note: 2017 is when $12 million allowance expires under House CS

Figure 12



House CS has average annual revenues $1.2 billion more than status quo
and $400 million more than Governor's bill. Net annual progressive surcharge $200-$400 mm.

Effective Tax Rate

- Severance Tax / (Wellhead less Royalty)
  - Without enhanced volumes / without gasline
  - With enhanced volumes / with gasline

FIGURE 13

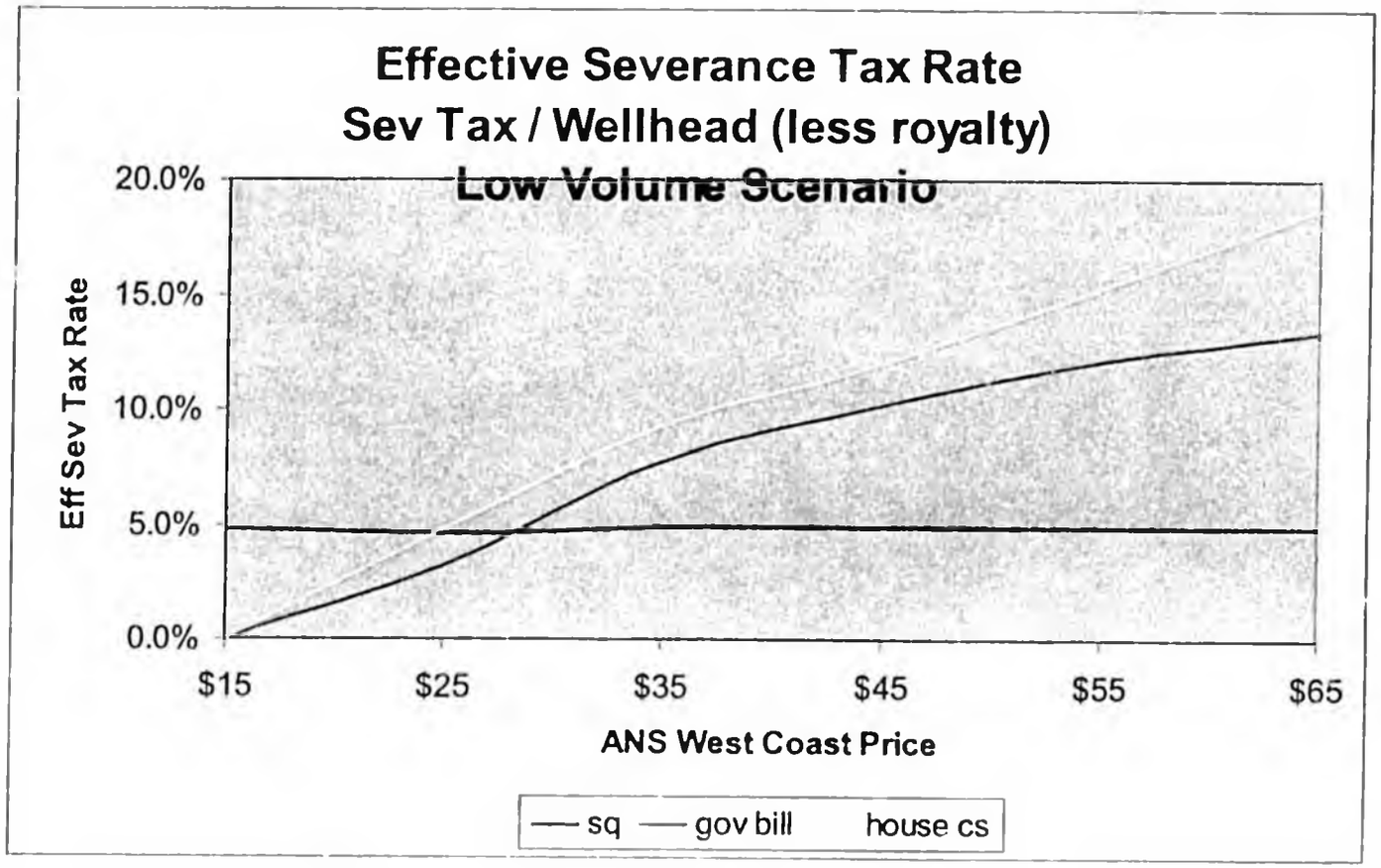
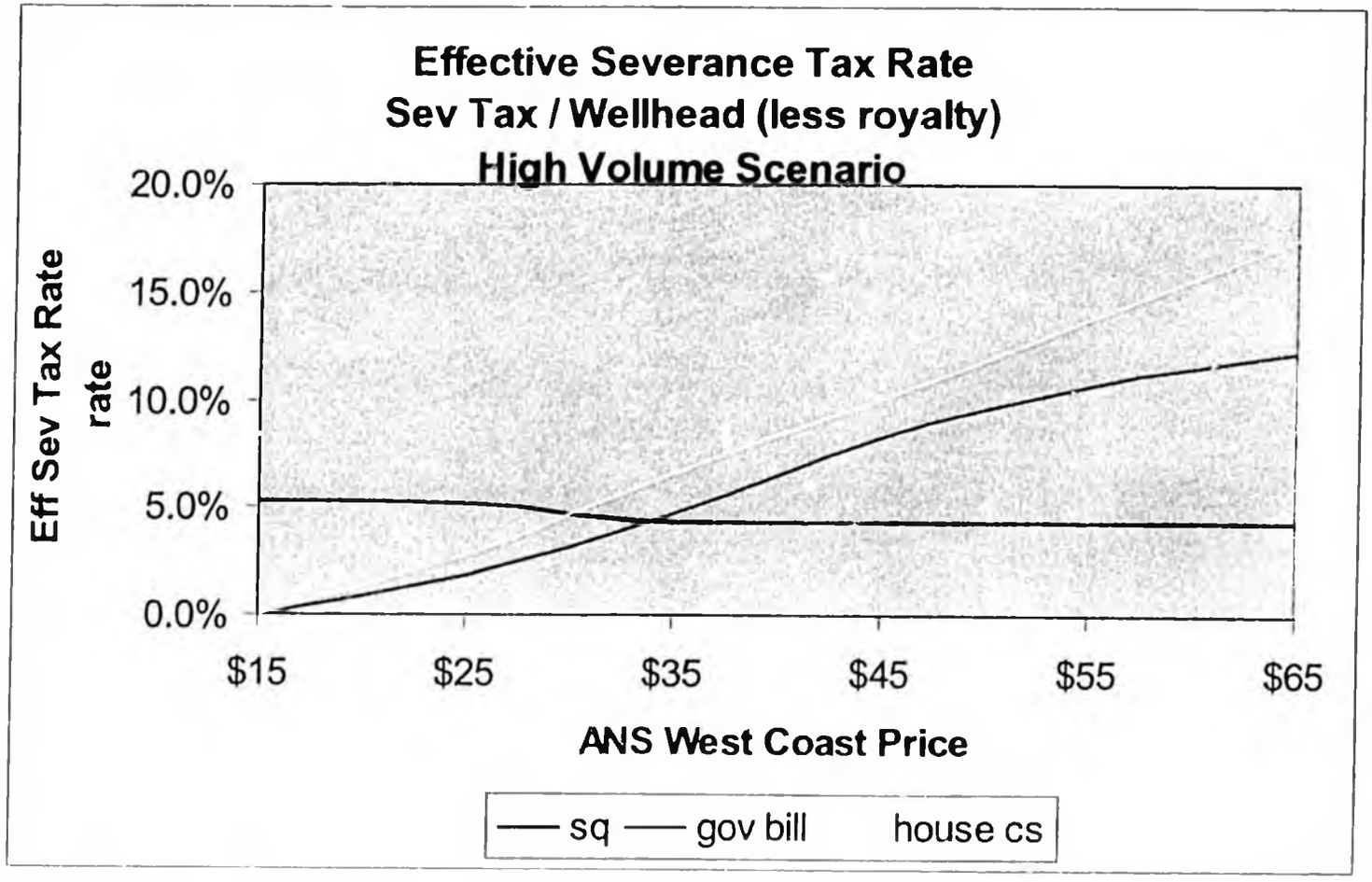

Effective Severance Tax Rate
Sev Tax / Wellhead (less royalty)
Low Volume Scenario
Eff Sev Tax Rate
20.0%
15.0%
10.0%
5.0%
0.0%
$15
$25
$35
$45
$55
$65
ANS West Coast Price
sq
gov bill
house cs

FIGURE 14


Effective Severance Tax Rate
Sev Tax / Wellhead (less royalty)
High Volume Scenario
Eff Sev Tax Rate
rate
20.0%
15.0%
10.0%
5.0%
0.0%
$15
$25
$35
$45
$55
$65
ANS West Coast Price
sq
gov bill
house cs

State Take

Sev Tax / Economic Rent

FIGURE 15

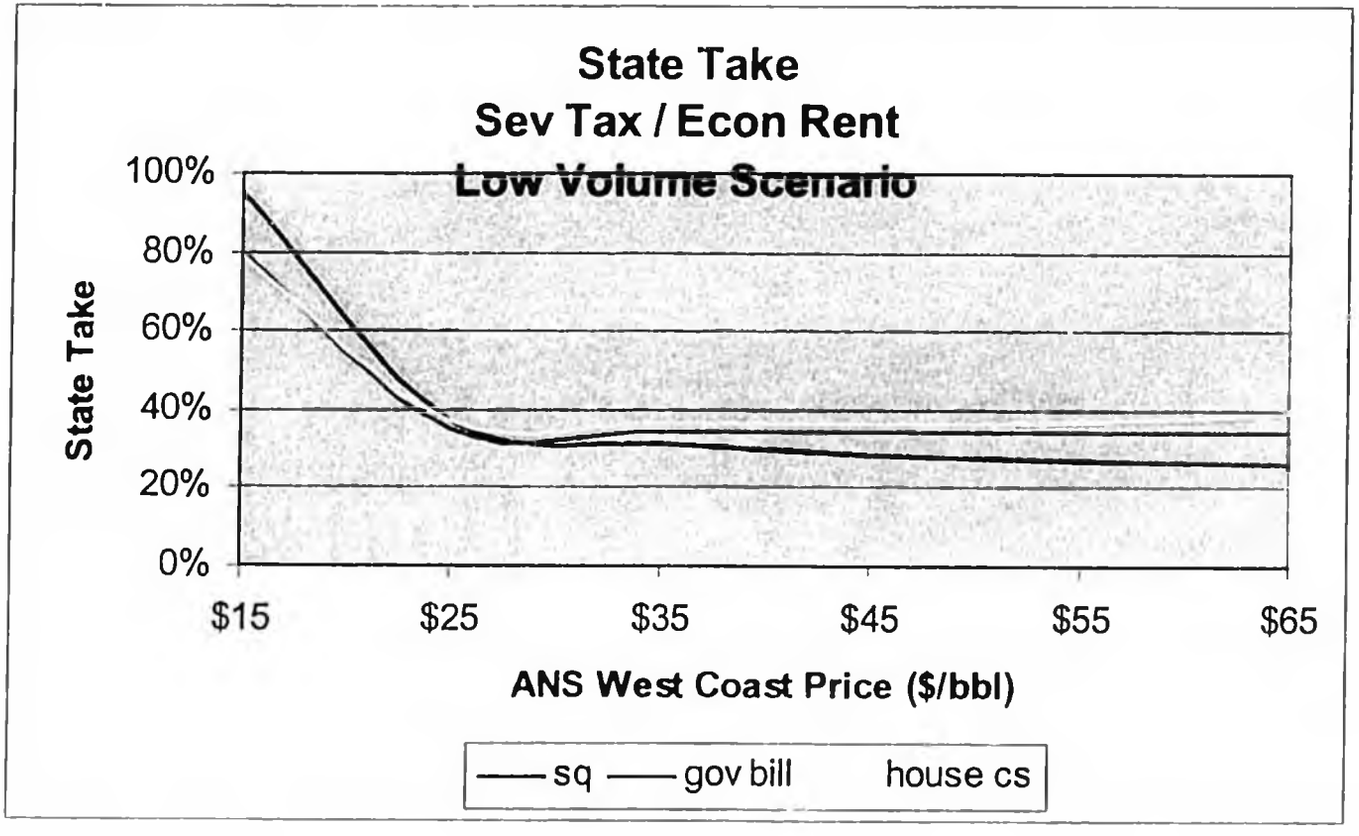
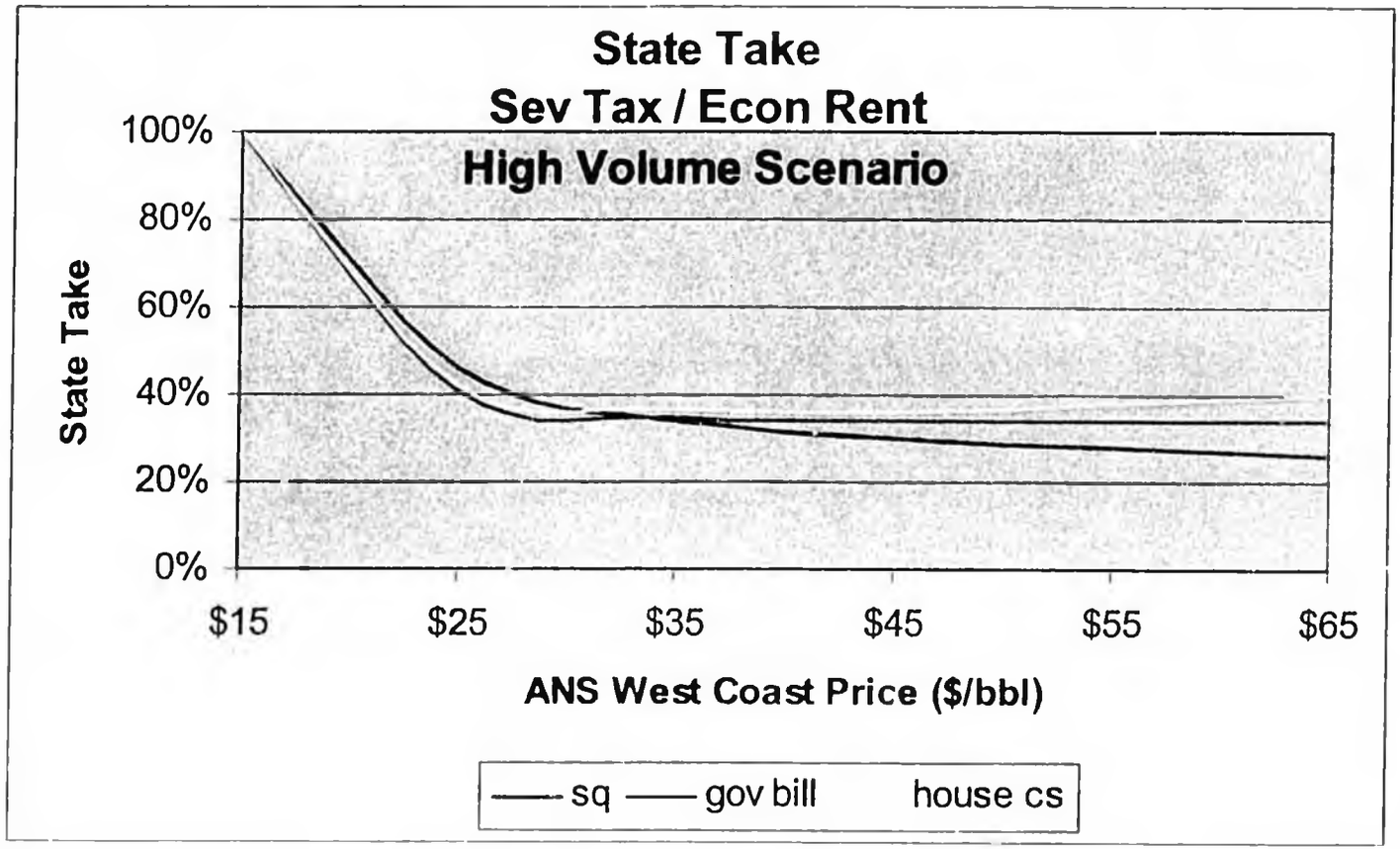

State Take
Sev Tax / Econ Rent
Low Volume Scenario
State Take
100%
80%
60%
40%
20%
0%
$15
$25
$35
$45
$55
$65
ANS West Coast Price ($/bbl)
sq
gov bill
house cs

FIGURE 16


State Take
Sev Tax / Econ Rent
High Volume Scenario
State Take
100%
80%
60%
40%
20%
0%
$15
$25
$35
$45
$55
$65
ANS West Coast Price ($/bbl)
sq
gov bill
house cs

Cook Inlet

	COOK INLET		
	Oil	Gas	Barrels of oil
	barrels/day	mcf/day	Equivalent
Aurora	0	9,260	1,543
Chevron/Unocal	7,885	116,755	27,344
ExxonMobil	1,111	0	1,111
Forest	6,891	108	6,909
Marathon	157	165,288	27,705
ML&P	0	15,431	2,572
ConocoPhillips	0	167,650	27,942
XTOE Energy	3,283	92	3,298
TOTAL	19,327	474,584	98,424

Cook Inlet Gas

- Cook Inlet is 80% gas on a BOE basis
- Industry is evolving
  - Decreased production?
  - Higher prices?
  - Increased investment?
- PPT impact on oil taxes not significant
- Gas taxes on existing fields may increase at higher prices
- New fields may see lower taxes/higher npv

GAS ELF

1 – (3000 / Average Well Productivity)

Example: 10,000 mcf/well/day
ELF = 0.70
6,000 mcf/well/day
ELF = 0.50

COOK INLET GAS FIELDS

Field	MCF/day	Avg Elf
BELUGA RIVER	155,740	0.751
BEAVER CREEK	17,554	0 088
CANNERY LOOP	40,636	0.601
GRANITE POINT	208	0.000
HAPPY VALLEY	5,083	0.170
IVAN RIVER	4,348	0.000
KALOA FIELD	3,269	0.424
KENAI UNIT	60,907	0.001
LEWIS RIVER	1,042	0.000
LONE CREEK	4,240	0.358
MIDDLE GROUND SHOAL	61	0.000
MOQUAWKIE	5,188	0.354
NORTH COOK INLET	108,421	0.648
NICOLAI CREEK	1,593	0.000
NINILCHIK	30,783	0.373
NORTH TRADING BAY UNIT	587	0.000
PRETTY CREEK	1,967	0.000
REDOUBT SHOALS	2	0.559
STERLING GAS FIELD	2,094	0.278
TRADING BAY UNIT	146,343	0.474
SWANSON RIVER	10,539	0.000
WOLF LAKE	163	0.000
	600,768	0.500

Gas ELF

- A 0.50 ELF implies 6,000 mcf/well/day
- Therefore, 3,000 mcf/well/day is tax-free
- The revenue from tax-free gas is supposed to recover operating costs
- Operating costs for Cook Inlet gas is estimated to be 50 cents
- Therefore operating costs are $3,000/well/day
- Henry Hub prices are over $7/mcf
- The revenue from the 3,000 tax-free mcf/well/day is worth $21,000
- This is 7X more than it should be recovering

Cook Inlet Gas Tax

- We estimate crossover point at about $5/mcf on existing fields
- At $6/mcf increase of $25 million annually on existing fields
- Out of $1 billion gross revenues annually
- Decrease as production goes down
- New production may see reduced taxes