History of Alaska's Oil & Gas Production (Severance) Tax

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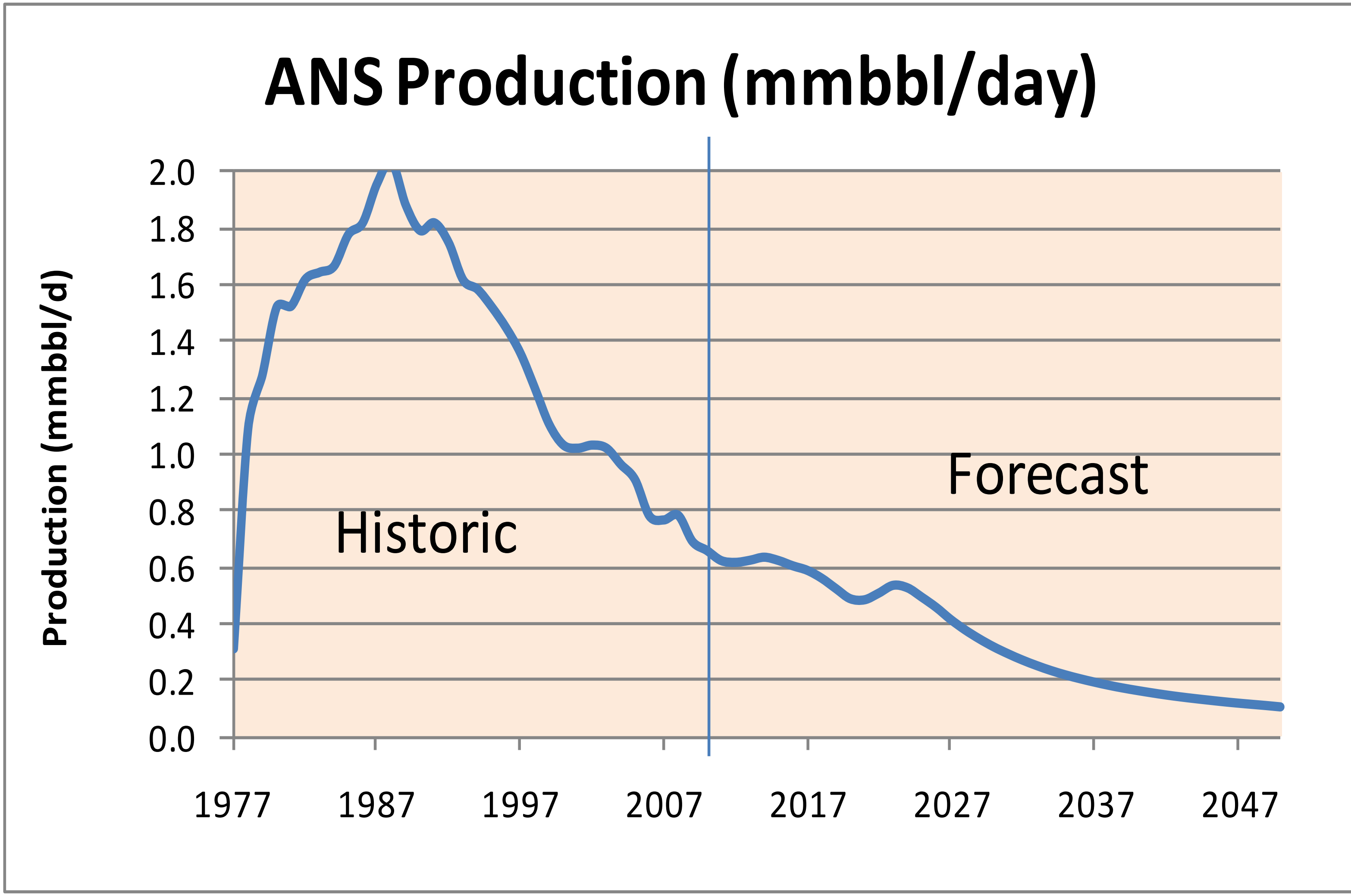
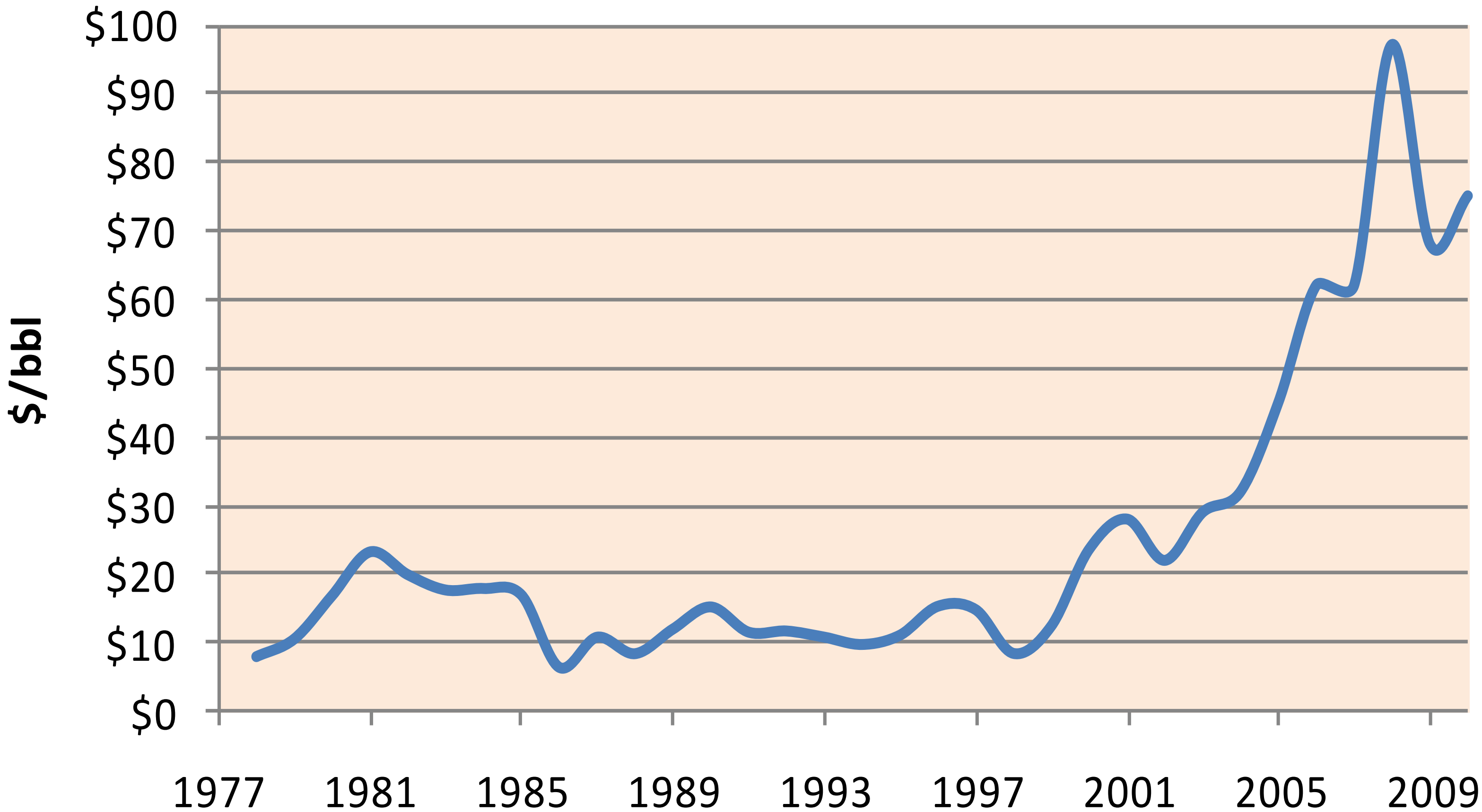

ANS Production (mmbbl/day)
Production (mmbbl/d)
2.0
1.8
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
Historic
Forecast
1977
1987
1997
2007
2017
2027
2037
2047

ANS Price History ($/bbl)

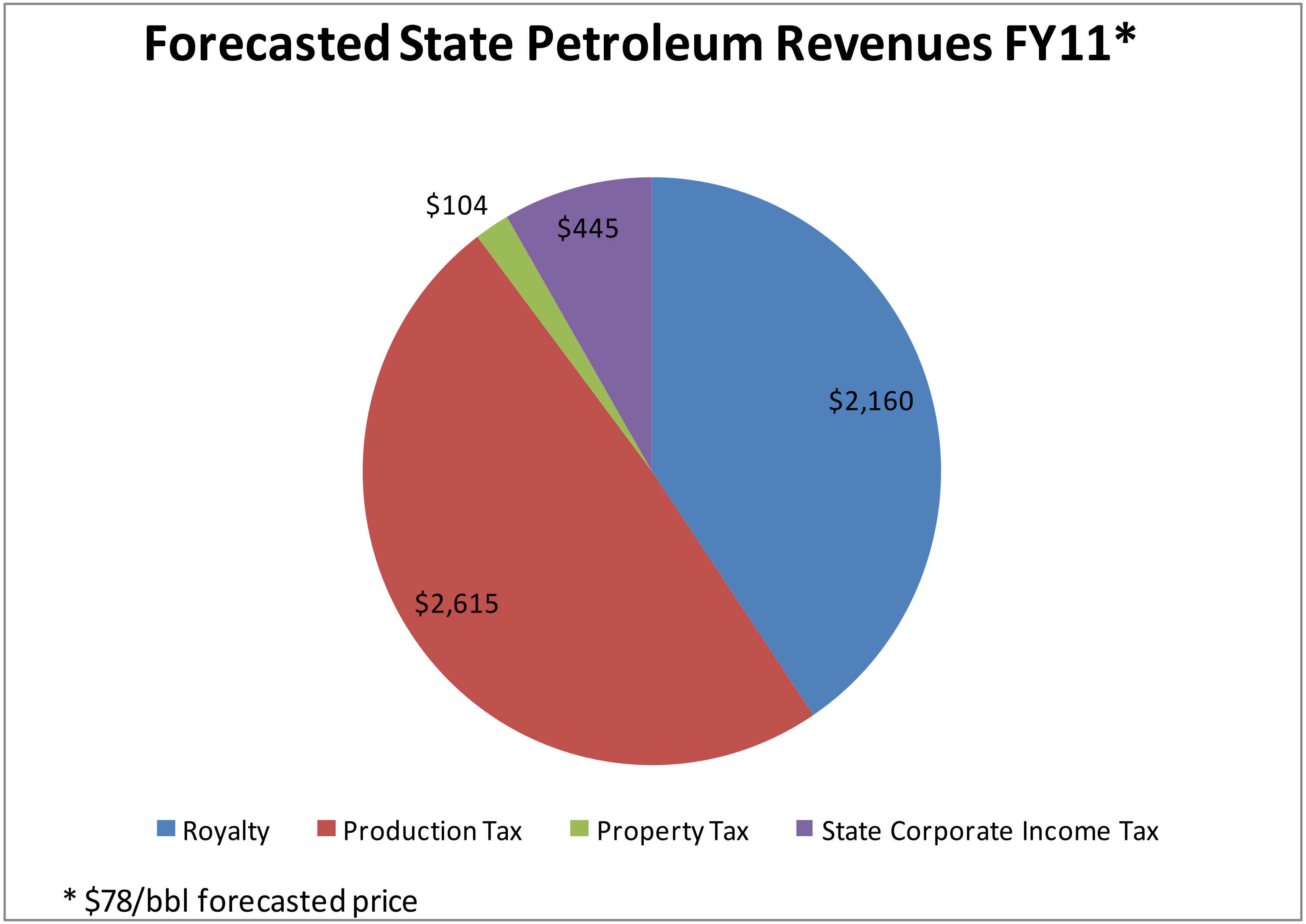


What is the Production Tax?

- A tax on producing or severing a non-renewable resource from the state
- Authorized in AS 43.55 (administered by the Dept. of Revenue)
- Applies to all production in the state (including 3 miles offshore and federal onshore acreage)
- Not payable on public (state/federal) royalty production

Petroleum Revenues

- Royalties
- Severance tax
- Property tax
  - 20 mills (2%)
  - Municipalities/boroughs retain tax on property within
- State corporate income tax
  - 9.4% of apportioned income
  - Apportions worldwide income to Alaska based on amount of property, production, and sales in Alaska relative to rest of world


Forecasted State Petroleum Revenues FY11*
$104
$445
$2,160
$2,615
Royalty
Production Tax
Property Tax
State Corporate Income Tax
* $78/bbl forecasted price

Vocabulary

- Market Price
  - Price ANS is sold for on the West Coast
- Gross (wellhead) Value
  - Market price less marine shipping and TAPS tariff
- Net Value
  - Gross value less production operating and capital costs

Example

Market Price =	\$90/bbl
Less:	
Marine shipping	\$2/bbl
TAPS Tariff	\$4/bbl
Gross Value =	\$84/bbl
Less:	
Capital production cost	\$12/bbl
Operating production cost	\$11/bbl
Net Value =	\$61/bbl

Four Tax Regimes

- Economic Limit Factor “ELF” I (1977-1989)
- ELF II (1989-2006)
- PPT (2006-2007)
- ACES (2007-present)

Production Tax Pre-Prudhoe

Taxed on well basis

- First 300 barrels per day: higher of:
  - 5% of gross value, or
  - 17¢/bbl*
- Next 700 barrels per day: higher of:
  - 6% of gross value, or
  - 20¢/bbl*
- Anything over 1,000 barrels per day: higher of
  - 8% of gross value, or
  - 27¢/bbl*

* Subject to inflation

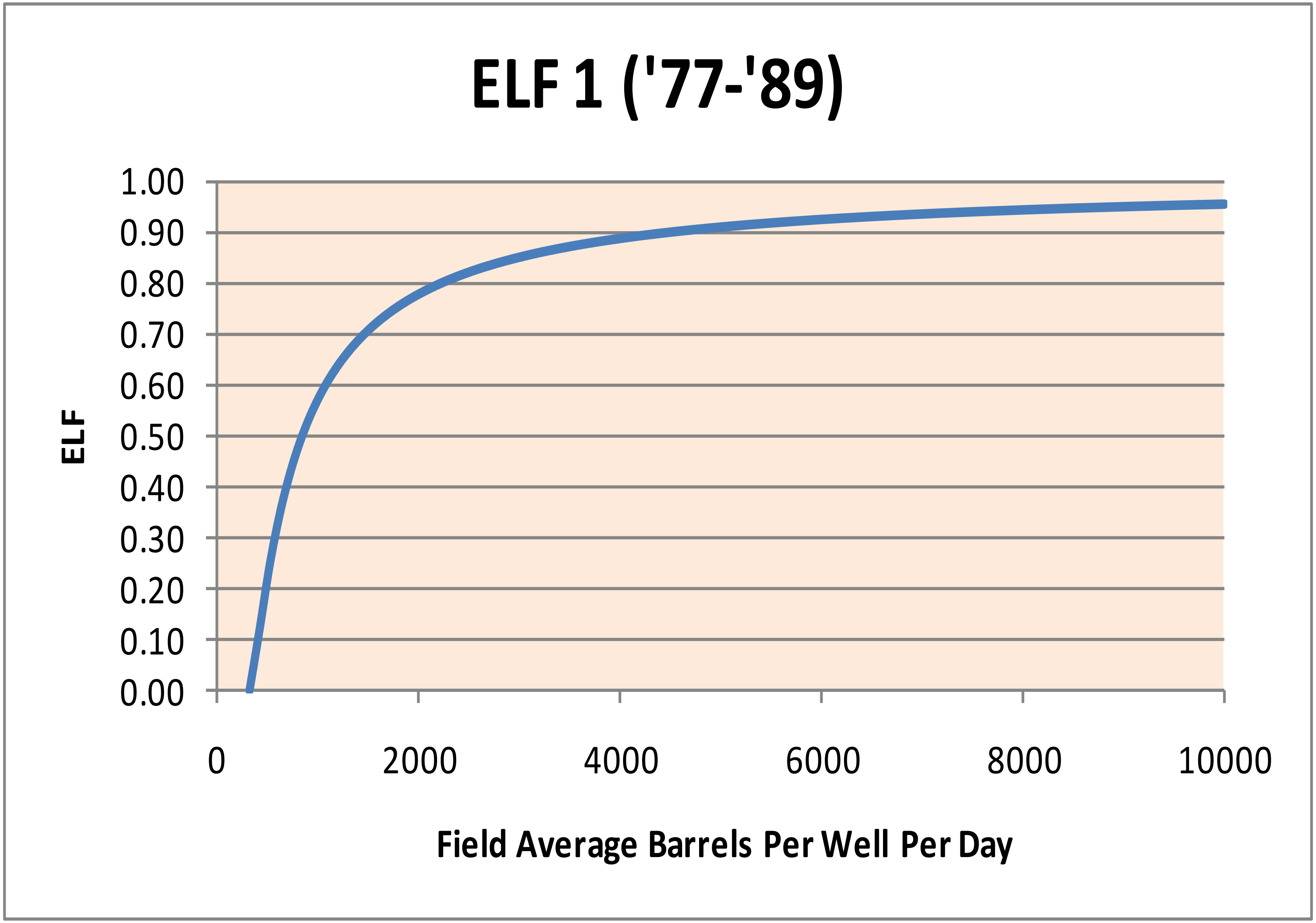
ELF I (1977-1989)

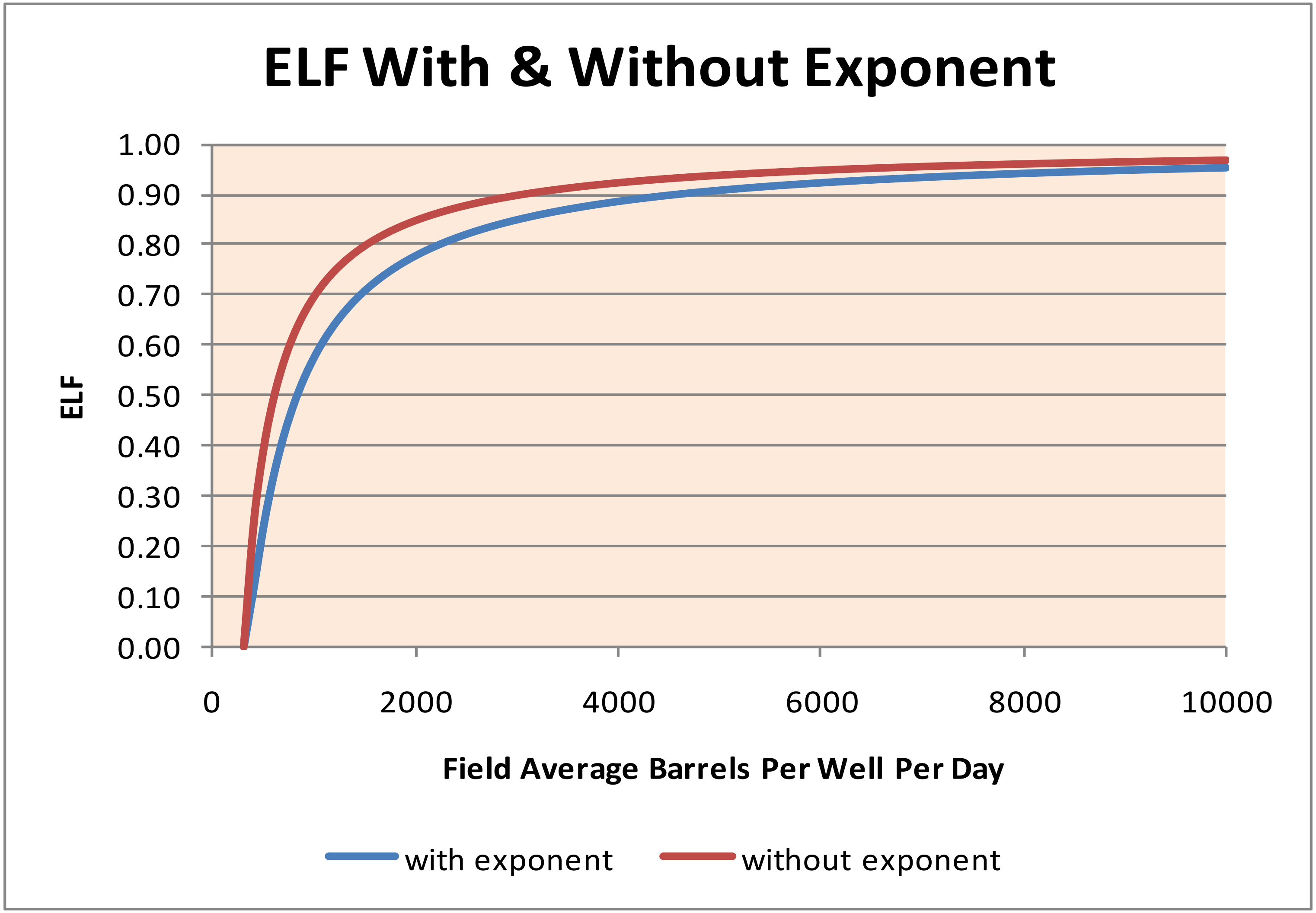
- <u>Theory</u>:
  - Economic Limit – the point where cost exceeds revenue
  - When a field is at its economic limit the burden of the tax should not cause the field to shut down
  - Scale down production tax as production declines toward economic limit so tax is zero at the economic limit
- <u>Original proposal</u>: Should not pay tax on the barrels that generate the revenue to cover operating costs at economic limit
- <u>Statute</u>: Each well gets 300 barrels per day tax free to cover operating costs at the economic limit

Original ELF Formula

(460 / 300)

[1 – (300 / Field Average Daily Well Productivity)]


ELF 1 ('77-'89)
1.00
0.90
0.80
0.70
0.60
0.50
0.40
0.30
0.20
0.10
0.00
ELF
0
2000
4000
6000
8000
10000
Field Average Barrels Per Well Per Day


ELF With & Without Exponent
1.00
0.90
0.80
0.70
0.60
0.50
0.40
0.30
0.20
0.10
0.00
ELF
0
2000
4000
6000
8000
10000
Field Average Barrels Per Well Per Day
with exponent
without exponent

Application

- ELF: a fraction between 0 and 1
- <u>Between 1977-1981</u>
  - Applied to nominal tax rate of 12.25% of gross
  - For example, if the ELF was 0.5, the effective rate would be 6.125%
- <u>Between 1981-1989 (Changes made in association with changes in state corporate income tax)</u>
  - Applied to nominal tax rate of 12.25% of gross for first five years of a field
  - 15% of gross thereafter
  - "Rounding rule": for the first 10 years of a field, if the ELF is greater than 0.7, it gets rounded up to 1.0

Problems with ELF I

- The 300 barrels is arbitrary as far as revenue to cover operating costs
- Drilling wells reduces the tax rate
- Field decline reduces the tax rate

Late 1980s Convergence of Issues

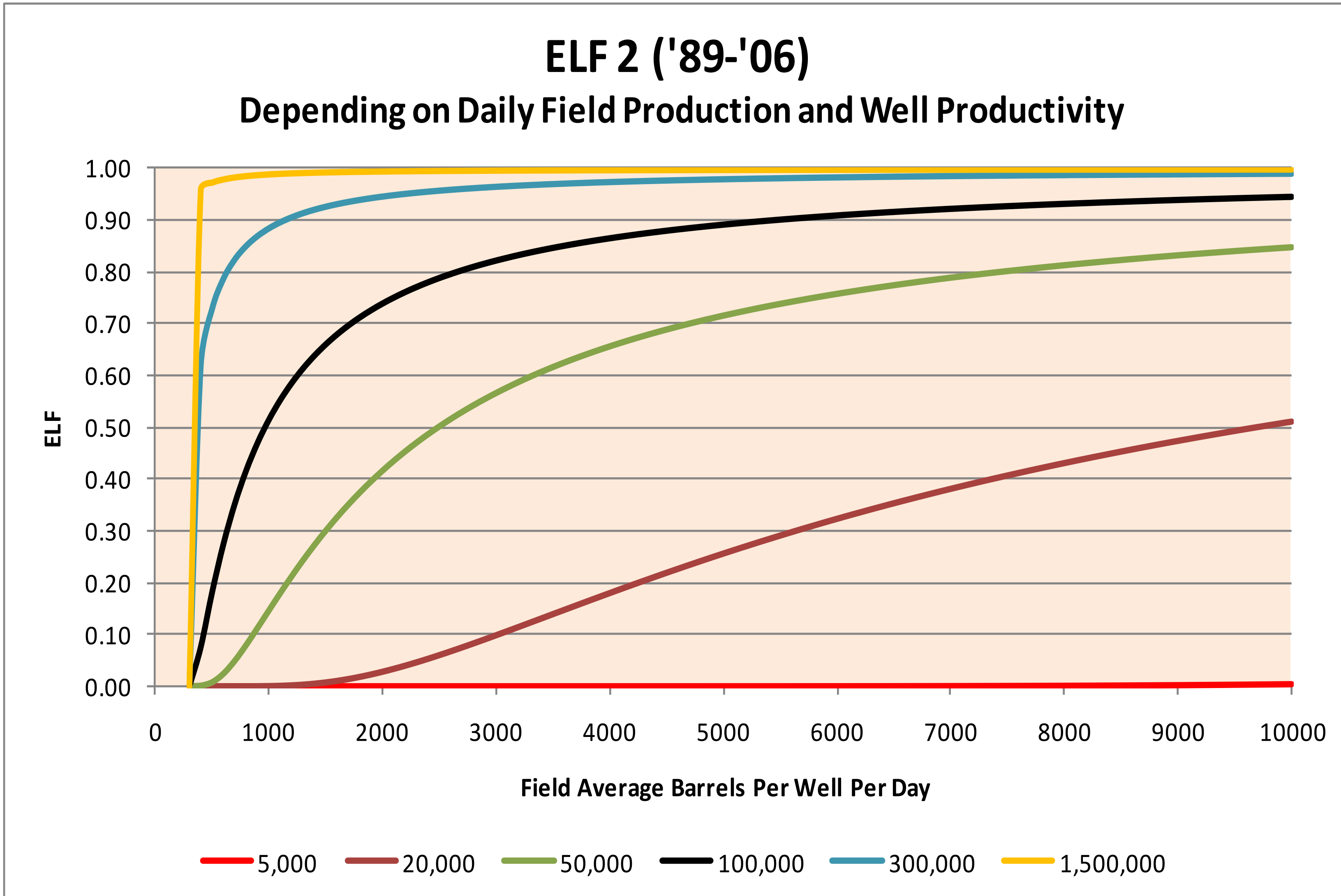
- Oil prices crashed in 1986
- Production was declining
- ELF was declining
  - 10 year rounding rule for Prudhoe Bay goes out

ELF II (1989-2006)

(460/300)

[(150,000/Daily Field Production ^]

[1–(300/Well Productivity) ^]



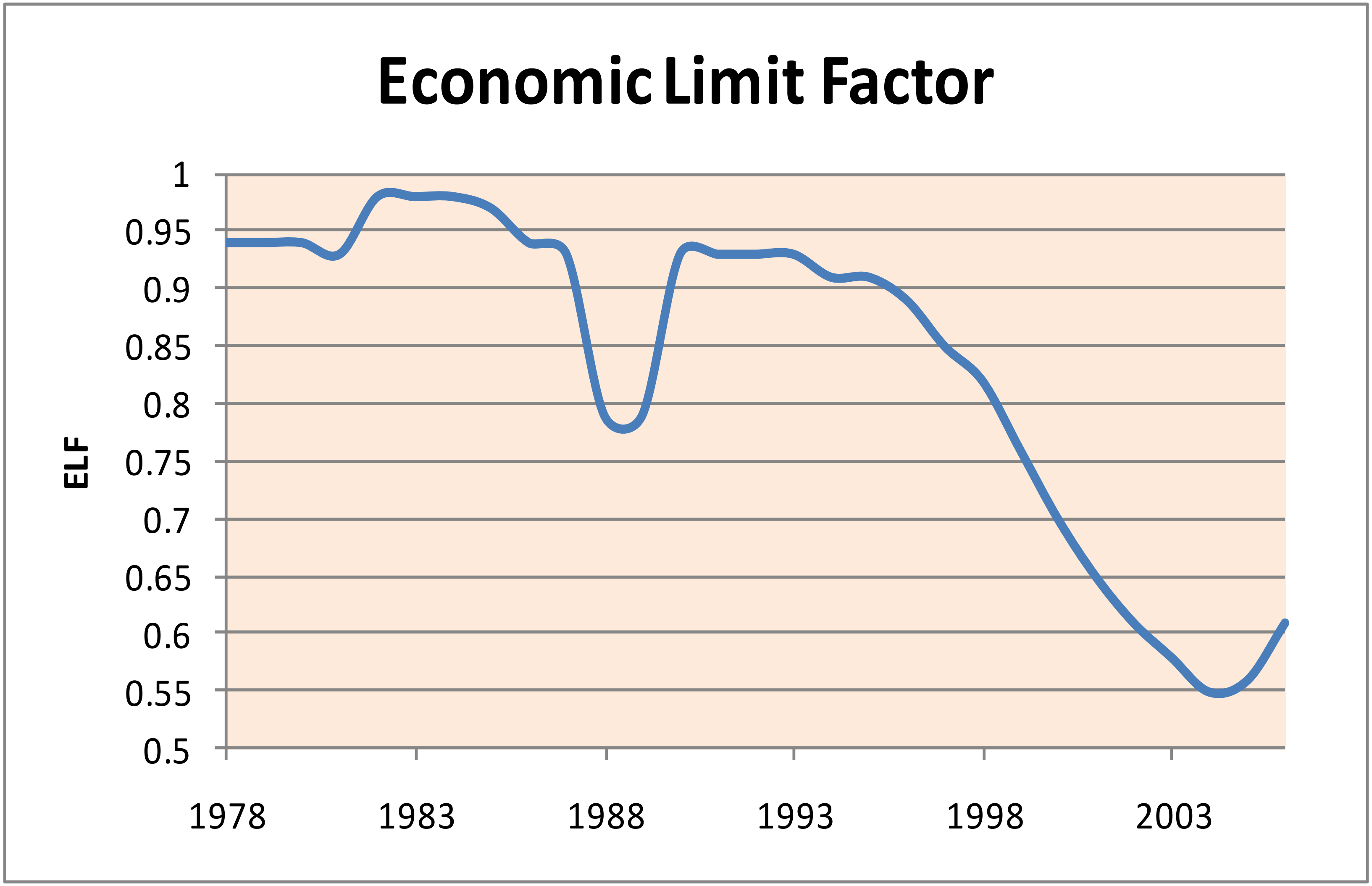
ELF 2 ('89-'06)
Depending on Daily Field Production and Well Productivity
ELF
1.00
0.90
0.80
0.70
0.60
0.50
0.40
0.30
0.20
0.10
0.00
0
1000
2000
3000
4000
5000
6000
7000
8000
9000
10000
Field Average Barrels Per Well Per Day
5,000
20,000
50,000
100,000
300,000
1,500,000

Problems with ELF II

- Same problems as ELF 1
  - Field size declines
  - Well productivity declines
  - Tax rate declines regardless of price
- Proliferation of field satellites

The Big Question:
What does “economically interdependent” mean?

- Conditions for advanced ruling not to aggregate:
  - If shared facilities reduce costs
  - If advanced ruling enhances likelihood of development
  - If oil from each field will be accurately measured
  - If shared facilities is only factor making fields interdependent
- Requests came in and Department granted some of them
  - By 2000 had not granted for Prudhoe Bay
  - Understanding of satellite development evolving
- “Economic interdependence” undefined
- Prudhoe Bay and satellites aggregated in 2005



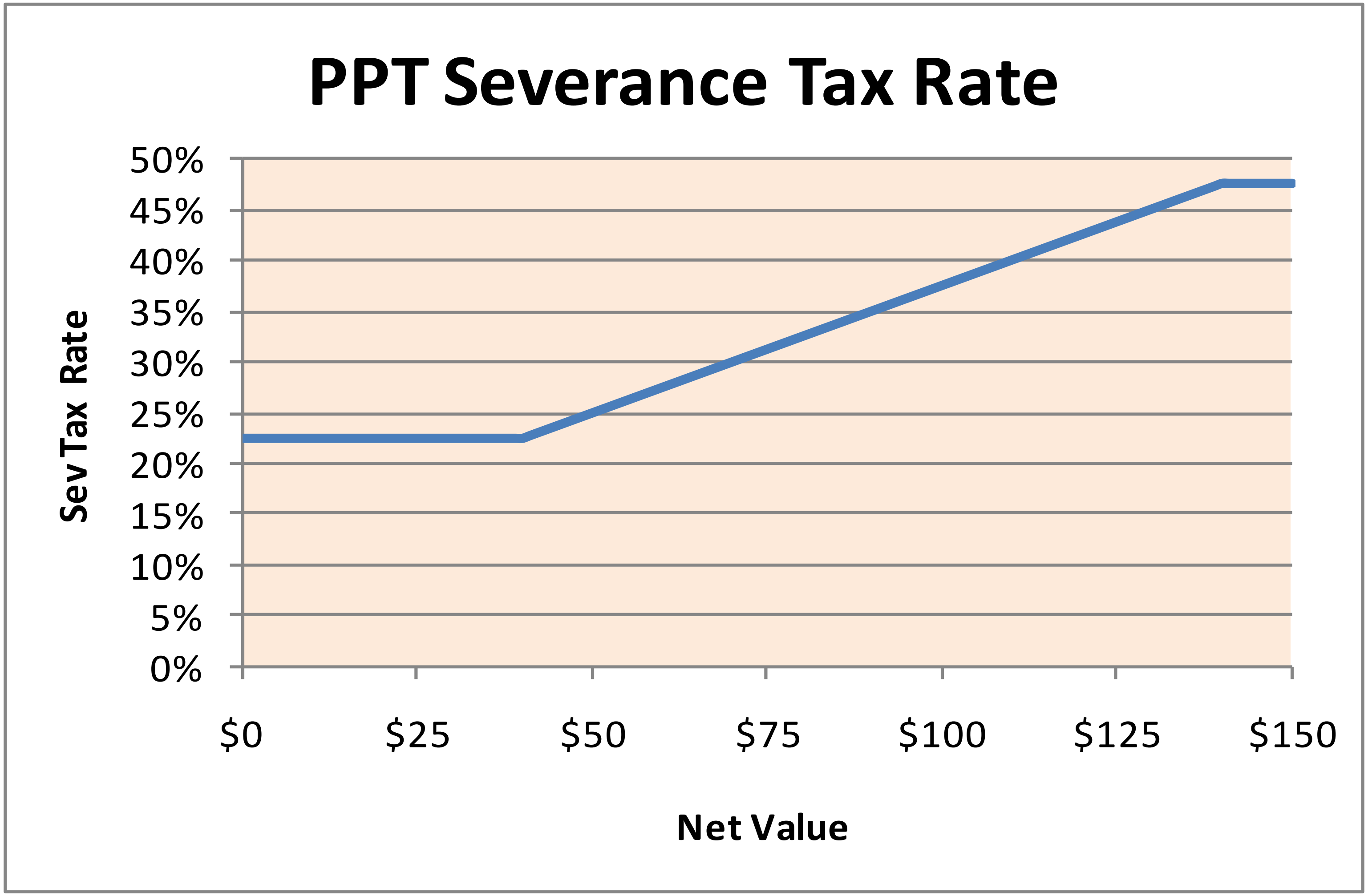
Economic Limit Factor
ELF
1
0.95
0.9
0.85
0.8
0.75
0.7
0.65
0.6
0.55
0.5
1978
1983
1988
1993
1998
2003

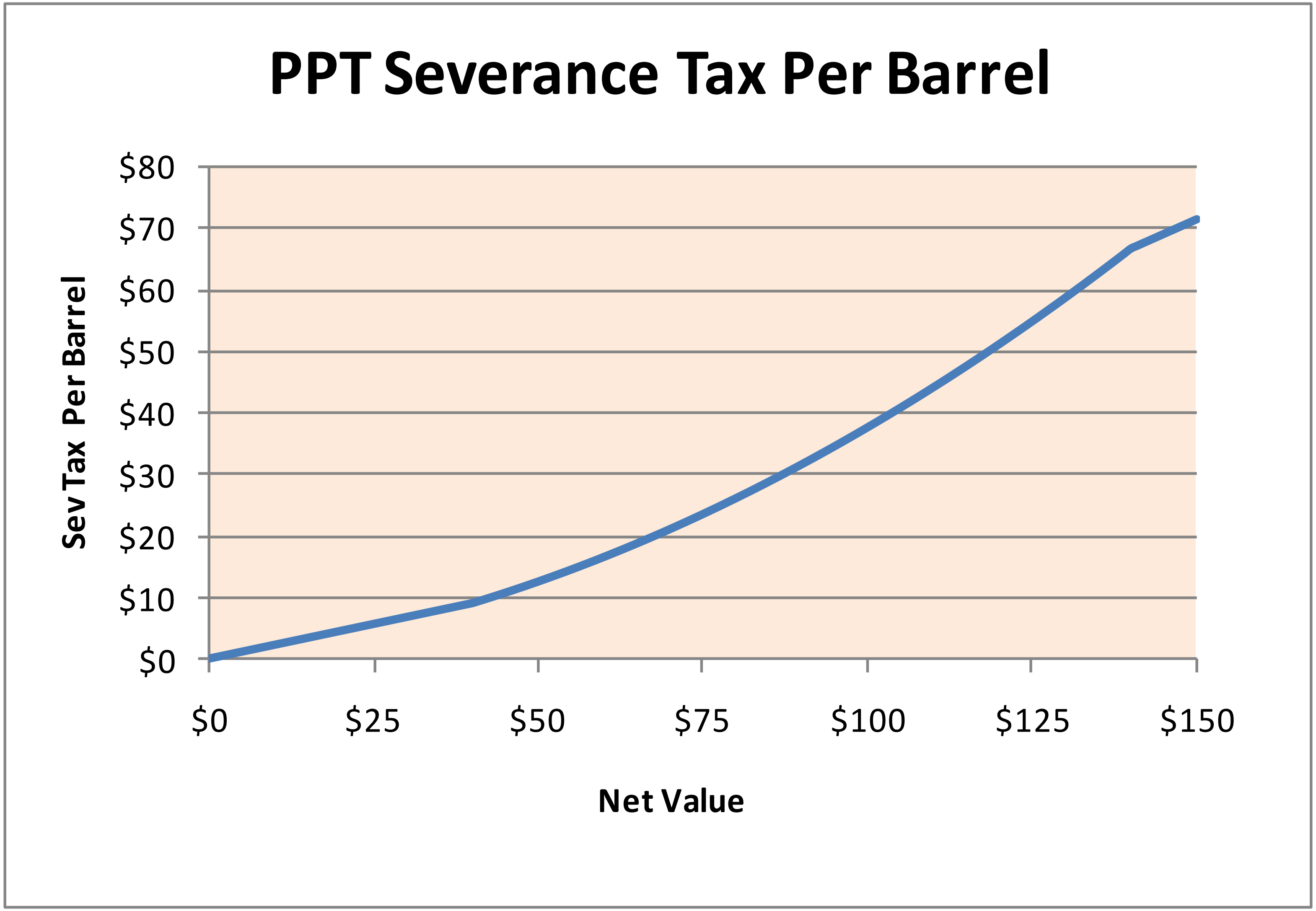
Stranded Gas Development Act (SGDA) Leads to PPT

- Producers wanted fiscal stability for oil
- SGDA did not authorize that
- Administration negotiated new oil tax system
- Administration sought to amend SGDA
- Legislature took negotiated product as starting point for amending severance tax statute

Petroleum Profits Tax ("PPT") 2006-2007

- Base rate of 22.5% of net value (after deducting all costs)
- Progressivity element when net value per barrel exceeds $40/bbl:
  - (Net value per barrel value - $40) X .0025
- So if oil price is $90/bbl:
  - Net value per barrel is about $61/bbl
  - Progressivity = ($61 - $40) X .0025 = 7.75%
  - Total tax rate = 22.5% + 5.25% = 27.75%
  - Tax is 27.75% X $61 = $16.93/bbl


PPT Severance Tax Rate
50%
45%
40%
35%
30%
25%
20%
15%
10%
5%
0%
SevTax Rate
$0
$25
$50
$75
$100
$125
$150
Net Value

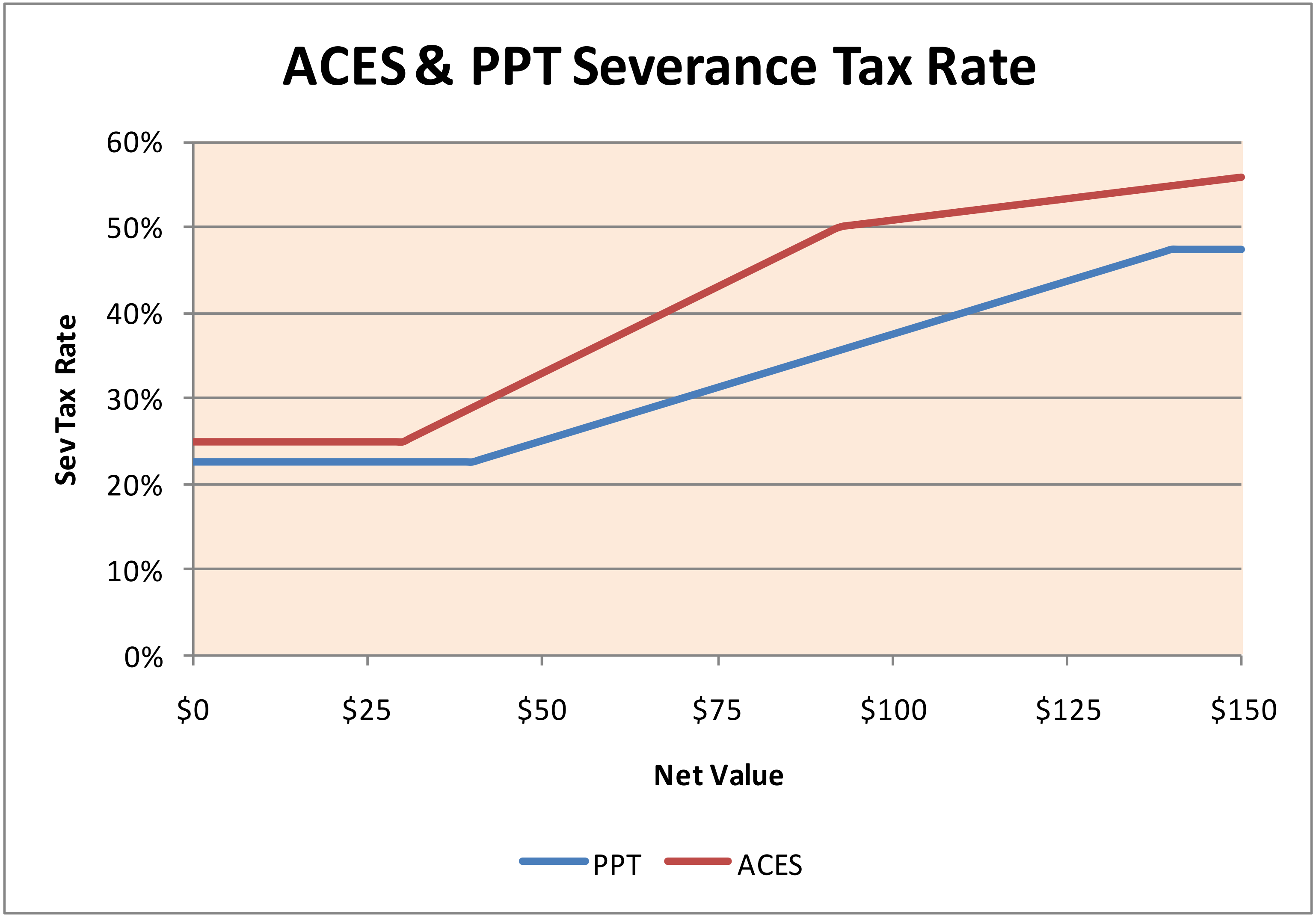

PPT Severance Tax Per Barrel
SevTax Per Barrel
$80
$70
$60
$50
$40
$30
$20
$10
$0
$0
$25
$50
$75
$100
$125
$150
Net Value

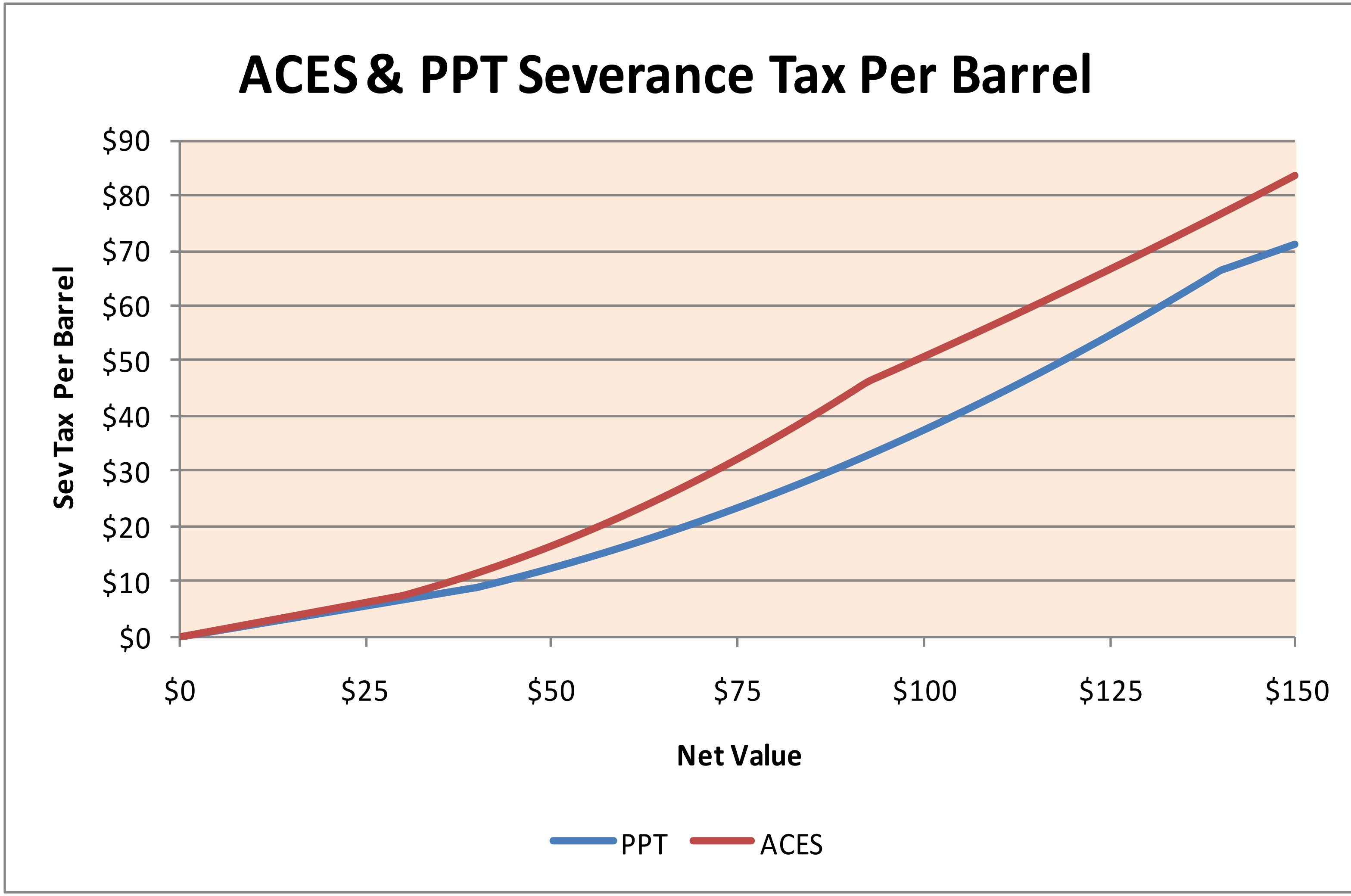
Problems with PPT

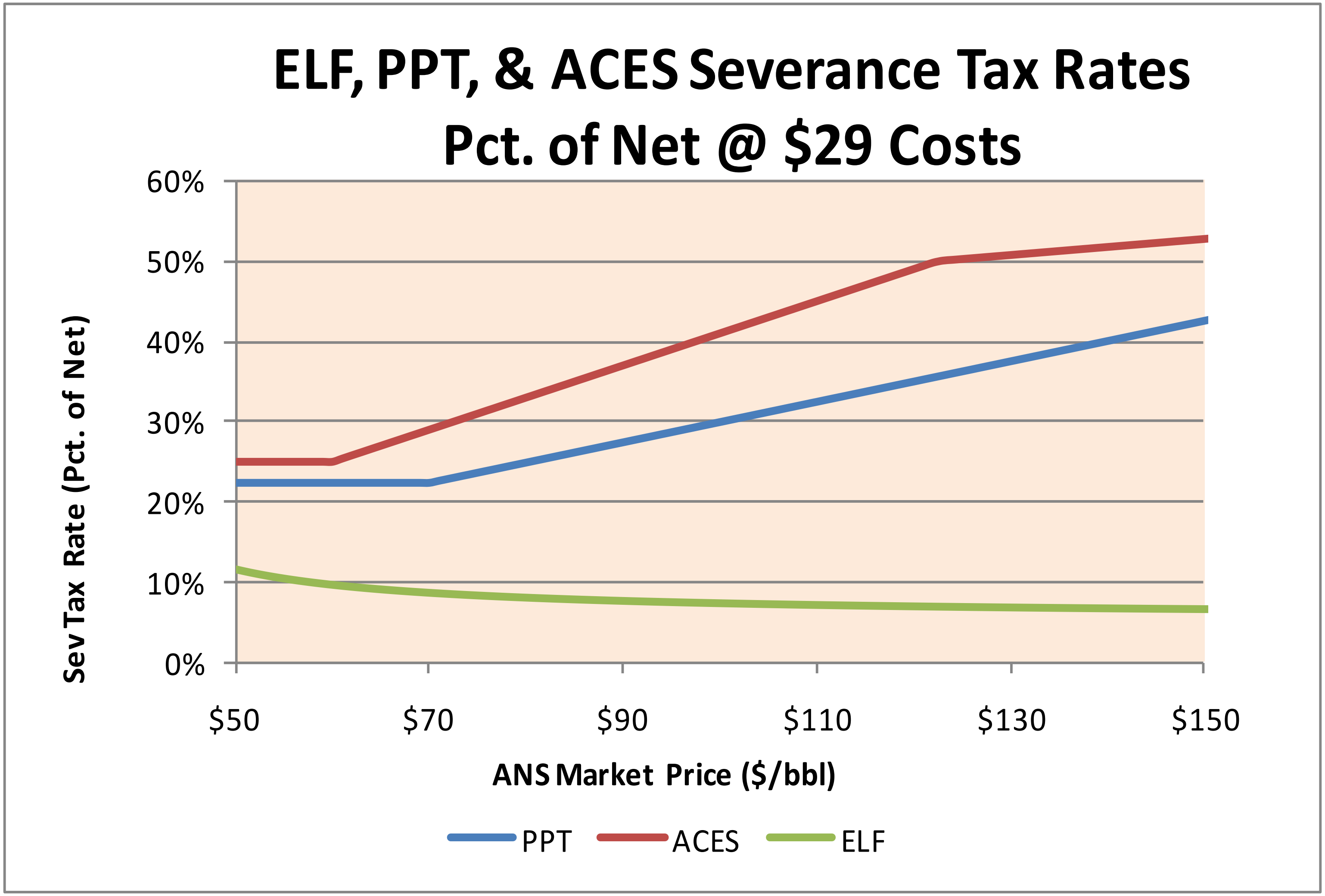
- Costs came in more than expected
- Revenues came in less than expected
- VECO taint

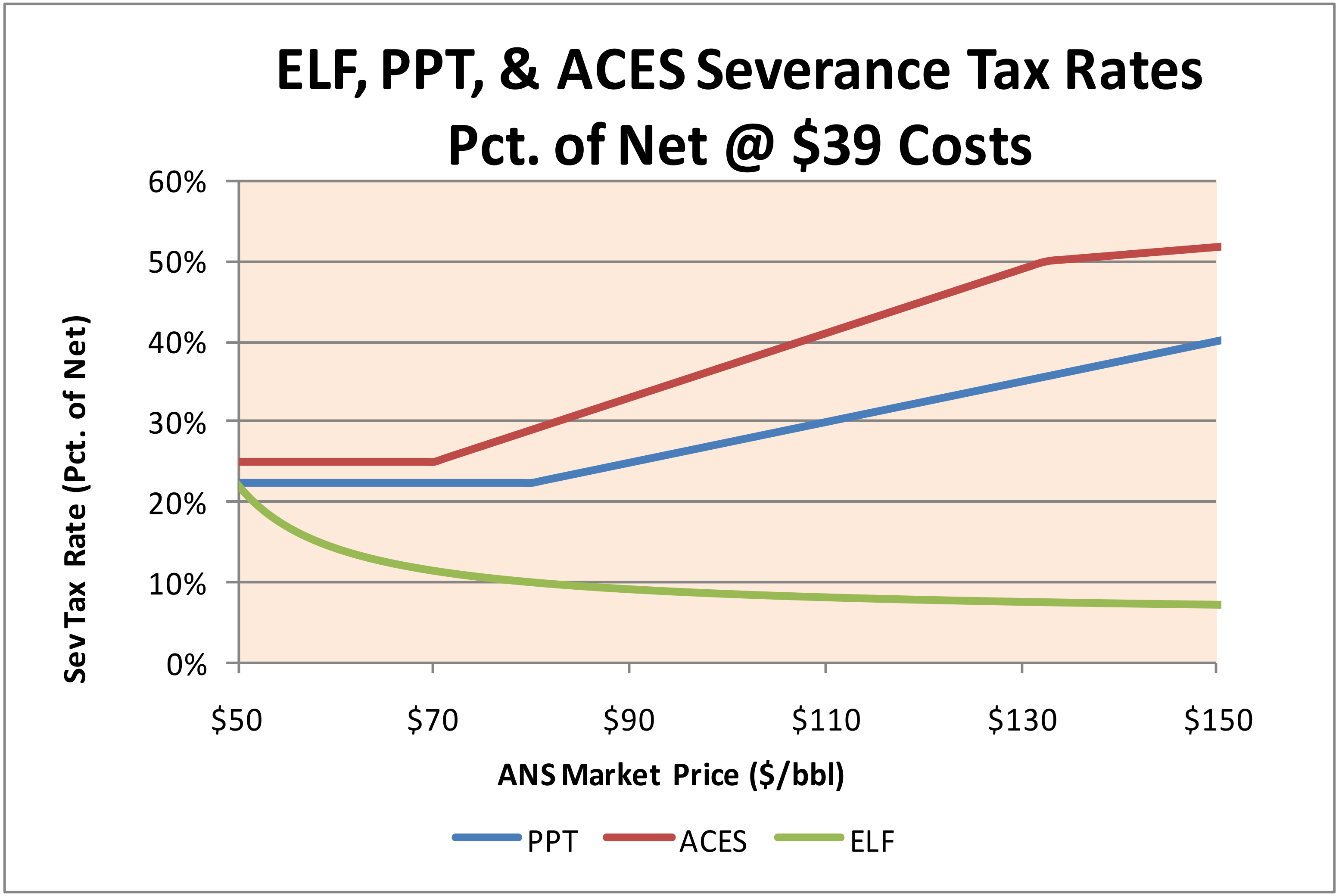
Alaska's Clear & Equitable Share ("ACES") 2007-Present

- Base rate of 25% of net value (after deducting all costs)
- Progressivity element when net value per barrel exceeds $30/bbl:
  - (Net value per barrel value - $30) X .004
- So if oil price is $90/bbl:
  - Net value per barrel is about $61/bbl
  - Progressivity = ($61 - $30) X .004 = 12.4%
  - Total tax rate = 25% + 12.4% = 37.4%
  - Tax is 37.4% X $61 = $22.81/bbl


ACES & PPT Severance Tax Rate
60%
50%
40%
30%
20%
10%
0%
Sev Tax Rate
$0
$25
$50
$75
$100
$125
$150
Net Value
PPT
ACES


ACES & PPT Severance Tax Per Barrel
$90
$80
$70
$60
$50
$40
$30
$20
$10
$0
Sev Tax Per Barrel
$0
$25
$50
$75
$100
$125
$150
Net Value
PPT
ACES


ELF, PPT, & ACES Severance Tax Rates
Pct. of Net @ $29 Costs
60%
50%
40%
30%
20%
10%
0%
Sev Tax Rate (Pct. of Net)
$50
$70
$90
$110
$130
$150
ANS Market Price ($/bbl)
PPT
ACES
ELF

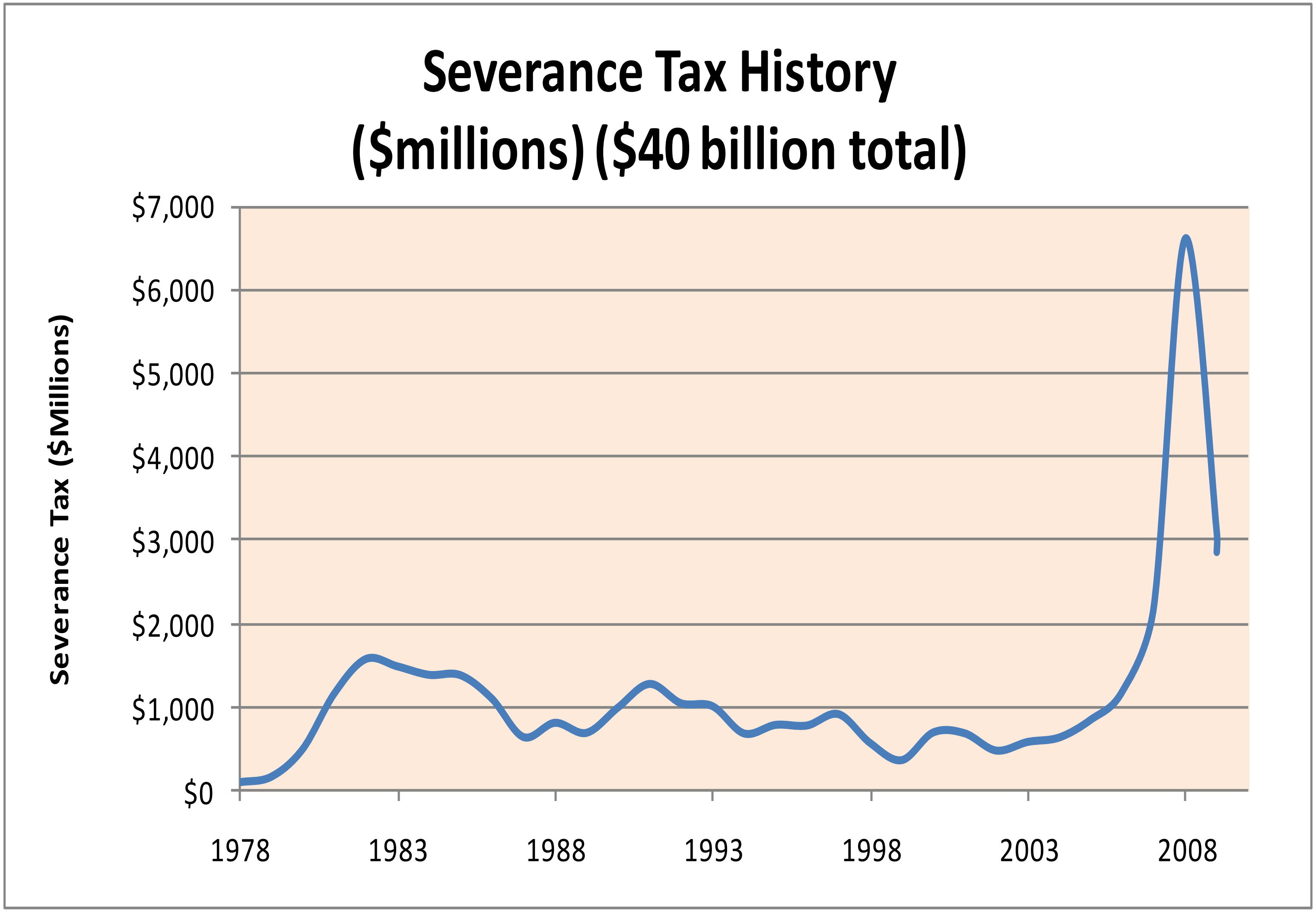

ELF, PPT, & ACES Severance Tax Rates
Pct. of Net @ $39 Costs
60%
50%
40%
30%
20%
10%
0%
Sev Tax Rate (Pct. of Net)
$50
$70
$90
$110
$130
$150
ANS Market Price ($/bbl)
PPT
ACES
ELF

Credits Overview

- Capital credit (20%)
- Well lease expenditure credit (excl. North Slope) (40%)
- Exploration credit (20% - 40% depending on location) (expire 2016)
- Small company credit ($12 million if sufficient offsetting income) (exp. 2016)
- Explore Cook Inlet pre-Tertiary zone w/jack-up rig
  - First: 100% up to $25.0 mm
  - Second: 90% up to $22.5 mm
  - Third: 80% up to $20.0 mm
  - 50% of credit reimbursed if commercial production
- Loss carry-forward credit of 25% of annual loss

Monetizing Credits
(If insufficient offsetting income)

- Can keep until sufficient offsetting income
- Can sell credits to other taxpayers
- State buy credits if produce under 50,000 bbls/day


Severance Tax History
($millions) ($40 billion total)
Severance Tax ($Millions)
$7,000
$6,000
$5,000
$4,000
$3,000
$2,000
$1,000
$0
1978
1983
1988
1993
1998
2003
2008