

NEW SUSTAINABLE  
**ALASKA**  
PLAN



*Pulling Together to Build Our Future*

# **Alaska's Oil and Gas Taxation – CSHB 111(RES)\N**

***Lifecycle Scenario Analysis***

***Presentation to House Finance Committee***

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# *What Will Be Presented Today*

- Summary of CSHB 111(RES)\N Impacts on Modeling
- Modeling Assumptions
- Scenario Analysis - economics of changes
  - Status Quo (HB247) Lifecycle analysis of two potential new North Slope fields (small and large).
  - Potential Impacts of HB111\N changes on new North Slope fields.

# What are the Major Tax Changes in HB 111\N

	Status Quo	HB111\N
<b>Net Operating Loss (NOL) Provisions</b>		
NOL Credit %	35%	0%
GVR can make NOL larger	no	no
NOL Carry Forward Loss	no	50%
NOL Loss Uplifts (7 yrs @ 7% + Fed Rate)	no	yes
<b>Per Taxable Barrel Credit Provisions (based on Wellhead Value)</b>		
Gross Value Reduction (GVR) 024i (fixed)	\$5 / bbl	\$5 / bbl
GVR limited to 3 yrs & \$70/bbl oil	yes	yes
Non-GVR 024j (sliding scale)	\$0 - \$8 / bbl	\$0, \$3-\$8 / bbl
<b>Credit Repurchases</b>		
Max Production to qualify	50,000/bpd	15,000/bpd*
Maximum per year @ 100%	\$35M	eliminated
Maximum per year @ 75%	\$35M	eliminated
<b>Minimum Tax Provisions</b>		
Min Tax % Rate based on ANS Price	4% =>\$25	4% <\$50, 5% =>\$50
Non-GVR Min Tax based on of Gross Value	yes	yes
GVR Min Tax based on Gross Value less GVR	no	yes
<b>Minimum Tax Floor (Hardening the Floor)</b>		
NOL credits against Min Tax	yes	no
GVR per barrel credits against Min Tax	yes	no
Non-GVR Sliding scale credits against Min Tax	no	no

\*This provision does not impact modeling since the only credit that a North Slope producer can earn post-1/1/18 is the NOL and the cash repurchase provision was eliminated for all producers.

## *Modeling Assumptions*

- All Fields begin development 1/1/2018
- Does not include Exploration Costs
- Includes price and cost inflation (based on Callan 2.25% rate)
- For Status Quo modeling, after GVR ends the producer opts to use their sliding scale per-taxable barrel credits, which requires tax payments not go below the minimum tax.
- For Status Quo modeling, producer opts to only apply for \$35 million of repurchasable credits per year (and forgo the additional \$35 million with the 25% “haircut”).
- Modeling assumes North Slope tax treatment.

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# **Field Lifecycle Modeling: Introduction**

# *Lifecycle Modeling Assumptions*

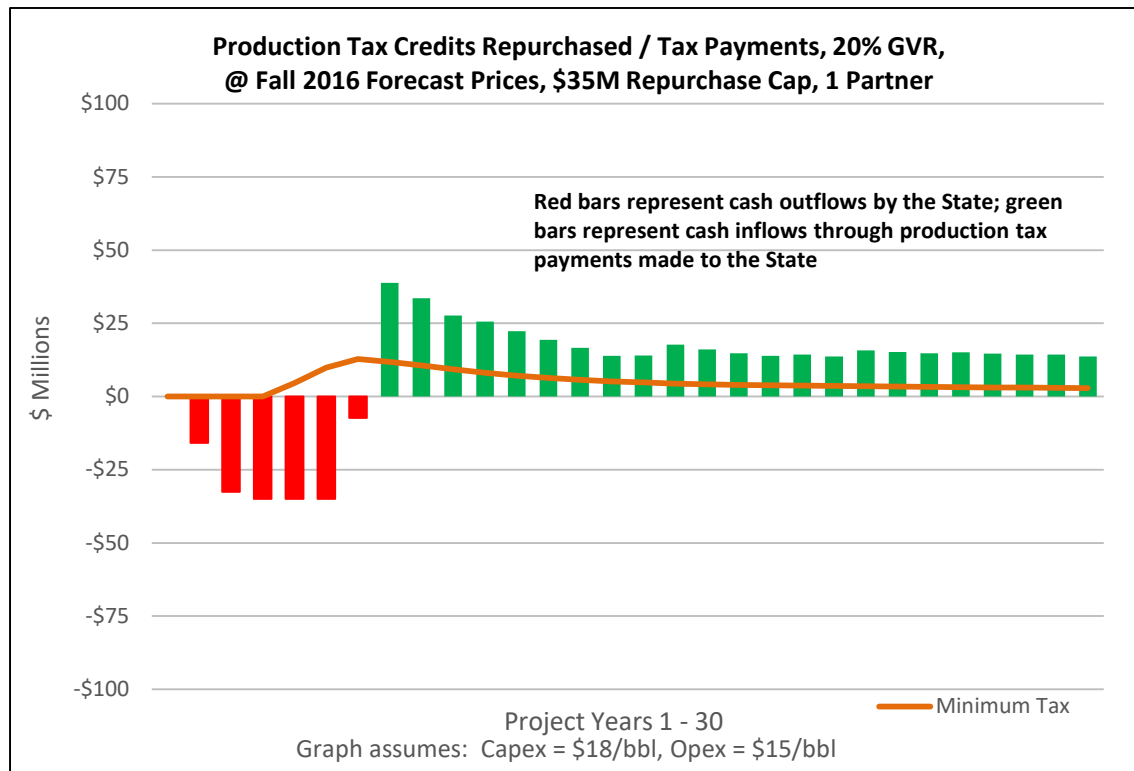
- Field Sizes Modeled:
  - 50 million barrels of oil (mmbo) field
  - 750 mmbo field
- Four Oil Prices Modeled:
  - \$40, \$60, and \$80 real (inflated)
  - Fall 2016 Forecast prices in real prices extending through life of field
- Tax Systems Modeled:
  - Status Quo
    - All Provisions
    - 1 and 4 Partner Scenarios (impacts total cash repurchase per year)
  - HB111\N

# *Lifecycle Modeling Outputs*

- Each Scenario has a Dashboard with Four Quadrants
  1. Production Tax by year
  2. State Revenue by year
  3. Producer Revenue by year
  4. Summary Economics
    - a. Total Cash Flows
    - b. NPV Analysis
    - c. Split of Profits
    - d. Split of Gross

# Dashboard – Net Production Tax

- Credits Repurchased by State
- Production Tax Paid
- Minimum Tax Calculation

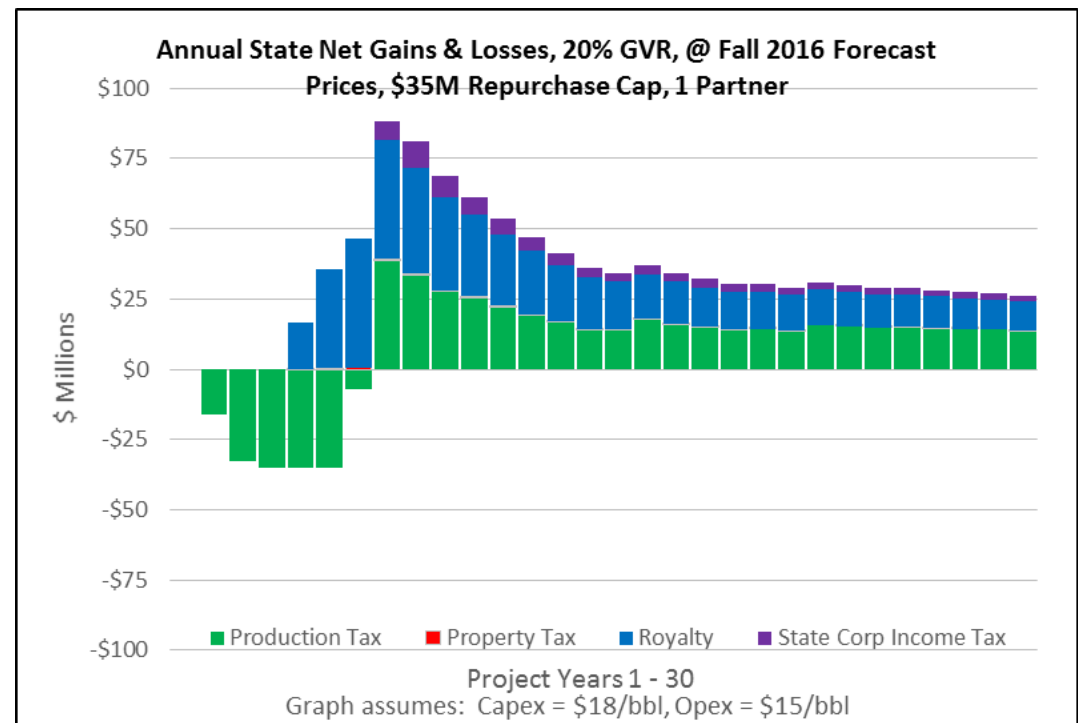




# Dashboard – State Gains & Losses

## ➤ State Revenue

- Production Tax (negative numbers are credits repurchased)
- Royalties
- State Share of Property Tax
- State Corp Income Tax



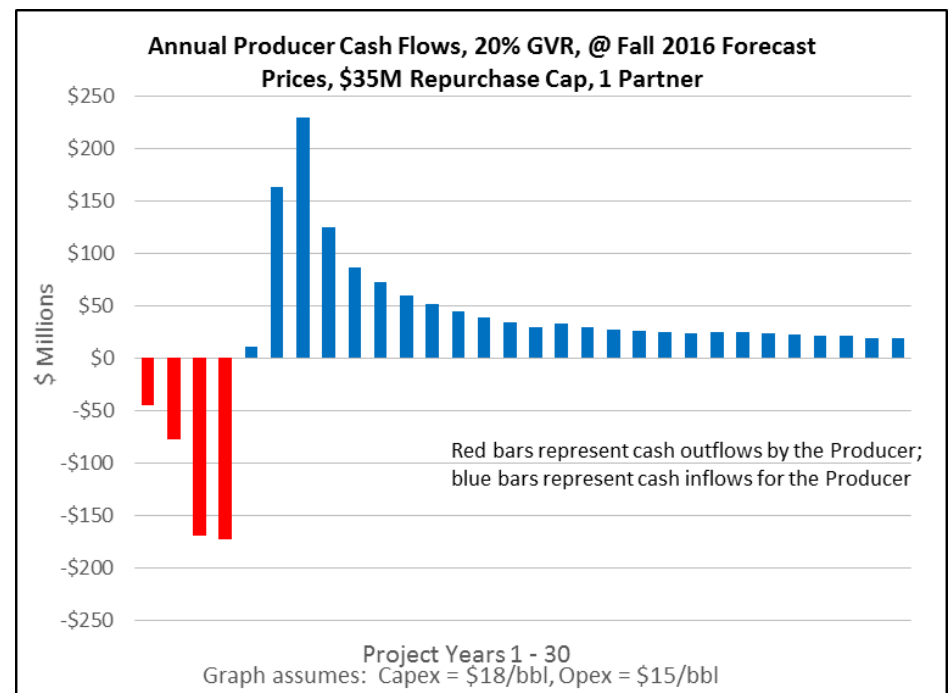
# Dashboard – Producer(s) Cash Flows

## ➤ Producer(s) Cash Outflows

- Period when net cash is negative (typically when haven't started production and have huge cash outflows).

## ➤ Producer(s) Cash Inflows

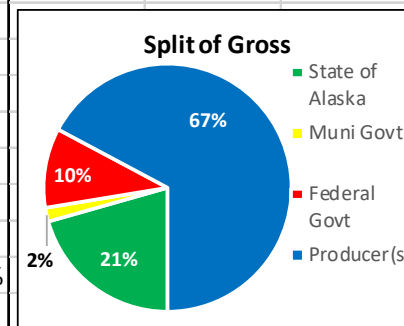
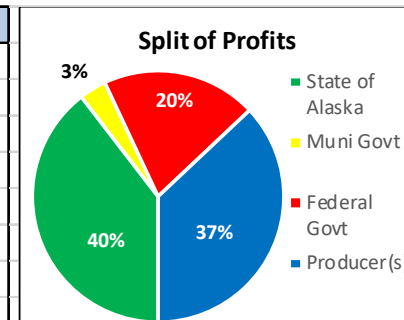
- Period when net cash is positive



# Dashboard – Summary Economics

- Total Credits
- Total State and Producer Cash Flows
- Lifecycle Totals
  - Net Present Value (NPV) of discounted cash flows for State and Producer(s).
- Split of Profits
  - By entity
- Split of Gross (wellhead value)
  - By Entity

Lifecycle Totals	
Tax Credits Repurchased = \$M	161
Production Tax Paid = \$M	420
Net Production Tax = \$M	259
Production Tax NPV @ 6.95% = \$M	26
Total Annual State Losses = \$M	102
Total Annual State Gains = \$M	972
Net State Gain (Loss) = \$M	870
State NPV @ 6.95% = \$M	281
Total Producer Cash Out = \$M	465
Total Producer Cash In = \$M	1,280
Net Producer Cash Flow = \$M	815
Producer Cash NPV @ 10.0% = \$M	104
Internal Rate of Return (IRR)	15%



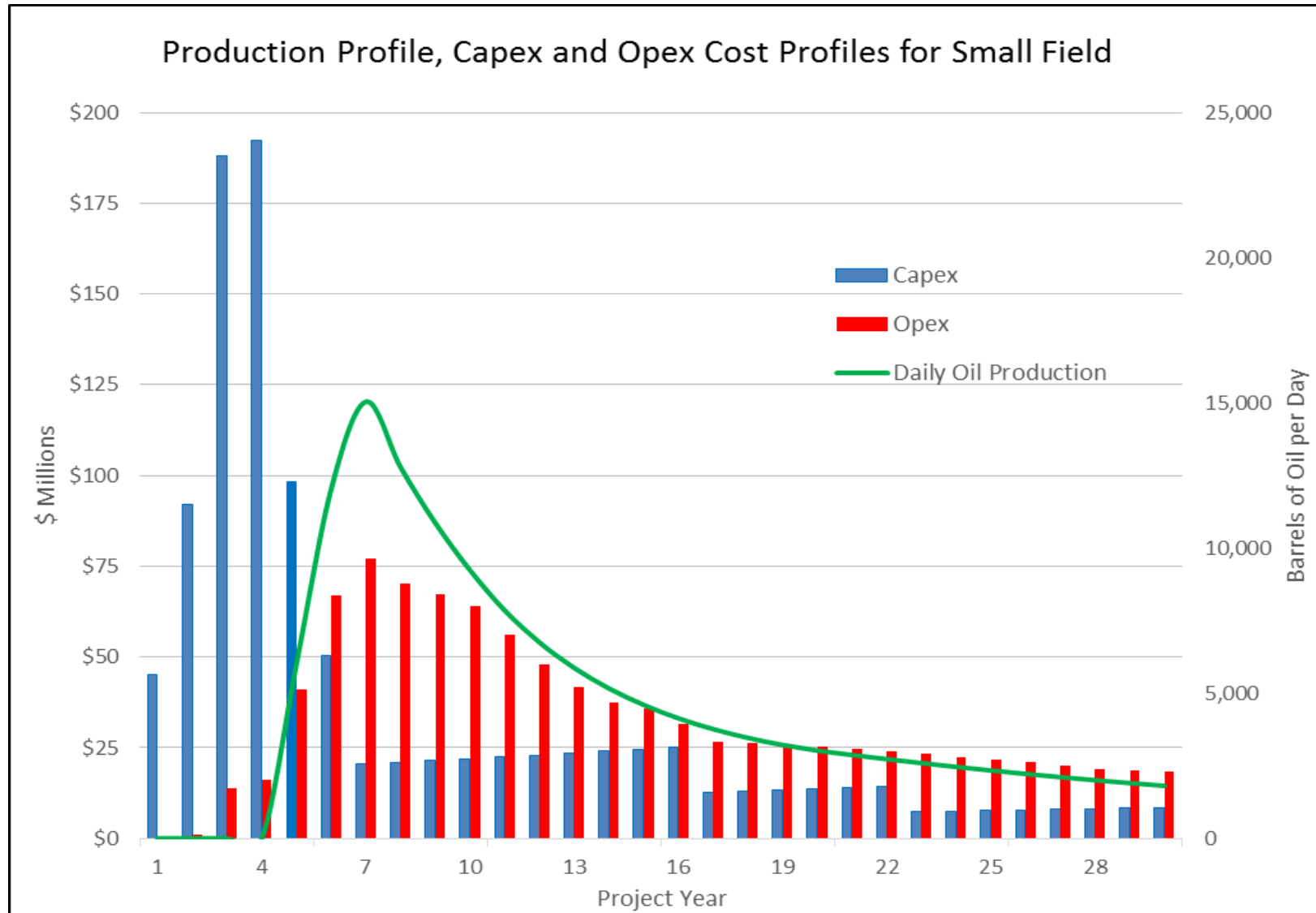
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# **Field Lifecycle Modeling: North Slope Small Field**

## **50 mmo Field Assumptions**

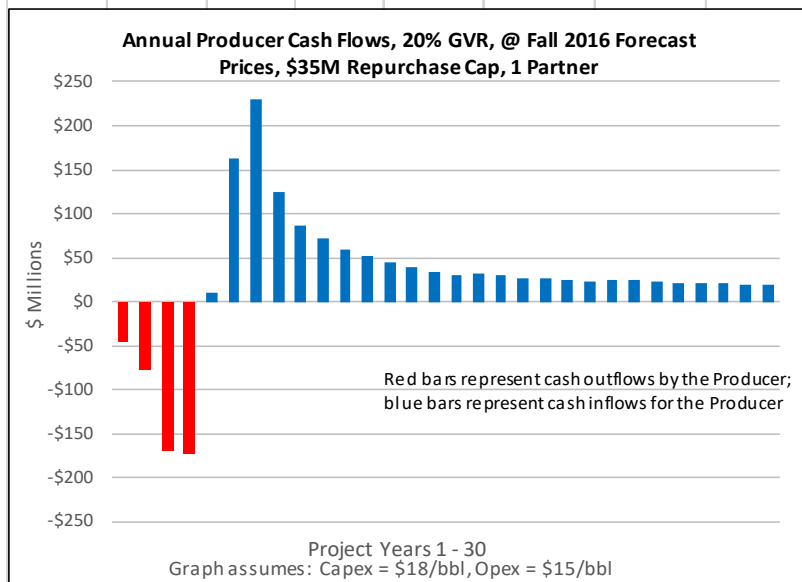
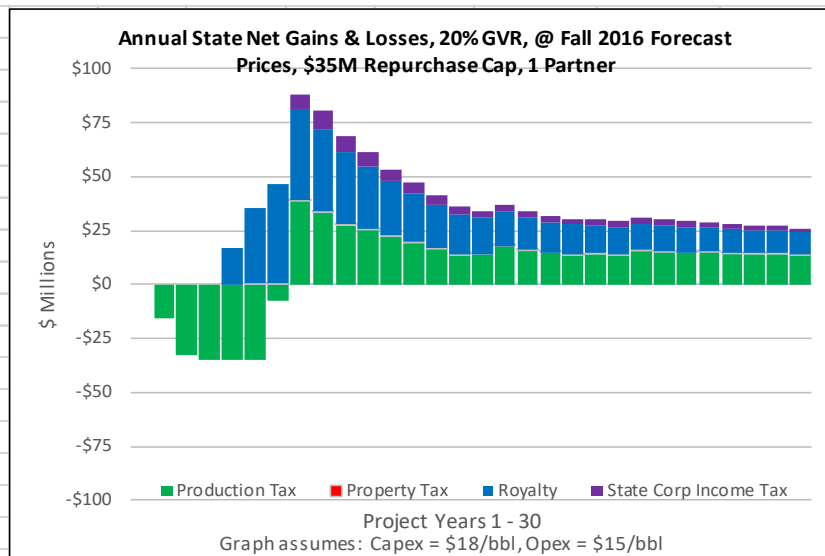
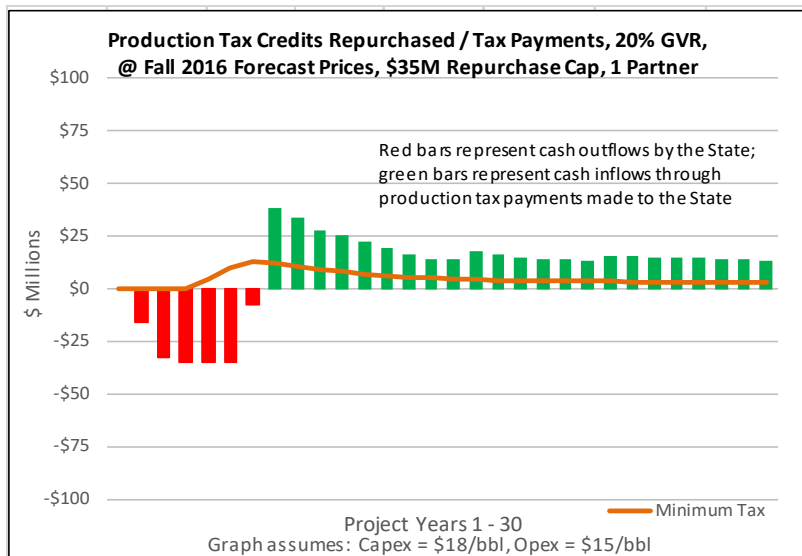
- Life of Field = 30 Years
- Peak Oil Production = ~15,000 bbls/day
- Transportation Cost = \$10 / bbl
- Royalty Rate = 12.5% (all State)
- Capital Expenditures (Capex) \$ = \$18 / bbl
- Operating Expenditures (Opex) \$ = \$15 / bbl
- Property Tax Rate = \$1.25 / bbl
- State Corp Income Tax Rate = 6.5% of remaining Production Tax Value (PTV) after Production Tax is paid
- Federal Corp Income Tax Rate = 35% of remaining PTV after State Corp Income Tax is paid

# Profile Curves – Small Field

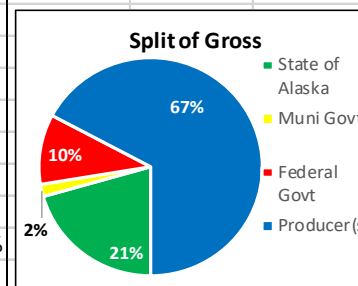
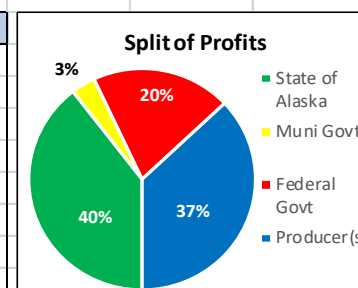


# Lifecycle Modeling – Small Field (GVR @ 20%)

## 50 mmbo, Status Quo, Fall 2016 Forecast Prices, 1 Partner

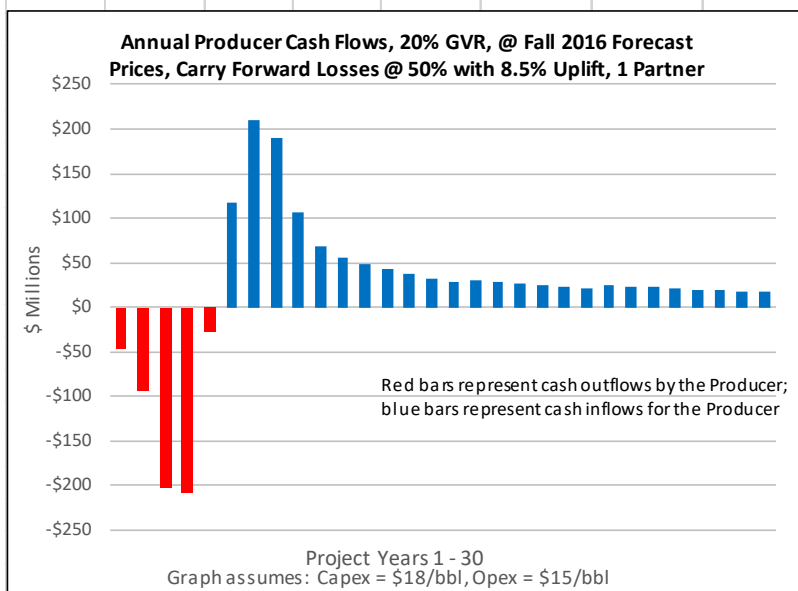
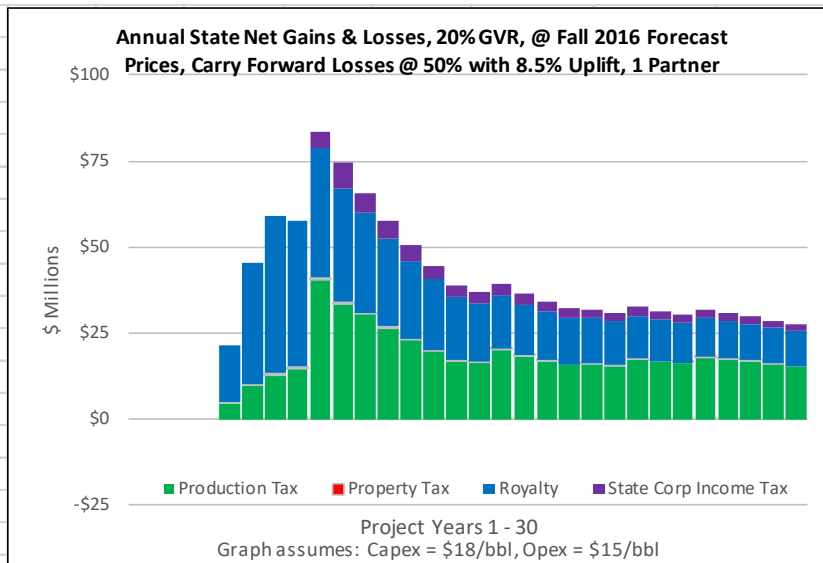
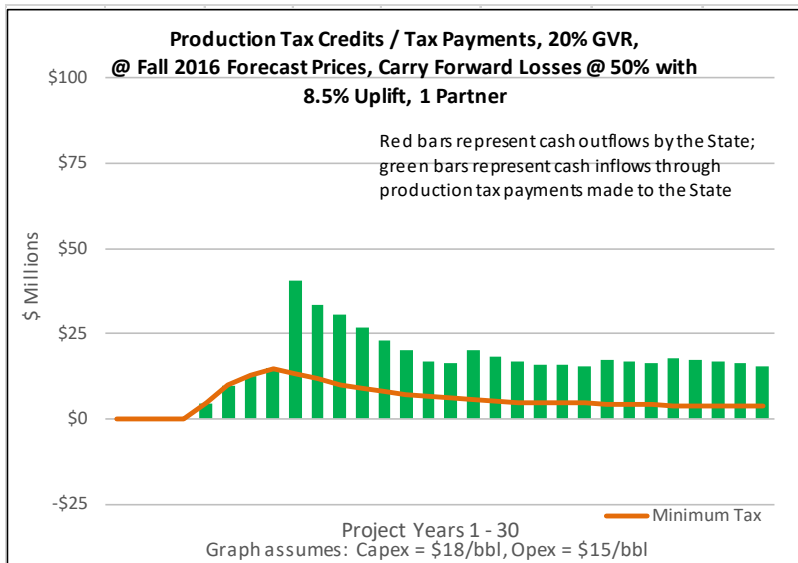


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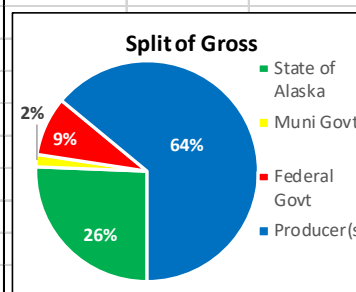
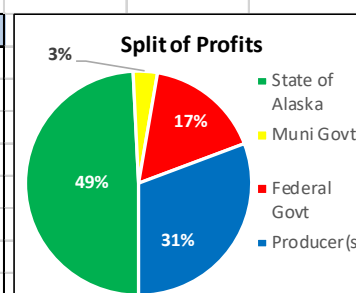


# Lifecycle Modeling – Small Field (GVR @ 20%)

## 50 mmbo, HB111\N, Fall 2016 Forecast Prices, 1 Partner



Lifecycle Totals	
Tax Credits Repurchased = \$M	0
Production Tax Paid = \$M	487
Net Production Tax = \$M	487
Production Tax NPV @ 6.95% = \$M	173
Total Annual State Losses = \$M	0
Total Annual State Gains = \$M	1,083
Net State Gain (Loss) = \$M	1,083
State NPV @ 6.95% = \$M	420
Total Producer Cash Out = \$M	577
Total Producer Cash In = \$M	1,254
Net Producer Cash Flow = \$M	677
Producer Cash NPV @ 10.0% = \$M	13
Internal Rate of Return (IRR)	11%

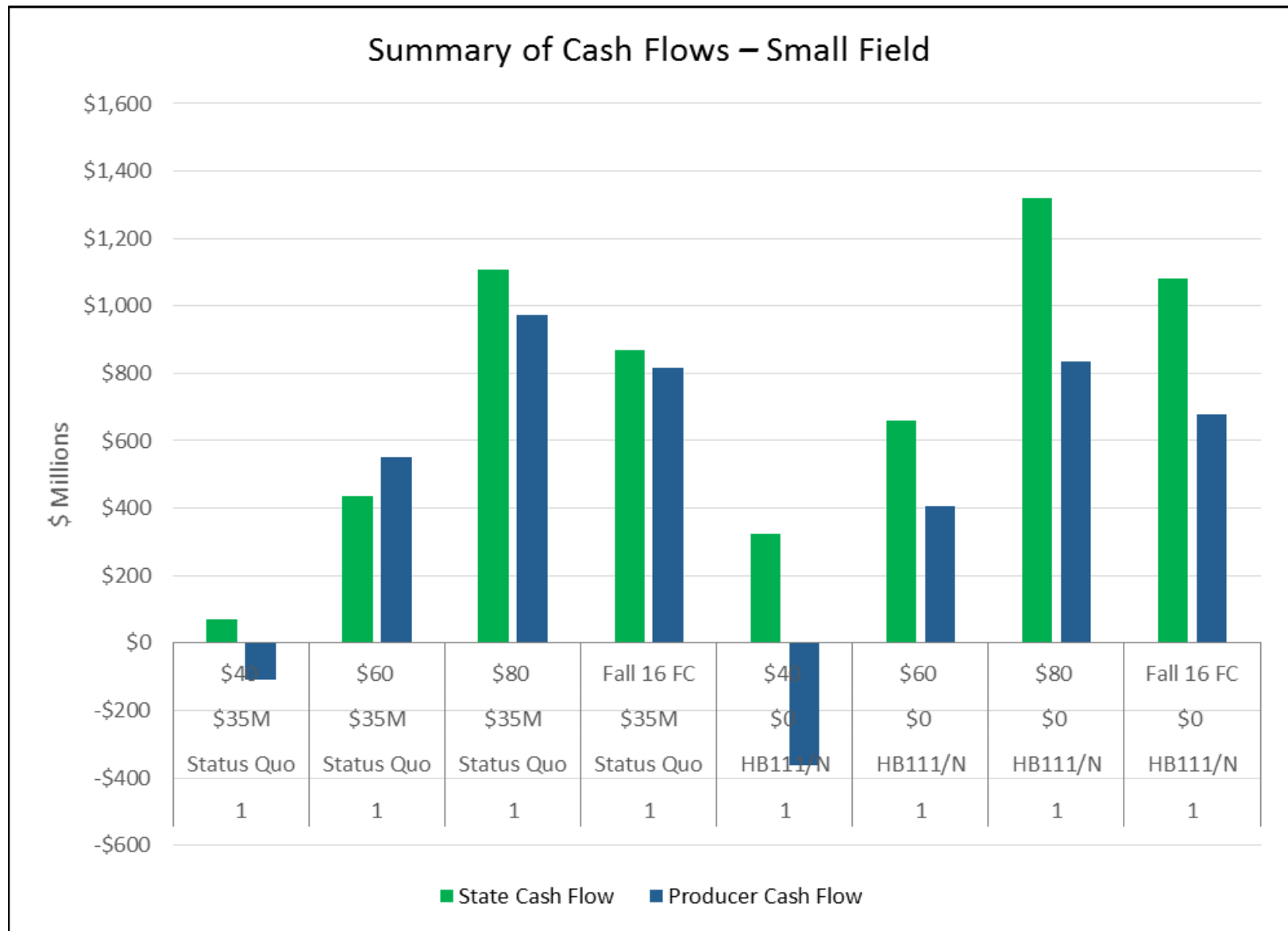




# Summary Table – Small Field

Field Size (million bbl)	# Partners	Tax Regime	Credit Repurchase Limit	Oil Price	Credits Repurchase (\$millions)	Net Production Tax Paid (\$millions)	Production Tax NPV 6.95% (\$millions)	Net State Gain (Loss) (\$millions)	State NPV 6.95% (\$millions)	Producer Cash Flow (\$millions)	Producer NPV 10.0% (\$millions)	Producer IRR (%)
50	1	Status Quo	\$35M	\$40	219	(183)	(145)	71	(36)	(109)	(217)	-3%
50	1	Status Quo	\$35M	\$60	185	(41)	(89)	437	113	550	23	11%
50	1	Status Quo	\$35M	\$80	153	420	99	1,108	390	972	170	18%
50	1	Status Quo	\$35M	Fall 16 FC	161	259	26	870	281	815	104	15%
50	1	HB111/N	0	\$40	0	72	29	326	138	(363)	(367)	-7%
50	1	HB111/N	0	\$60	0	197	69	659	263	406	(78)	7%
50	1	HB111/N	0	\$80	0	645	241	1,318	525	836	84	13%
50	1	HB111/N	0	Fall 16 FC	0	487	173	1,083	420	677	13	11%

# Summary Results – Small Field



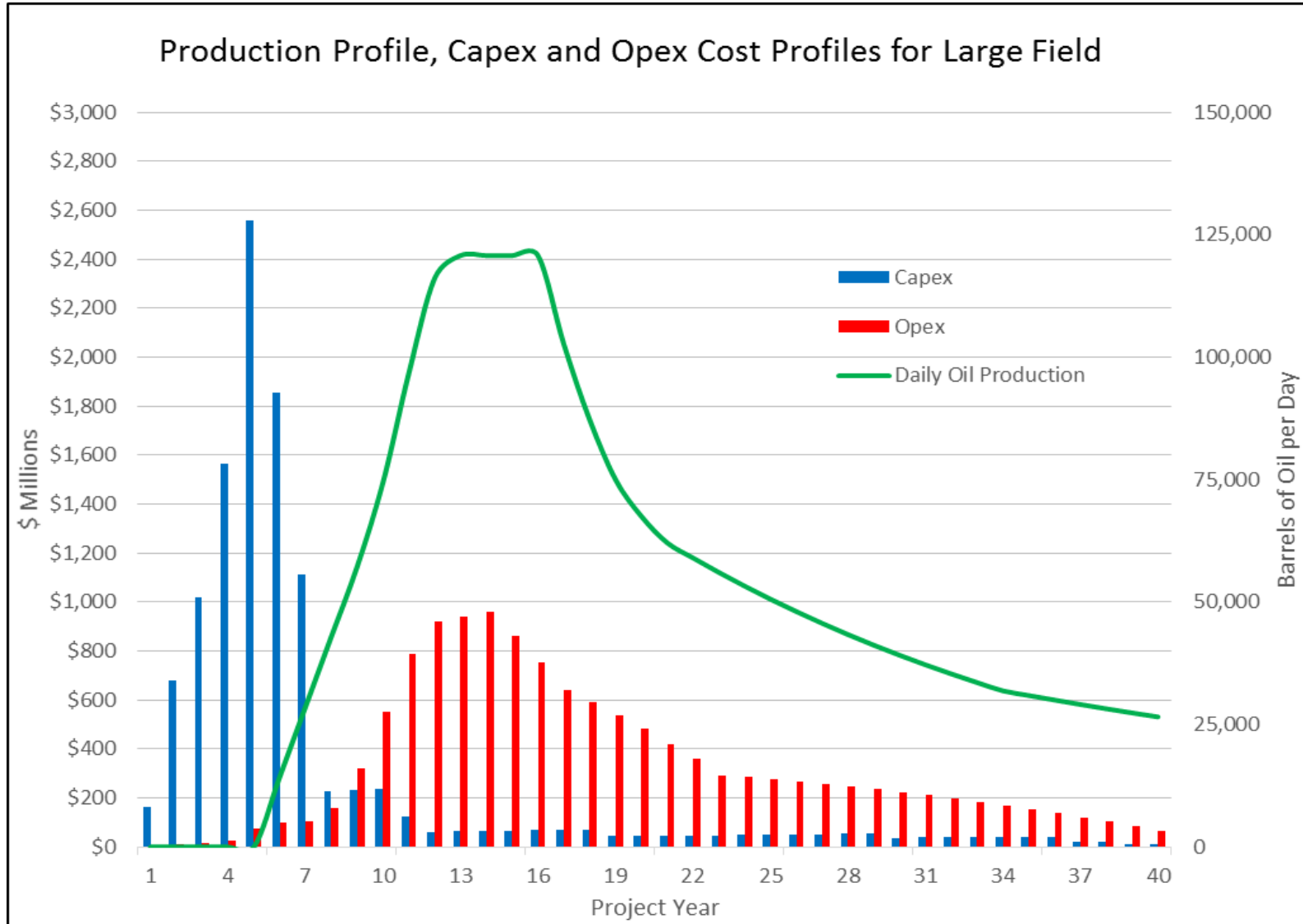
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# **Field Lifecycle Modeling: North Slope Large Field**

## **750 mmo Field Assumptions**

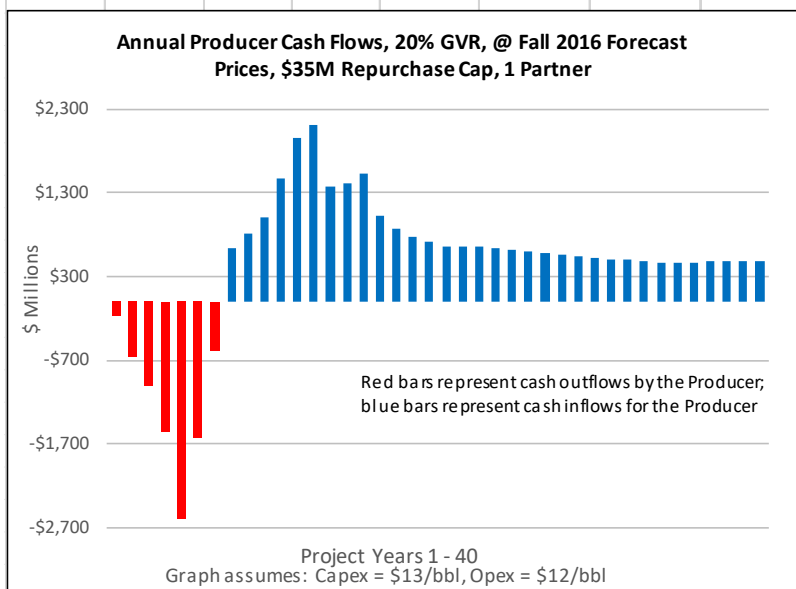
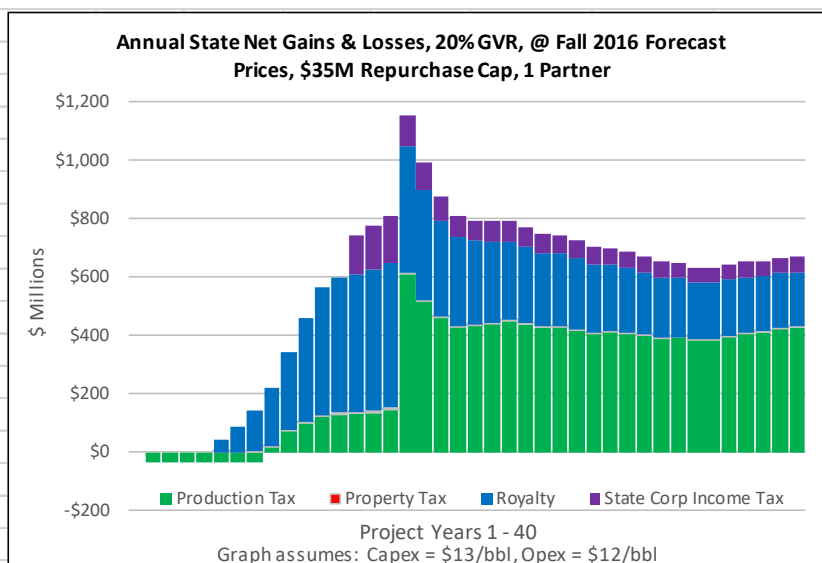
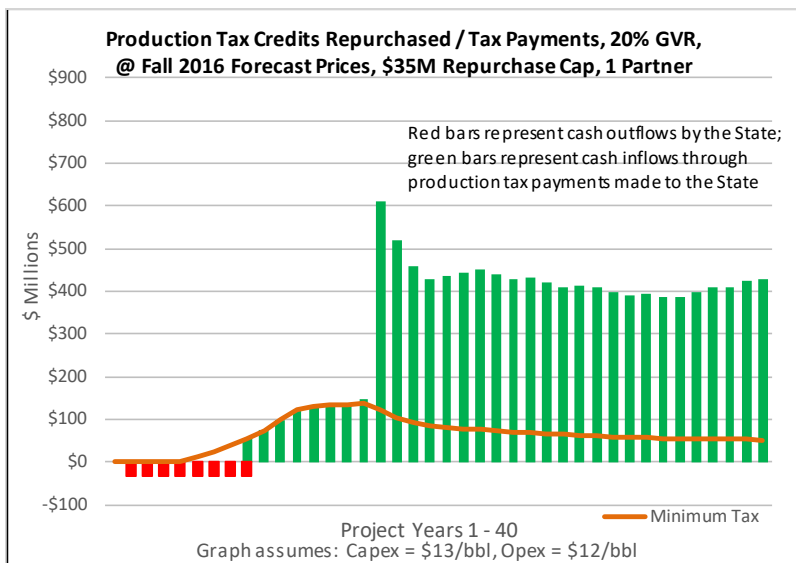
- Life of Field = 40 Years
- Peak Oil Production = ~120,000 bbls/day
- Transportation Cost = \$10 / bbl
- Royalty Rate = 12.5% (all State)
- Capex \$ = \$13 / bbl
- Opex \$ = \$12 / bbl
- Property Tax Rate = \$1.25 / bbl
- State Corp Income Tax Rate = 6.5% of remaining Production Tax Value (PTV) after Production Tax is paid
- Federal Corp Income Tax Rate = 35% of remaining PTV after State Corp Income Tax is paid

# Profile Curves – Large Field

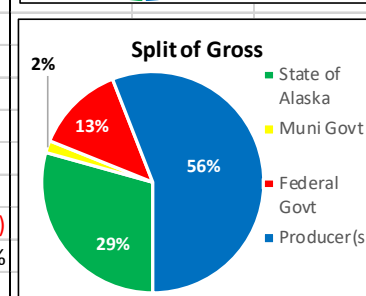
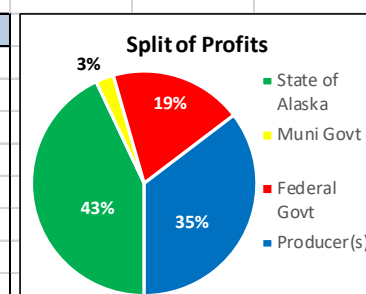


# Lifecycle Modeling – Large Field (GVR @ 20%)

## 750 mmbo, Status Quo, Fall 2016 Forecast Prices, 1 Partner



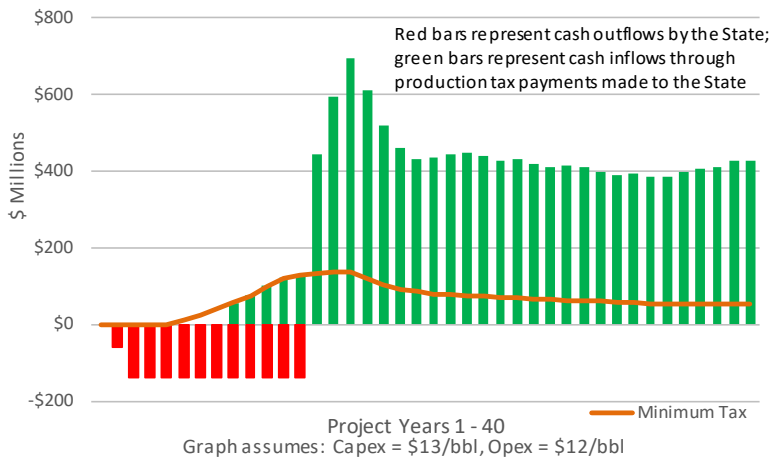
Lifecycle Totals	
Tax Credits Repurchased = \$M	280
Production Tax Paid = \$M	11,230
Net Production Tax = \$M	10,950
Production Tax NPV @ 6.95% = \$M	1,937
Total Annual State Losses = \$M	140
Total Annual State Gains = \$M	22,525
Net State Gain (Loss) = \$M	22,385
State NPV @ 6.95% = \$M	4,978
Total Producer Cash Out = \$M	8,170
Total Producer Cash In = \$M	26,586
Net Producer Cash Flow = \$M	18,417
Producer Cash NPV @ 10.0% = \$M	(181)
Internal Rate of Return (IRR)	10%



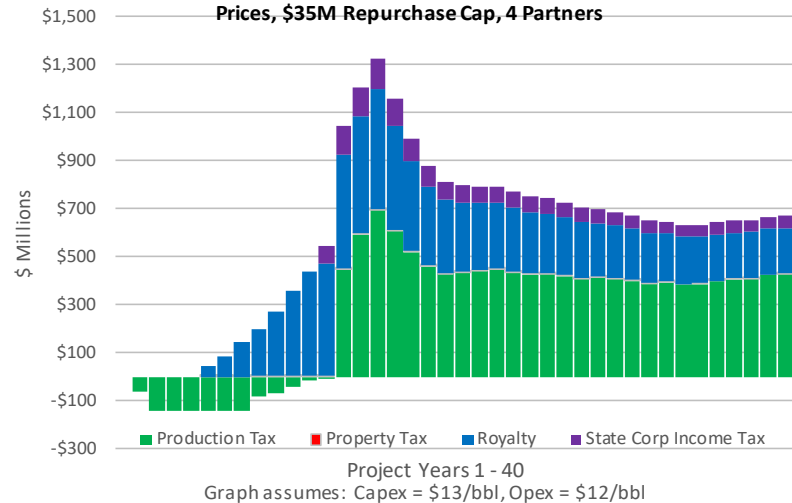
# Lifecycle Modeling – Large Field (GVR @ 20%)

## 750 mmbo, Status Quo, Fall 2016 Forecast Prices, 4 Partners

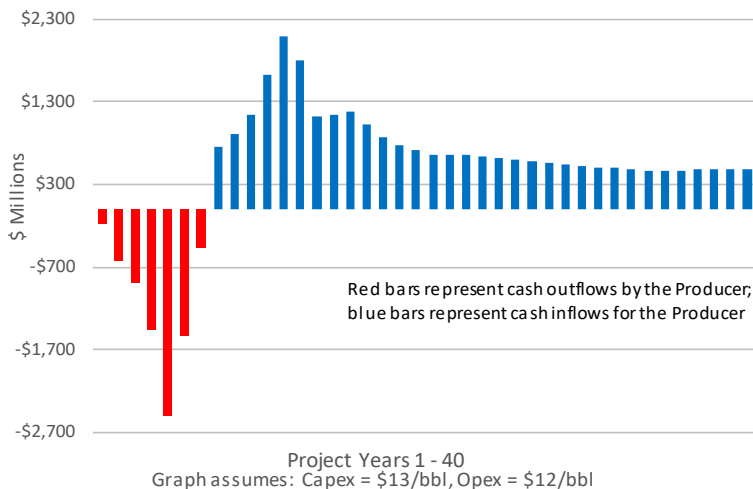
**Production Tax Credits Repurchased / Tax Payments, 20% GVR, @ Fall 2016 Forecast Prices, \$35M Repurchase Cap, 4 Partners**



**Annual State Net Gains & Losses, 20% GVR, @ Fall 2016 Forecast Prices, \$35M Repurchase Cap, 4 Partners**



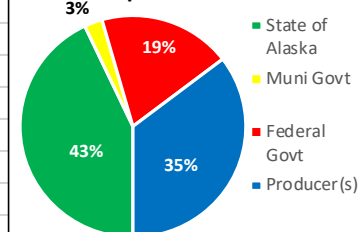
**Annual Producer Cash Flows, 20% GVR, @ Fall 2016 Forecast Prices, \$35M Repurchase Cap, 4 Partners**



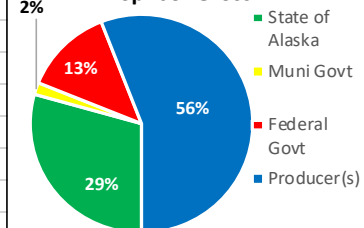
### Lifecycle Totals

Tax Credits Repurchased = \$M	1,600
Production Tax Paid = \$M	12,549
Net Production Tax = \$M	10,950
Production Tax NPV @ 6.95% = \$M	1,638
Total Annual State Losses = \$M	629
Total Annual State Gains = \$M	23,014
Net State Gain (Loss) = \$M	22,385
State NPV @ 6.95% = \$M	4,683
Total Producer Cash Out = \$M	7,620
Total Producer Cash In = \$M	26,037
Net Producer Cash Flow = \$M	18,417
Producer Cash NPV @ 10.0% = \$M	112
Internal Rate of Return (IRR)	10%

### Split of Profits

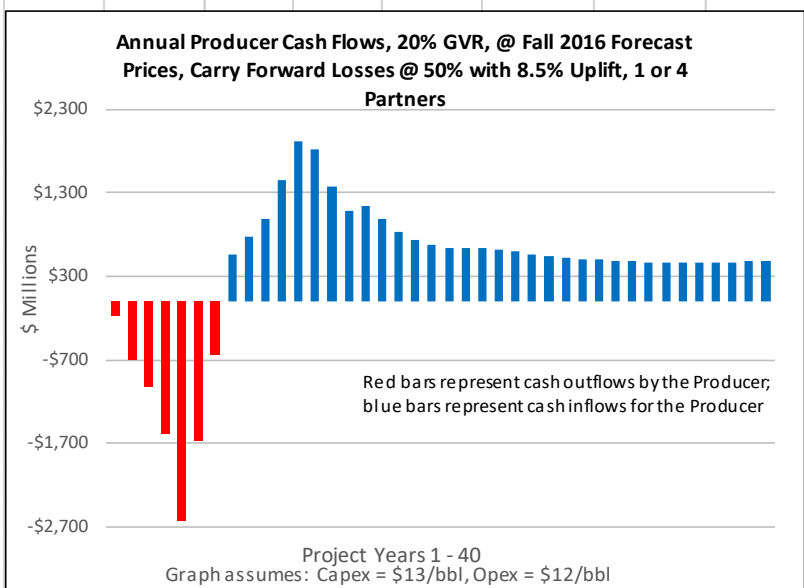
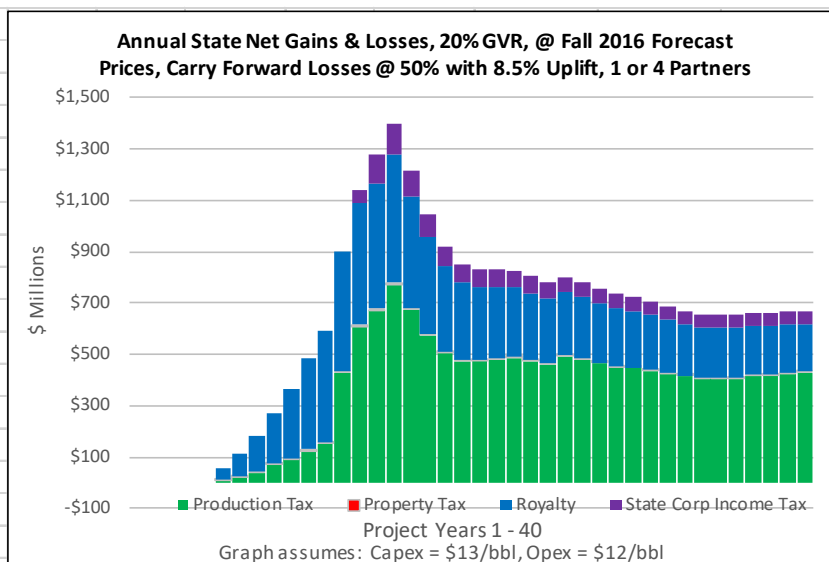
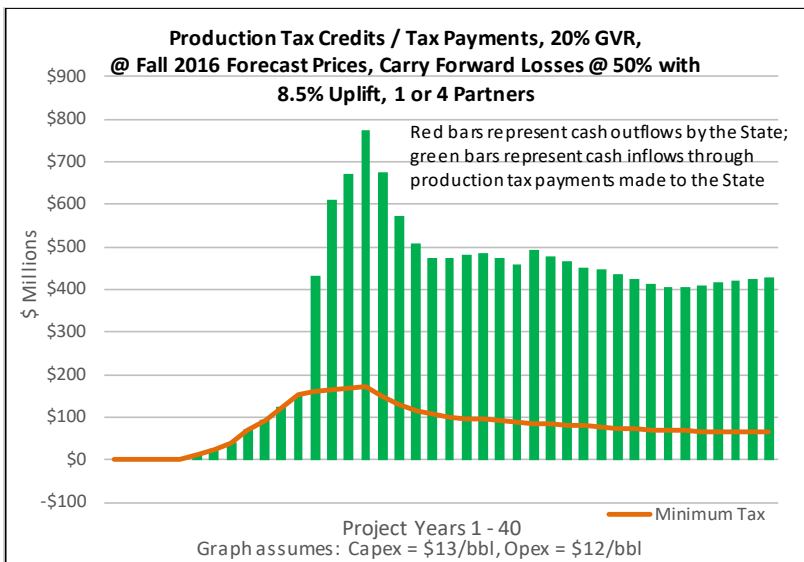


### Split of Gross

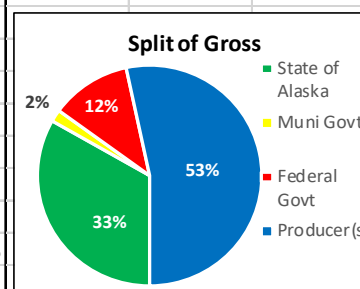
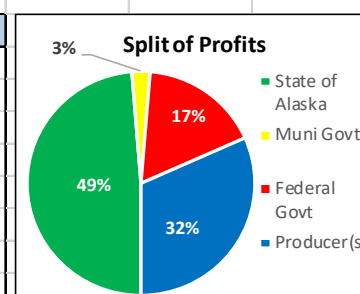


# Lifecycle Modeling – Large Field (GVR @ 20%)

## 750 mmbo, HB111\N, Fall 2016 Forecast Prices, 1 or 4 Partners



Lifecycle Totals	
Tax Credits Repurchased = \$M	0
Production Tax Paid = \$M	14,136
Net Production Tax = \$M	14,136
Production Tax NPV @ 6.95% = \$M	3,100
Total Annual State Losses = \$M	0
Total Annual State Gains = \$M	25,364
Net State Gain (Loss) = \$M	25,364
State NPV @ 6.95% = \$M	6,073
Total Producer Cash Out = \$M	8,416
Total Producer Cash In = \$M	24,896
Net Producer Cash Flow = \$M	16,480
Producer Cash NPV @ 10.0% = \$M	(717)
Internal Rate of Return (IRR)	9%

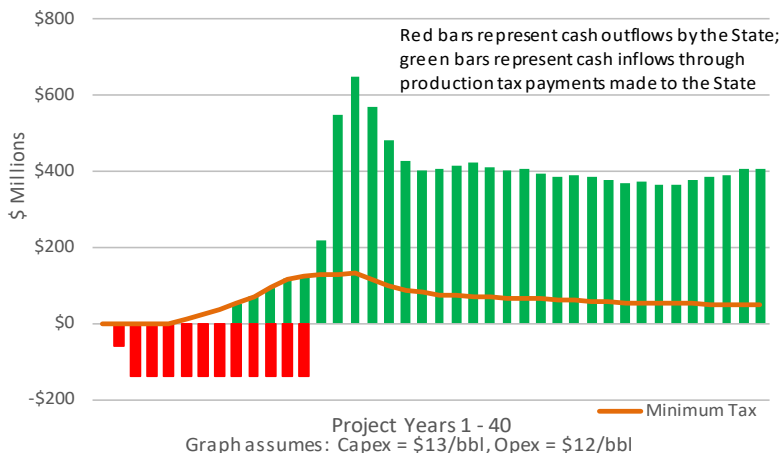




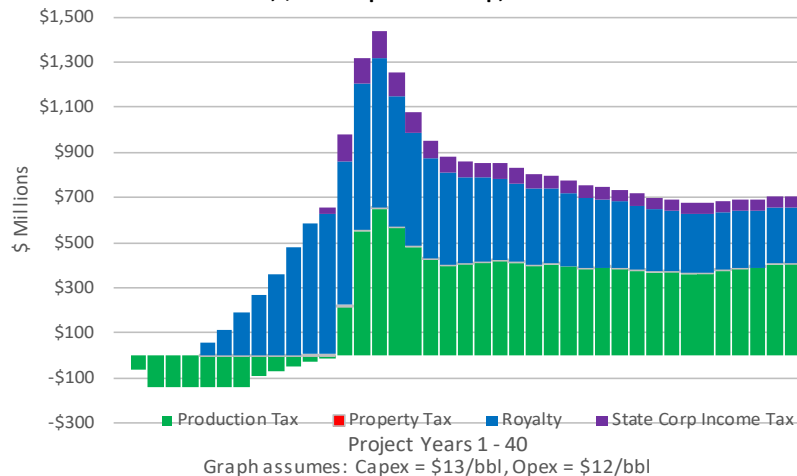
# Lifecycle Modeling – Large Field (GVR @ 30%)

## 750 mmbo, Status Quo, Fall 2016 Forecast Prices, 4 Partners

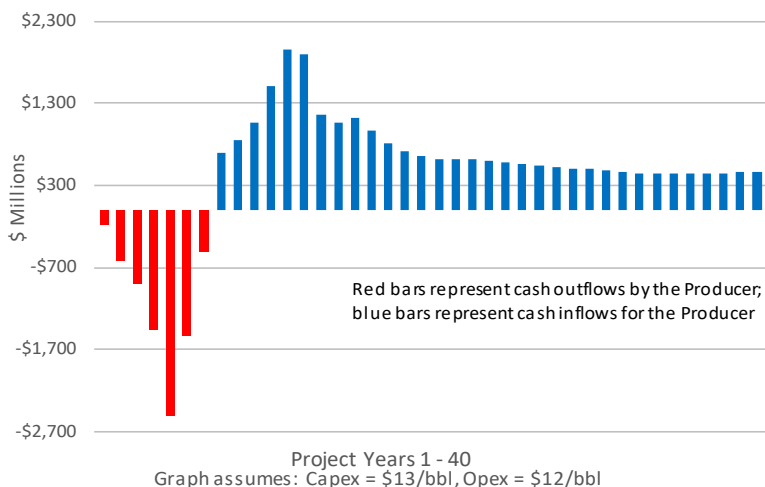
**Production Tax Credits Repurchased / Tax Payments, 30% GVR, @ Fall 2016 Forecast Prices, \$35M Repurchase Cap, 4 Partners**



**Annual State Net Gains & Losses, 30% GVR, @ Fall 2016 Forecast Prices, \$35M Repurchase Cap, 4 Partners**



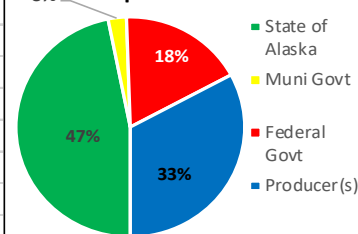
**Annual Producer Cash Flows, 30% GVR, @ Fall 2016 Forecast Prices, \$35M Repurchase Cap, 4 Partners**



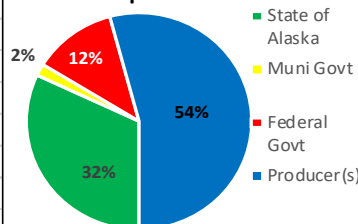
### Lifecycle Totals

Tax Credits Repurchased = \$M	1,600
Production Tax Paid = \$M	11,590
Net Production Tax = \$M	9,990
Production Tax NPV @ 6.95% = \$M	1,397
Total Annual State Losses = \$M	586
Total Annual State Gains = \$M	24,992
Net State Gain (Loss) = \$M	24,406
State NPV @ 6.95% = \$M	5,264
Internal Rate of Return (IRR)	32%
Total Producer Cash Out = \$M	7,663
Total Producer Cash In = \$M	24,766
Net Producer Cash Flow = \$M	17,103
Producer Cash NPV @ 10.0% = \$M	(148)
Internal Rate of Return (IRR)	10%

### Split of Profits

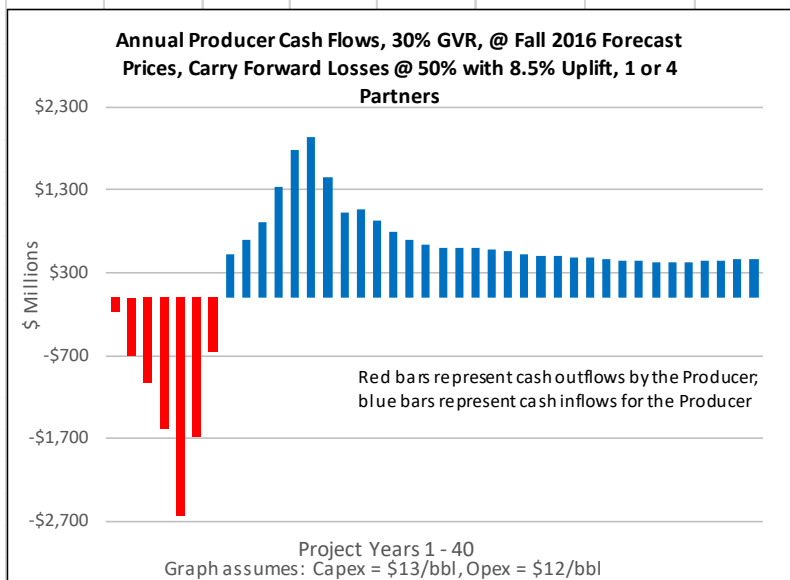
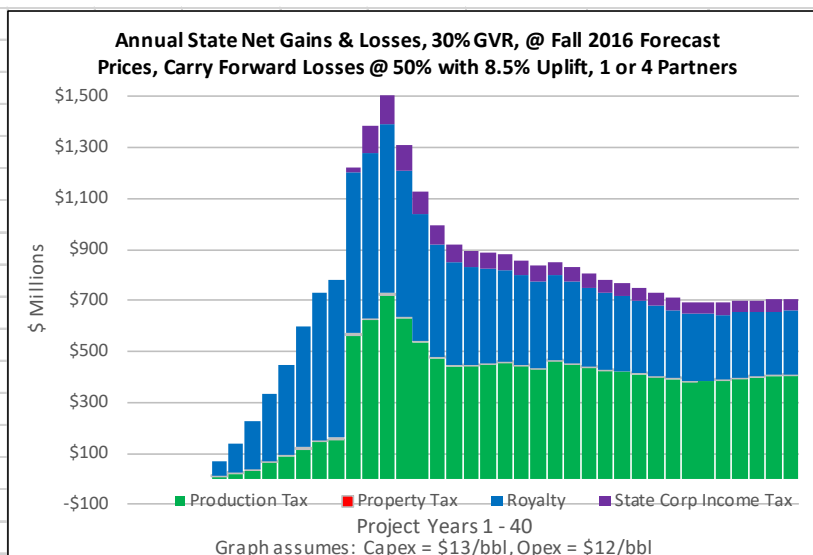
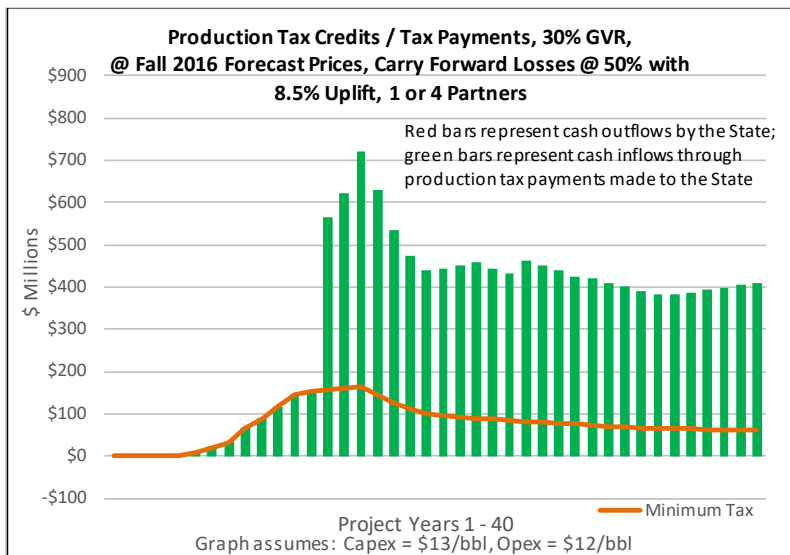


### Split of Gross

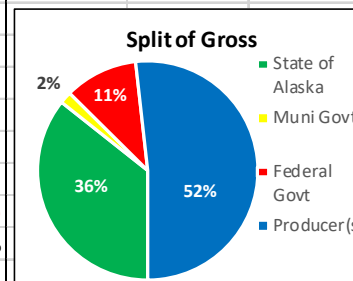
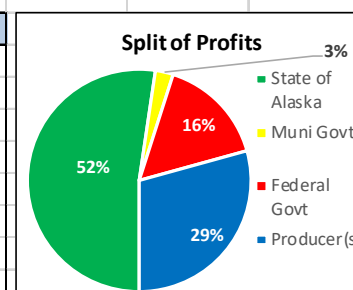


# Lifecycle Modeling – Large Field (GVR @ 30%)

## 750 mmbo, HB111\N, Fall 2016 Forecast Prices, 1 or 4 Partners



Lifecycle Totals	
Tax Credits Repurchased = \$M	0
Production Tax Paid = \$M	13,025
Net Production Tax = \$M	13,025
Production Tax NPV @ 6.95% = \$M	2,798
Total Annual State Losses = \$M	0
Total Annual State Gains = \$M	27,244
Net State Gain (Loss) = \$M	27,244
State NPV @ 6.95% = \$M	6,597
Total Producer Cash Out = \$M	8,453
Total Producer Cash In = \$M	23,711
Net Producer Cash Flow = \$M	15,258
Producer Cash NPV @ 10.0% = \$M	(953)
Internal Rate of Return (IRR)	8%

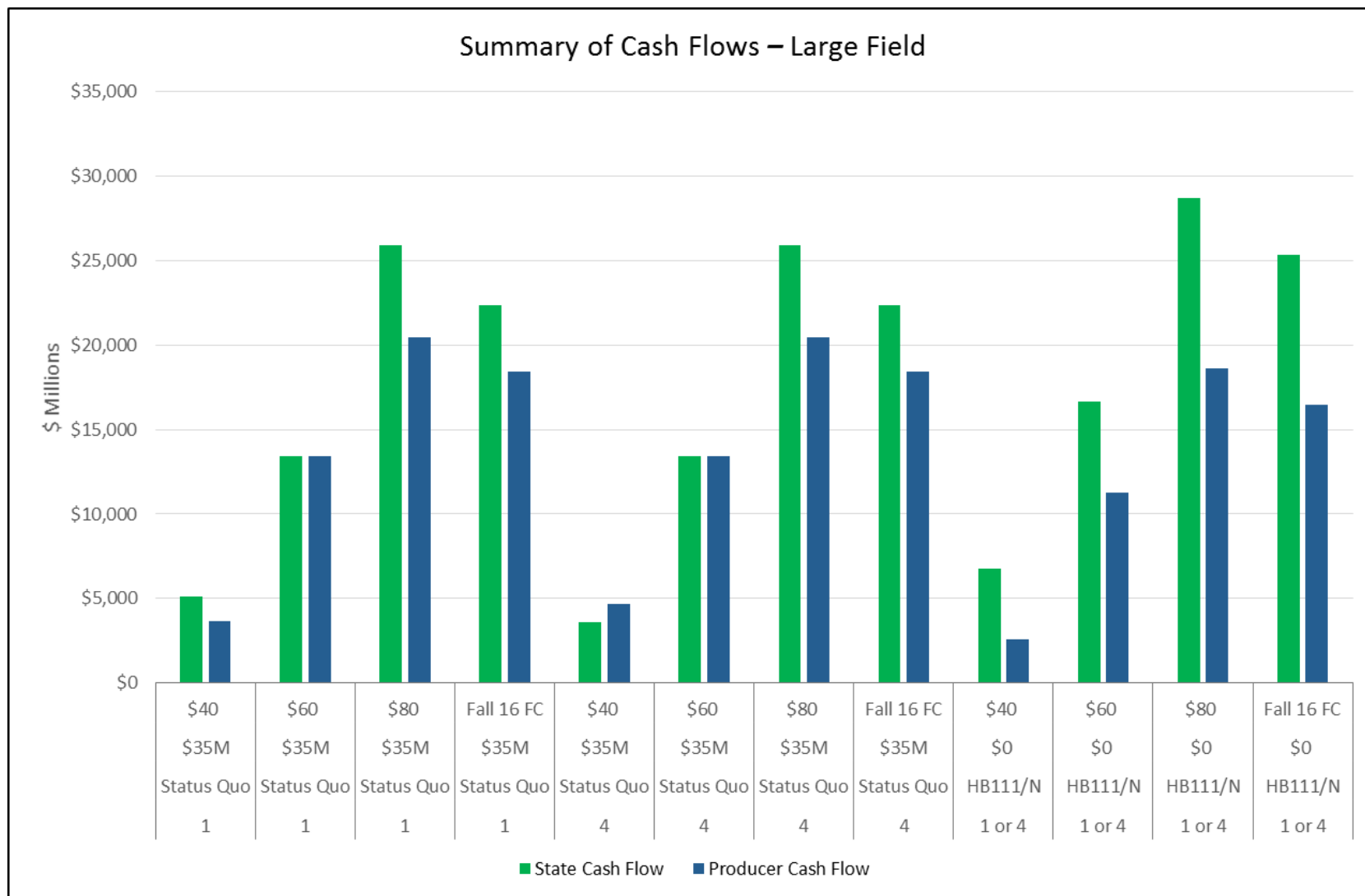


# Summary Table – Large Field

Field Size (million bbl)	# Partners	Tax Regime	GVR %	Credit Repurchase Limit	Oil Price	Credits Repurchased (\$millions)	Net Production Tax Paid (\$millions)	Production Tax NPV 6.95% (\$millions)	Net State Gain (Loss) (\$millions)	State NPV 6.95% (\$millions)	Producer Cash Flow (\$millions)	Producer NPV 10.0% (\$millions)	Producer IRR (%)
750	1	Status Quo	20%	\$35M	\$40	770	250	(15)	5,116	1,260	3,679	(3,787)	2%
750	1	Status Quo	20%	\$35M	\$60	280	4,596	596	13,412	2,917	13,414	(1,360)	7%
750	1	Status Quo	20%	\$35M	\$80	280	13,415	2,546	25,891	5,883	20,430	296	11%
750	1	Status Quo	20%	\$35M	Fall 16 FC	280	10,950	1,937	22,385	4,978	18,417	(181)	10%
750	4	Status Quo	20%	\$35M	\$40	3,065	(1,351)	(1,094)	3,620	208	4,652	(3,034)	3%
750	4	Status Quo	20%	\$35M	\$60	2,020	4,596	73	13,412	2,409	13,414	(926)	8%
750	4	Status Quo	20%	\$35M	\$80	1,460	13,415	2,287	25,891	5,626	20,430	564	11%
750	4	Status Quo	20%	\$35M	Fall 16 FC	1,600	10,950	1,638	22,385	4,683	18,417	112	10%
750	4	Status Quo	30%	\$35M	Fall 16 FC	1,600	9,990	1,397	24,406	5,264	17,103	(148)	10%
750	1 or 4	HB111/N	20%	0	\$40	0	2,046	432	6,796	1,694	2,587	(4,064)	1%
750	1 or 4	HB111/N	20%	0	\$60	0	8,081	1,615	16,671	3,879	11,295	(1,819)	6%
750	1 or 4	HB111/N	20%	0	\$80	0	16,388	3,681	28,670	6,950	18,623	(230)	10%
750	1 or 4	HB111/N	20%	0	Fall 16 FC	0	14,136	3,100	25,364	6,073	16,480	(717)	9%
750	1 or 4	HB111/N	30%	0	Fall 16 FC	0	13,025	2,798	27,244	6,597	15,258	(953)	8%

**Note: Gray shaded lines are those GVR fields with royalty > 12.5% so qualify for 30% GVR instead of 20% when royalty = 12/5%**

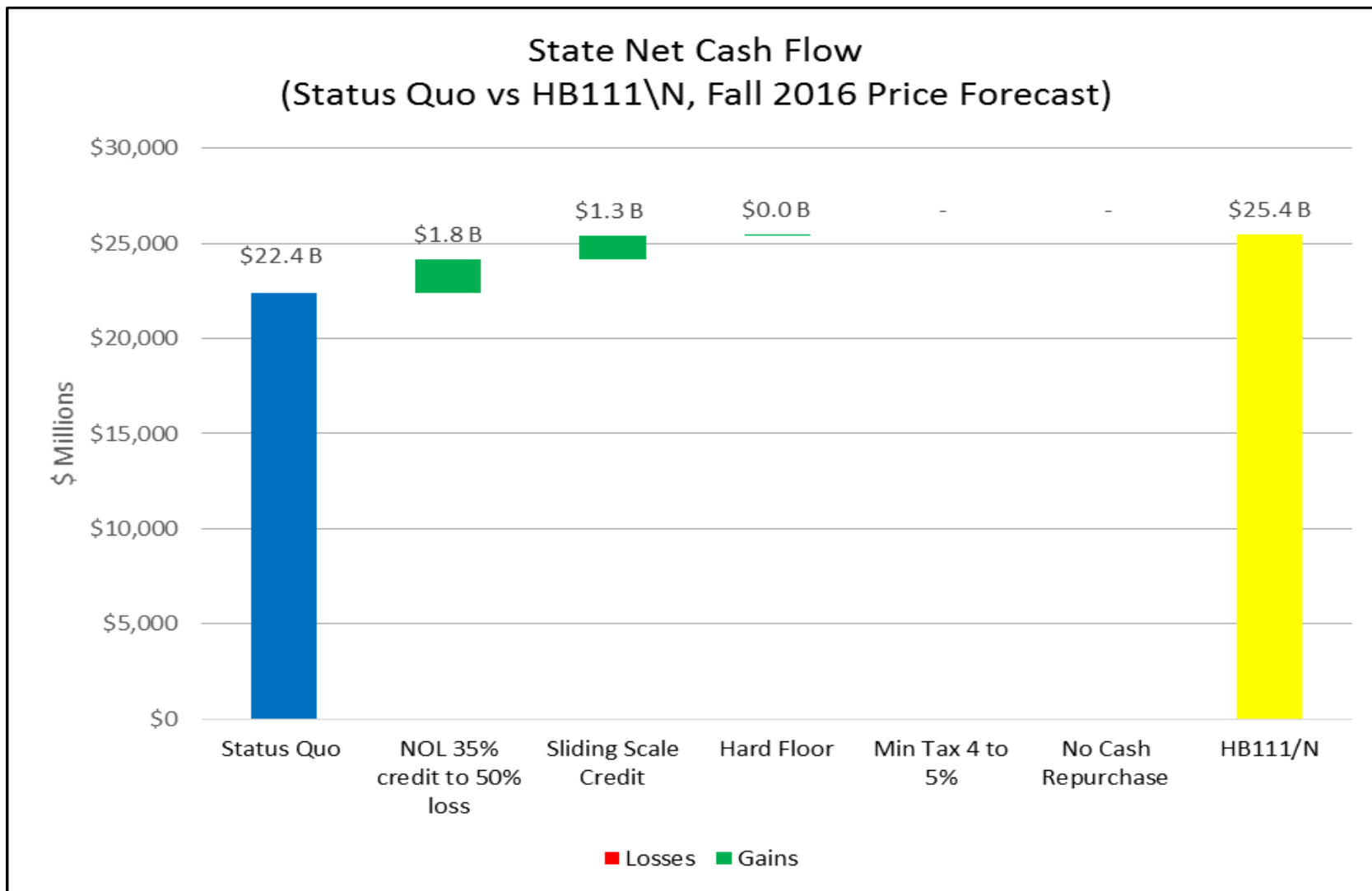
# Summary Results – Large Field



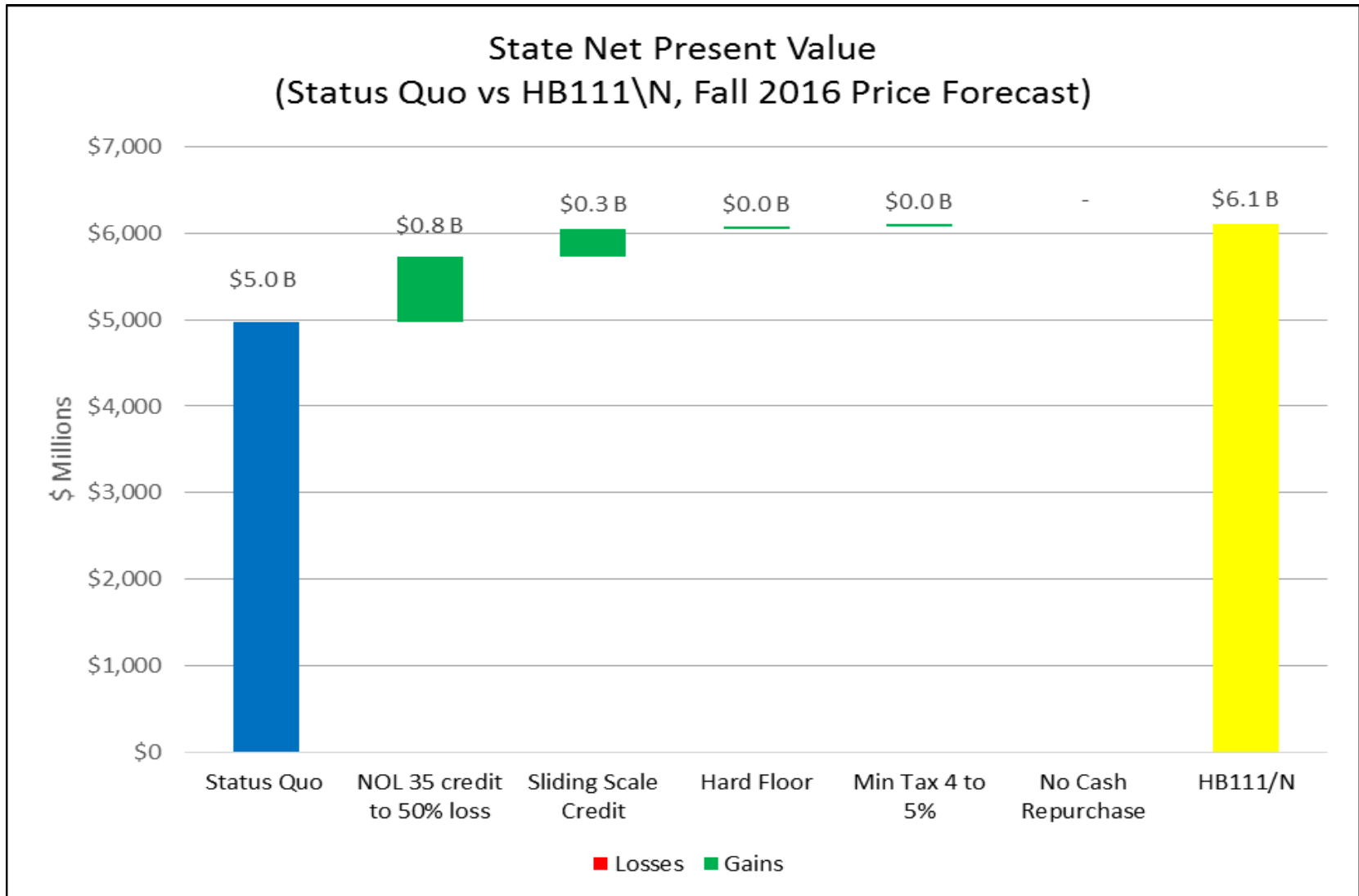
## *Further Analysis – Large Field*

- What's Driving the Changes from Status Quo by Tax Component Change
  - Compared Two Scenarios
    - 2016 Fall Forecast Prices
    - 1 Partner Scenario vs HB111\N
  - Five Components to Tax Change
    - Net Operating Losses (NOLs) changed from 35% credit to 50% carry forward loss
    - Sliding Scale Credits shifted from maximum of \$8/bbl @ <\$80 Wellhead value to \$6/bbl @ <\$60 Wellhead value
    - Hardened the Floor
    - Minimum Tax increased from 4% to 5% @ \$50 ANS \$
    - Cash Repurchases Eliminated for North Slope

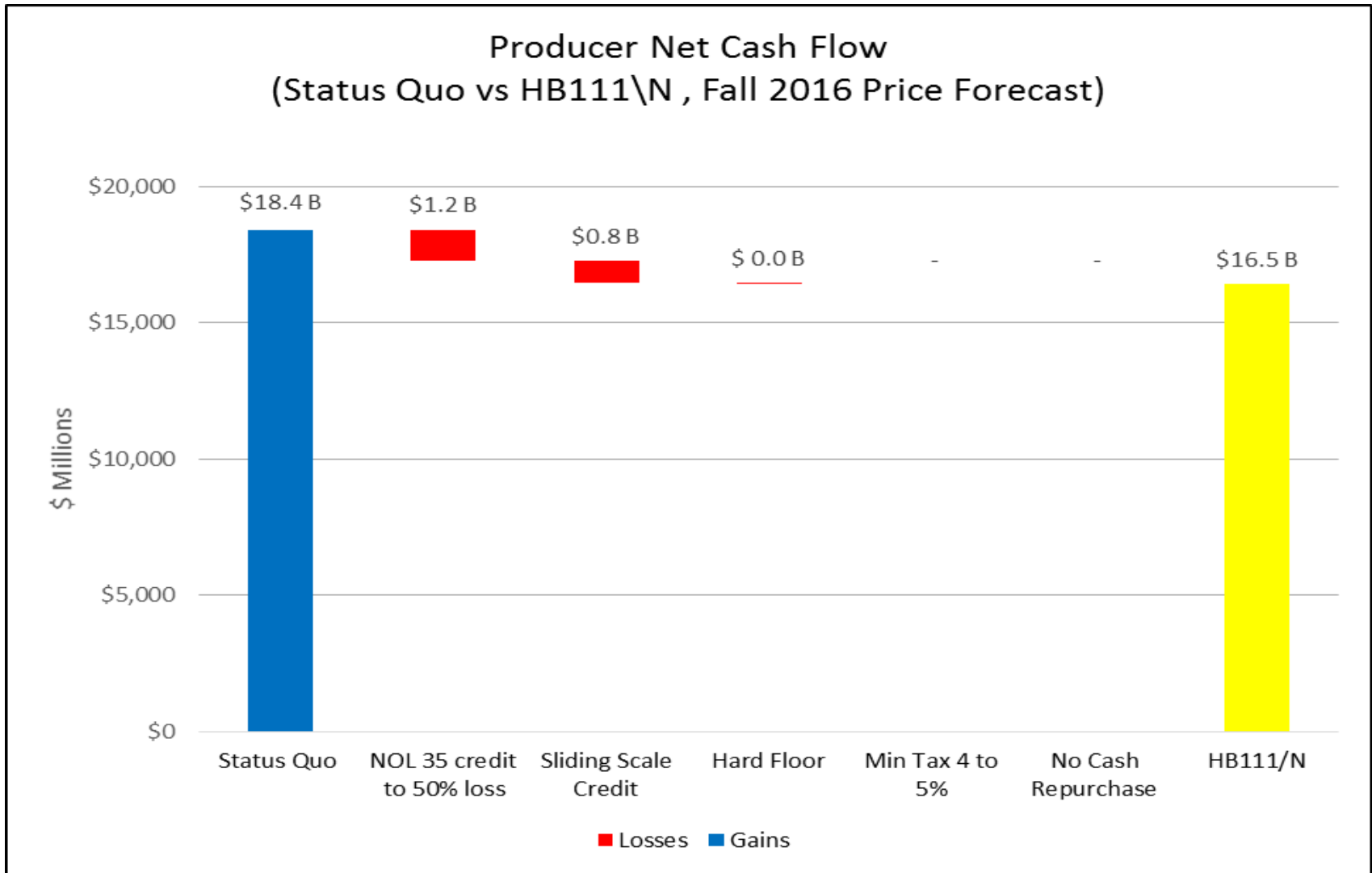
# Status Quo vs HB111 – State Net Cash Flows



# Status Quo vs HB111 – State Net Present Value

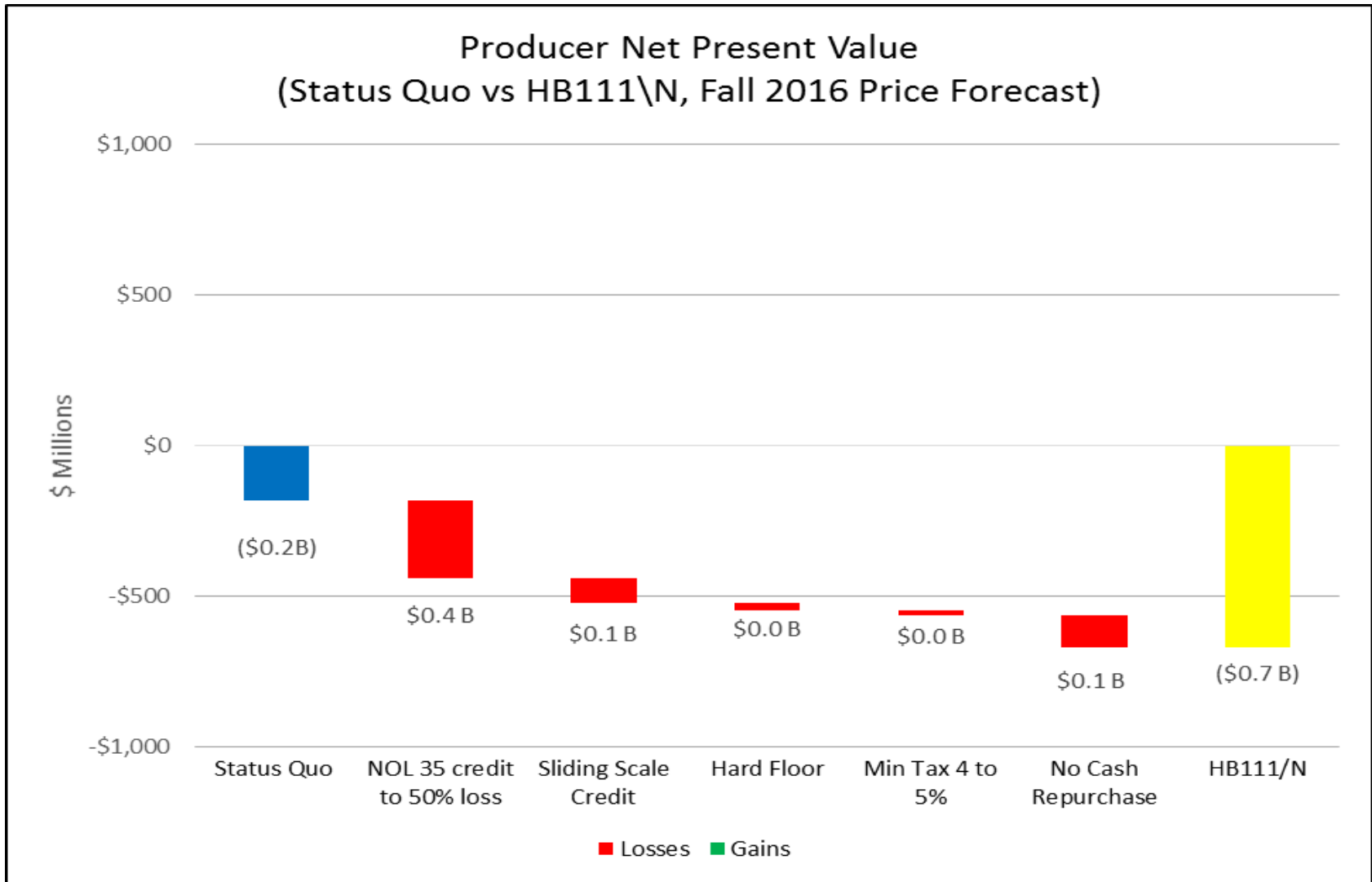


# Status Quo vs HB111 – Producer Net Cash Flows





# Status Quo vs HB111 – Producer Net Present Value



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**Thank You!**

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