



Alaska's Oil and Gas Taxation – HB111\O

Lifecycle Scenario Analysis

Presentation to House Resources Committee

Colleen Glover, Tax Division Commercial Analyst
Alaska Department of Revenue

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What Will Be Presented Today

- Summary of HB111\O 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 changes on new North Slope fields.

What are the Major Tax Changes in HB111\ O

	Status Quo	HB111
Net Operating Loss (NOL) Provisions		
NOL Credit %	35%	15%
GVR can make NOL larger	no	no
Per Taxable Barrel Credit Provisions		
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 - \$5 / bbl
Credit Repurchases		
Max Production to qualify	50,000/bpd	15,000/bpd*
Maximum per year @ 100%	\$35M	eliminated
Maximum per year @ 75%	\$35M	eliminated
Minimum Tax Provisions		
Min Tax % of Gross Value (GVPP)	4%	5%
NOL credits against Min Tax	yes	no
024i credits against Min Tax	yes	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.

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

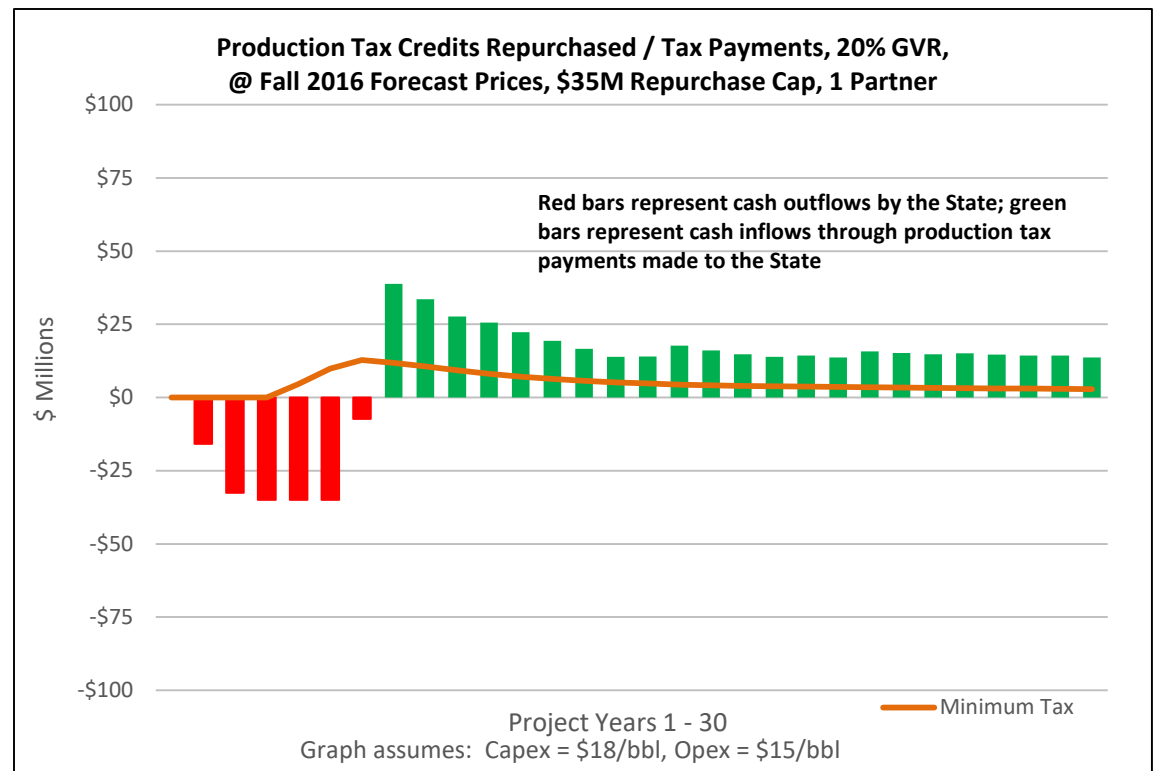
Lifecycle Modeling Outputs

➤ Each Scenario has a Dashboard with Four Quadrants

1. Production Tax
2. State Revenue
3. Producer Revenue
4. Summary Economics
 - a. Total Cash Flows
 - b. NPV Analysis
 - c. Split of Profits
 - d. Split of Gross

Dashboard – Net Production Tax

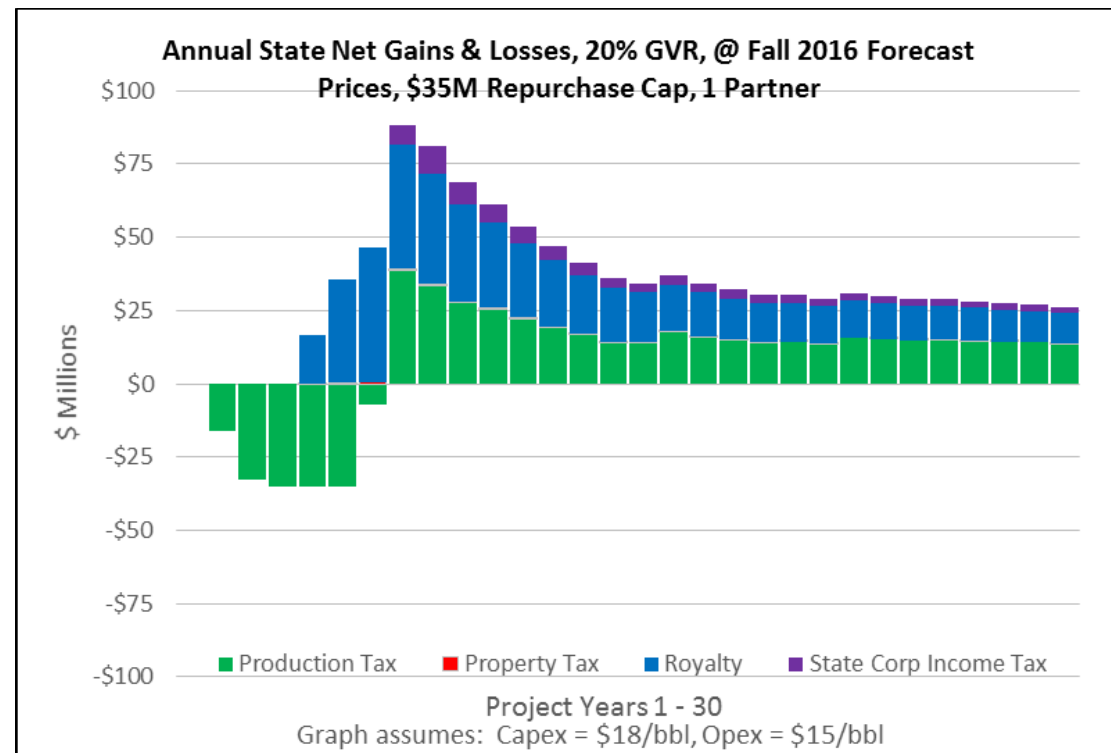
- Credits Repurchased by State
- Production Tax Paid
- Minimum Tax Calculation



Dashboard – State Gains & Losses

➤ State Revenue

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



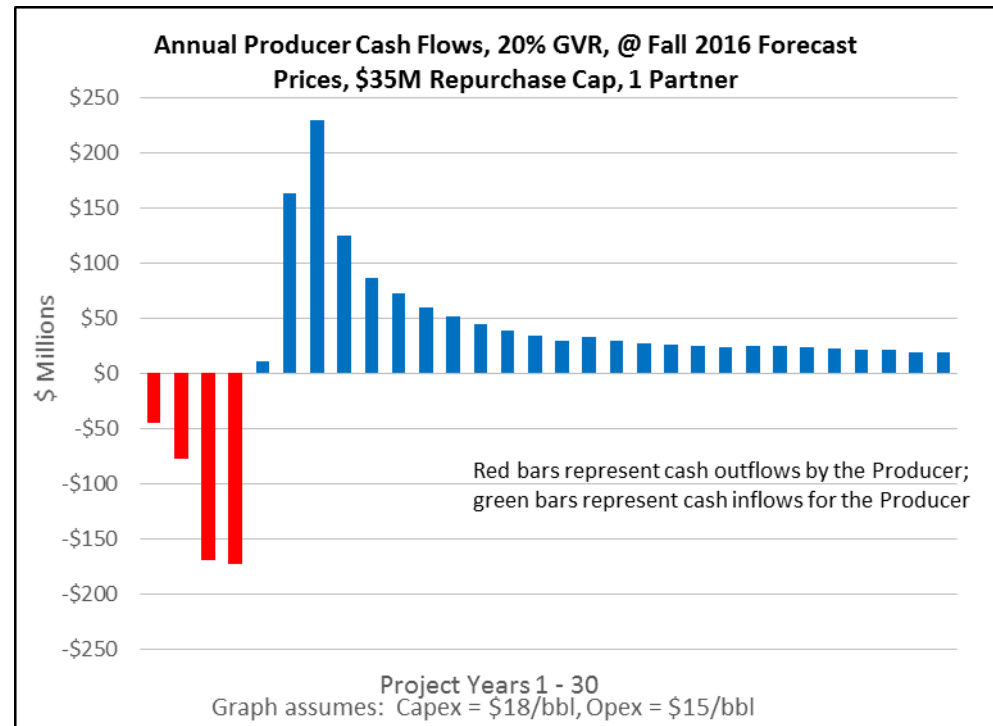
Dashboard – Producer(s) Cash Flows

➤ 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

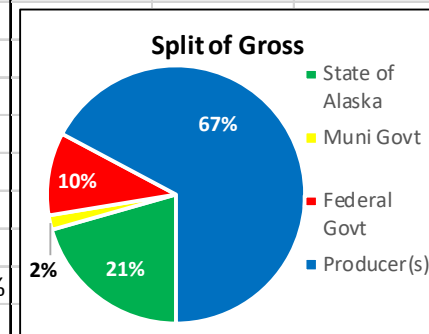
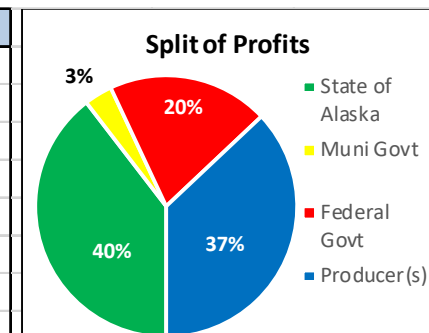
- Period when net cash is positive



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%

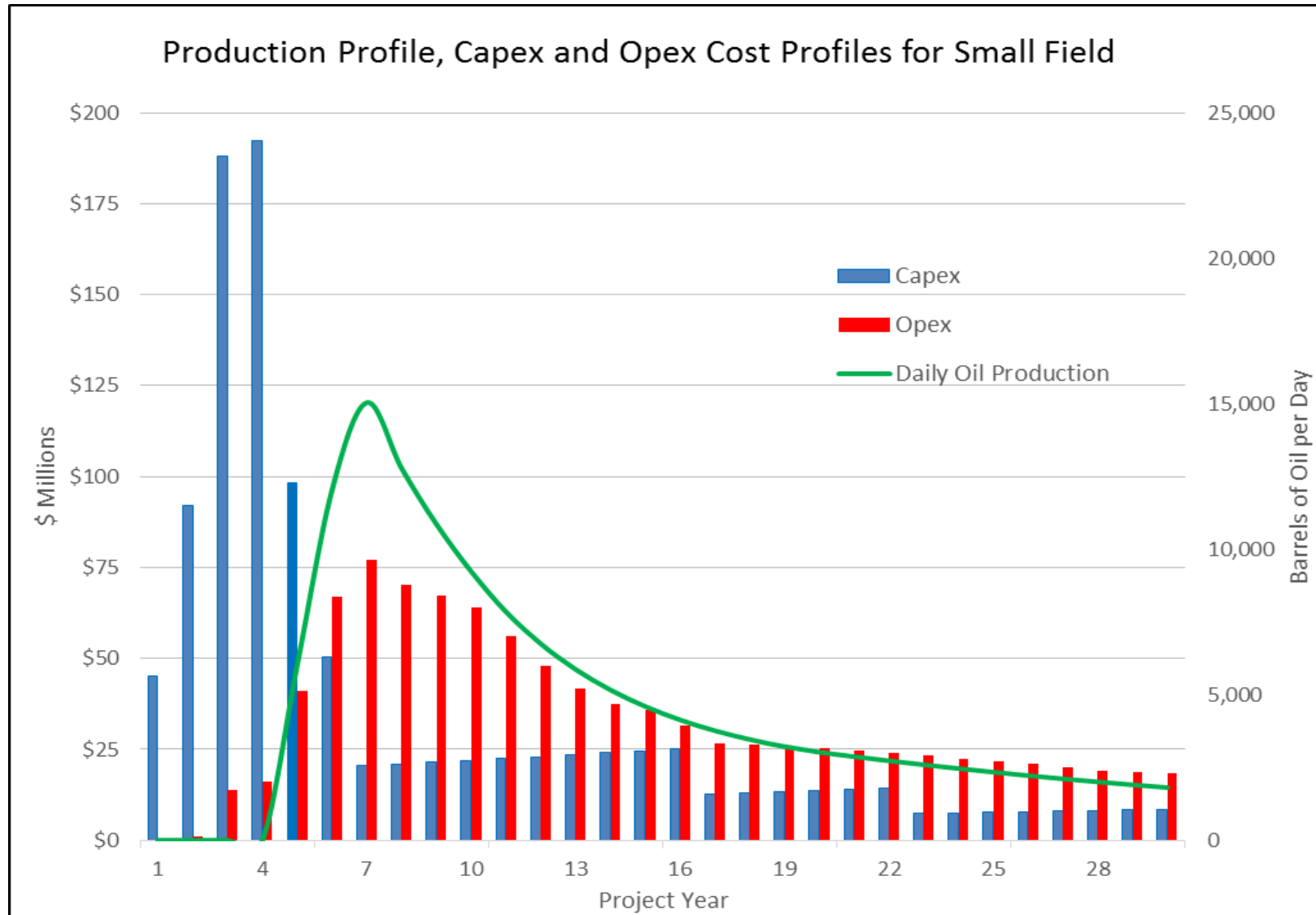


Field Lifecycle Modeling: North Slope Small Field

50 mmbo Field Assumptions

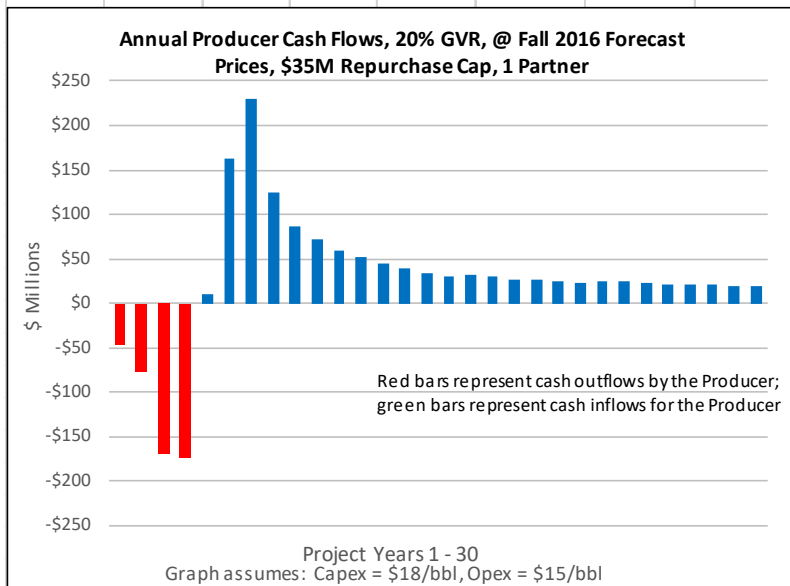
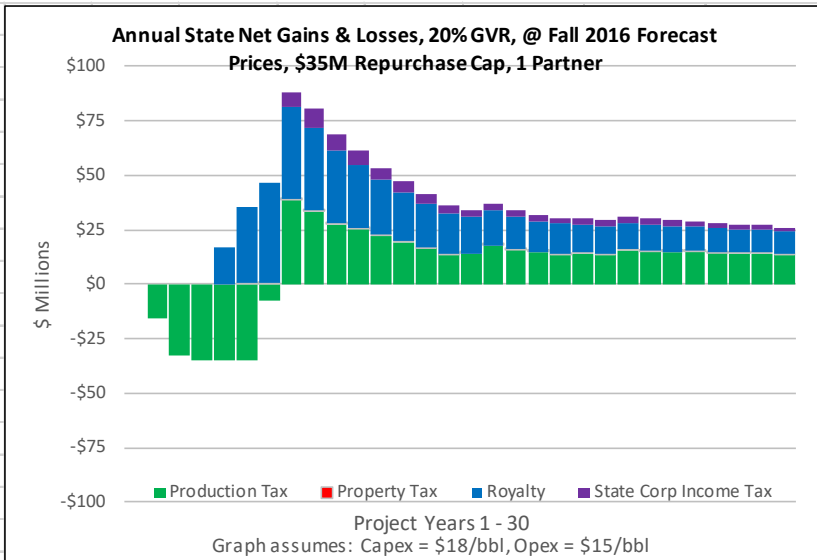
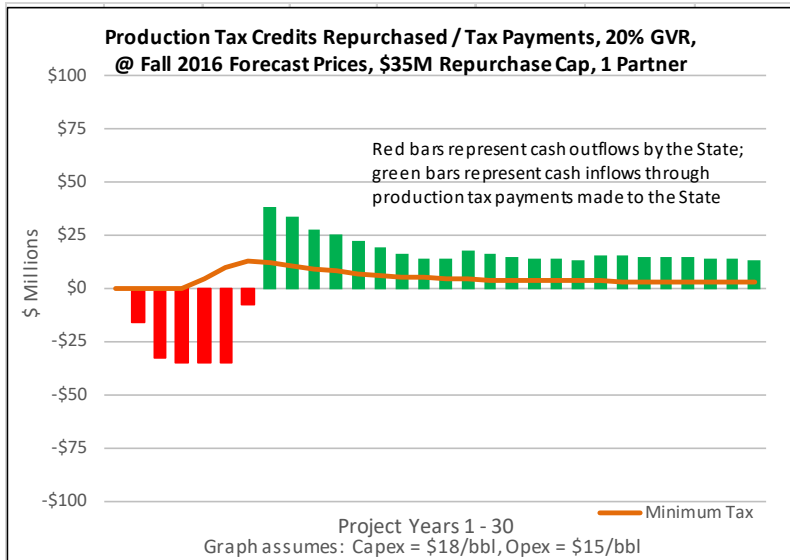
- Life of Field = 30 Years
- Peak Oil Production = ~15,000 bbls/day
- Transportation Cost = \$10 / bbl
- Royalty Rate = 12.5% (all State)
- Capex \$ = \$18 / bbl
- Opex \$ = \$15 / bbl
- Property Tax Rate = \$1.25 / bbl
- State Corp Income Tax Rate = 6.5% of remaining Production Tax Value (PTV) after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

Profile Curves – Small Field

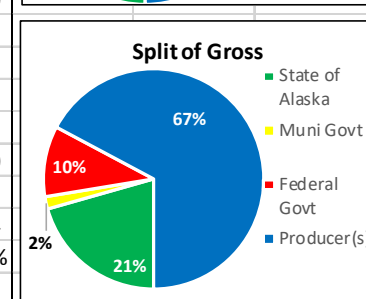
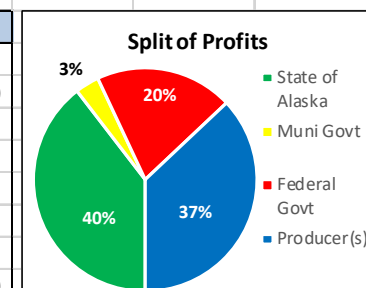


Lifecycle Modeling – Small Field

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

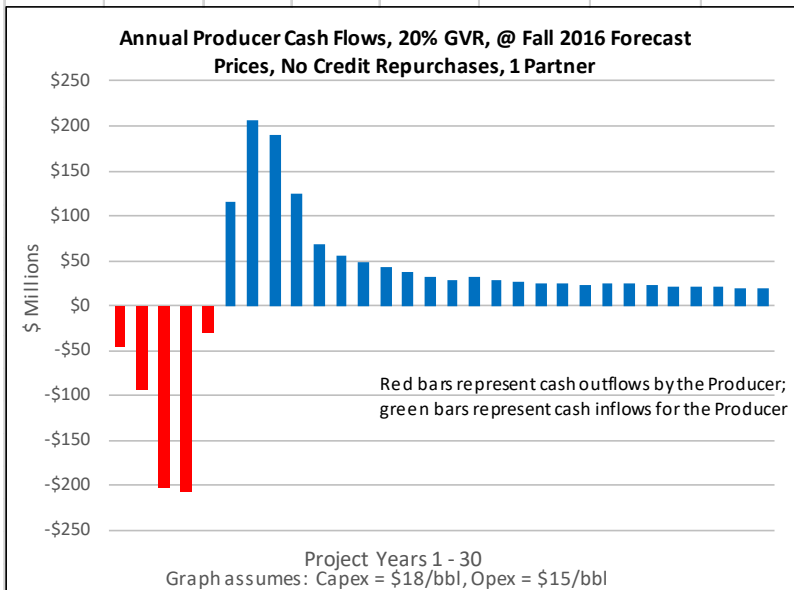
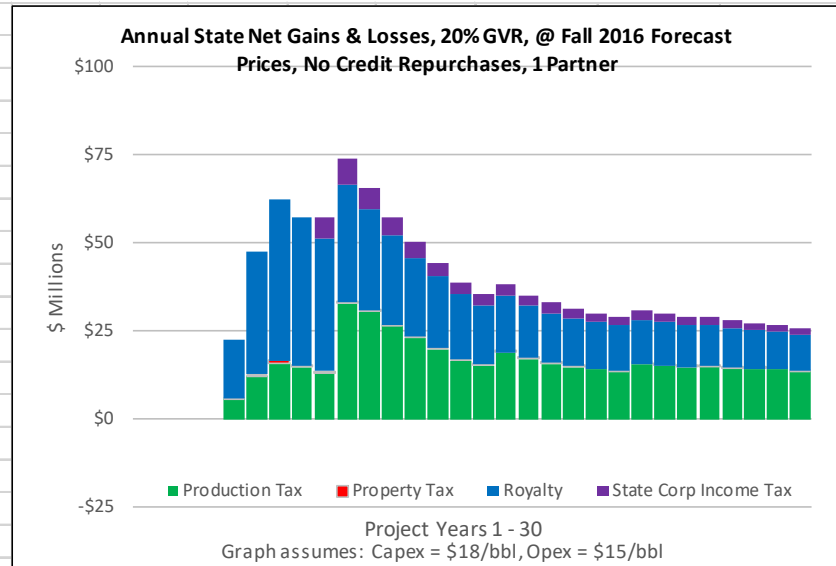
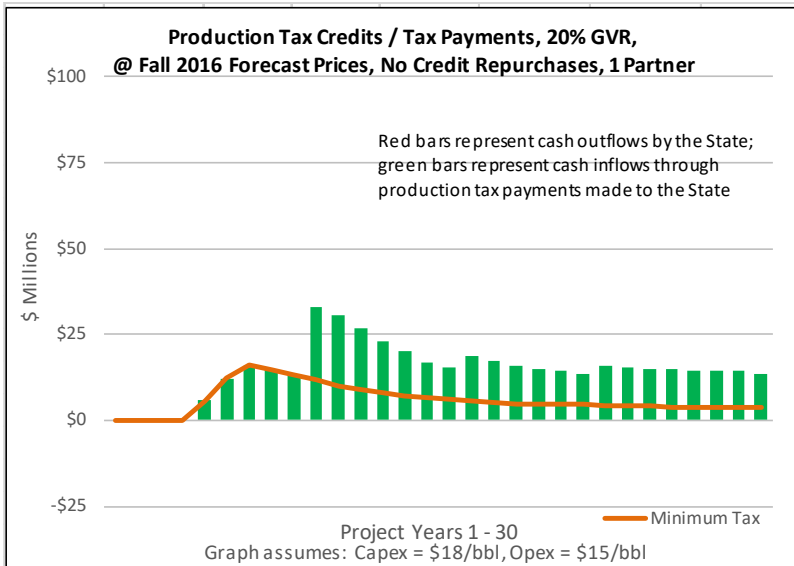


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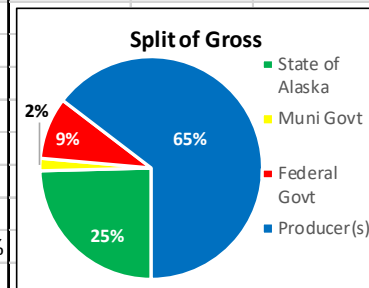
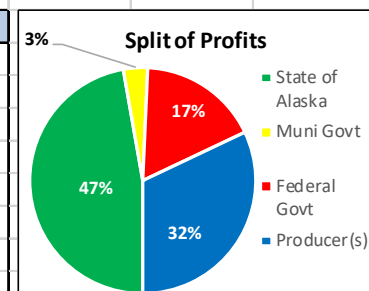


Lifecycle Modeling – Small Field

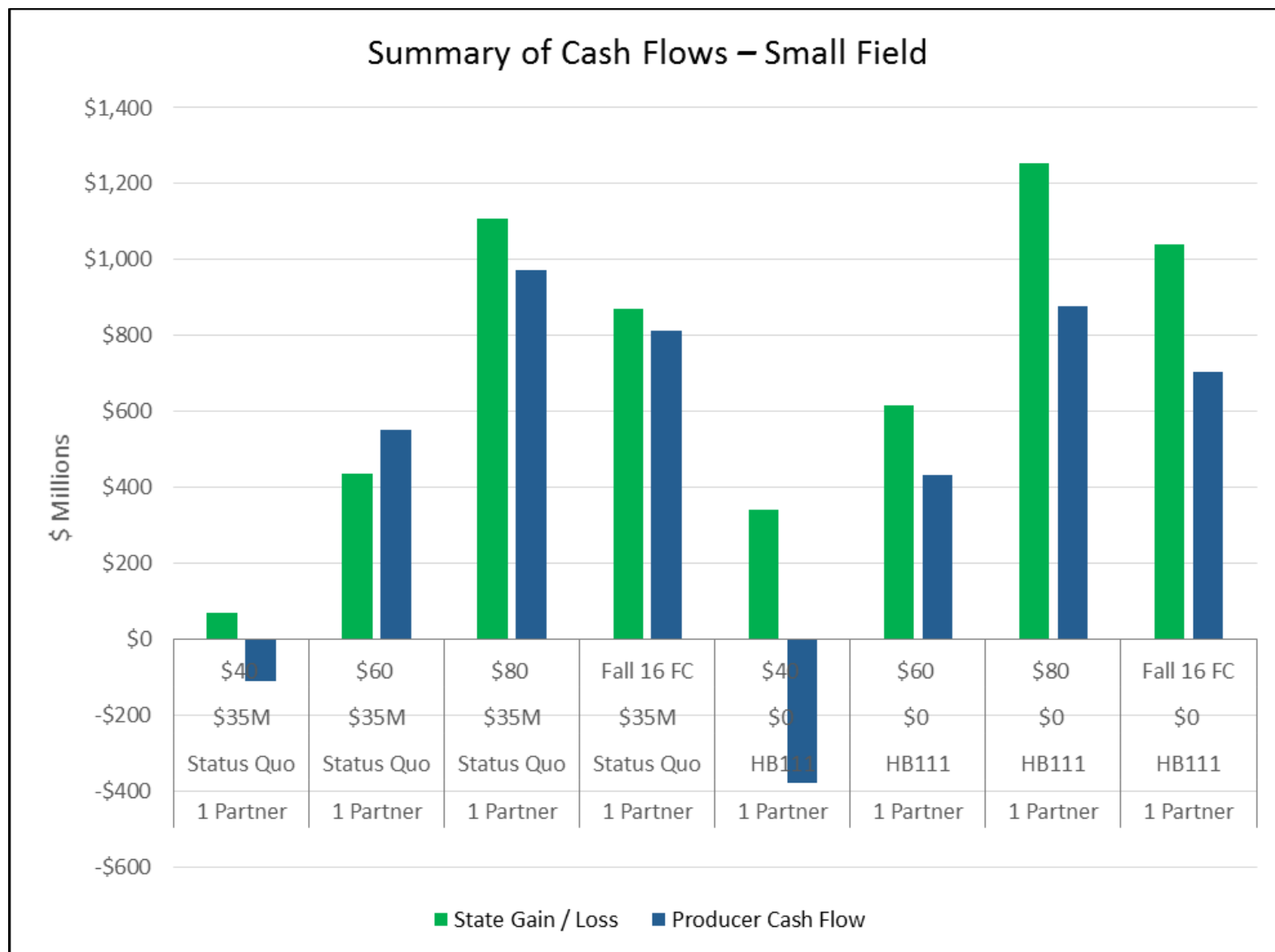
50 mmbo, HB111, Fall 2016 Forecast Prices, 1 Partner



Lifecycle Totals	
Tax Credits Repurchased = \$M	0
Production Tax Paid = \$M	440
Net Production Tax = \$M	440
Production Tax NPV @ 6.95% = \$M	157
Total Annual State Losses = \$M	0
Total Annual State Gains = \$M	1,039
Net State Gain (Loss) = \$M	1,039
State NPV @ 6.95% = \$M	405
Total Producer Cash Out = \$M	579
Total Producer Cash In = \$M	1,284
Net Producer Cash Flow = \$M	705
Producer Cash NPV @ 10.0% = \$M	20
Internal Rate of Return (IRR)	11%



Summary Table – Small Field



Summary Table – Small Field

Field Size (million bbl)	# Partners	Tax Regime	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 (%)
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	0	\$40	0	87	37	341	147	(378)	(374)	-7%
50	1	HB111	0	\$60	0	152	63	618	257	433	(78)	7%
50	1	HB111	0	\$80	0	575	213	1,253	499	878	96	14%
50	1	HB111	0	Fall 16 FC	0	440	157	1,039	405	705	20	11%

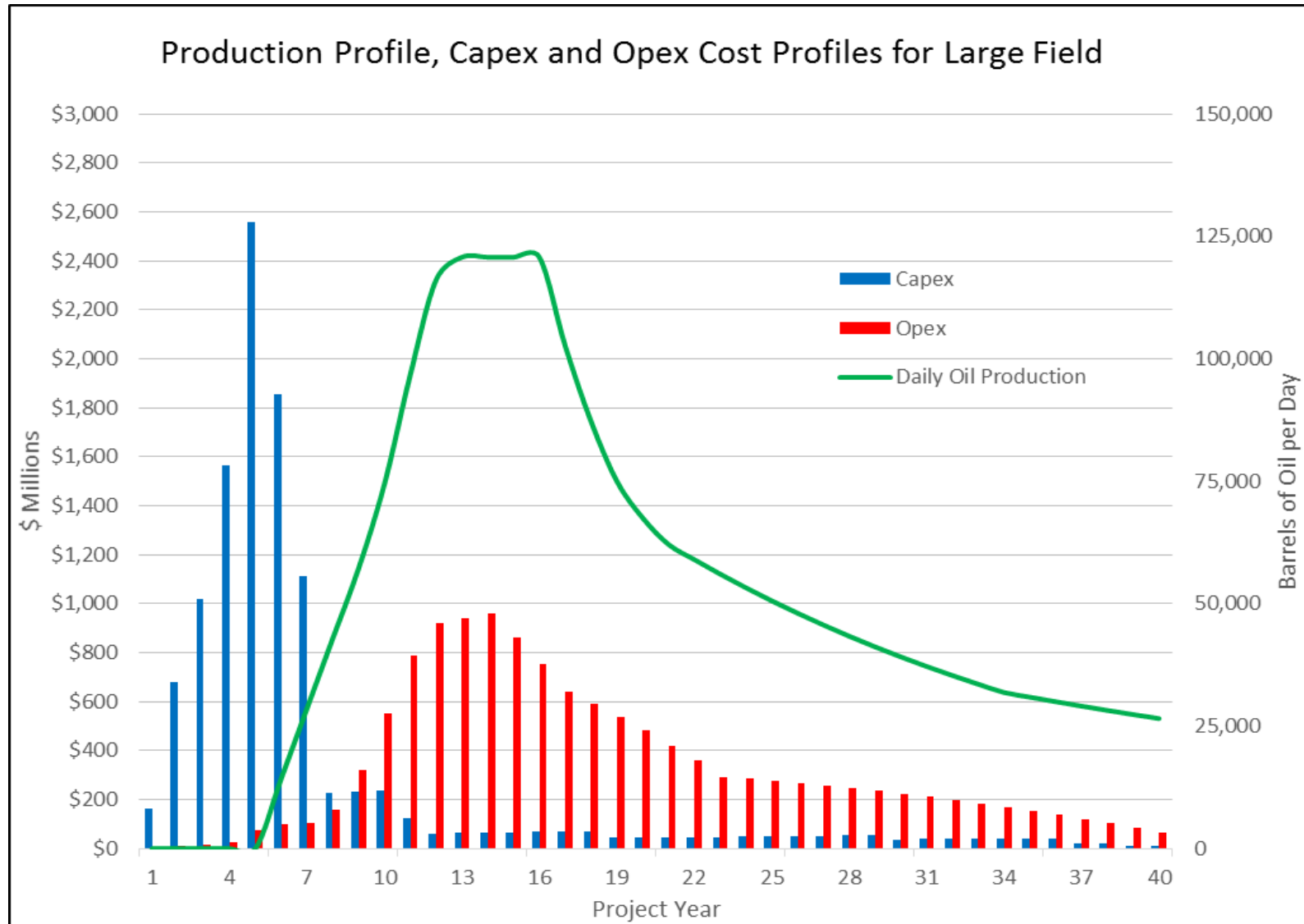
Field Lifecycle Modeling: North Slope Large Field

Lifecycle Modeling Assumptions – Large Field

750 mmbo Field Assumptions

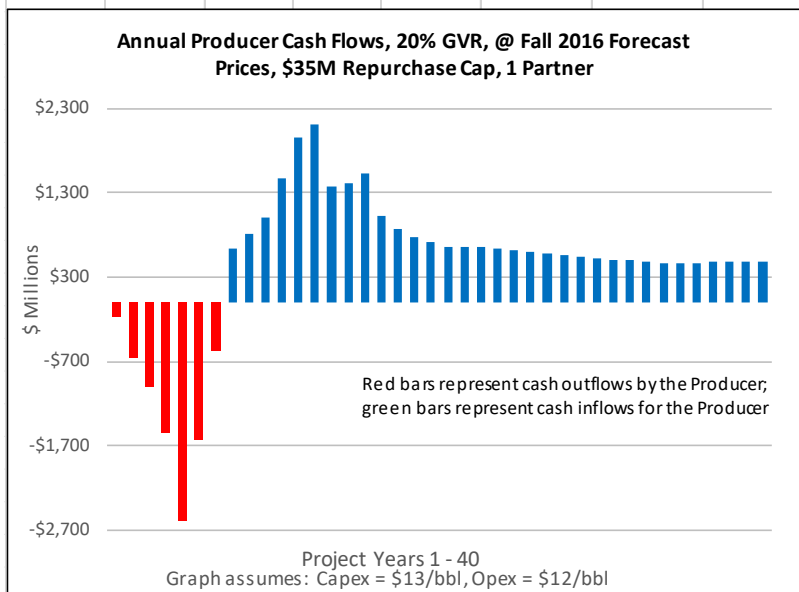
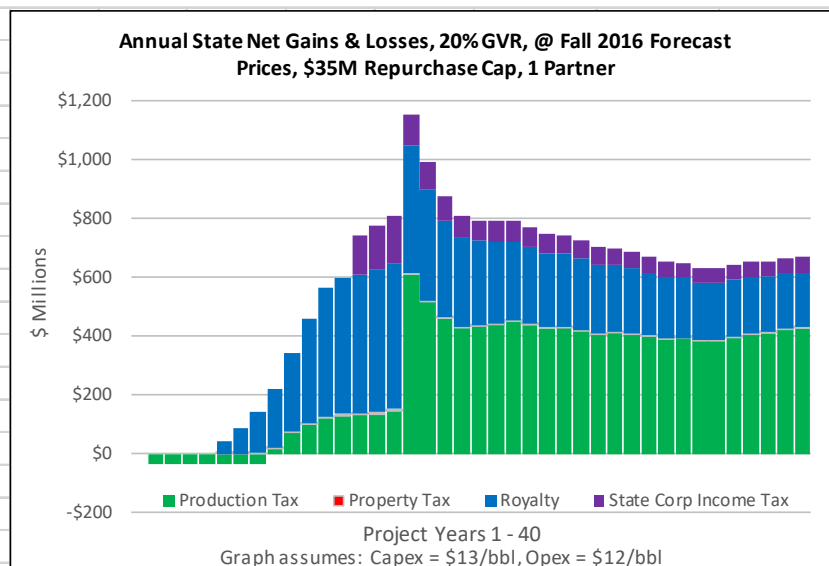
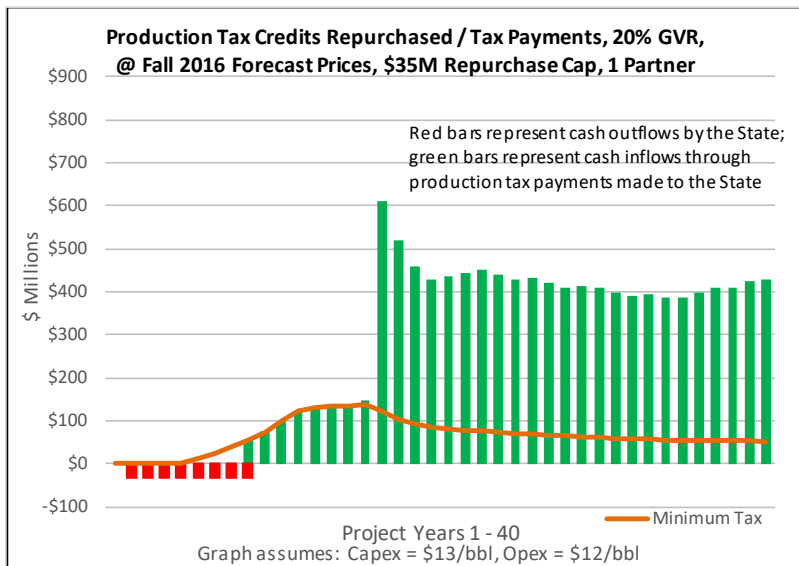
- Life of Field = 40 Years
- Peak Oil Production = ~120,000 bbls/day
- Transportation Cost = \$10 / bbl
- Royalty Rate = 12.5% (all State)
- Capex \$ = \$13 / bbl
- Opex \$ = \$12 / bbl
- Property Tax Rate = \$1.25 / bbl
- State Corp Income Tax Rate = 6.5% of remaining Production Tax Value (PTV) after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

Profile Curves – Large Field

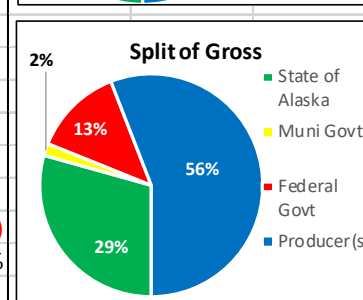
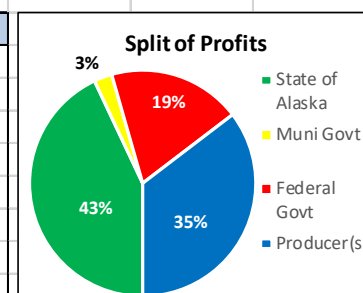


Lifecycle Modeling – Large Field

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



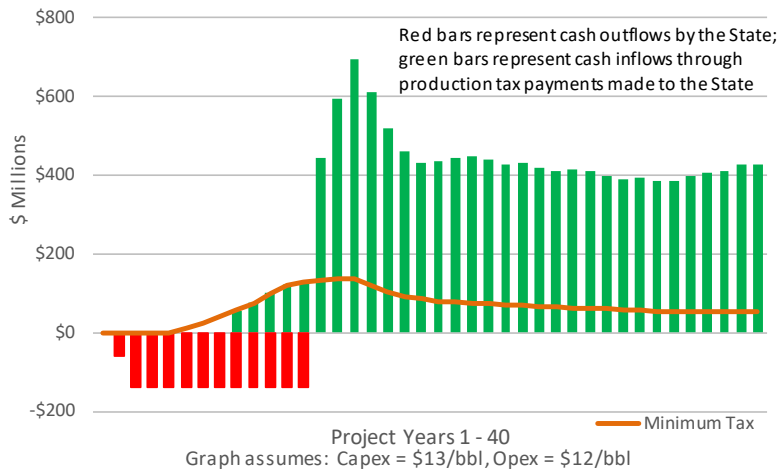
Lifecycle Totals	
Tax Credits Repurchased = \$M	280
Production Tax Paid = \$M	11,230
Net Production Tax = \$M	10,950
Production Tax NPV @ 6.95% = \$M	1,937
Total Annual State Losses = \$M	140
Total Annual State Gains = \$M	22,525
Net State Gain (Loss) = \$M	22,385
State NPV @ 6.95% = \$M	4,978
Total 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%



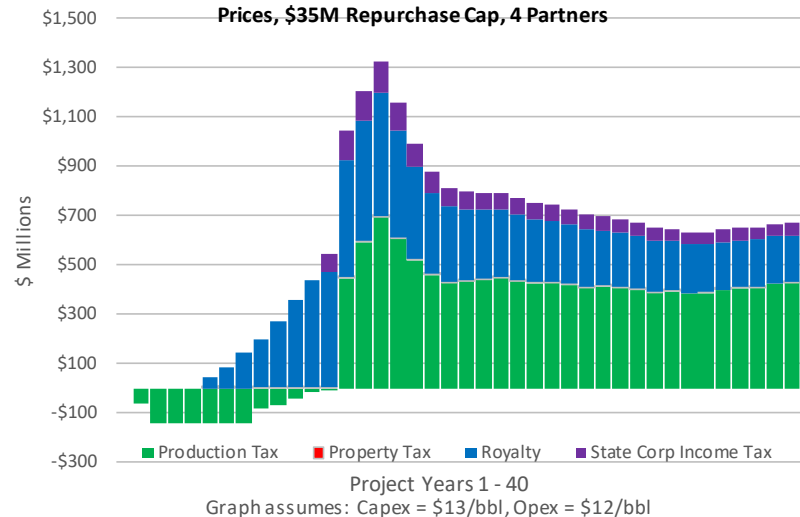
Lifecycle Modeling – Large Field

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

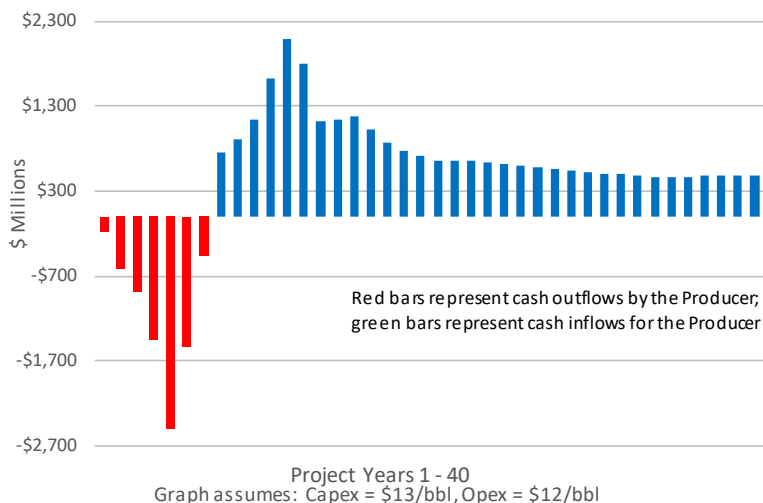
**Production Tax Credits Repurchased / Tax Payments, 20% GVR,
@ Fall 2016 Forecast Prices, \$35M Repurchase Cap, 4 Partners**



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



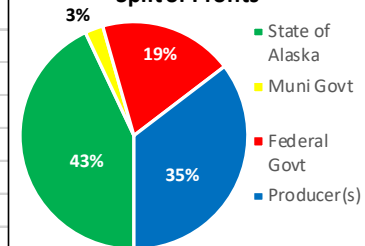
**Annual Producer Cash Flows, 20% GVR, @ Fall 2016 Forecast
Prices, \$35M Repurchase Cap, 4 Partners**



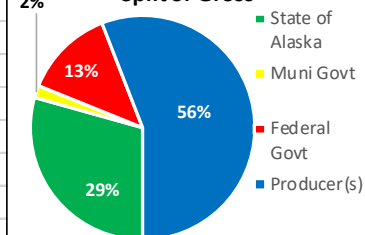
Lifecycle Totals

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

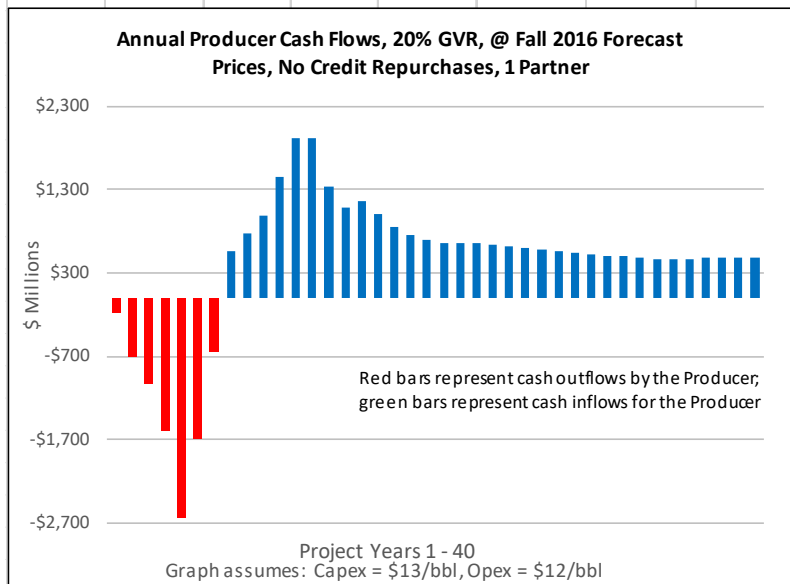
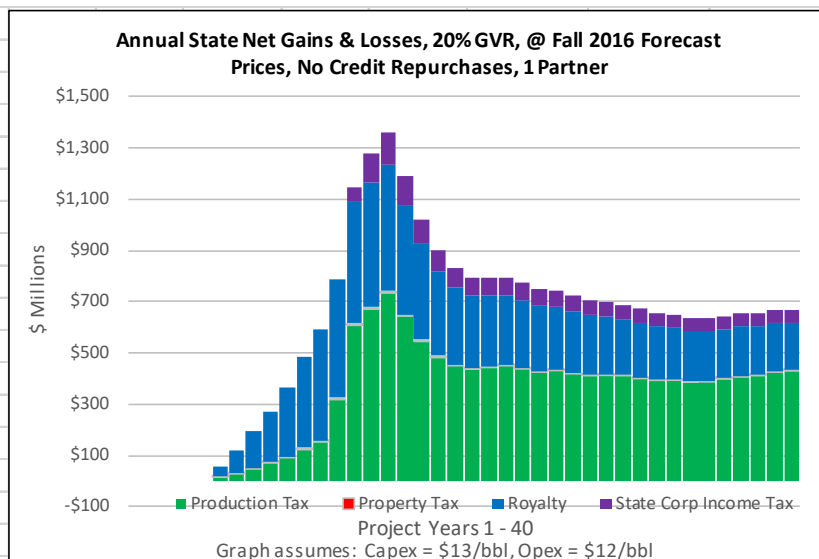
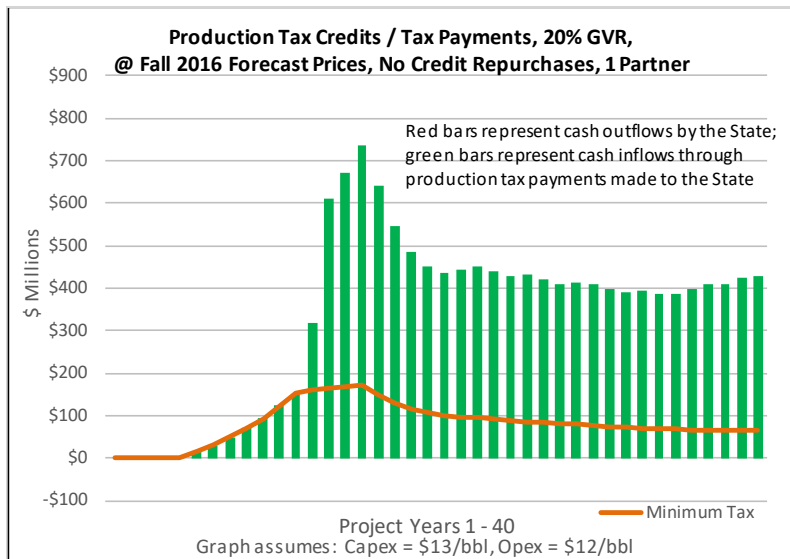


Split of Gross

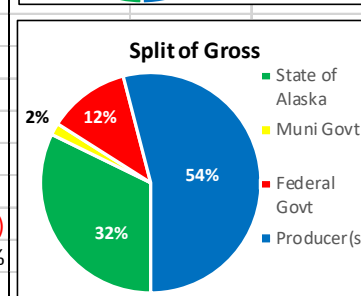
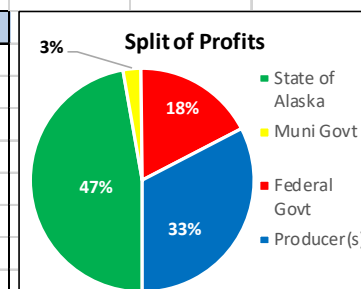


Lifecycle Modeling – Large Field

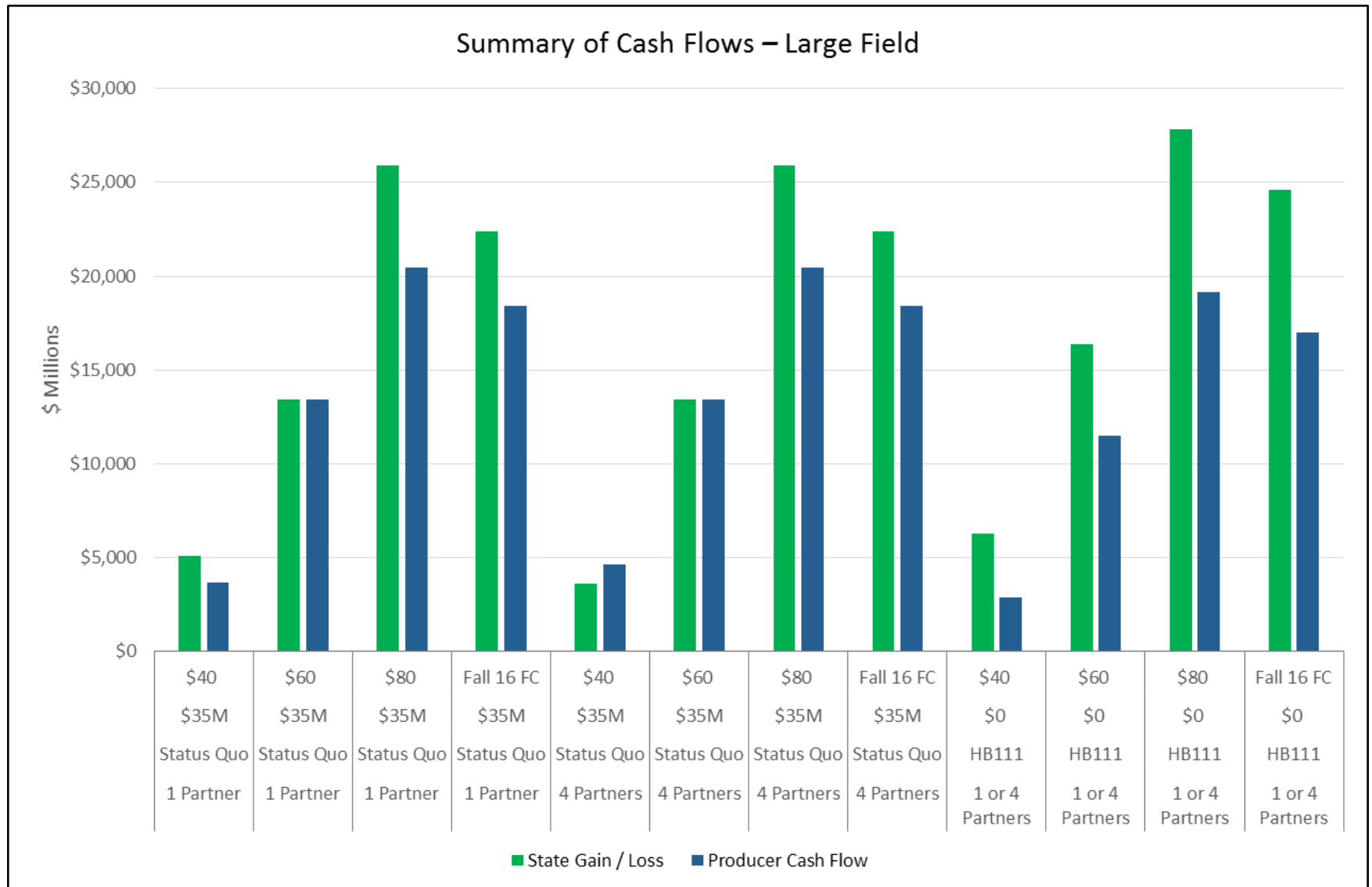
750 mmbo, HB111, Fall 2016 Forecast Prices, 1 or 4 Partners



Lifecycle Totals	
Tax Credits Repurchased = \$M	0
Production Tax Paid = \$M	13,309
Net Production Tax = \$M	13,309
Production Tax NPV @ 6.95% = \$M	2,926
Total Annual State Losses = \$M	0
Total Annual State Gains = \$M	24,590
Net State Gain (Loss) = \$M	24,590
State NPV @ 6.95% = \$M	5,911
Total Producer Cash Out = \$M	8,425
Total Producer Cash In = \$M	25,408
Net Producer Cash Flow = \$M	16,983
Producer Cash NPV @ 10.0% = \$M	(660)
Internal Rate of Return (IRR)	9%



Summary Table – Large Field



Summary Table – Large Field

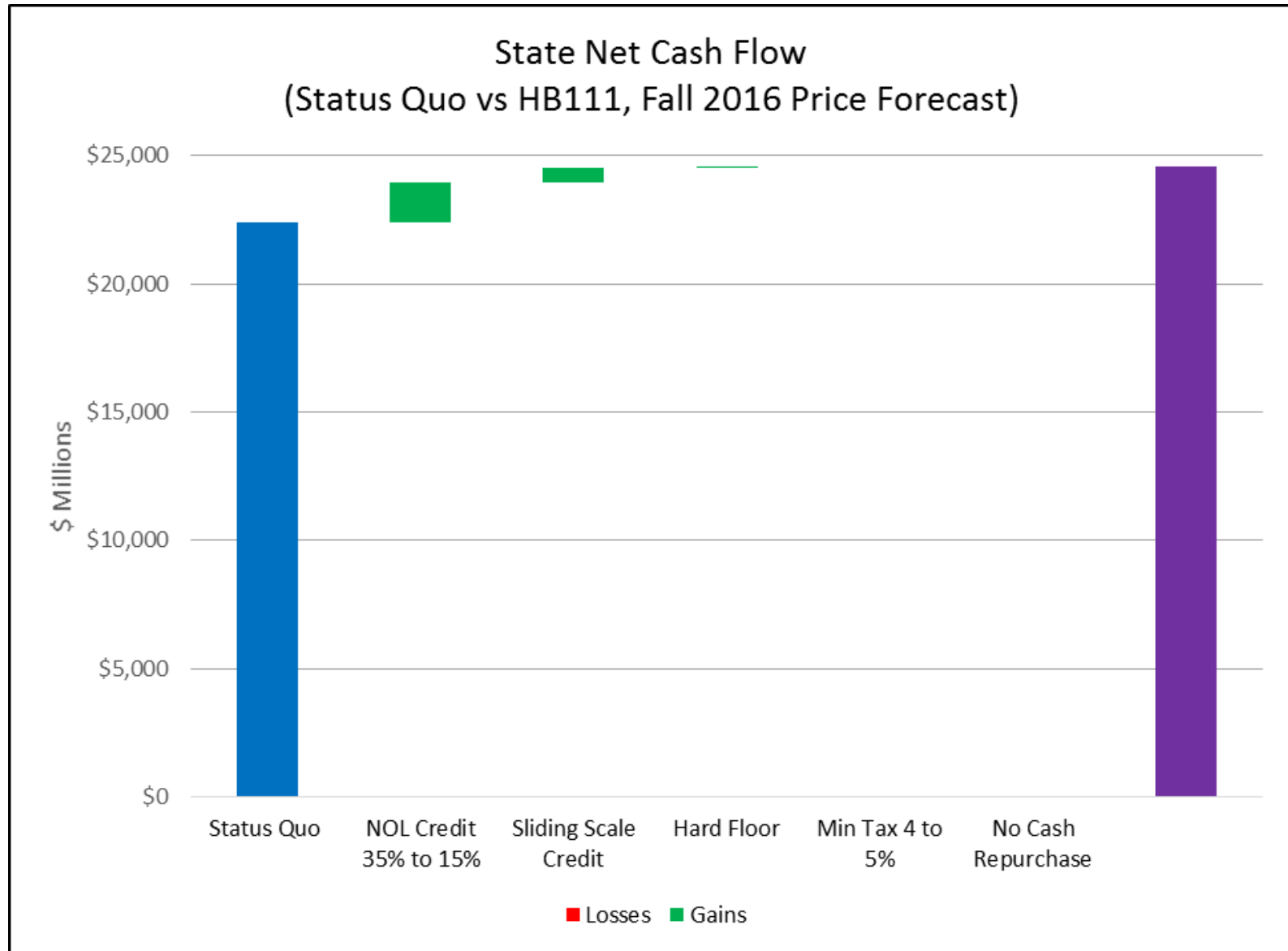
Field Size (million bbl)	# Partners	Tax Regime	Credit Repurchase Limit	Oil Price	Credits Repurchased (\$millions)	Net Production Tax Paid (\$millions)	Production Tax NPV 6.95% (\$millions)	Net State Gain (Loss) (\$millions)	State NPV 6.95% (\$millions)	Producer Cash Flow (\$millions)	Producer NPV 10.0% (\$millions)	Producer IRR (%)
750	1	Status Quo	\$35M	\$40	770	250	(15)	5,116	1,260	3,679	(3,787)	2%
750	1	Status Quo	\$35M	\$60	280	4,596	596	13,412	2,917	13,414	(1,360)	7%
750	1	Status Quo	\$35M	\$80	280	13,415	2,546	25,891	5,883	20,430	296	11%
750	1	Status Quo	\$35M	Fall 16 FC	280	10,950	1,937	22,385	4,978	18,417	(181)	10%
750	4	Status Quo	\$35M	\$40	3,065	(1,351)	(1,094)	3,620	208	4,652	(3,034)	3%
750	4	Status Quo	\$35M	\$60	2,020	4,596	73	13,412	2,409	13,414	(926)	8%
750	4	Status Quo	\$35M	\$80	1,460	13,415	2,287	25,891	5,626	20,430	564	11%
750	4	Status Quo	\$35M	Fall 16 FC	1,600	10,950	1,638	22,385	4,683	18,417	112	10%
750	1 or 4	HB111	0	\$40	0	1,527	421	6,310	1,686	2,903	(4,082)	2%
750	1 or 4	HB111	0	\$60	0	7,776	1,580	16,386	3,848	11,481	(1,814)	6%
750	1 or 4	HB111	0	\$80	0	15,515	3,487	27,854	6,770	19,153	(168)	10%
750	1 or 4	HB111	0	Fall 16 FC	0	13,309	2,926	24,590	5,911	16,983	(660)	9%

Further Analysis – Large Field

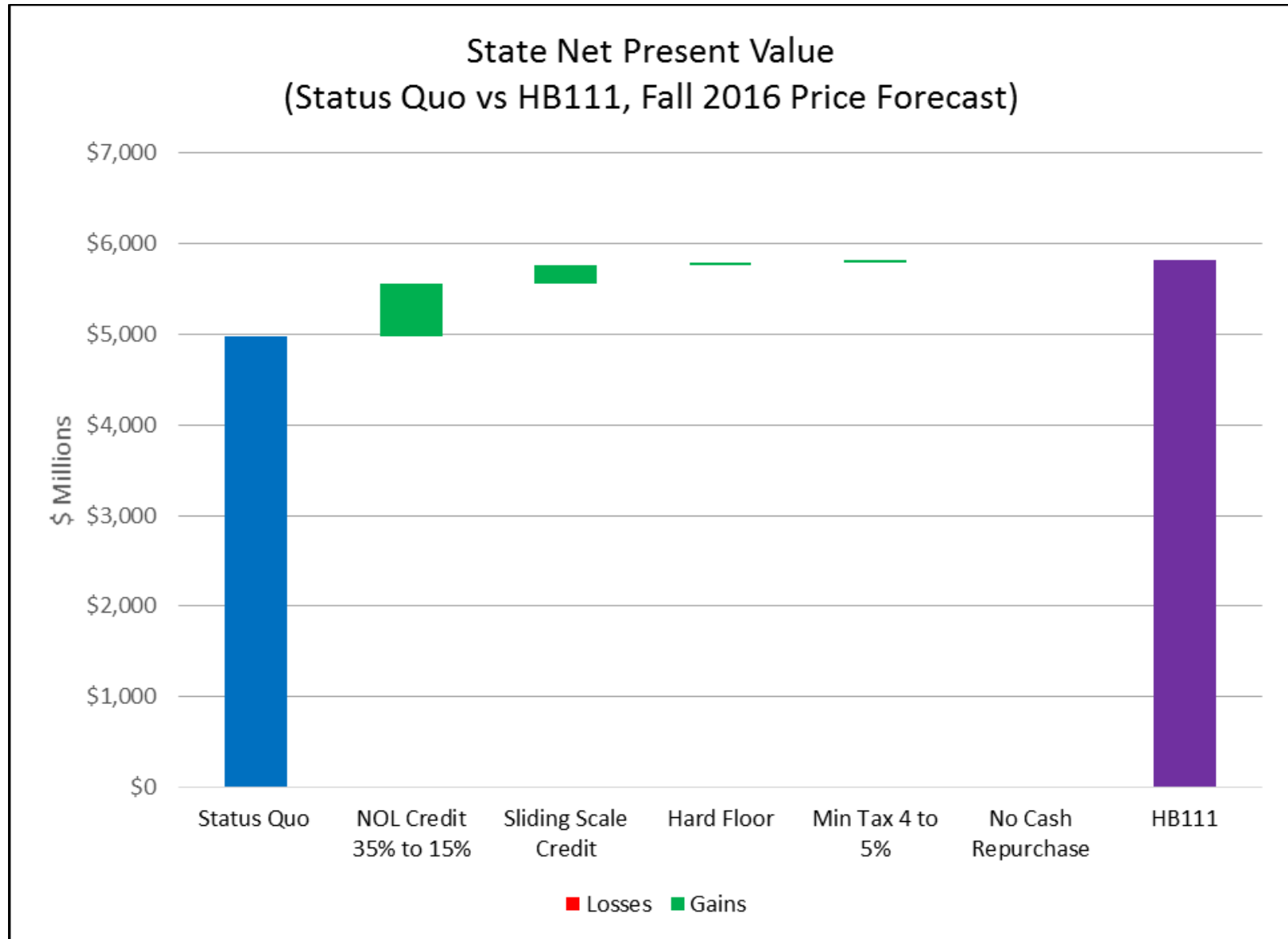
➤ What's Driving the Changes from Status Quo by Tax Component Change

- Compared Two Scenarios
 - 2016 Fall Forecast Prices
 - 1 Partner Scenario vs HB111
- Five Components to Tax Change
 - NOLs reduced from 35% to 15%
 - Sliding Scale Credits reduced from maximum of \$8/bbl to \$5/bbl
 - Hardened the Floor
 - Minimum Tax increased from 4% to 5%
 - Cash Repurchases Eliminated for North Slope

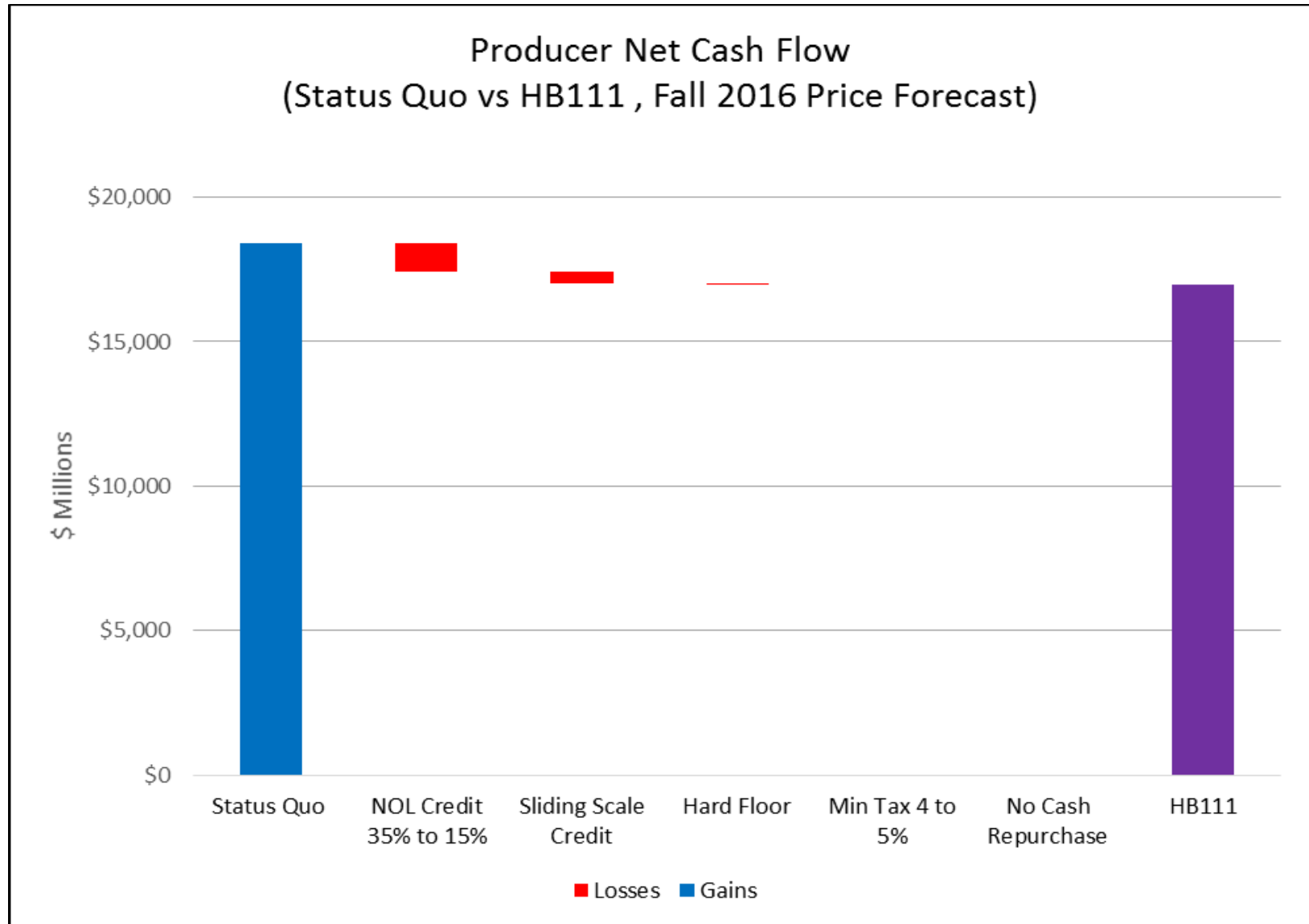
Status Quo vs HB111 – State Net Cash Flows



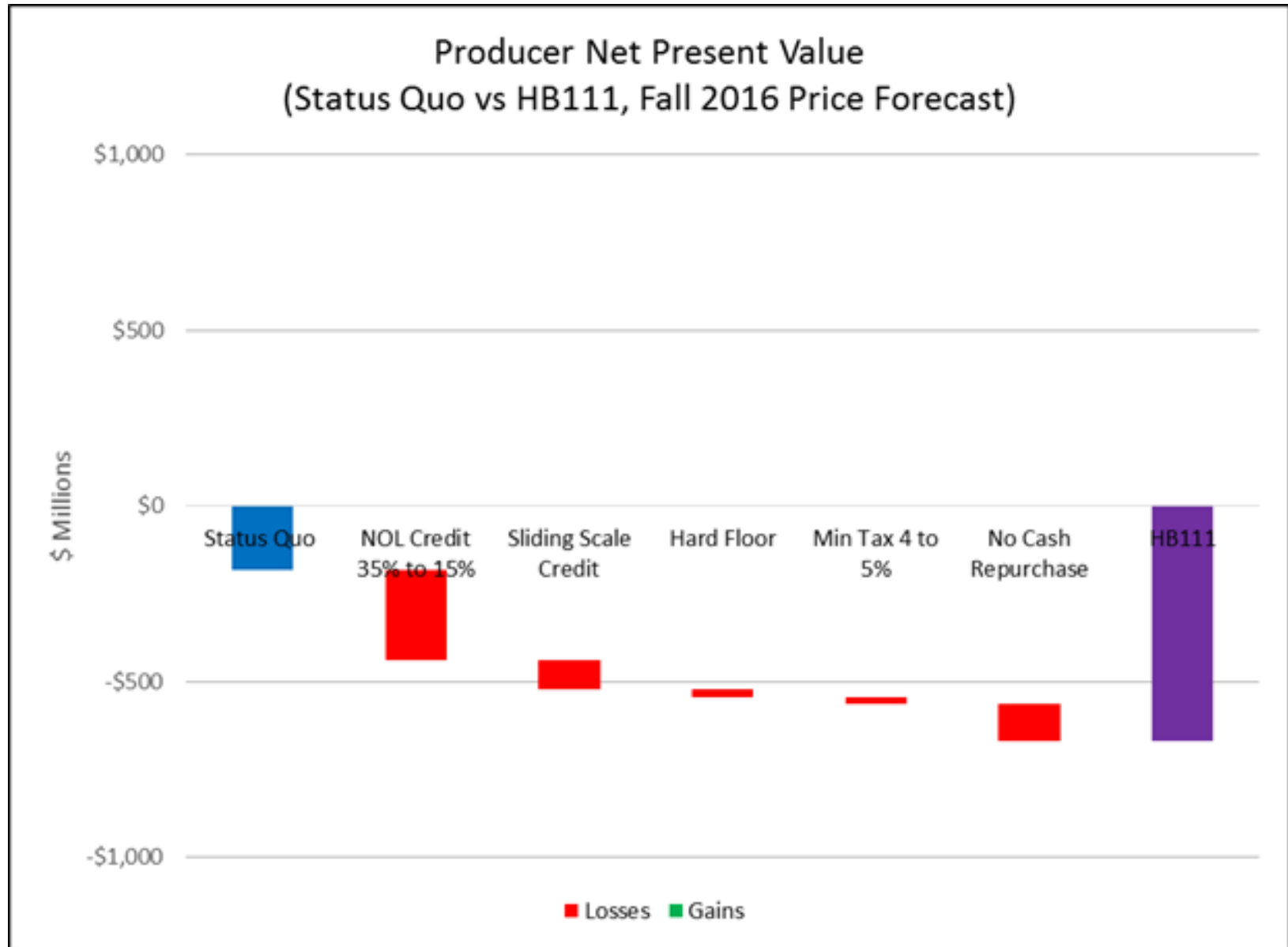
Status Quo vs HB111 – State Net Present Value



Status Quo vs HB111 – Producer Net Cash Flows



Status Quo vs HB111 – Producer Net Present Value





Thank You!

Contact Information

Colleen Glover
Commercial Analyst
Department of Revenue
Colleen.Glover@Alaska.gov
(907) 269-7809