



## **Oil and Gas Tax Credit Reform- HB247**

Department of Revenue

**“Additional Modeling – Committee Requests”**

Response to the House Resources Committee

Attachment to letter dated March 17, 2016

# *Contents / Modeling Scenarios*

## **Part 2a: Prior Presentation**

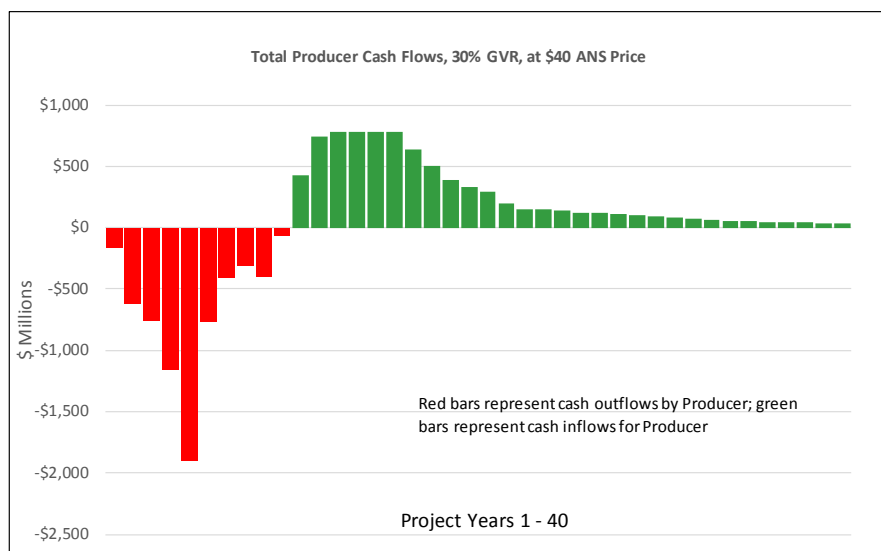
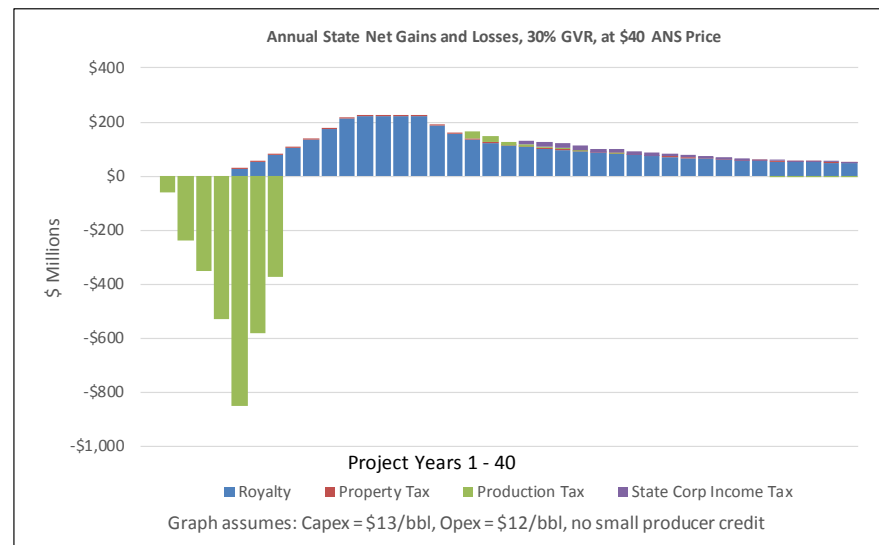
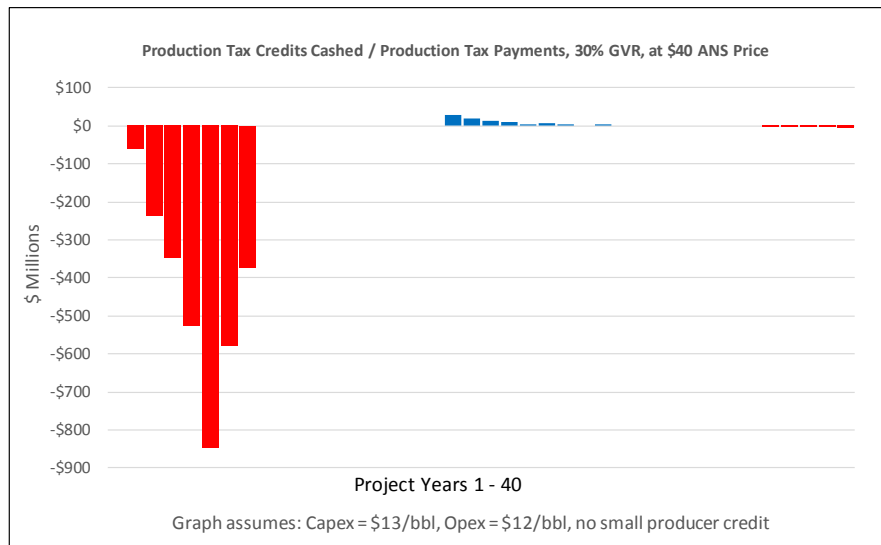
- Impact of minimum tax changes on current production
- North Slope- 50 mm bbl new field life cycle analysis
- North Slope- 750 mm bbl new field life cycle analysis
- Cook Inlet- 50 mm bbl new field life cycle analysis
- Summary slides

## **This Presentation**

- North Slope- 750 mm bbl new field life cycle analysis (high royalty / 30% GVR alternative)
- North Slope- 750 mm bbl new field life cycle analysis (50% private royalty / 50% state royalty alternative)
- Cook Inlet- 670 bcf new gas field life cycle analysis
- Middle Earth- 670 bcf new gas field life cycle analysis

# North Slope Life Cycle Modeling

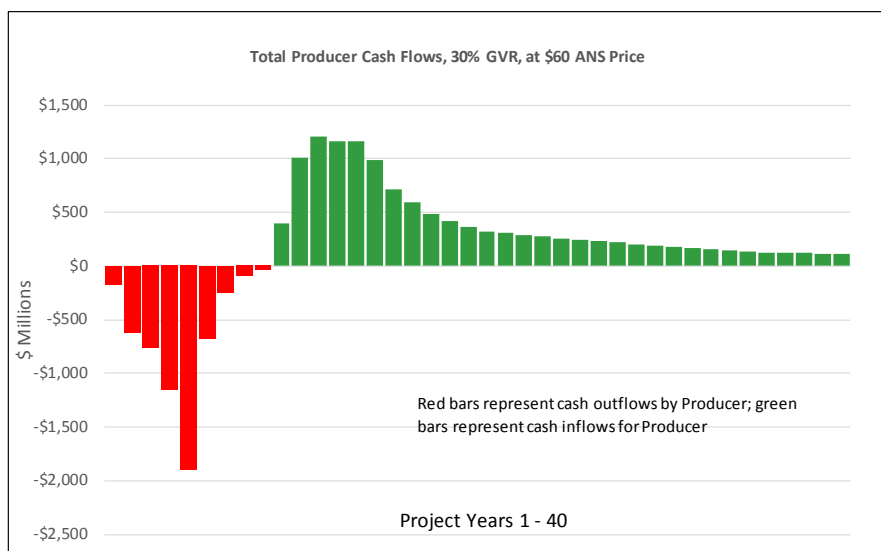
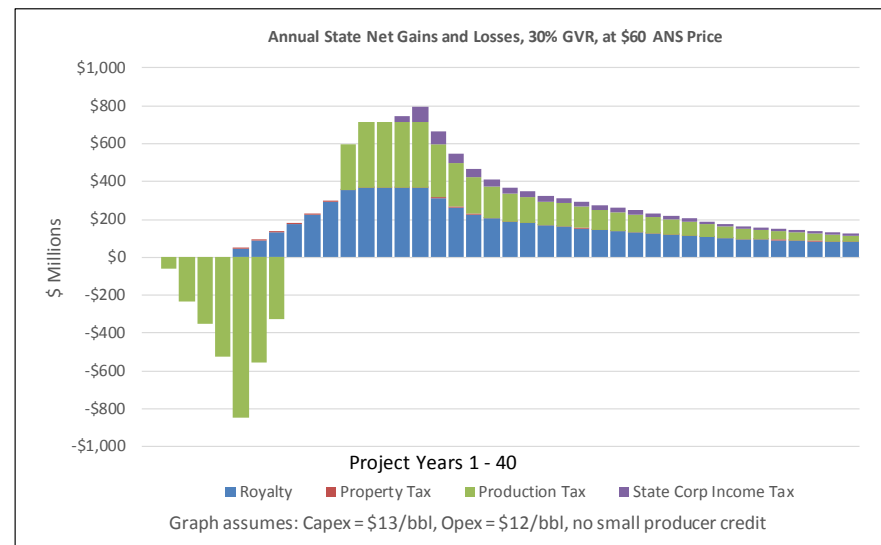
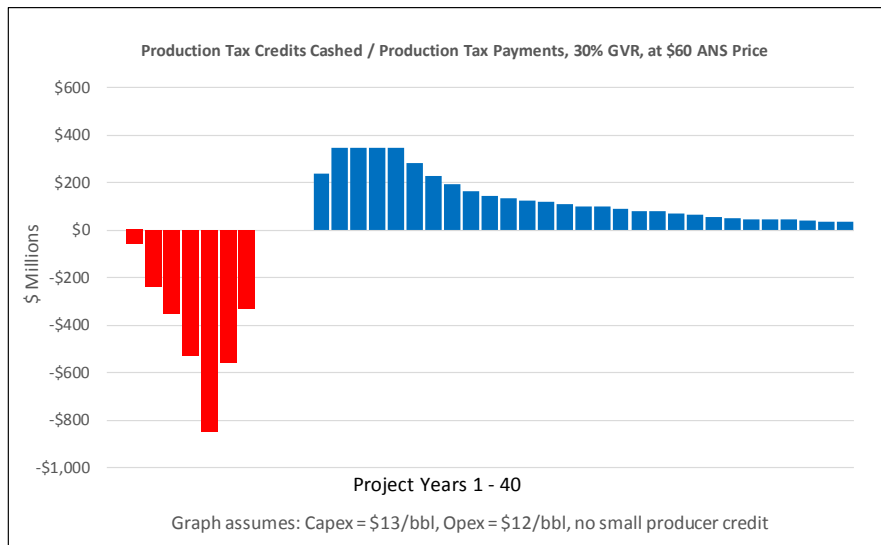
## 750 mmbo Status Quo, 16.67% Royalty / 30% GVR - \$40/bbl



Life Cycle Totals	\$Millions
Production Tax Credits Cashed	2,982
Production Tax Paid	89
Net Production Tax	-2,893
Production Tax NPV 6.15%	-2,096
Total Annual State Losses	2,810
Total Annual State Gains	3,907
Net State Gain (Loss)	1,097
State NPV 6.15%	-756
Total Producer Cash Out	6,524
Total Producer Cash In	8,180
Net Producer Cash Flow	1,656
Producer Cash NPV 6.15%	-1,965

# North Slope Life Cycle Modeling

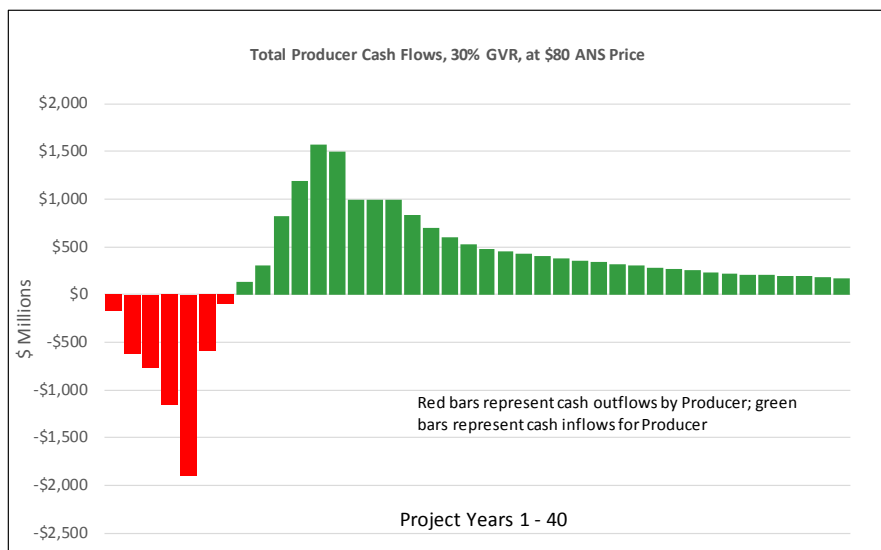
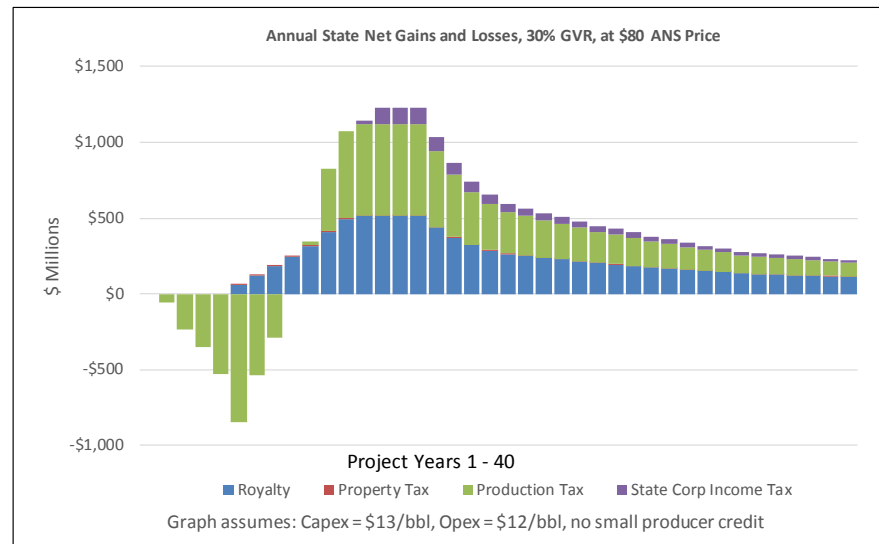
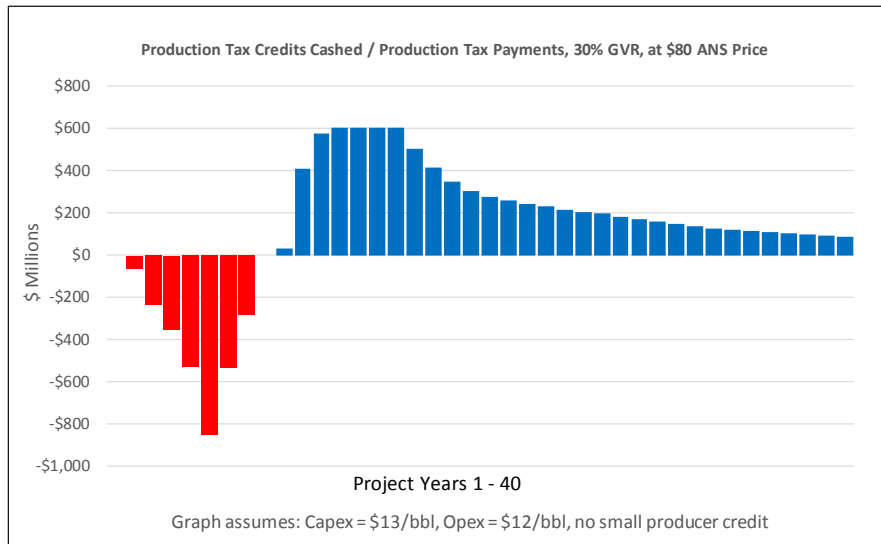
## 750 mmbo Status Quo, 16.67% Royalty / 30% GVR - \$60/bbl



Life Cycle Totals	\$Millions
Production Tax Credits Cashed	2,905
Production Tax Paid	4,083
Net Production Tax	1,178
Production Tax NPV 6.15%	-772
Total Annual State Losses	2,642
Total Annual State Gains	10,852
Net State Gain (Loss)	8,210
State NPV 6.15%	1,578
Total Producer Cash Out	5,663
Total Producer Cash In	12,426
Net Producer Cash Flow	6,764
Producer Cash NPV 6.15%	48

# North Slope Life Cycle Modeling

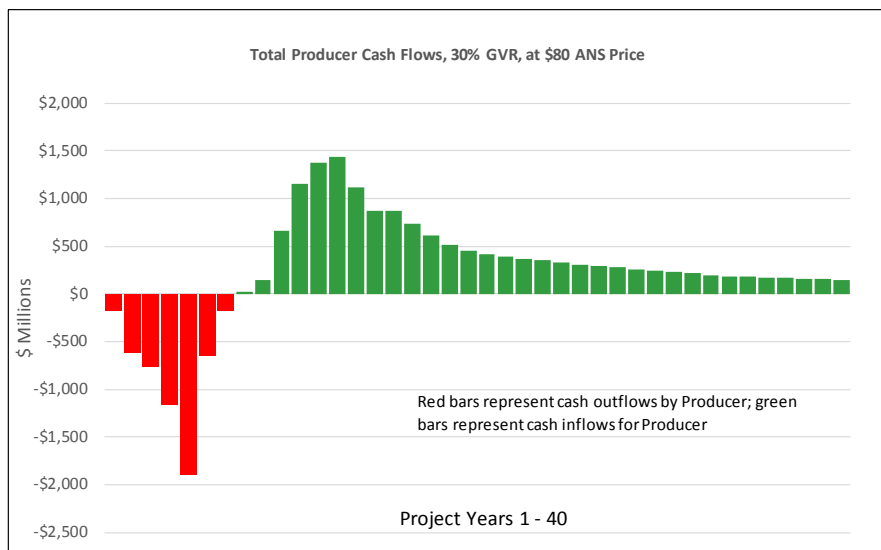
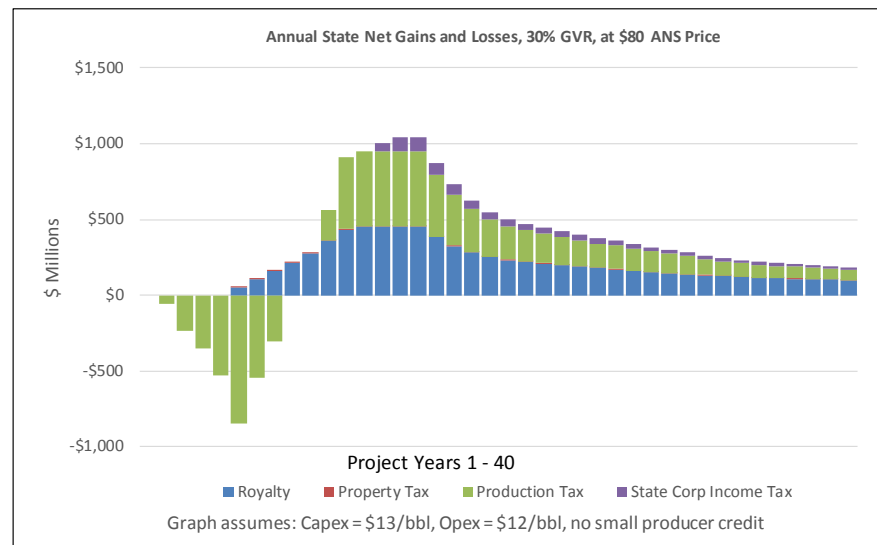
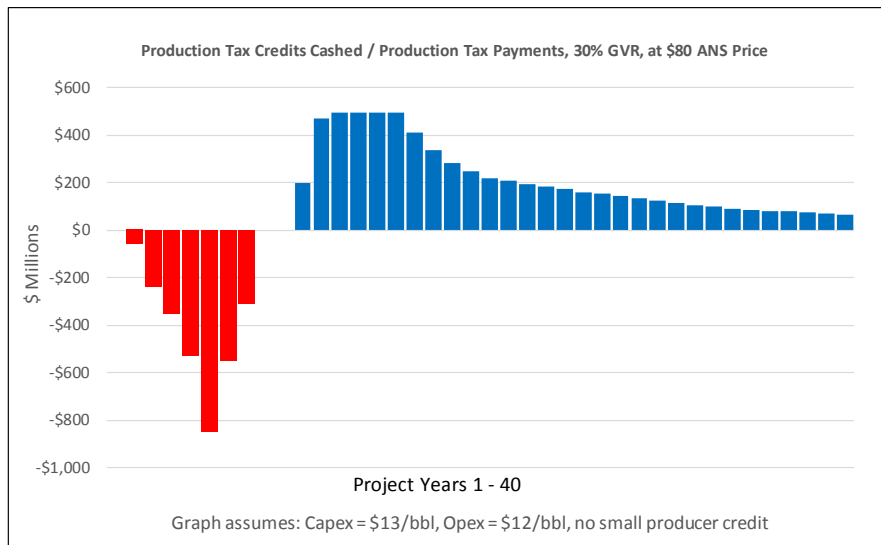
## 750 mmbo Status Quo, 16.67% Royalty / 30% GVR - \$80/bbl



Life Cycle Totals	\$Millions
Production Tax Credits Cashed	2,841
Production Tax Paid	8,313
Net Production Tax	5,472
Production Tax NPV 6.15%	656
Total Annual State Losses	2,473
Total Annual State Gains	18,005
Net State Gain (Loss)	15,532
State NPV 6.15%	4,030
Total Producer Cash Out	5,289
Total Producer Cash In	17,024
Net Producer Cash Flow	11,735
Producer Cash NPV 6.15%	1,879

# North Slope Life Cycle Modeling

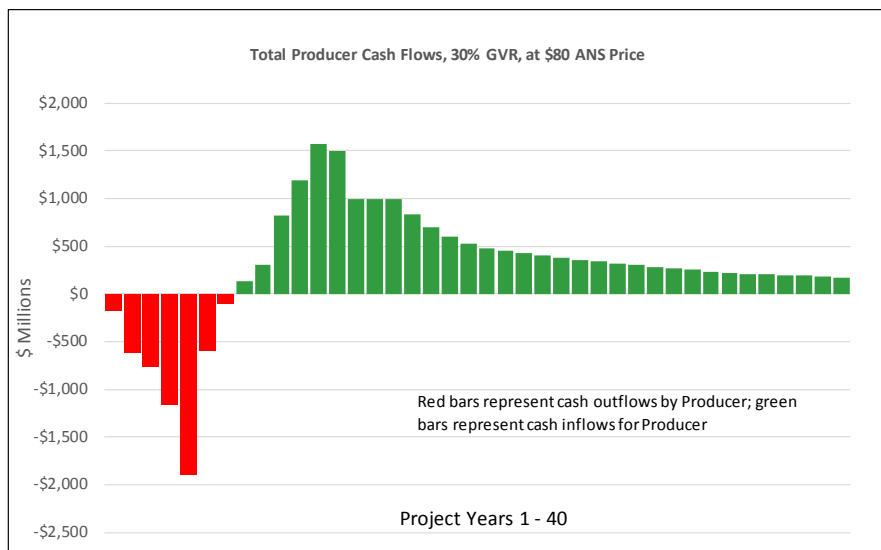
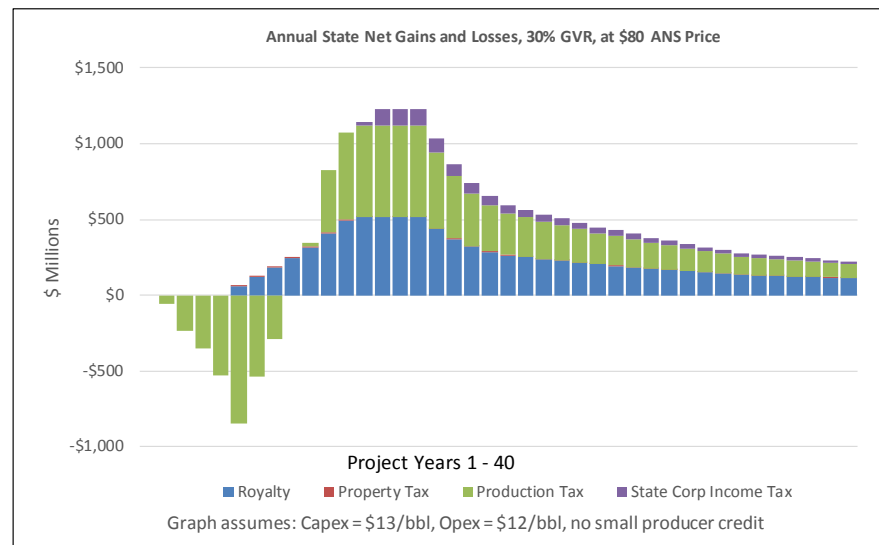
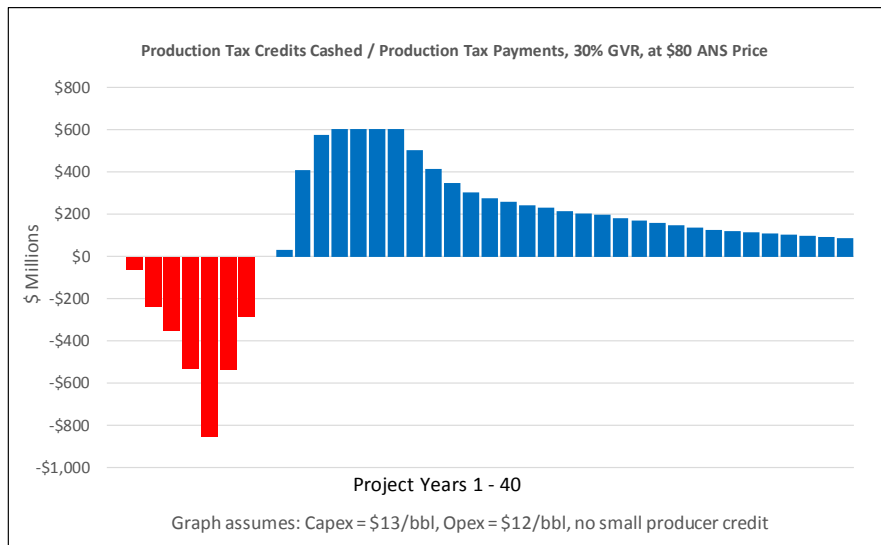
## 750 mmbo Status Quo, 16.67% Royalty / 30% GVR – Fall FC Price



Life Cycle Totals	\$Millions
Production Tax Credits Cashed	2,874
Production Tax Paid	6,497
Net Production Tax	3,623
Production Tax NPV 6.15%	35
Total Annual State Losses	2,558
Total Annual State Gains	14,941
Net State Gain (Loss)	12,383
State NPV 6.15%	2,964
Total Producer Cash Out	5,410
Total Producer Cash In	15,015
Net Producer Cash Flow	9,604
Producer Cash NPV 6.15%	1,092

# North Slope Life Cycle Modeling

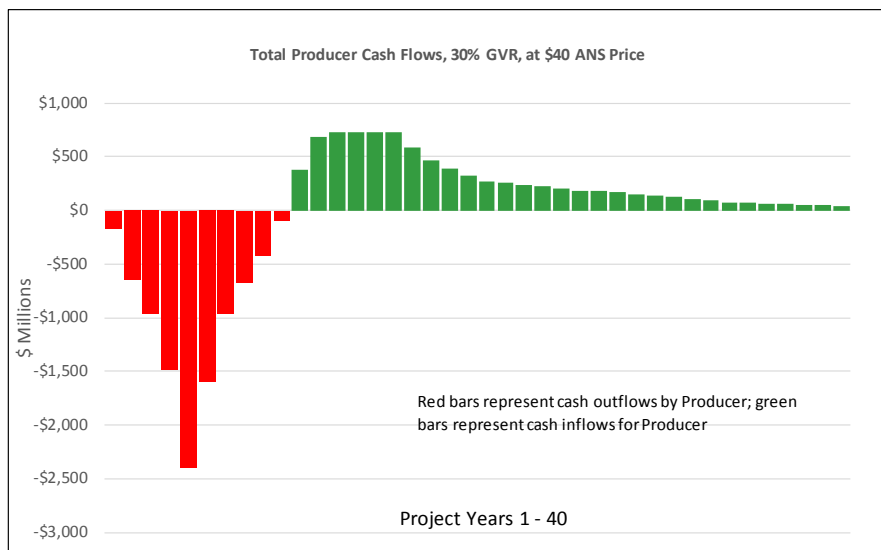
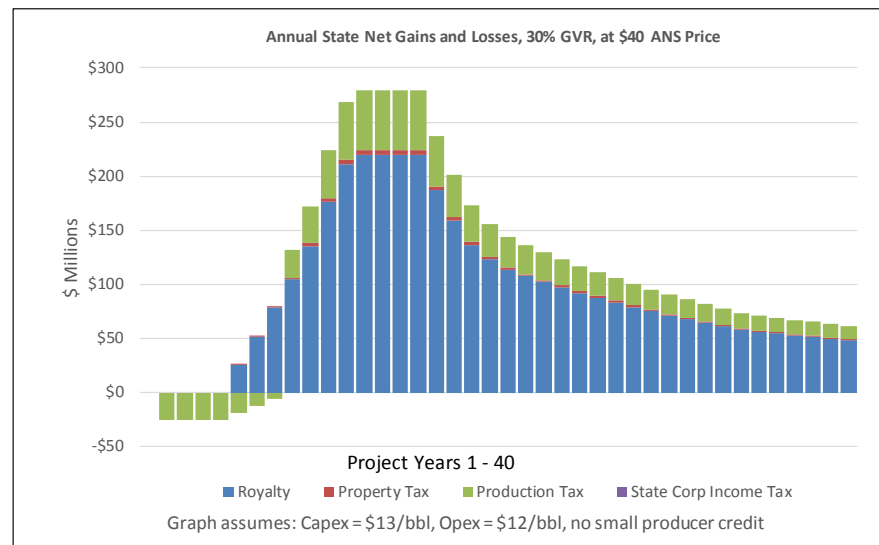
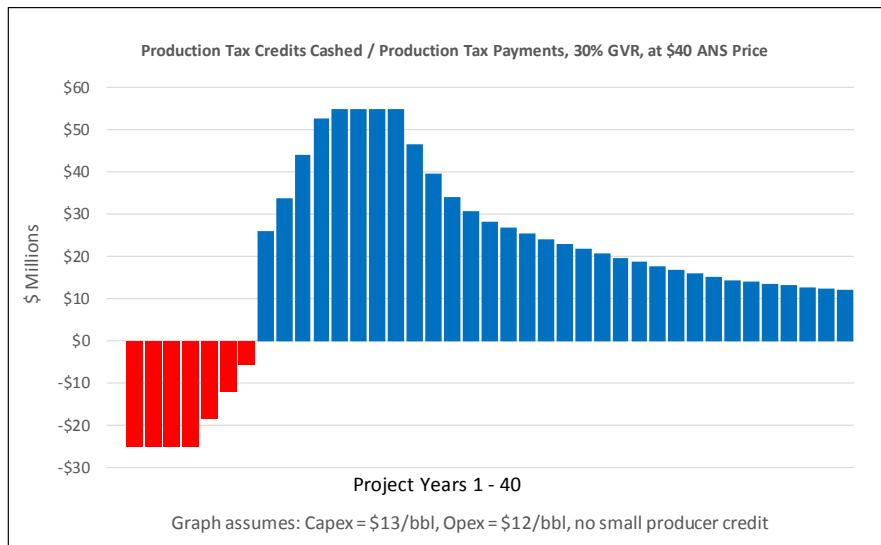
750 mmbbl Status Quo, 16.67% Royalty / 30% GVR, Co w/ >\$10B - \$80/bbl



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# North Slope Life Cycle Modeling

750 mmbo HB 247, 16.67% Royalty / 30% GVR - \$40/bbl

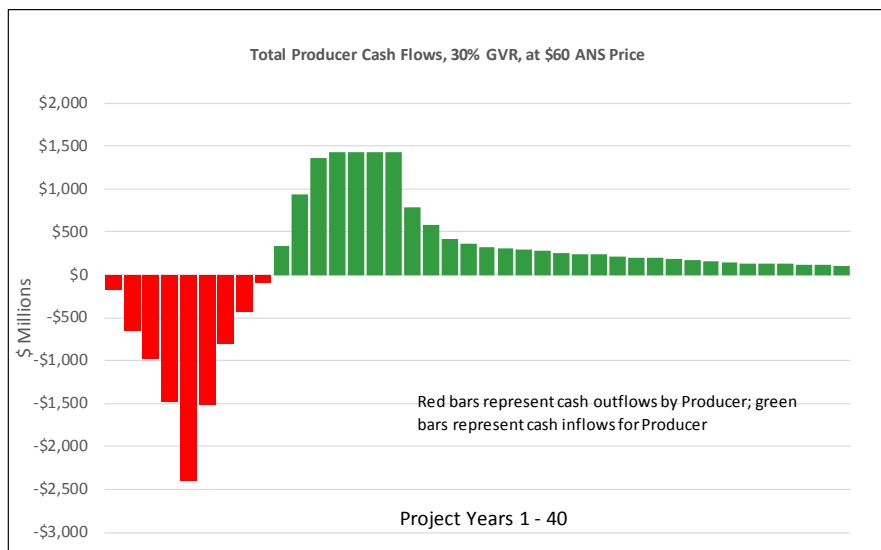
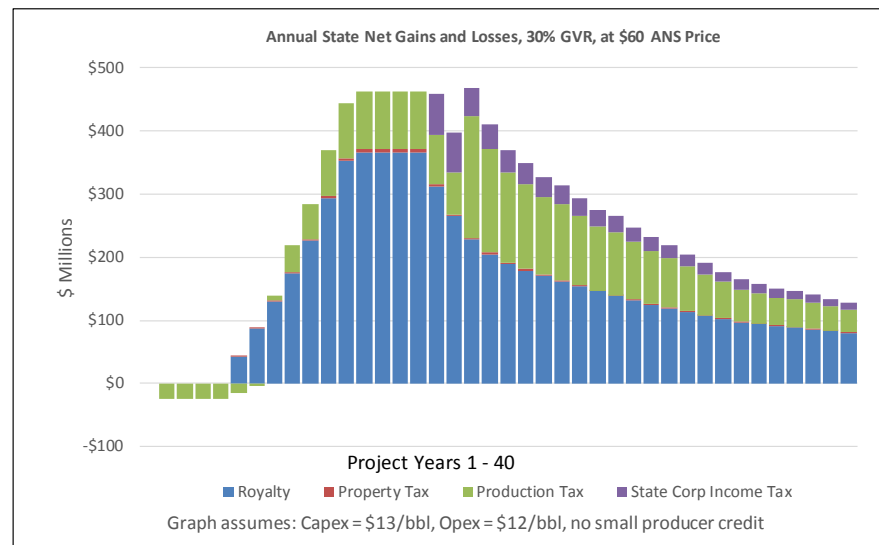
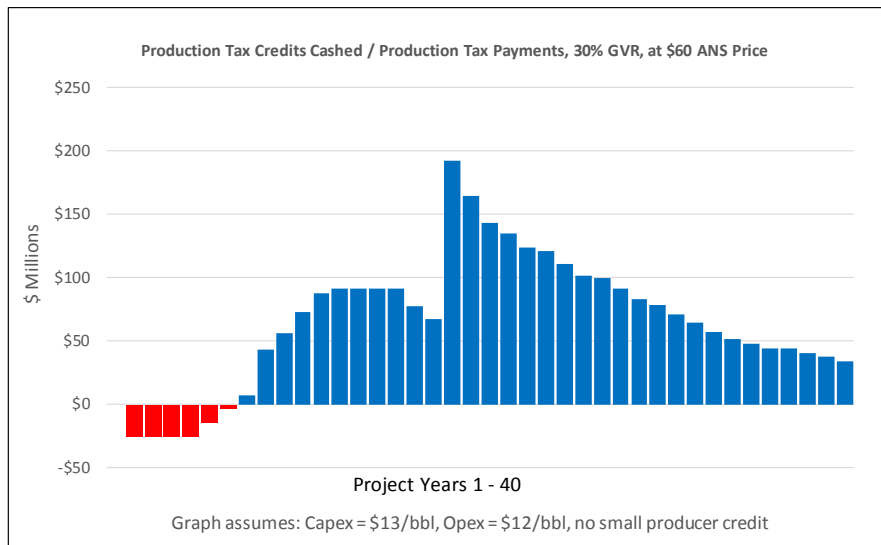


Life Cycle Totals	\$Millions
Production Tax Credits Cashed	136
Production Tax Paid	897
Net Production Tax	761
Production Tax NPV 6.15%	190
Total Annual State Losses	100
Total Annual State Gains	4,674
Net State Gain (Loss)	4,574
State NPV 6.15%	1,496
Total Producer Cash Out	9,417
Total Producer Cash In	8,488
Net Producer Cash Flow	-928
Producer Cash NPV 6.15%	-4,049



# North Slope Life Cycle Modeling

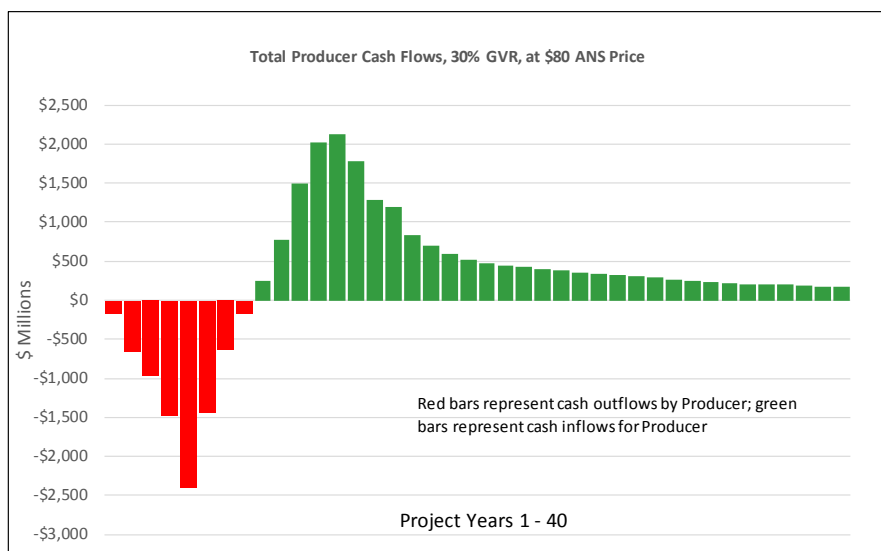
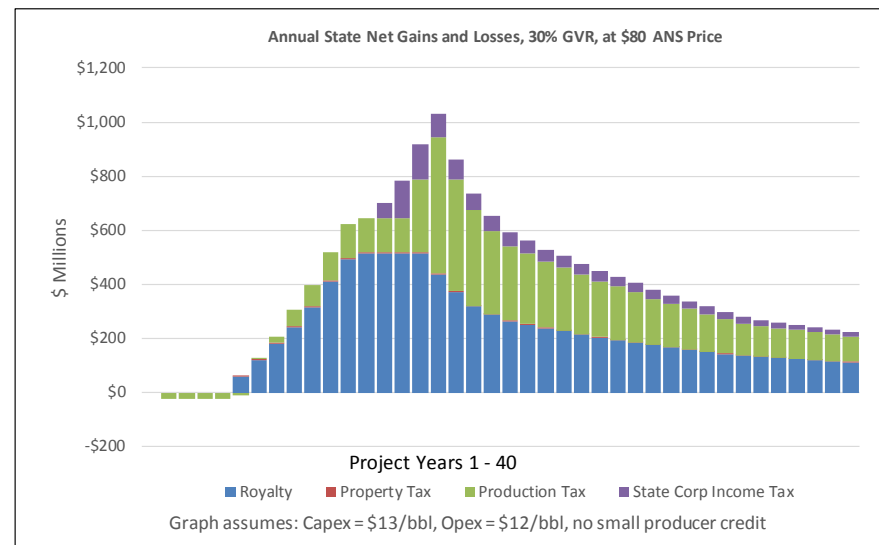
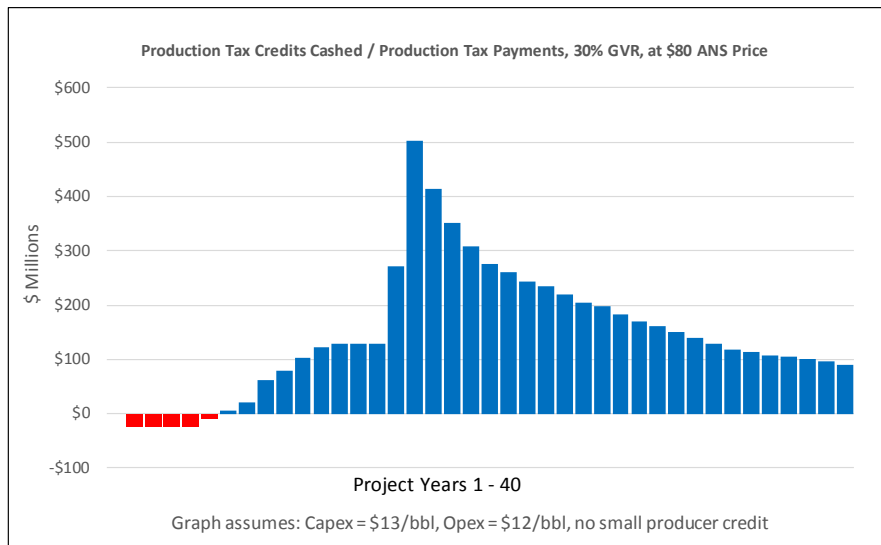
## 750 mmbo HB 247, 16.67% Royalty / 30% GVR - \$60/bbl



Life Cycle Totals	\$Millions
Production Tax Credits Cashed	117
Production Tax Paid	2,722
Net Production Tax	2,605
Production Tax NPV 6.15%	679
Total Annual State Losses	100
Total Annual State Gains	9,644
Net State Gain (Loss)	9,544
State NPV 6.15%	2,992
Total Producer Cash Out	8,502
Total Producer Cash In	14,398
Net Producer Cash Flow	5,897
Producer Cash NPV 6.15%	-1,179

# North Slope Life Cycle Modeling

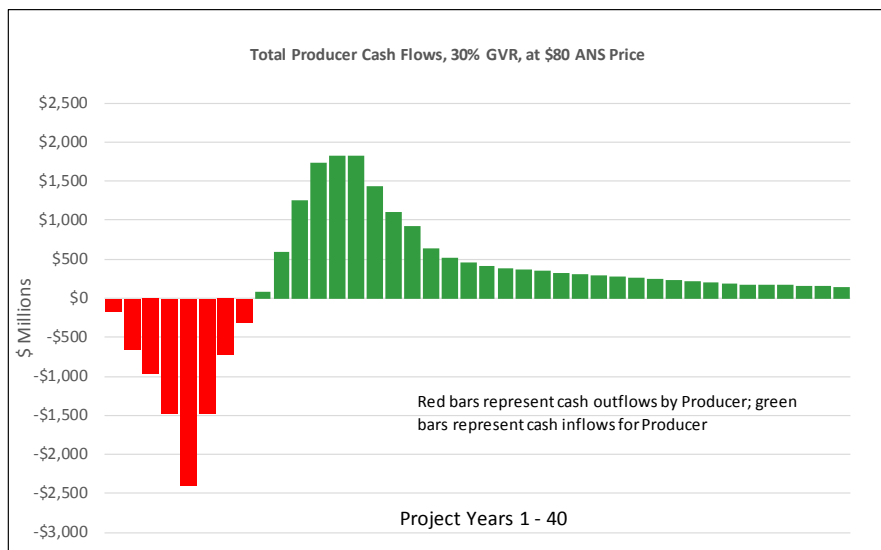
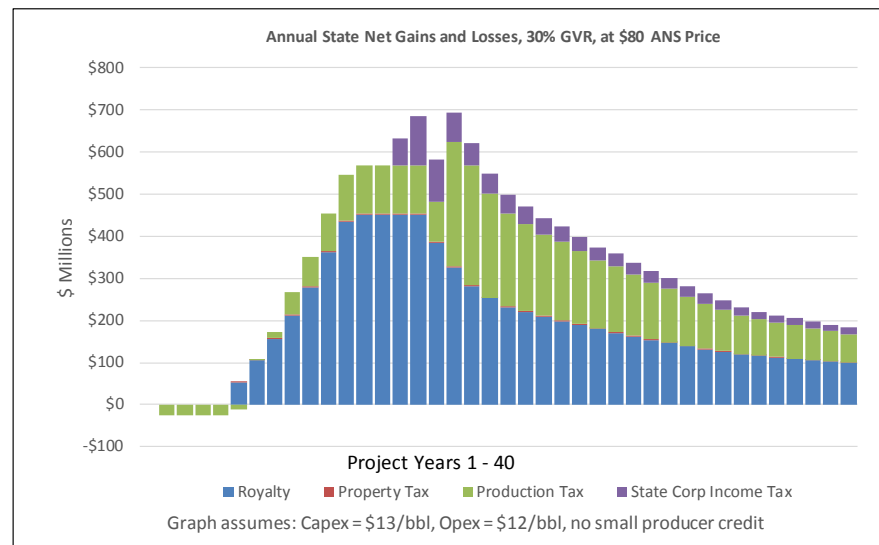
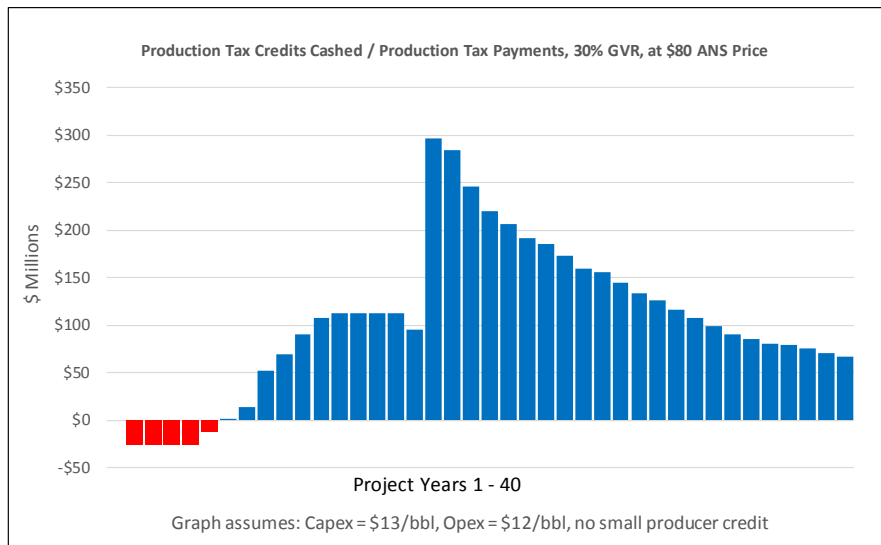
## 750 mmbo HB 247, 16.67% Royalty / 30% GVR - \$80/bbl



Life Cycle Totals	\$Millions
Production Tax Credits Cashed	110
Production Tax Paid	5,928
Net Production Tax	5,818
Production Tax NPV 6.15%	1,557
Total Annual State Losses	100
Total Annual State Gains	15,955
Net State Gain (Loss)	15,855
State NPV 6.15%	4,918
Total Producer Cash Out	7,919
Total Producer Cash In	19,444
Net Producer Cash Flow	11,525
Producer Cash NPV 6.15%	1,052

# North Slope Life Cycle Modeling

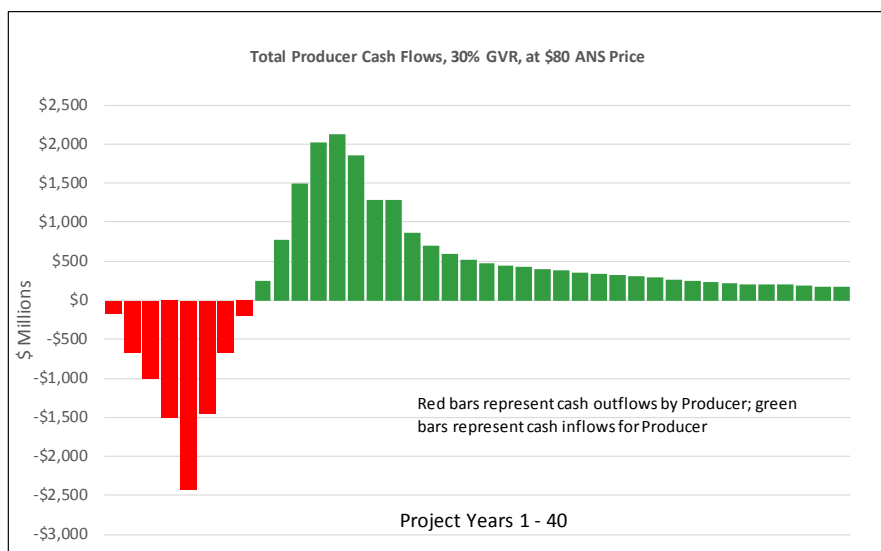
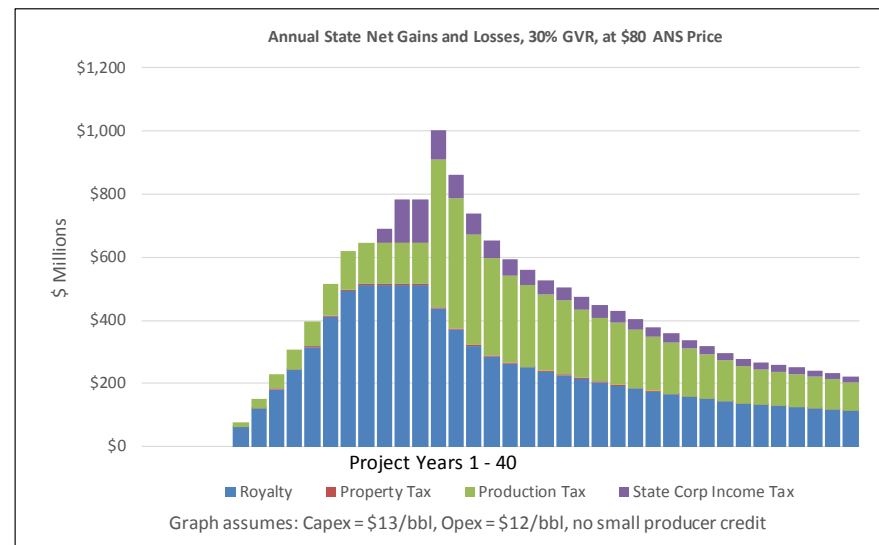
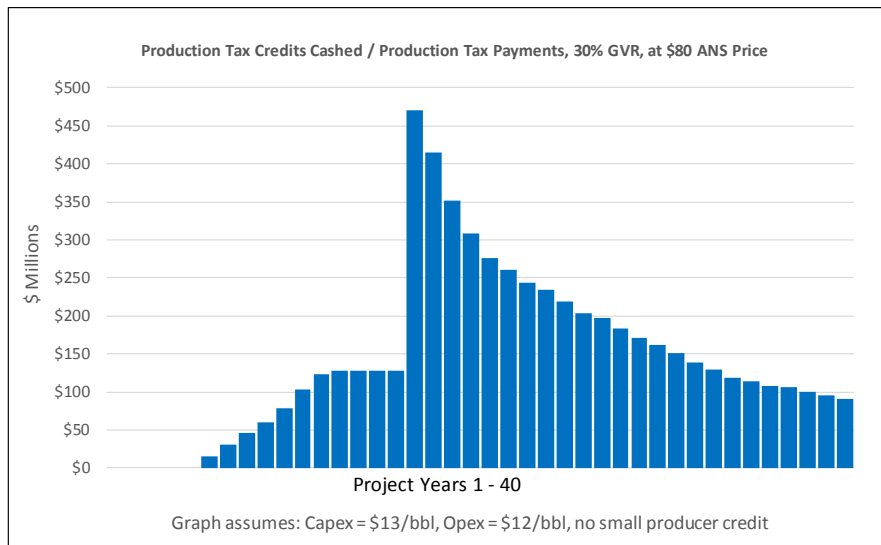
## 750 mmbo HB 247, 16.67% Royalty / 30% GVR – Fall FC Price



Life Cycle Totals	\$Millions
Production Tax Credits Cashed	112
Production Tax Paid	4,283
Net Production Tax	4,171
Production Tax NPV 6.15%	1,078
Total Annual State Losses	100
Total Annual State Gains	12,996
Net State Gain (Loss)	12,896
State NPV 6.15%	3,991
Total Producer Cash Out	8,168
Total Producer Cash In	17,439
Net Producer Cash Flow	9,271
Producer Cash NPV 6.15%	154

# North Slope Life Cycle Modeling

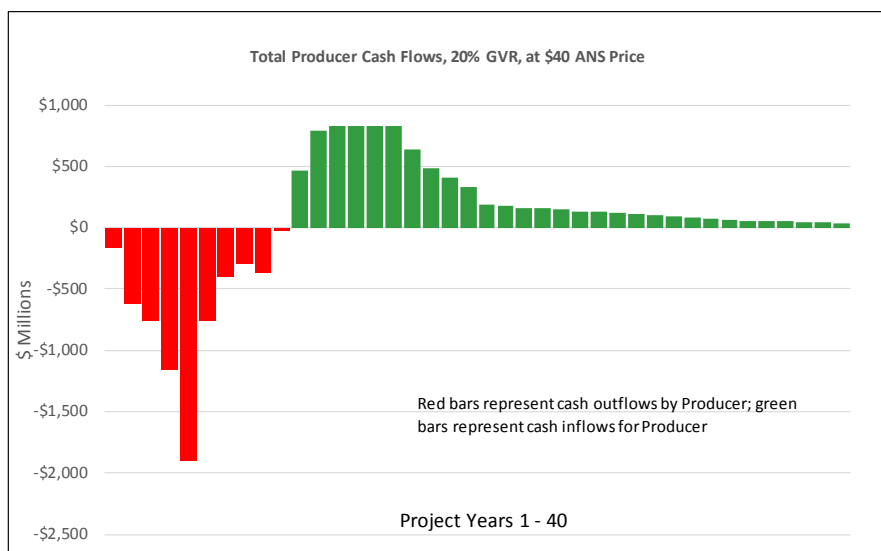
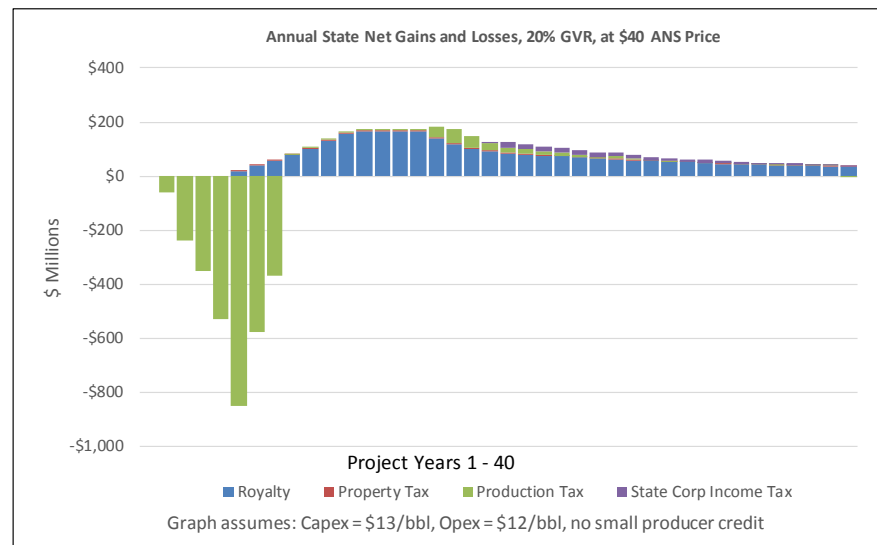
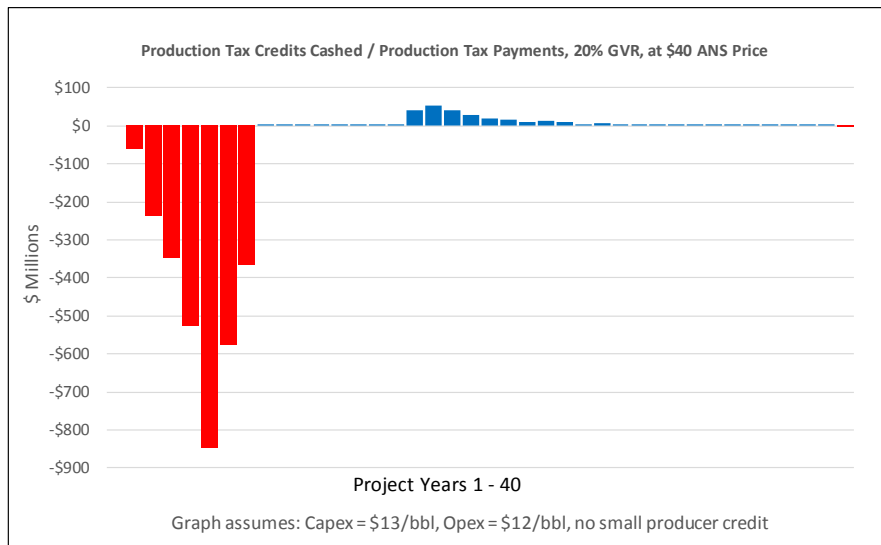
750 mmbo HB 247, 16.67% Royalty / 30% GVR, Co w/>\$10B - \$80/bbl



Life Cycle Totals	\$Millions
Production Tax Credits Cashed	0
Production Tax Paid	5,818
Net Production Tax	5,818
Production Tax NPV 6.15%	1,621
Total Annual State Losses	0
Total Annual State Gains	15,855
Net State Gain (Loss)	15,855
State NPV 6.15%	4,982
Total Producer Cash Out	8,094
Total Producer Cash In	19,619
Net Producer Cash Flow	11,525
Producer Cash NPV 6.15%	991

# North Slope Life Cycle Modeling

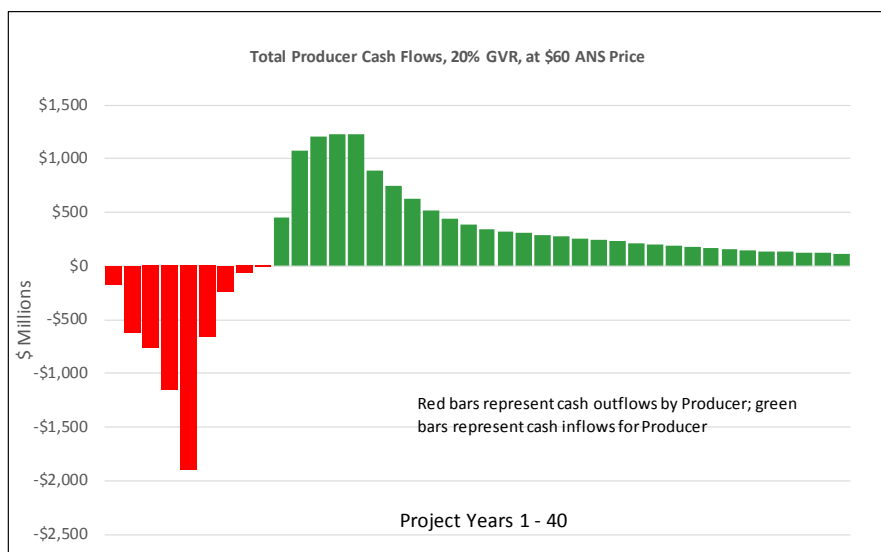
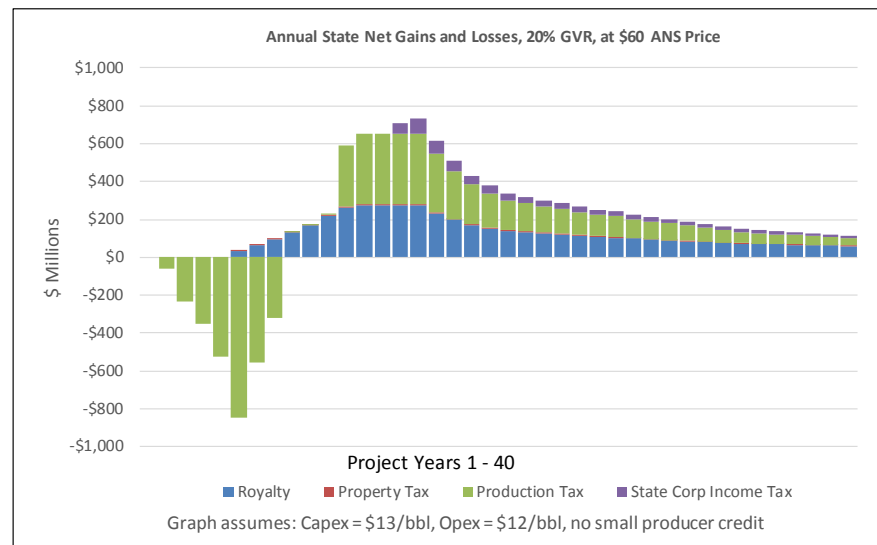
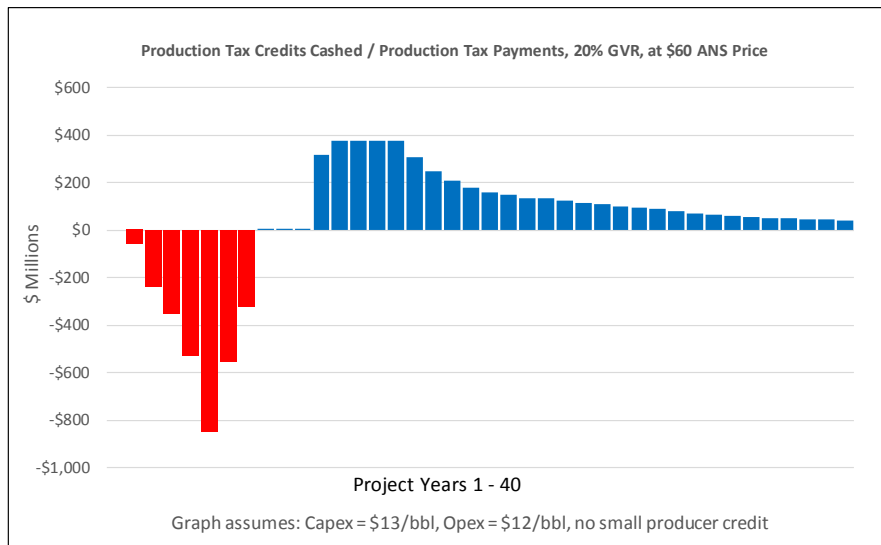
## 750 mmbo Status Quo, 50% Private Royalty / 20% GVR - \$40/bbl



Life Cycle Totals	\$Millions
Production Tax Credits Cashed	2,963
Production Tax Paid	294
Net Production Tax	-2,668
Production Tax NPV 6.15%	-2,023
Total Annual State Losses	2,900
Total Annual State Gains	1,929
Net State Gain (Loss)	-971
State NPV 6.15%	-1,474
Total Producer Cash Out	6,437
Total Producer Cash In	8,525
Net Producer Cash Flow	2,089
Producer Cash NPV 6.15%	-1,785

# North Slope Life Cycle Modeling

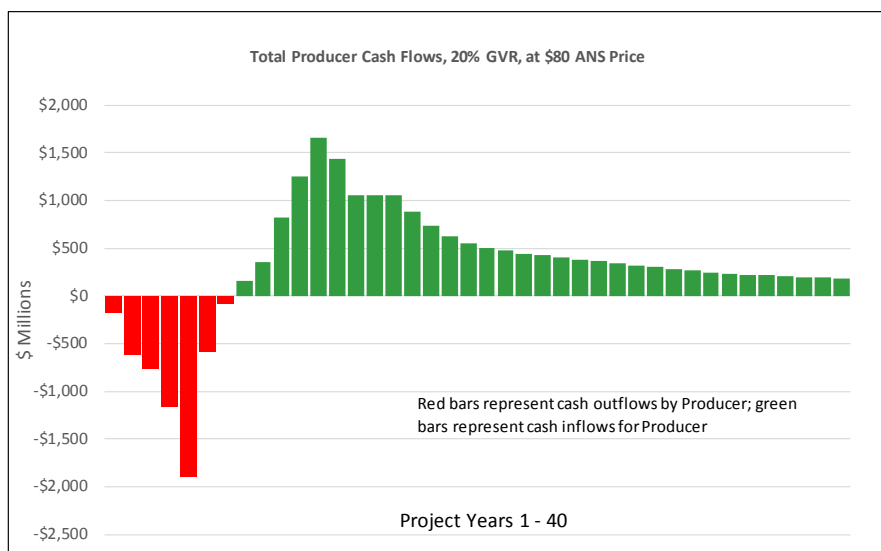
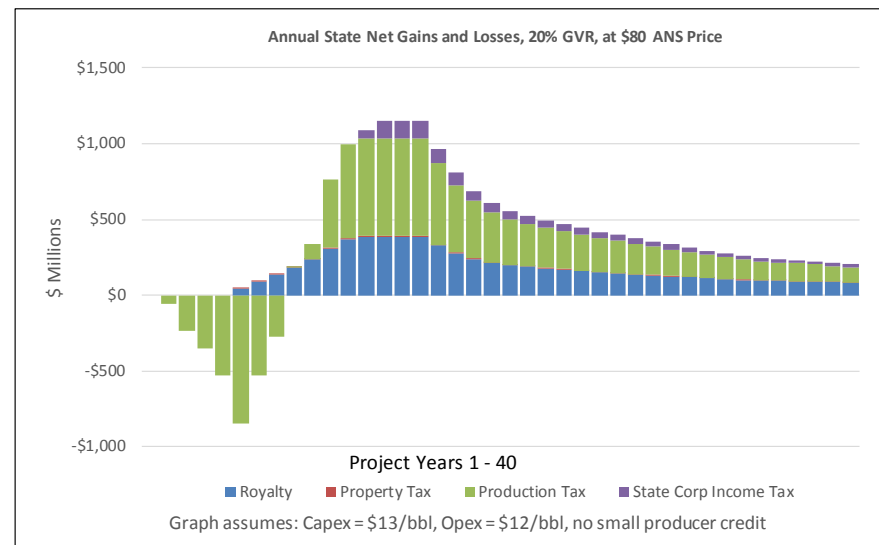
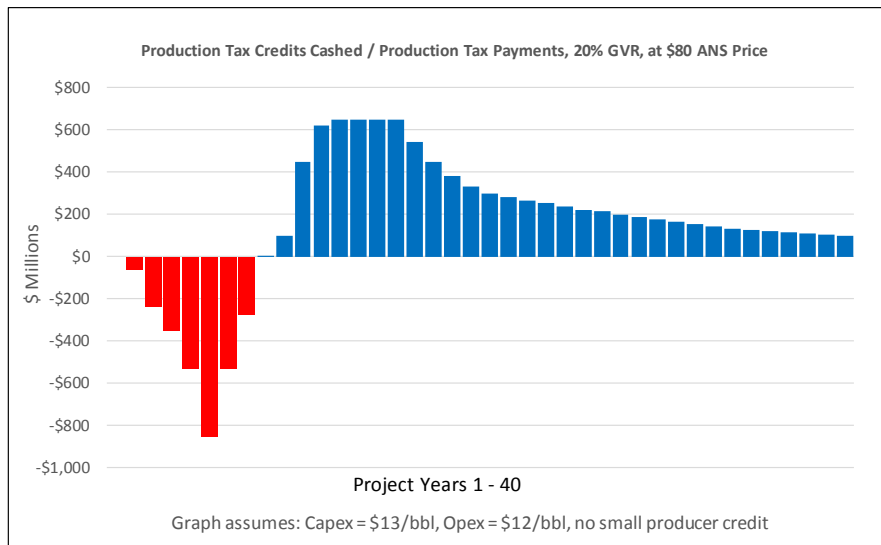
## 750 mmo Status Quo, 50% Private Royalty / 20% GVR - \$60/bbl



Life Cycle Totals	\$Millions
Production Tax Credits Cashed	2,892
Production Tax Paid	4,577
Net Production Tax	1,685
Production Tax NPV 6.15%	-602
Total Annual State Losses	2,792
Total Annual State Gains	7,677
Net State Gain (Loss)	4,886
State NPV 6.15%	433
Total Producer Cash Out	5,570
Total Producer Cash In	12,974
Net Producer Cash Flow	7,404
Producer Cash NPV 6.15%	286

# North Slope Life Cycle Modeling

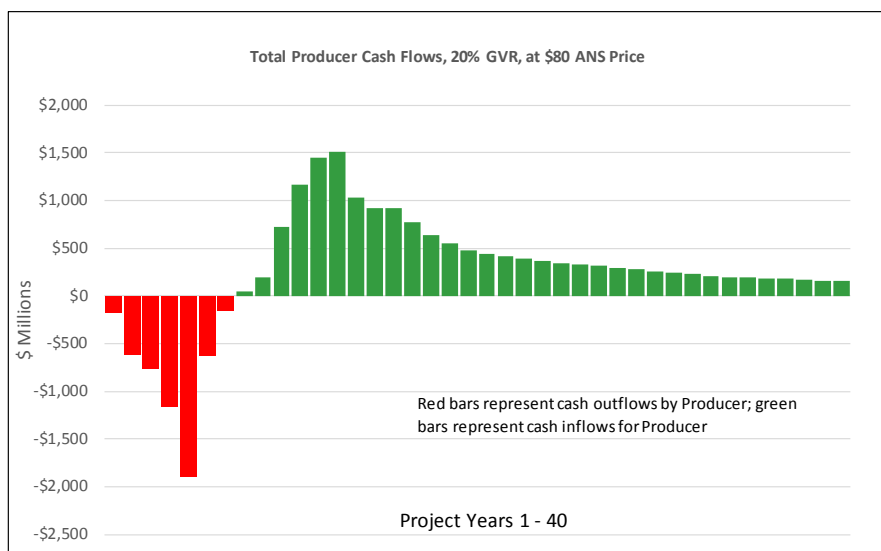
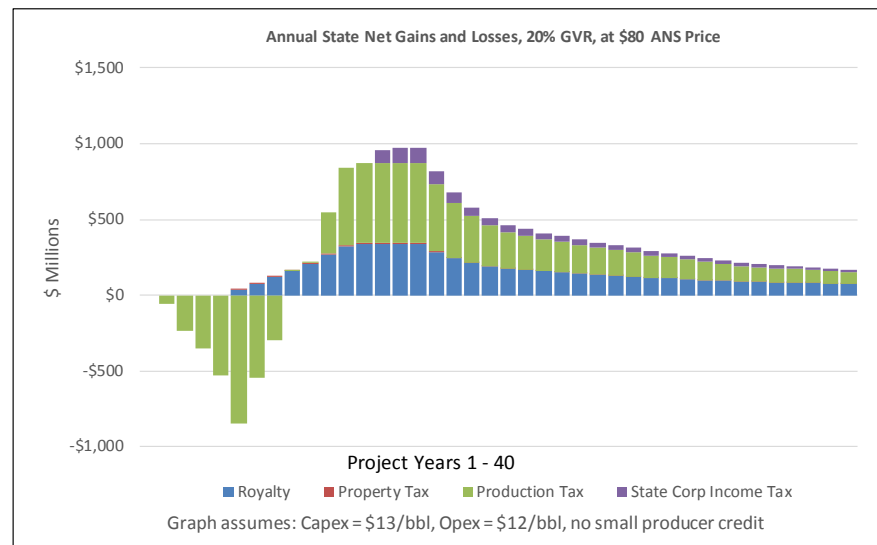
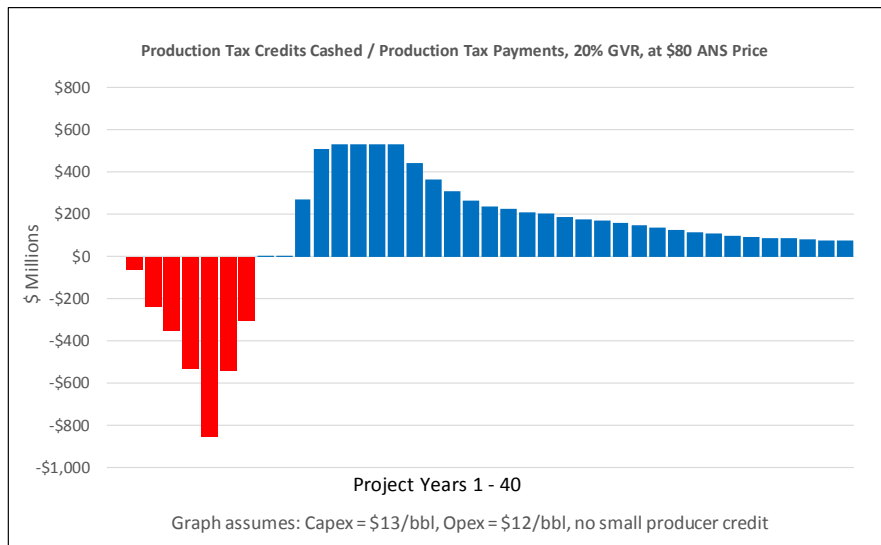
## 750 mmbo Status Quo, 50% Private Royalty / 20% GVR - \$80/bbl



Life Cycle Totals	\$Millions
Production Tax Credits Cashed	2,823
Production Tax Paid	9,080
Net Production Tax	6,256
Production Tax NPV 6.15%	925
Total Annual State Losses	2,684
Total Annual State Gains	13,631
Net State Gain (Loss)	10,947
State NPV 6.15%	2,458
Total Producer Cash Out	5,250
Total Producer Cash In	17,837
Net Producer Cash Flow	12,587
Producer Cash NPV 6.15%	2,181

# North Slope Life Cycle Modeling

## 750 mmbo Status Quo, 50% Private Royalty / 20% GVR – Fall FC Price

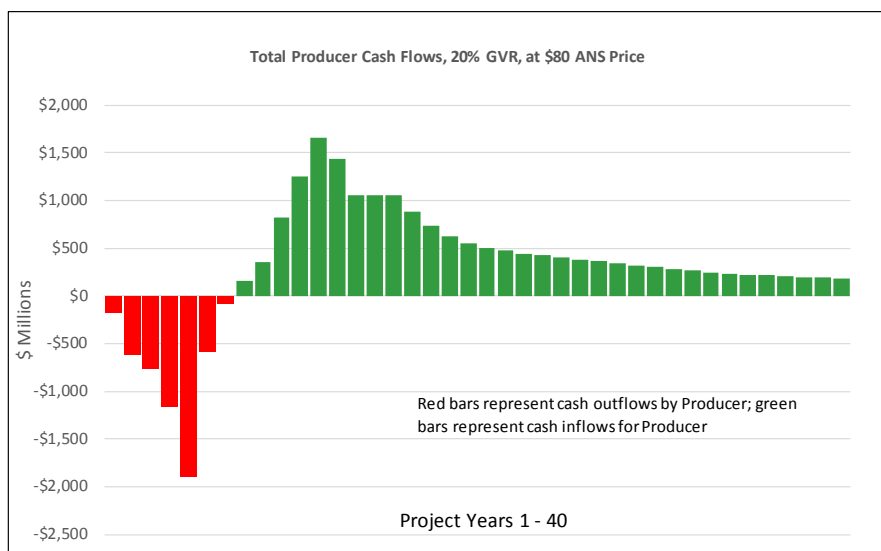
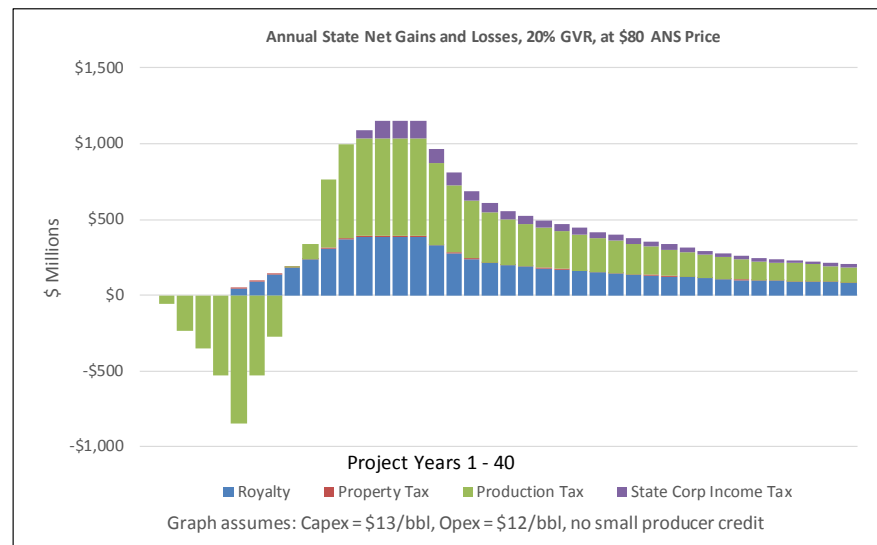
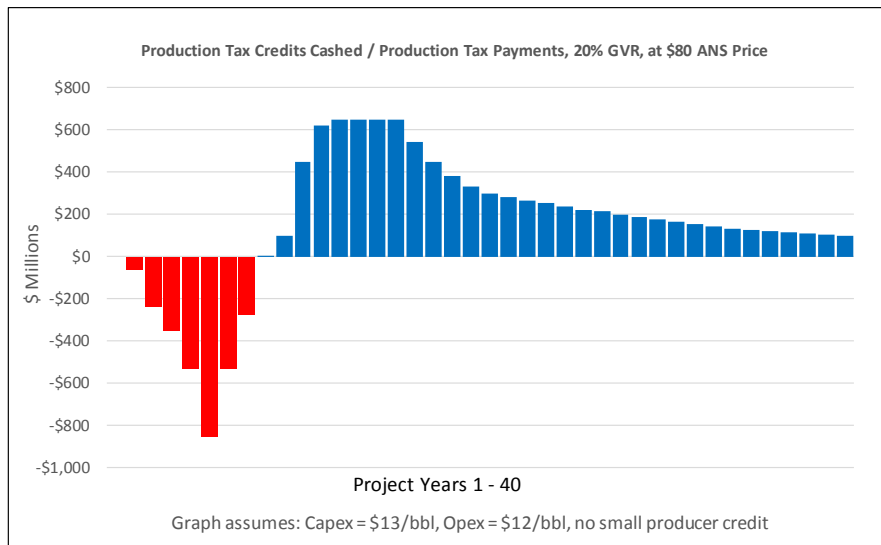


Life Cycle Totals	\$Millions
Production Tax Credits Cashed	2,858
Production Tax Paid	7,137
Net Production Tax	4,278
Production Tax NPV 6.15%	255
Total Annual State Losses	2,738
Total Annual State Gains	11,069
Net State Gain (Loss)	8,331
State NPV 6.15%	1,572
Total Producer Cash Out	5,377
Total Producer Cash In	15,748
Net Producer Cash Flow	10,371
Producer Cash NPV 6.15%	1,370



# North Slope Life Cycle Modeling

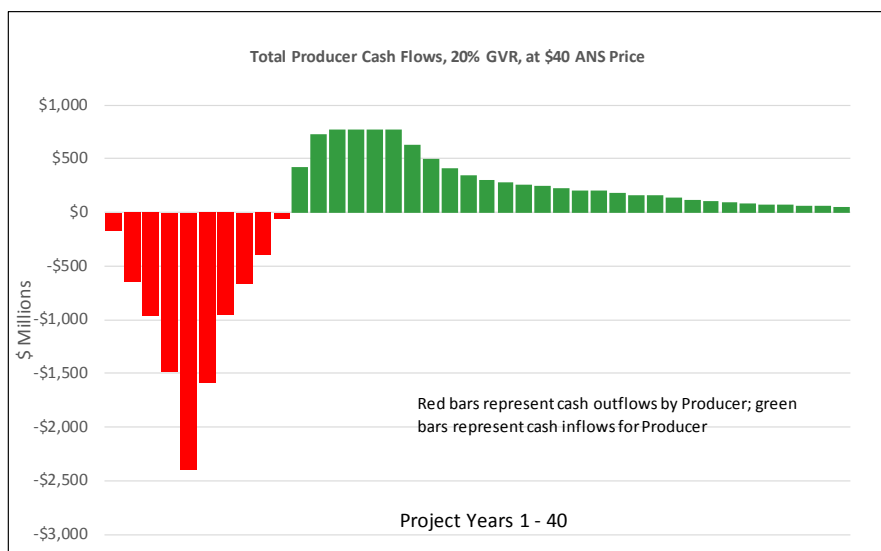
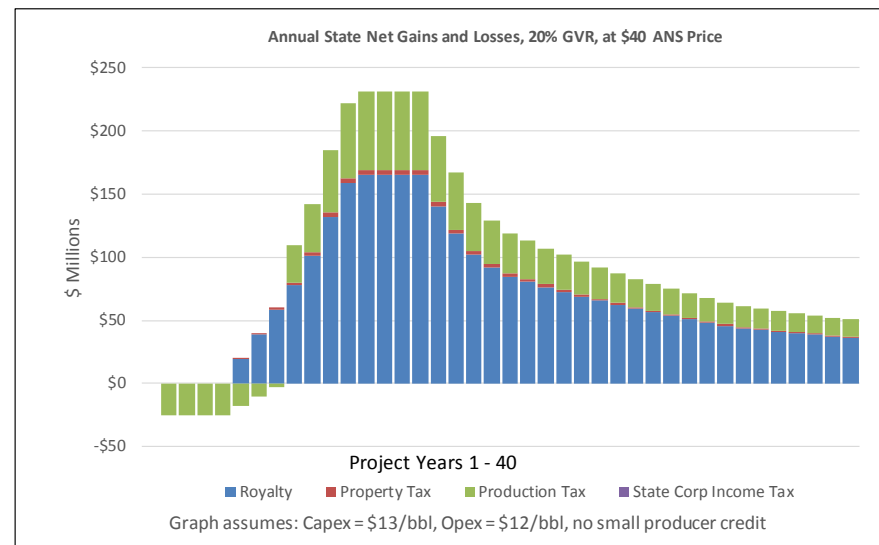
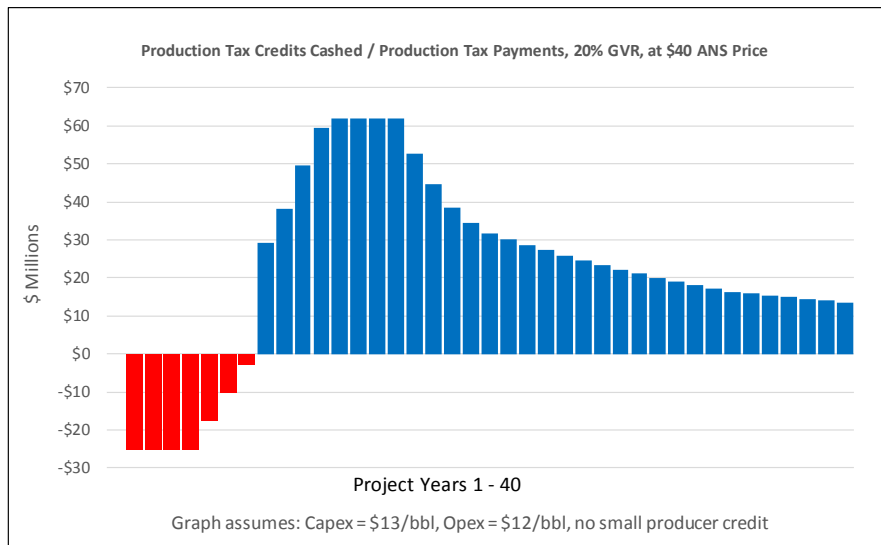
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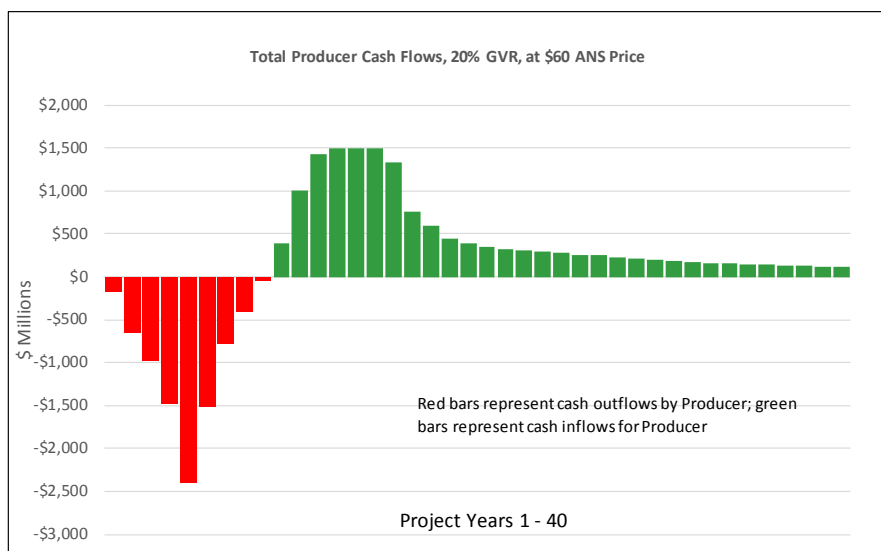
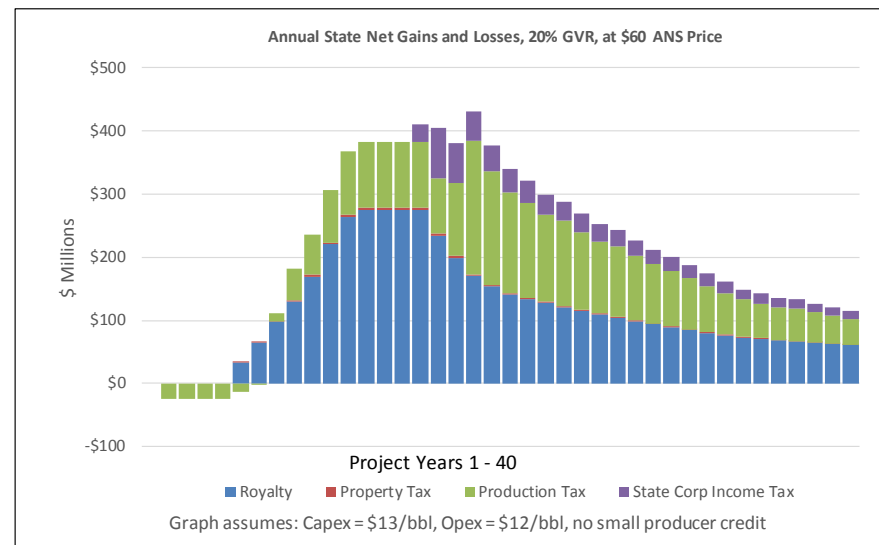
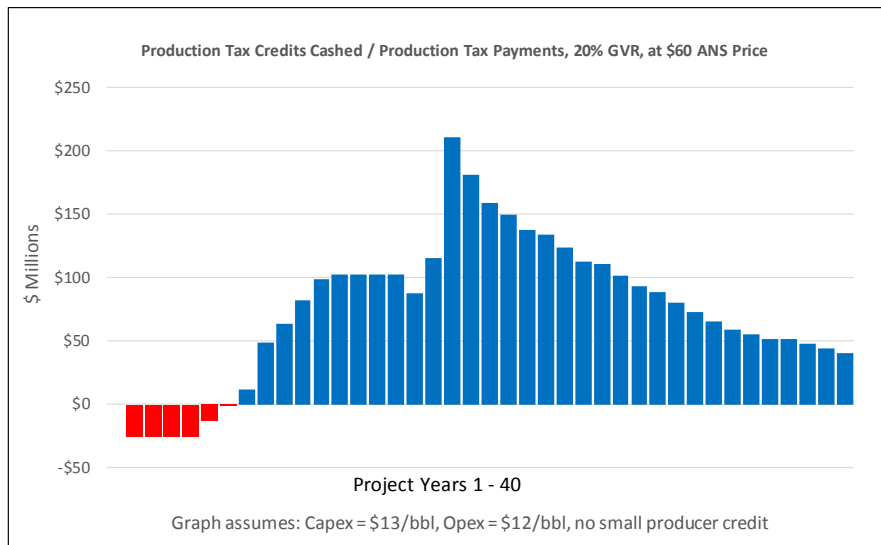
## 750 mmbo HB 247, 50% Private Royalty / 20% GVR - \$40/bbl



Life Cycle Totals	\$Millions
Production Tax Credits Cashed	131
Production Tax Paid	1,009
Net Production Tax	878
Production Tax NPV 6.15%	230
Total Annual State Losses	107
Total Annual State Gains	2,459
Net State Gain (Loss)	2,351
State NPV 6.15%	735
Total Producer Cash Out	9,330
Total Producer Cash In	9,221
Net Producer Cash Flow	-109
Producer Cash NPV 6.15%	-3,768

# North Slope Life Cycle Modeling

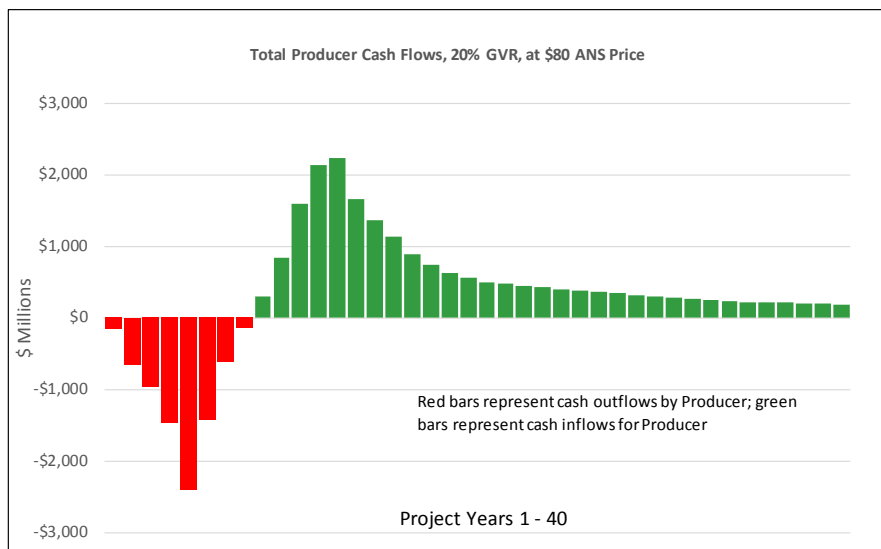
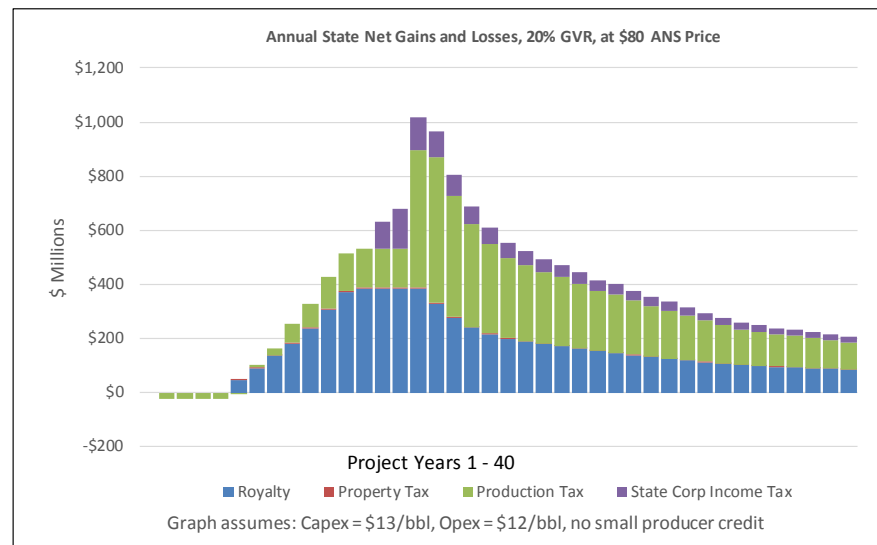
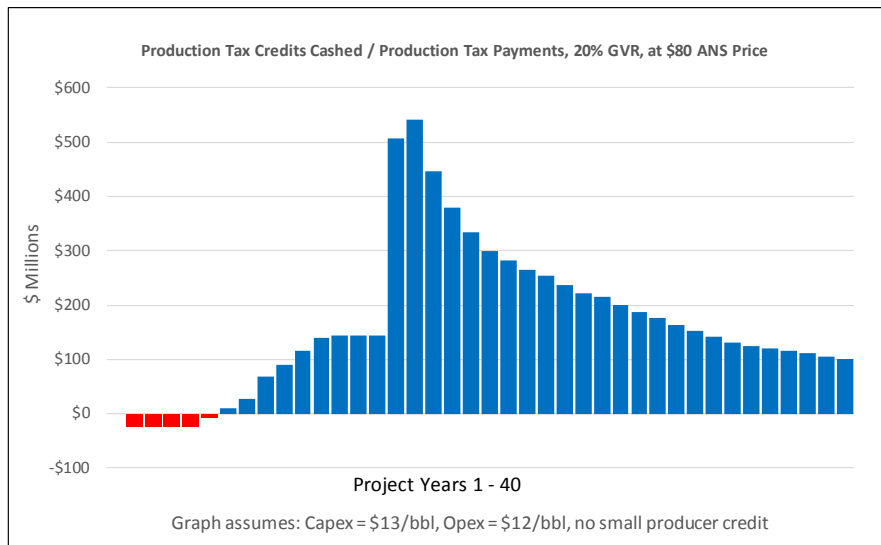
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Production Tax Credits Cashed	113
Production Tax Paid	3,098
Net Production Tax	2,984
Production Tax NPV 6.15%	789
Total Annual State Losses	100
Total Annual State Gains	6,201
Net State Gain (Loss)	6,101
State NPV 6.15%	1,789
Total Producer Cash Out	8,406
Total Producer Cash In	15,021
Net Producer Cash Flow	6,614
Producer Cash NPV 6.15%	-896

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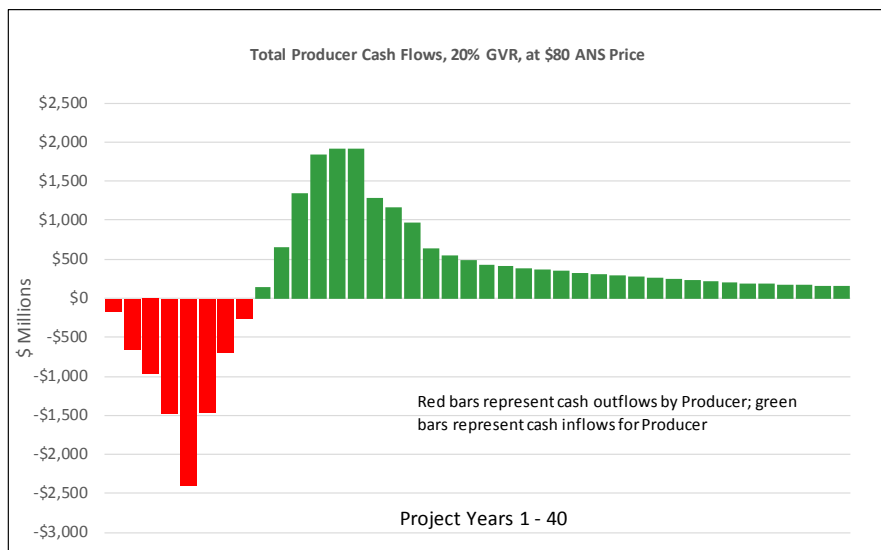
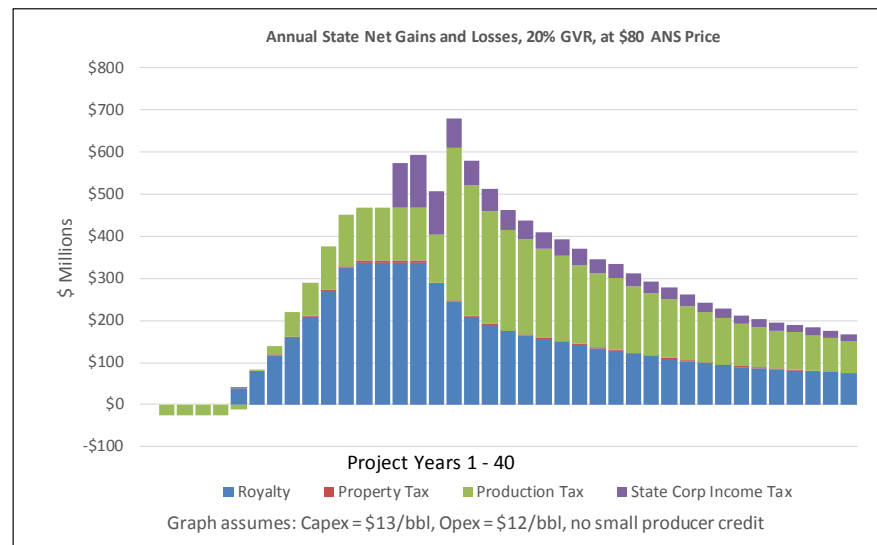
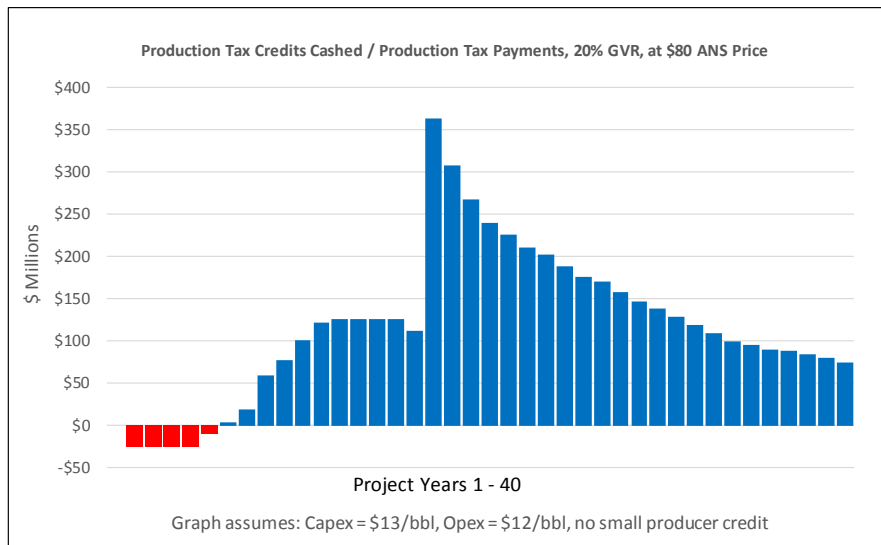
## 750 mmbo HB 247, 50% Private Royalty / 20% GVR - \$80/bbl



Life Cycle Totals	\$Millions
Production Tax Credits Cashed	108
Production Tax Paid	6,696
Net Production Tax	6,588
Production Tax NPV 6.15%	1,799
Total Annual State Losses	100
Total Annual State Gains	11,357
Net State Gain (Loss)	11,257
State NPV 6.15%	3,319
Total Producer Cash Out	7,839
Total Producer Cash In	20,224
Net Producer Cash Flow	12,385
Producer Cash NPV 6.15%	1,379

# North Slope Life Cycle Modeling

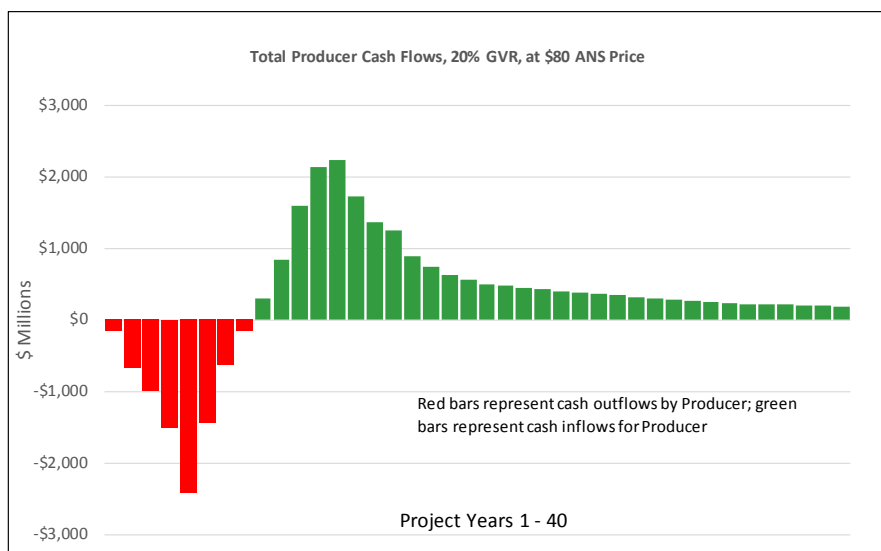
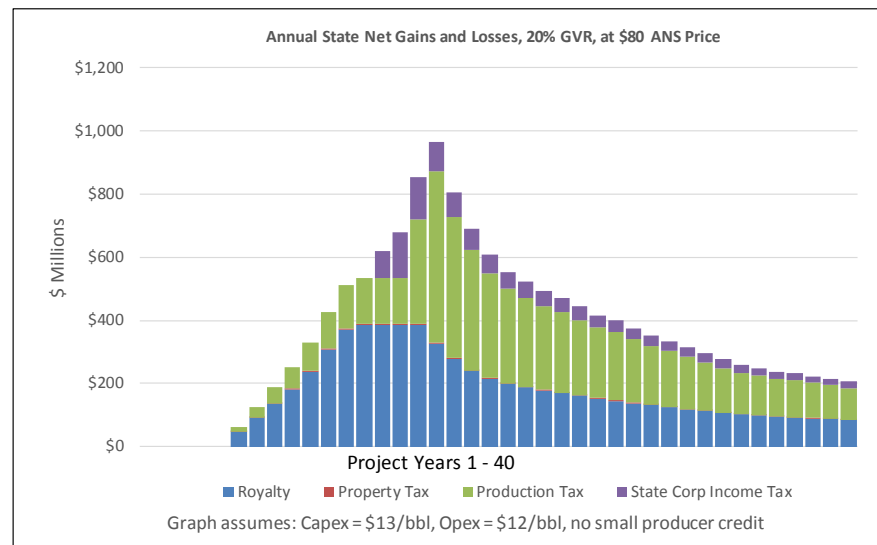
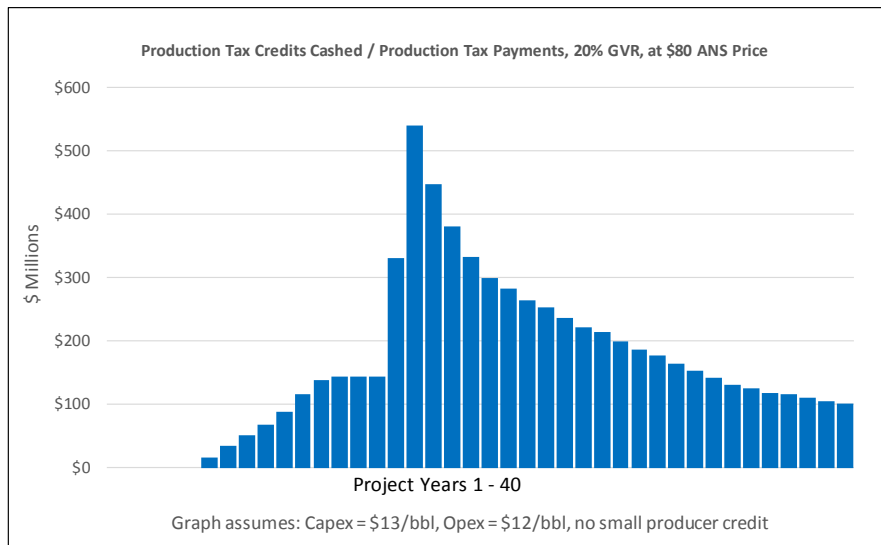
## 750 mmbo HB 247, 50% Private Royalty / 20% GVR – Fall FC Price



Life Cycle Totals	\$Millions
Production Tax Credits Cashed	110
Production Tax Paid	4,777
Net Production Tax	4,667
Production Tax NPV 6.15%	1,222
Total Annual State Losses	100
Total Annual State Gains	8,794
Net State Gain (Loss)	8,694
State NPV 6.15%	2,524
Total Producer Cash Out	8,100
Total Producer Cash In	18,235
Net Producer Cash Flow	10,135
Producer Cash NPV 6.15%	488

# North Slope Life Cycle Modeling

750 mmbo HB 247, 50% Private Royalty / 20% GVR, Co w/>\$10B - \$80/bbl



Life Cycle Totals	\$Millions
Production Tax Credits Cashed	0
Production Tax Paid	6,588
Net Production Tax	6,588
Production Tax NPV 6.15%	1,862
Total Annual State Losses	0
Total Annual State Gains	11,257
Net State Gain (Loss)	11,257
State NPV 6.15%	3,382
Total Producer Cash Out	8,014
Total Producer Cash In	20,399
Net Producer Cash Flow	12,385
Producer Cash NPV 6.15%	1,319

# Summary Table - North Slope Scenarios

750 MM Barrel Field, 16.67% Royalty, 30% GVR; Assumes all Royalty paid to State

Tax Regime	Oil Price	Producer Size (>\$10 billion revenue)	Credits Paid (\$millions)	Net Production Tax Paid (\$millions)	Production Tax NPV 6.15% (\$millions)	Net State Gain (Loss) (\$millions)	State NPV 6.15% (\$millions)	Producer Cash Flow (\$millions)	Producer NPV 6.15% (\$millions)
Status Quo	\$40	n/a	\$2,982	(\$2,893)	(\$2,096)	\$1,097	(\$756)	\$1,656	(\$1,965)
Status Quo	\$60	n/a	\$2,905	\$1,178	(\$772)	\$8,210	\$1,578	\$6,764	\$48
Status Quo	\$80	n/a	\$2,841	\$5,472	\$656	\$15,532	\$4,030	\$11,735	\$1,879
Status Quo	Fall 2015 FC	n/a	\$2,874	\$3,623	\$35	\$12,383	\$2,964	\$9,604	\$1,092
Status Quo	\$80	Large	\$2,841	\$5,472	\$656	\$15,532	\$4,030	\$11,735	\$1,879
HB 247	\$40	n/a	\$136	\$761	\$190	\$4,574	\$1,496	(\$928)	(\$4,049)
HB 247	\$60	n/a	\$117	\$2,605	\$679	\$9,544	\$2,992	\$5,897	(\$1,179)
HB 247	\$80	n/a	\$110	\$5,818	\$1,557	\$15,855	\$4,918	\$11,525	\$1,052
HB 247	Fall 2015 FC	n/a	\$112	\$4,171	\$1,078	\$12,896	\$3,991	\$9,271	\$154
HB 247	\$80	Large	\$0	\$5,818	\$1,621	\$15,855	\$4,982	\$11,525	\$991

750 MM Barrel Field, 50% Private Royalty (at 12.5%), 20% GVR; Assumes non-Private Royalty paid to State

Status Quo	\$40	n/a	\$2,963	(\$2,668)	(\$2,023)	(\$971)	(\$1,474)	\$2,089	(\$1,785)
Status Quo	\$60	n/a	\$2,892	\$1,685	(\$602)	\$4,886	\$433	\$7,404	\$286
Status Quo	\$80	n/a	\$2,823	\$6,256	\$925	\$10,947	\$2,458	\$12,587	\$2,181
Status Quo	Fall 2015 FC	n/a	\$2,858	\$4,278	\$255	\$8,331	\$1,572	\$10,371	\$1,370
Status Quo	\$80	Large	\$2,823	\$6,256	\$925	\$10,947	\$2,458	\$12,587	\$2,181
HB 247	\$40	n/a	\$131	\$878	\$230	\$2,351	\$735	(\$109)	(\$3,768)
HB 247	\$60	n/a	\$113	\$2,984	\$789	\$6,101	\$1,789	\$6,614	(\$896)
HB 247	\$80	n/a	\$108	\$6,588	\$1,799	\$11,257	\$3,319	\$12,385	\$1,379
HB 247	Fall 2015 FC	n/a	\$110	\$4,667	\$1,222	\$8,694	\$2,524	\$10,135	\$488
HB 247	\$80	Large	\$0	\$6,588	\$1,862	\$11,257	\$3,382	\$12,385	\$1,319

# *Cook Inlet / Middle Earth Gas Life Cycle Modeling Assumptions*

- Production of 670 billion cubic feet (BCF) over 20 years
- New producer eligible for cash refunds
  - (Modeling also applies for an incumbent producer not eligible for cash refunds who can apply credits to other North Slope fields)
- Three prices modeled – all in real uninflated dollars
  - \$4, \$6, and \$8 held static through life of field
- Two tax systems modeled
  - Status quo
  - HB247 elements:
    - Limit tax refunds to \$25 million per company per year
    - Repeal of Qualified Capital Expenditure and Well Lease Expenditure credits
    - 10-year limit on carry-forward of NOL credits
- Alternatives for Cook Inlet tax regime, with current tax cap of \$0.177/mcf expiring in 2022 or extended indefinitely
- For Middle Earth, includes tax cap of 4% of gross for first 7 years of production



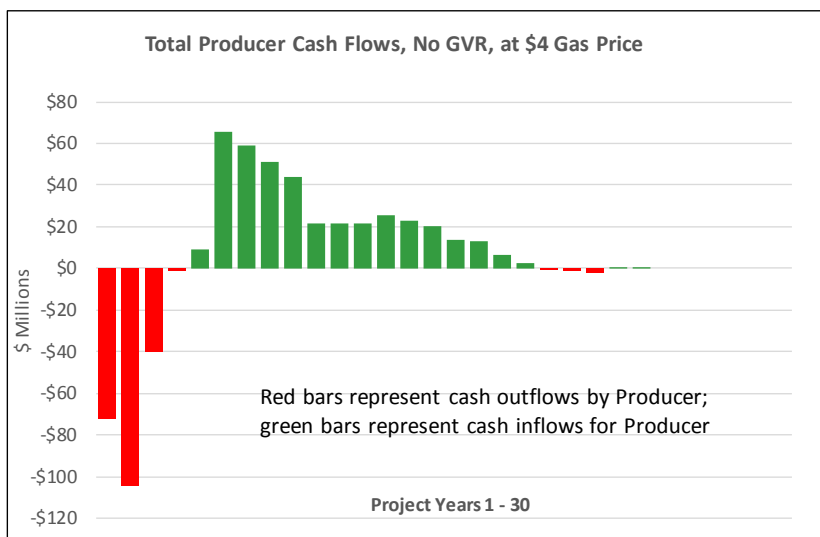
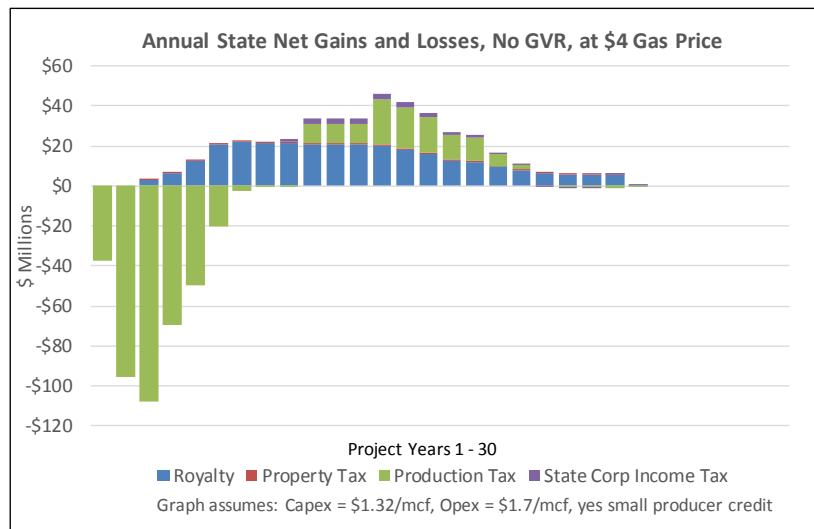
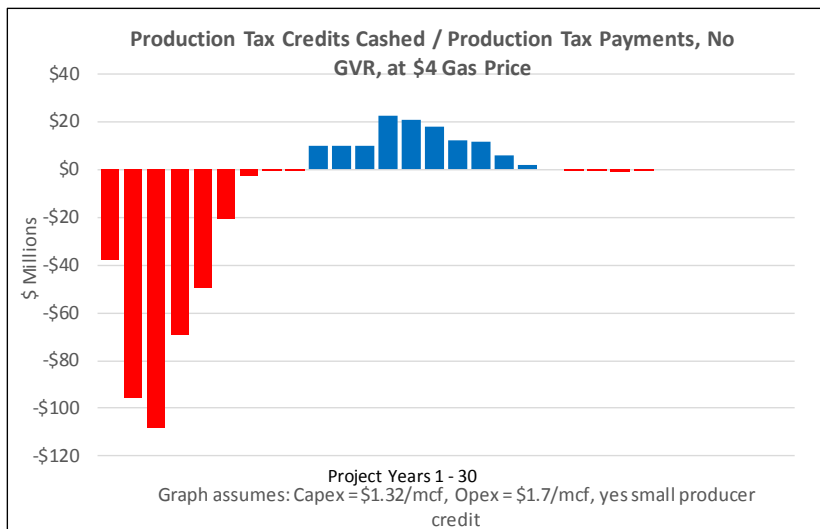
# *Cook Inlet / Middle Earth Gas Life Cycle Modeling Assumptions*

## **Gas field assumptions**

Life of Field	20 years
Peak gas Production	140 million cubic feet / day
Transport / mcf	\$0.50 / mcf
Royalty Rate	12.50%, state land
Capex / mcf	\$1.32 / mcf (~\$8 / BOE)
Opex / mcf	\$1.70 / mcf (~10 / BOE)
Property Tax / mcf	~\$0.21 / mcf (\$1.25 / BOE)
State Corp Income Tax Rate	6.5% of PTV after Prod Tax
Fed Corp Income Tax Rate	35% of PTV after SCIT

# Cook Inlet Life Cycle Modeling

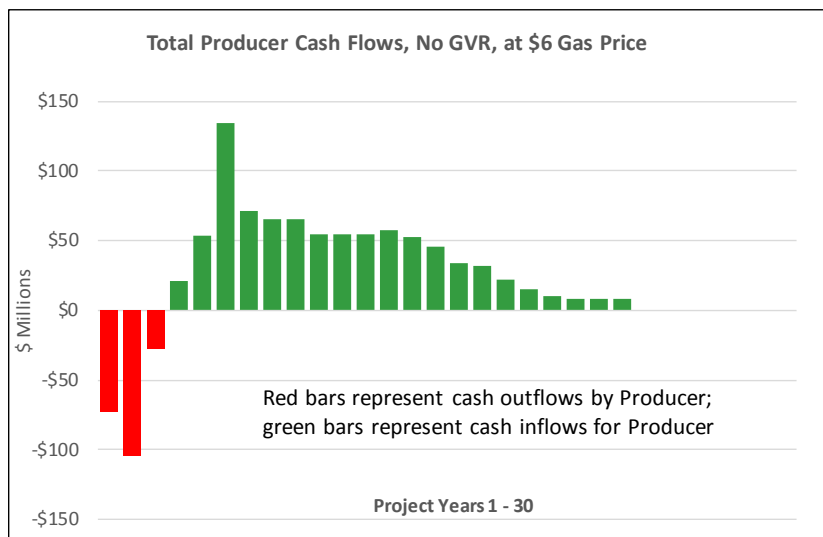
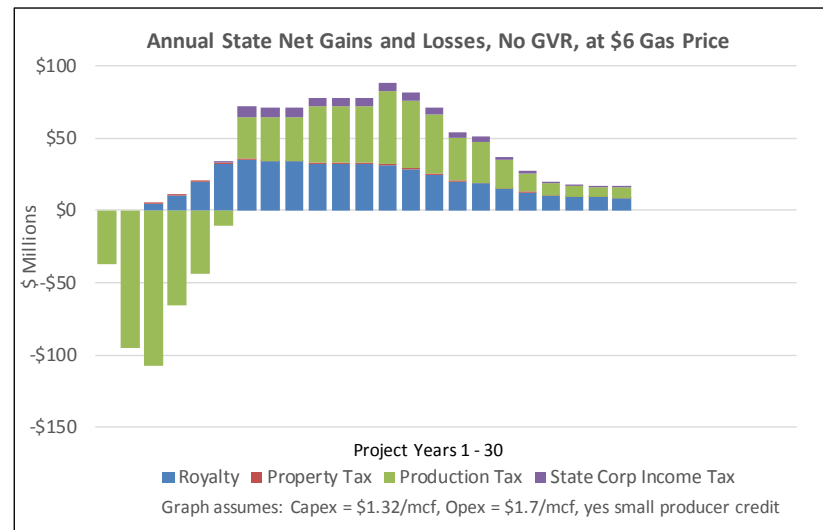
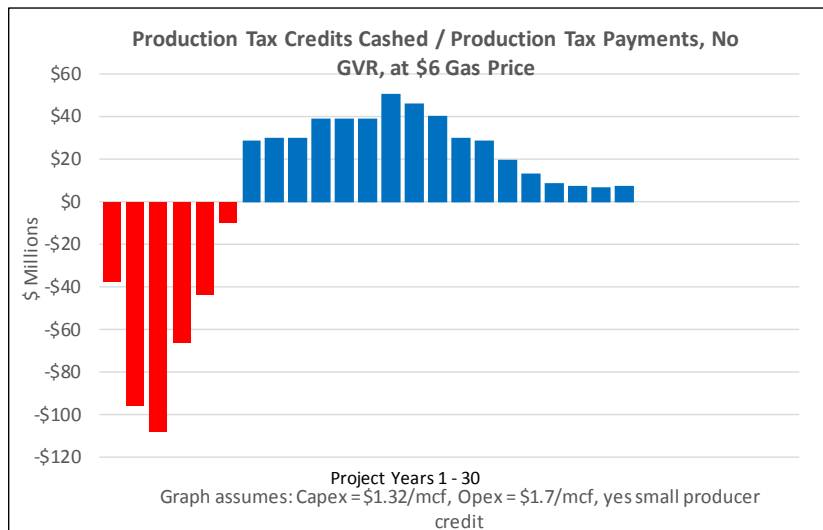
## Gas field Status Quo, 2022 Tax Caps expire, \$4/mcf



Life Cycle Totals	\$Millions
Production Tax Credits Cashed	385
Production Tax Paid	123
Net Production Tax	-262
Production Tax NPV 6.15%	-264
Total Annual State Losses	332
Total Annual State Gains	456
Net State Gain (Loss)	124
State NPV 6.15%	-67
Total Producer Cash Out	222
Total Producer Cash In	399
Net Producer Cash Flow	177
Producer Cash NPV 6.15%	30

# Cook Inlet Life Cycle Modeling

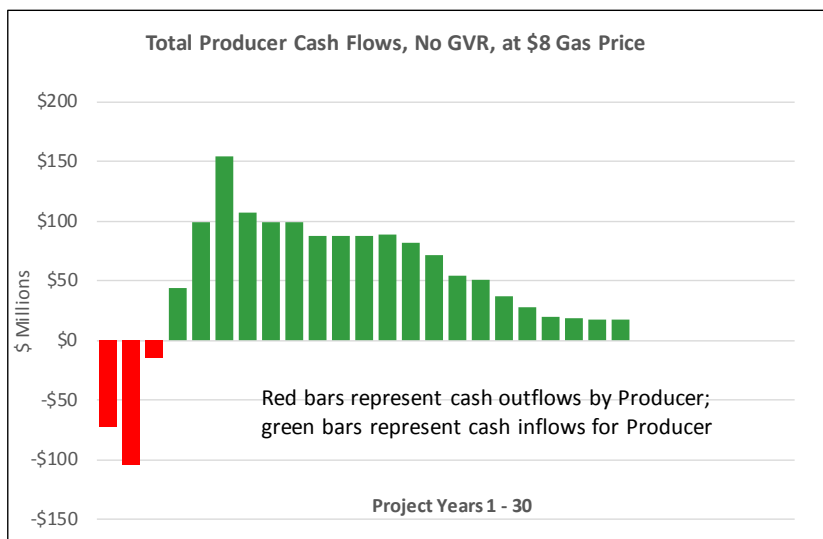
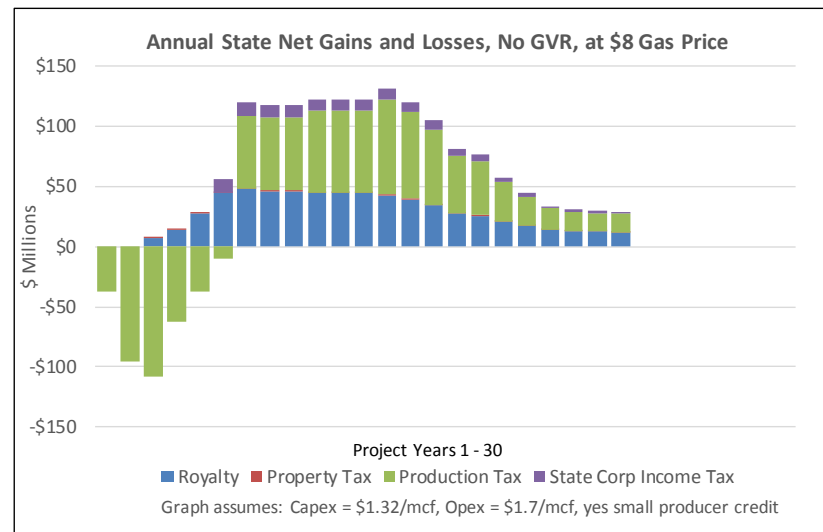
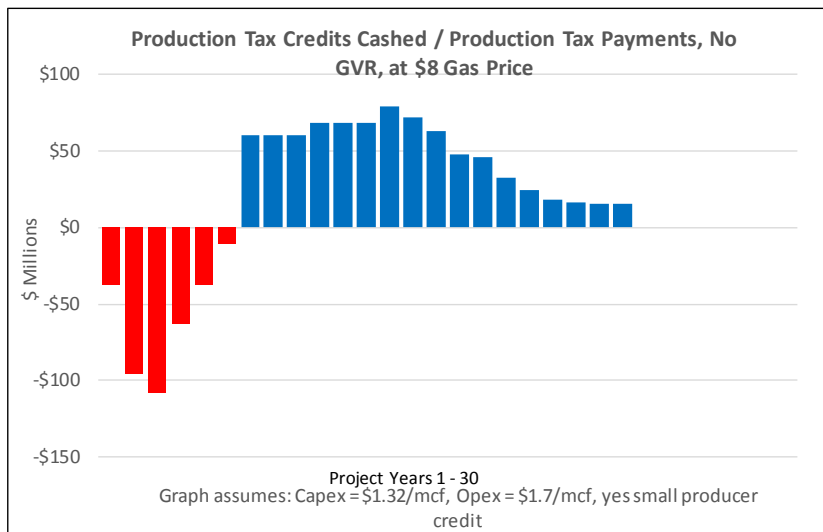
## Gas field Status Quo, 2022 Tax Caps expire, \$6/mcf



Life Cycle Totals	\$Millions
Production Tax Credits Cashed	360
Production Tax Paid	465
Net Production Tax	105
Production Tax NPV 6.15%	-84
Total Annual State Losses	309
Total Annual State Gains	1,018
Net State Gain (Loss)	709
State NPV 6.15%	226
Total Producer Cash Out	204
Total Producer Cash In	867
Net Producer Cash Flow	663
Producer Cash NPV 6.15%	292

# Cook Inlet Life Cycle Modeling

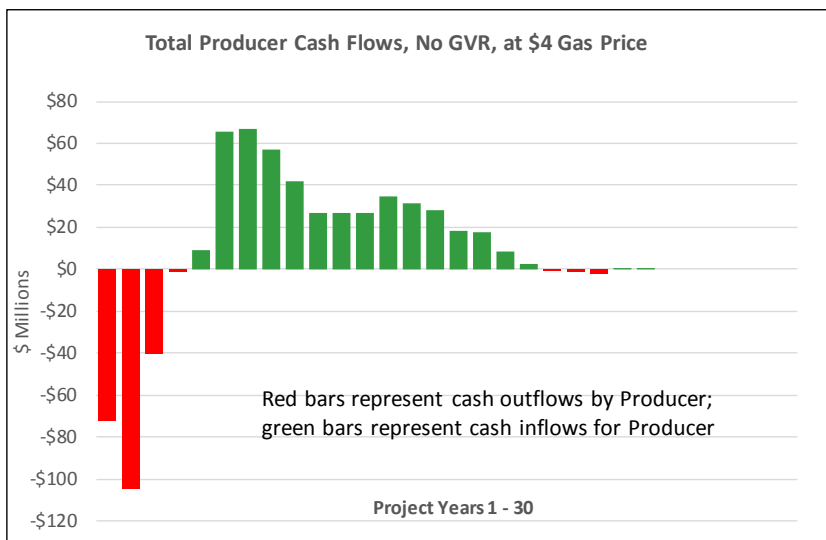
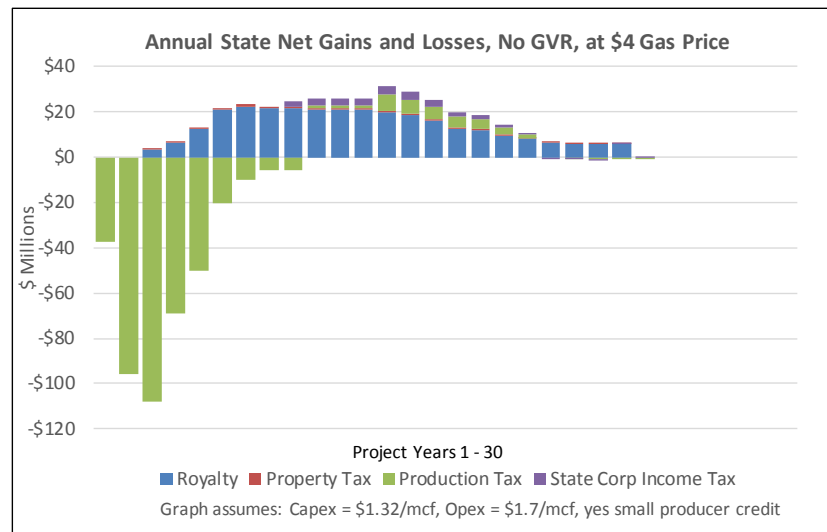
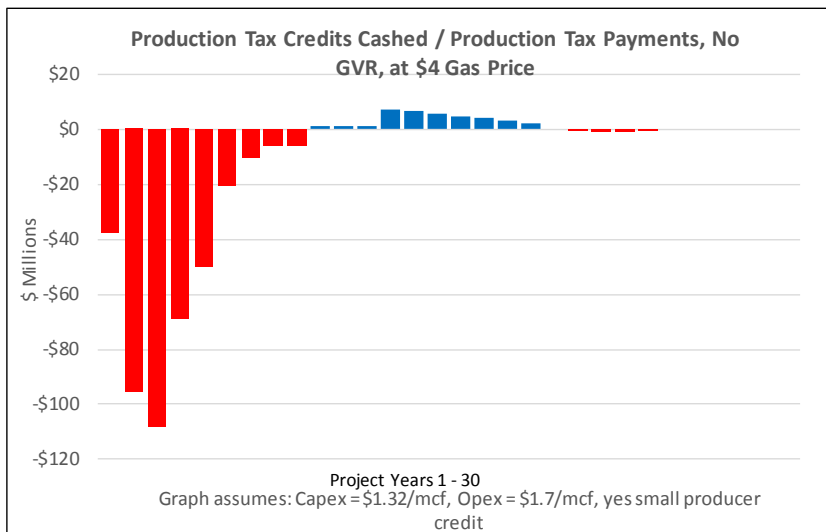
## Gas field Status Quo, 2022 Tax Caps expire, \$8/mcf



Life Cycle Totals	\$Millions
Production Tax Credits Cashed	351
Production Tax Paid	813
Net Production Tax	462
Production Tax NPV 6.15%	89
Total Annual State Losses	287
Total Annual State Gains	1,572
Net State Gain (Loss)	1,285
State NPV 6.15%	512
Total Producer Cash Out	191
Total Producer Cash In	1,346
Net Producer Cash Flow	1,154
Producer Cash NPV 6.15%	554

# Cook Inlet Life Cycle Modeling

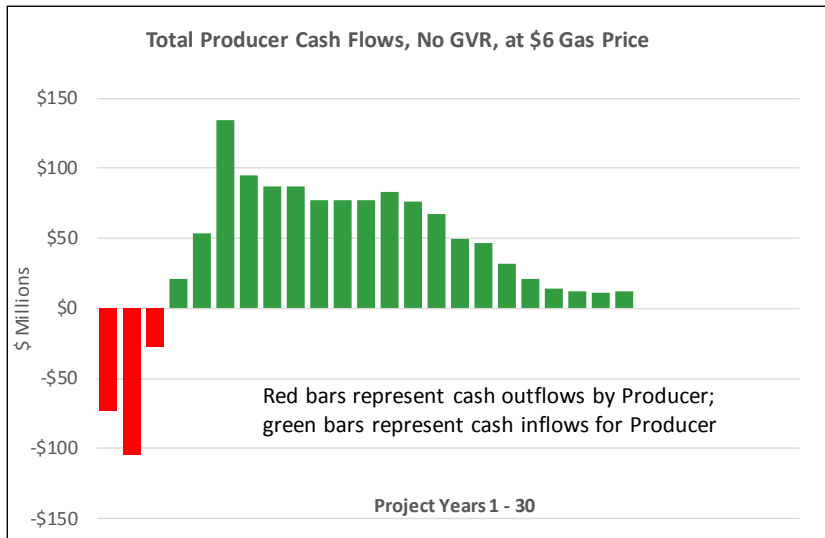
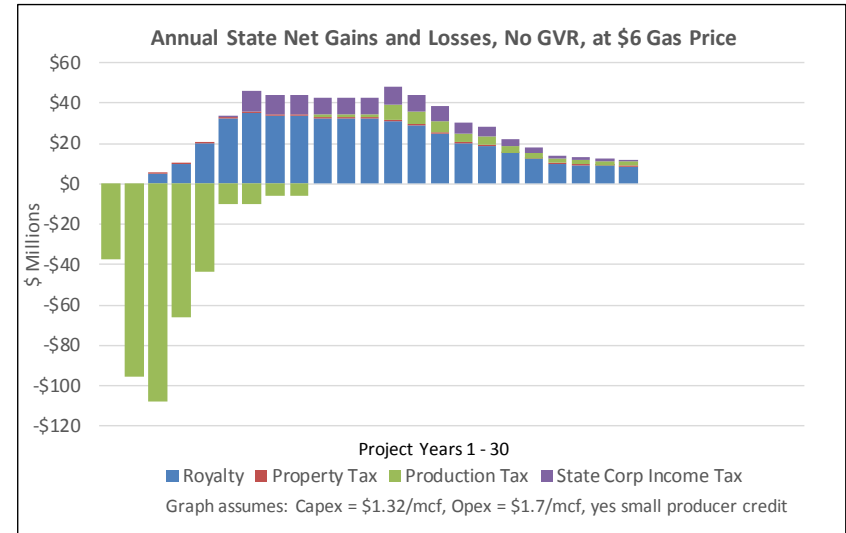
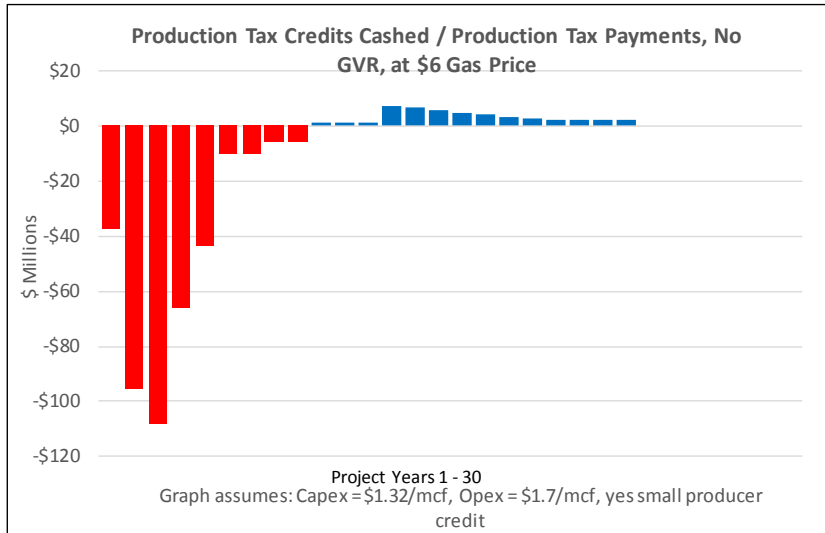
## Gas field Status Quo, 2022 Tax Caps extended, \$4/mcf



Life Cycle Totals	\$Millions
Production Tax Credits Cashed	404
Production Tax Paid	37
Net Production Tax	-367
Production Tax NPV 6.15%	-315
Total Annual State Losses	332
Total Annual State Gains	358
Net State Gain (Loss)	26
State NPV 6.15%	-114
Total Producer Cash Out	222
Total Producer Cash In	463
Net Producer Cash Flow	241
Producer Cash NPV 6.15%	60

# Cook Inlet Life Cycle Modeling

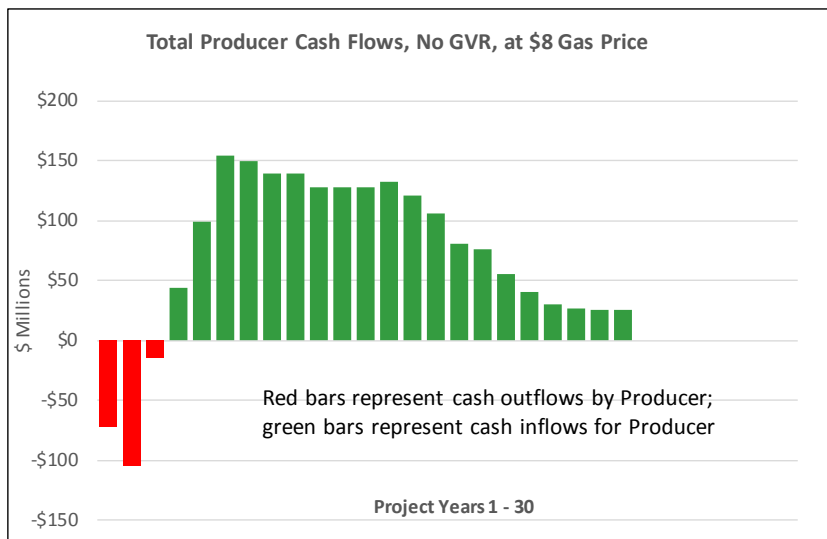
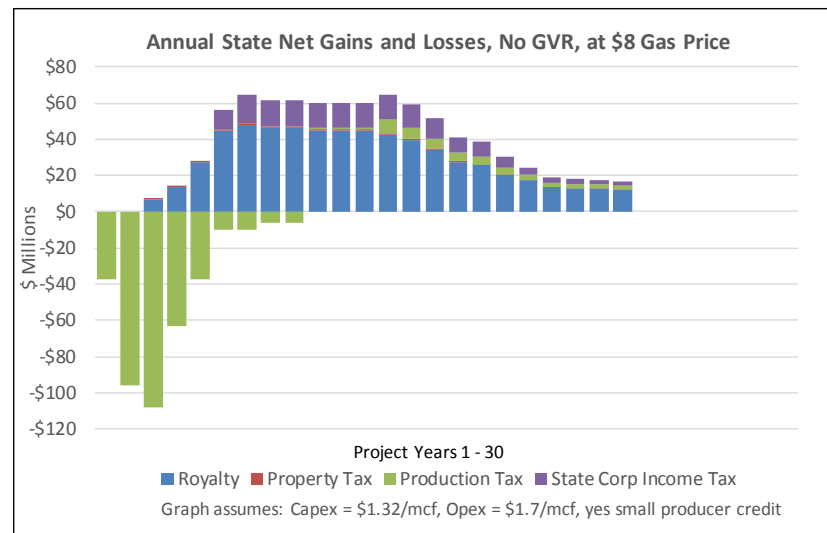
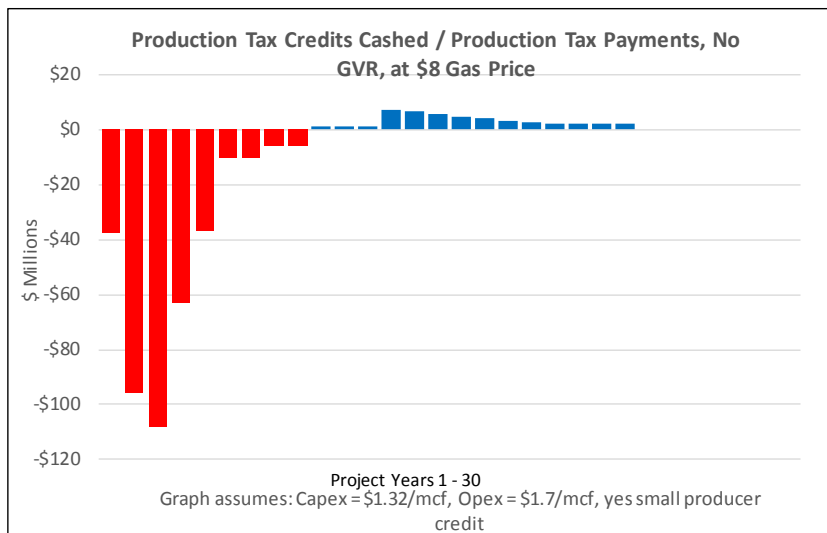
## Gas field Status Quo, 2022 Tax Caps extended, \$6/mcf



Life Cycle Totals	\$Millions
Production Tax Credits Cash	383
Production Tax Paid	47
Net Production Tax	-336
Production Tax NPV 6.15%	-297
Total Annual State Losses	309
Total Annual State Gains	606
Net State Gain (Loss)	297
State NPV 6.15%	27
Total Producer Cash Out	204
Total Producer Cash In	1,135
Net Producer Cash Flow	931
Producer Cash NPV 6.15%	421

# Cook Inlet Life Cycle Modeling

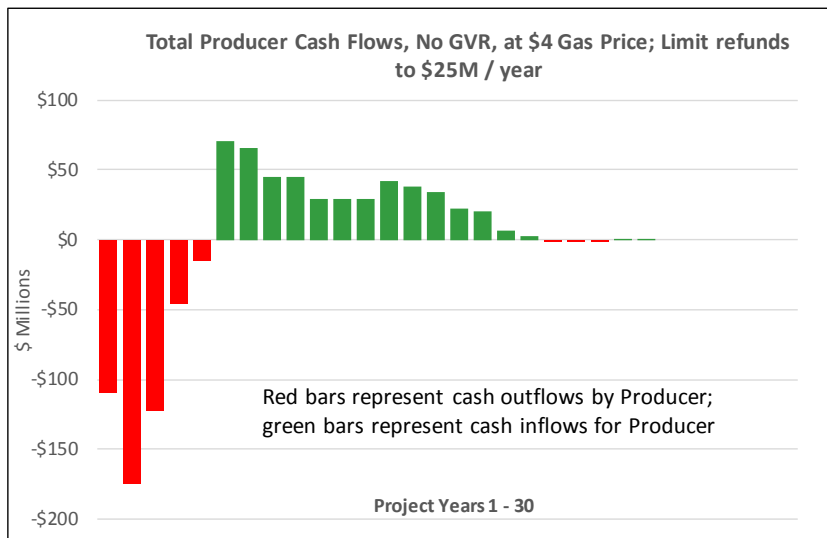
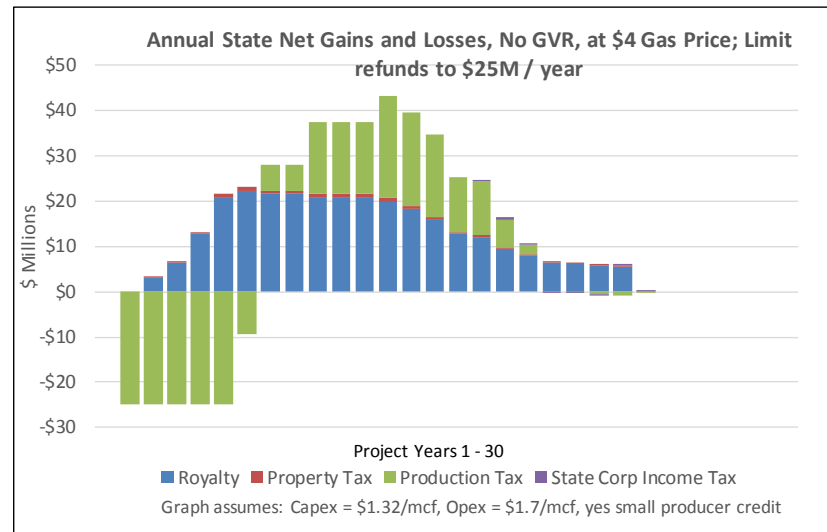
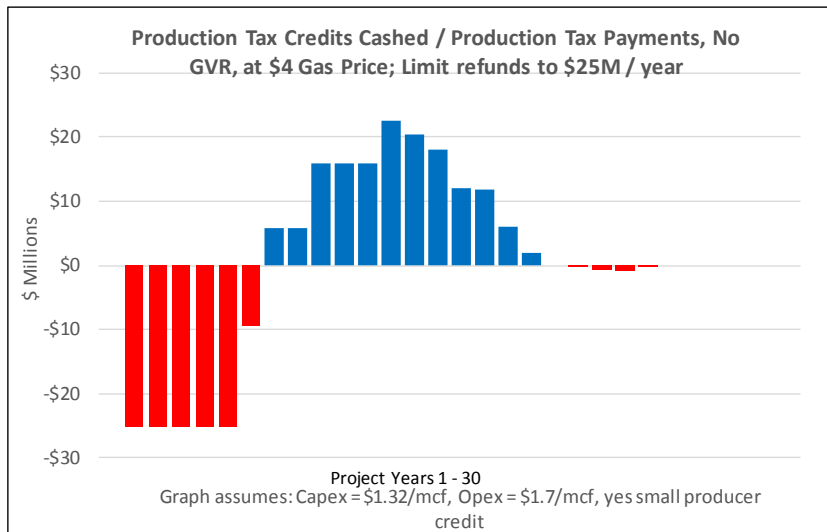
## Gas field Status Quo, 2022 Tax Caps extended, \$8/mcf



Life Cycle Totals	\$Millions
Production Tax Credits Cash	373
Production Tax Paid	47
Net Production Tax	-326
Production Tax NPV 6.15%	-290
Total Annual State Losses	287
Total Annual State Gains	835
Net State Gain (Loss)	548
State NPV 6.15%	158
Total Producer Cash Out	191
Total Producer Cash In	1,825
Net Producer Cash Flow	1,633
Producer Cash NPV 6.15%	784

# Cook Inlet Life Cycle Modeling

## Gas field HB247, 2022 Tax Caps expire, \$4/mcf

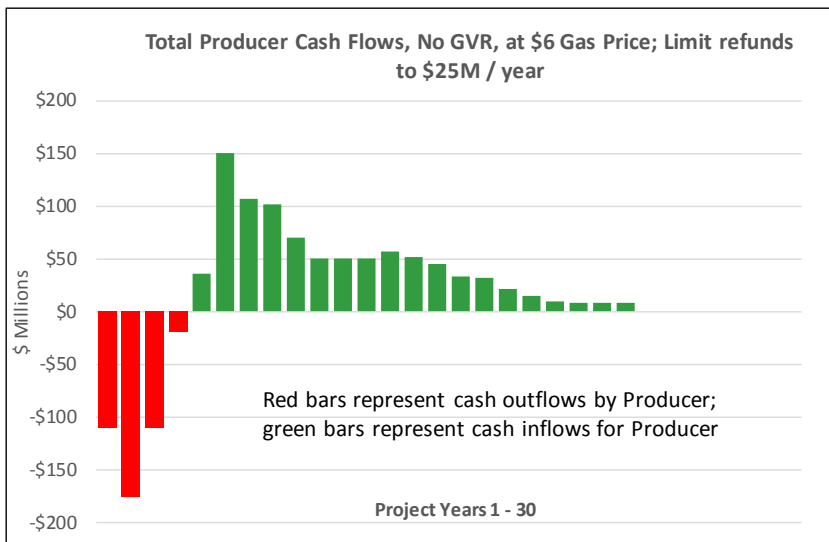
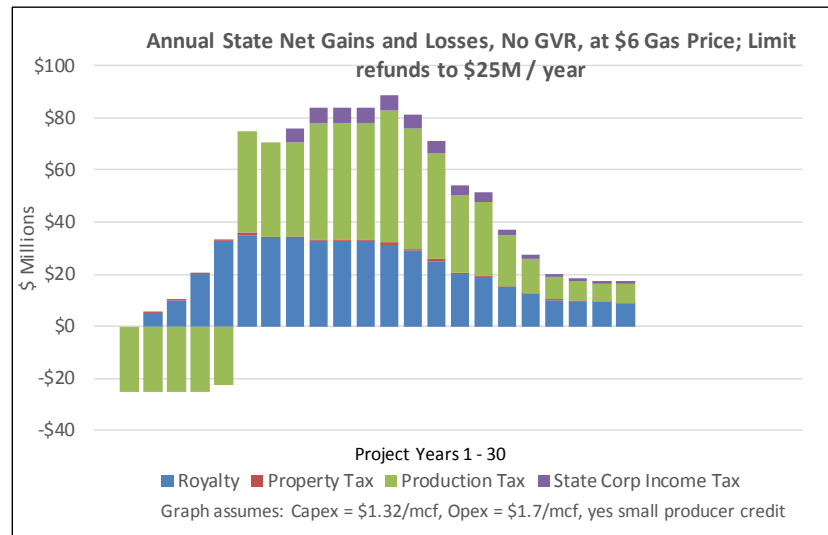
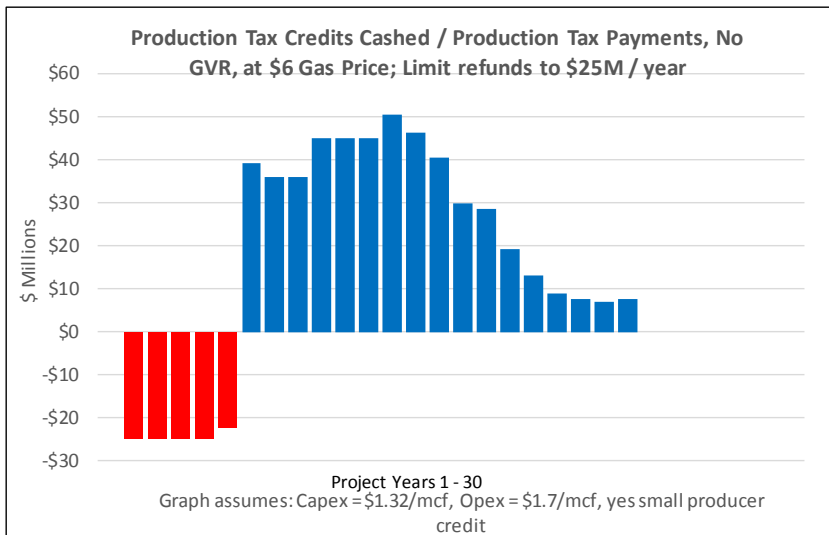


Life Cycle Totals	\$Millions
Production Tax Credits Cashed	136
Production Tax Paid	152
Net Production Tax	16
Production Tax NPV 6.15%	-35
Total Annual State Losses	72
Total Annual State Gains	456
Net State Gain (Loss)	384
State NPV 6.15%	154
Total Producer Cash Out	472
Total Producer Cash In	480
Net Producer Cash Flow	8
Producer Cash NPV 6.15%	-148



# Cook Inlet Life Cycle Modeling

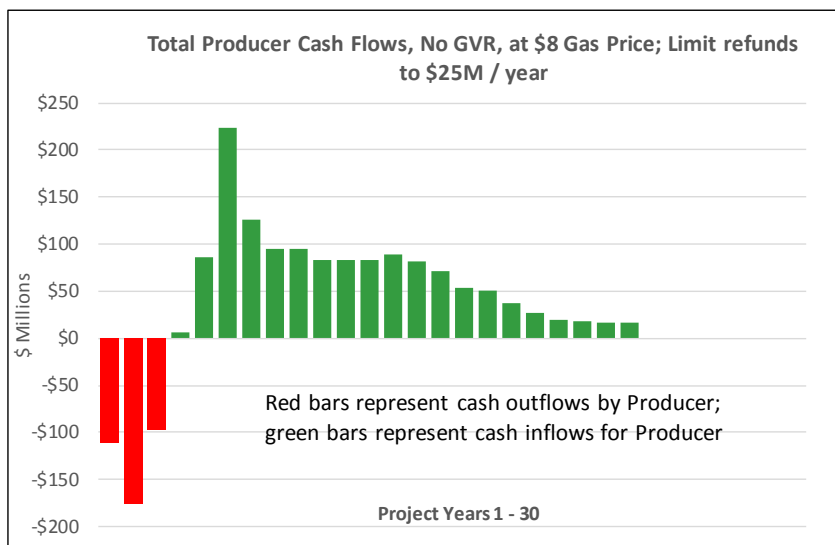
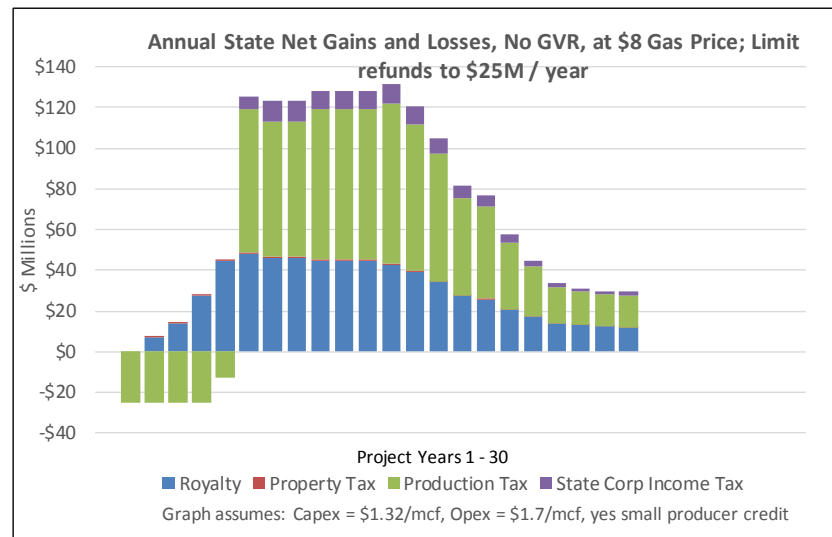
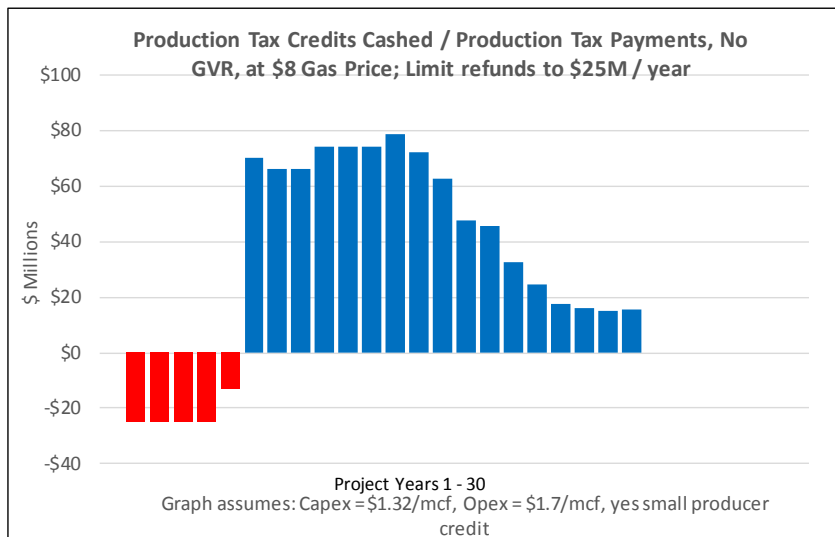
## Gas field HB247, 2022 Tax Caps expire, \$6/mcf



Life Cycle Totals	\$Millions
Production Tax Credits Cashed	122
Production Tax Paid	505
Net Production Tax	383
Production Tax NPV 6.15%	143
Total Annual State Losses	59
Total Annual State Gains	1,028
Net State Gain (Loss)	969
State NPV 6.15%	442
Total Producer Cash Out	415
Total Producer Cash In	909
Net Producer Cash Flow	494
Producer Cash NPV 6.15%	132

# Cook Inlet Life Cycle Modeling

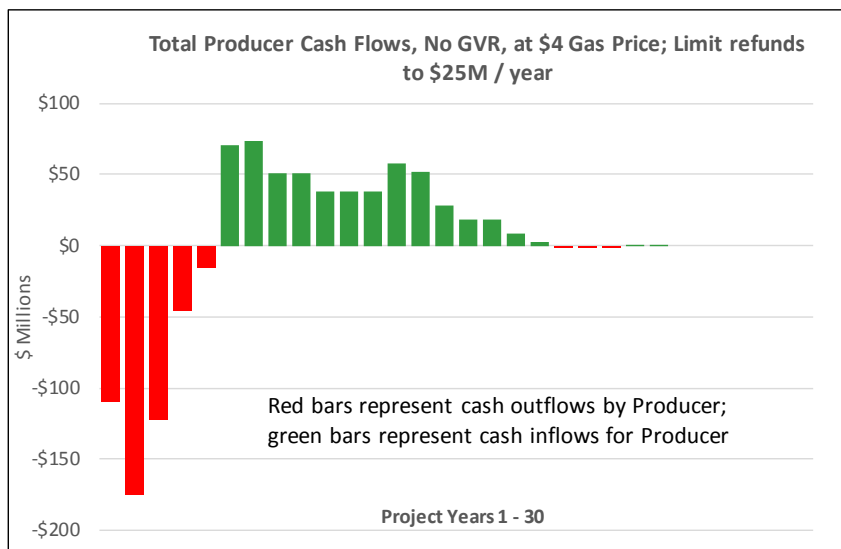
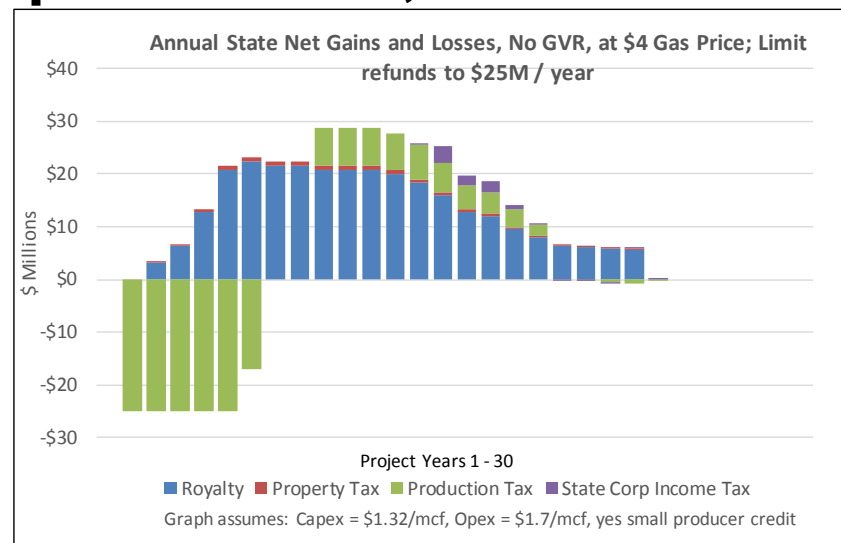
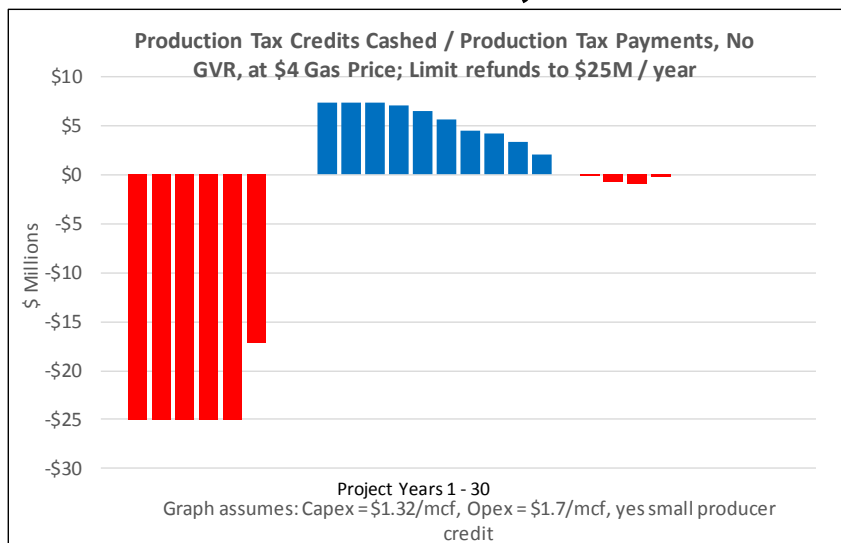
## Gas field HB247, 2022 Tax Caps expire, \$8/mcf



Life Cycle Totals	\$Millions
Production Tax Credits Cashed	113
Production Tax Paid	853
Net Production Tax	740
Production Tax NPV 6.15%	316
Total Annual State Losses	52
Total Annual State Gains	1,597
Net State Gain (Loss)	1,545
State NPV 6.15%	727
Total Producer Cash Out	382
Total Producer Cash In	1,367
Net Producer Cash Flow	985
Producer Cash NPV 6.15%	400

# Cook Inlet Life Cycle Modeling

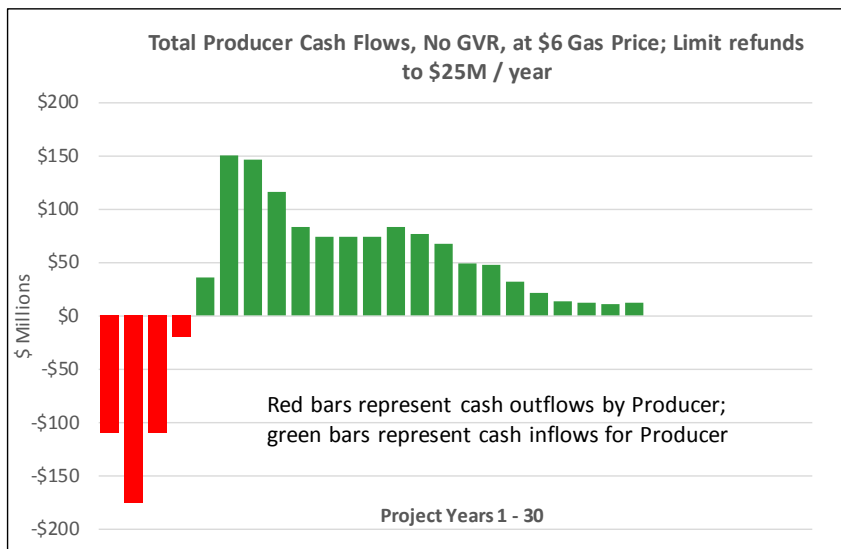
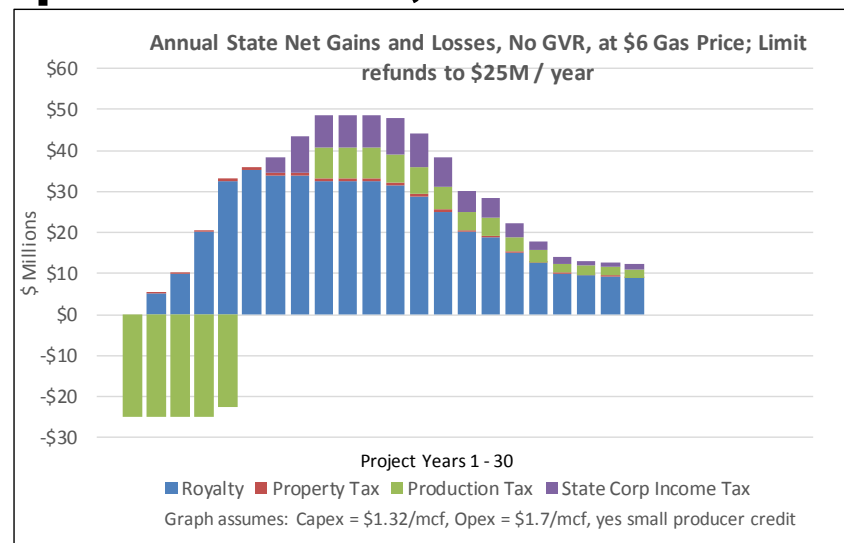
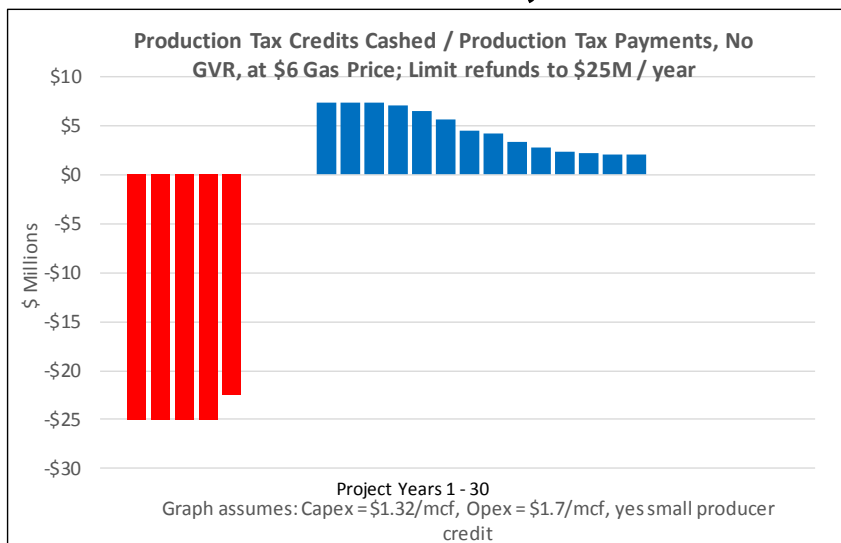
## Gas field HB247, 2022 Tax Caps extended, \$4/mcf



Life Cycle Totals	\$Millions
Production Tax Credits Cashed	144
Production Tax Paid	55
Net Production Tax	-88
Production Tax NPV 6.15%	-86
Total Annual State Losses	72
Total Annual State Gains	358
Net State Gain (Loss)	286
State NPV 6.15%	106
Total Producer Cash Out	472
Total Producer Cash In	544
Net Producer Cash Flow	72
Producer Cash NPV 6.15%	-114

# Cook Inlet Life Cycle Modeling

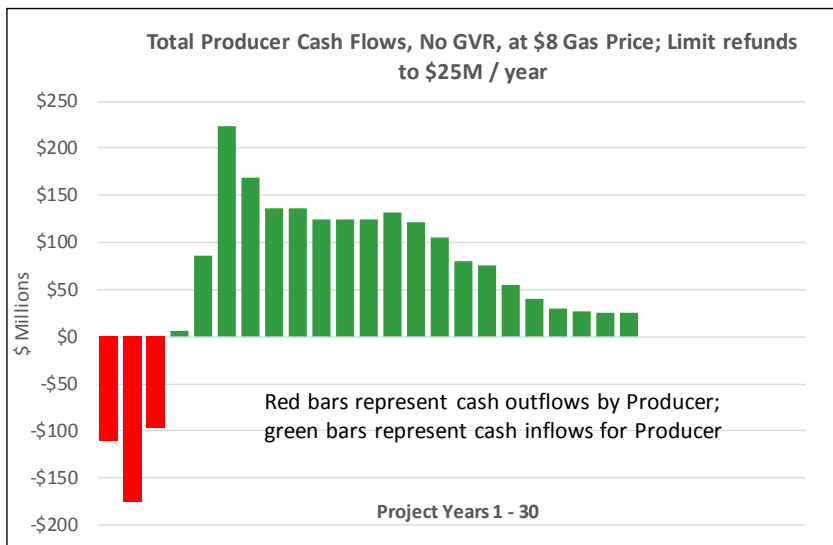
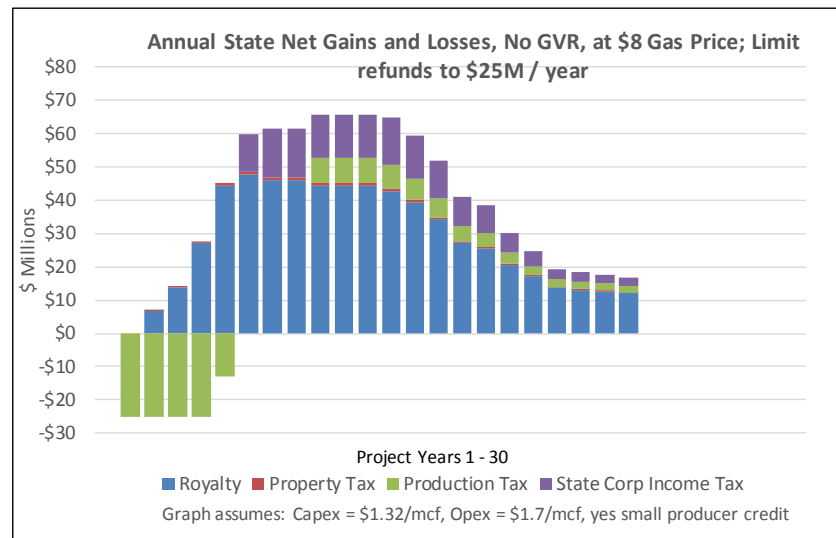
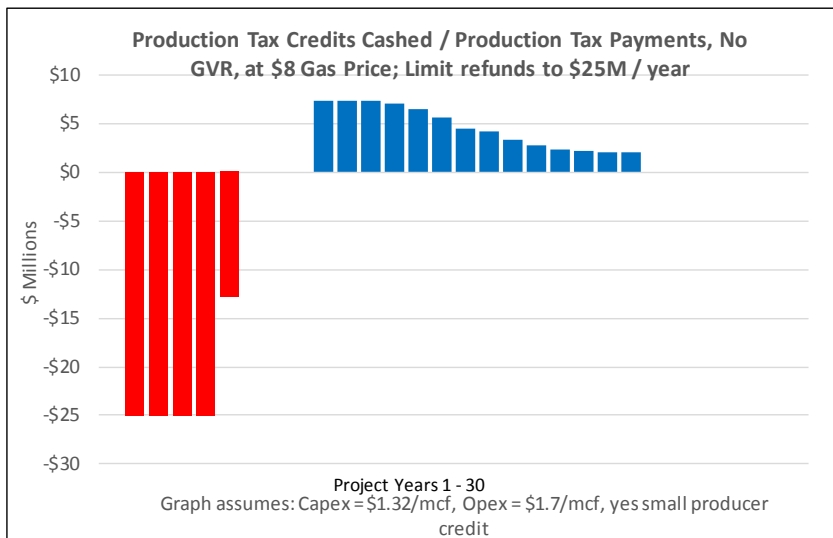
## Gas field HB247, 2022 Tax Caps extended, \$6/mcf



Life Cycle Totals	\$Millions
Production Tax Credits Cashed	122
Production Tax Paid	65
Net Production Tax	-58
Production Tax NPV 6.15%	-69
Total Annual State Losses	59
Total Annual State Gains	616
Net State Gain (Loss)	557
State NPV 6.15%	243
Total Producer Cash Out	415
Total Producer Cash In	1,176
Net Producer Cash Flow	762
Producer Cash NPV 6.15%	263

# Cook Inlet Life Cycle Modeling

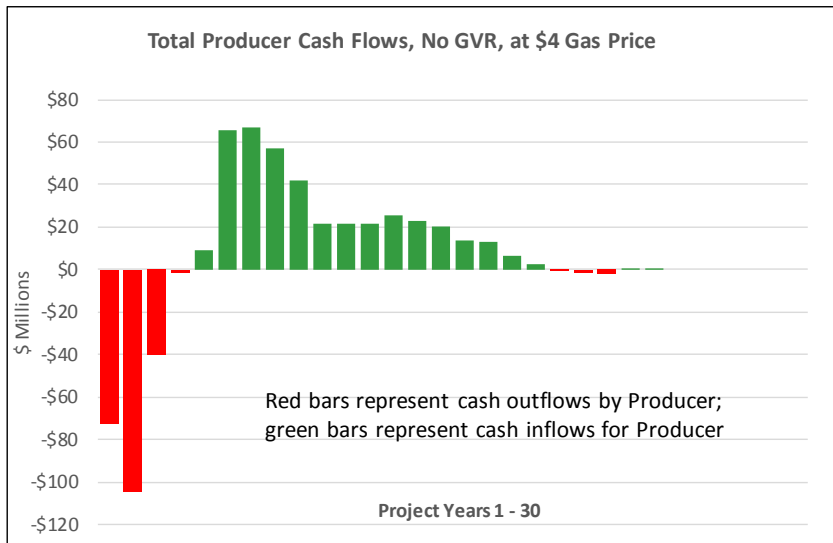
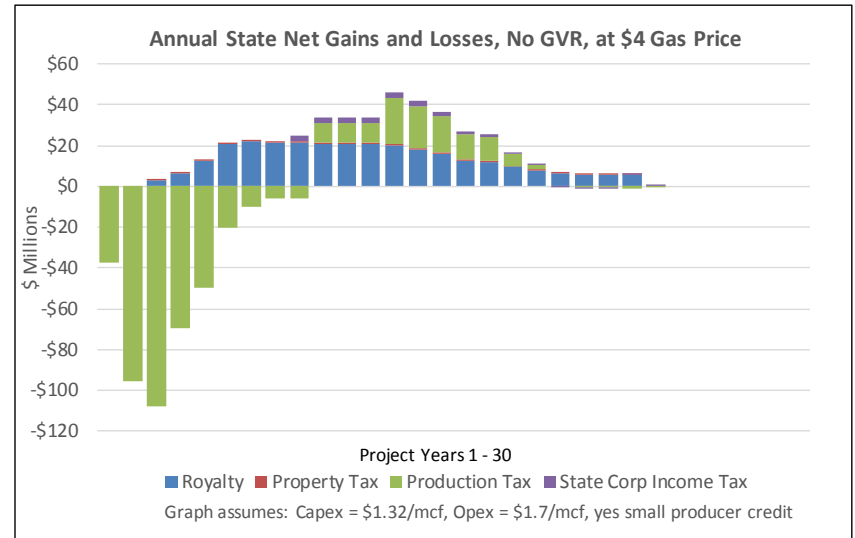
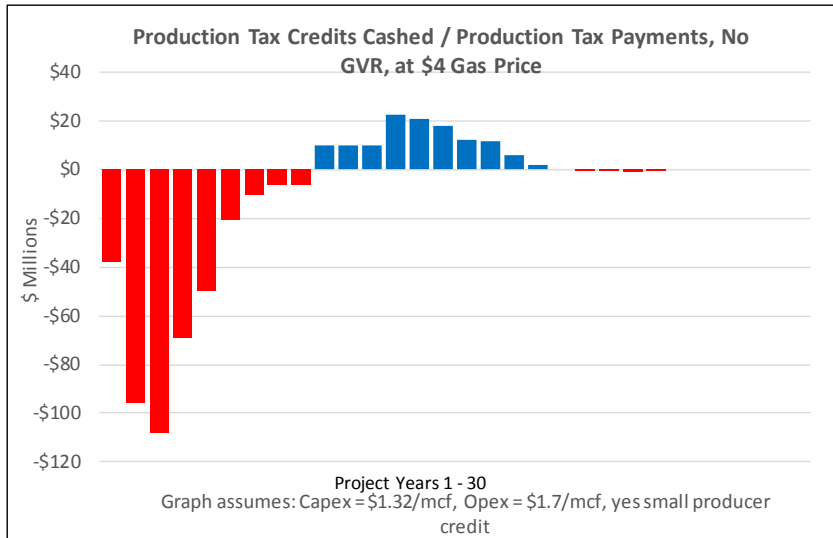
## Gas field HB247, 2022 Tax Caps extended, \$8/mcf



Life Cycle Totals	\$Millions
Production Tax Credits Cashed	113
Production Tax Paid	65
Net Production Tax	-48
Production Tax NPV 6.15%	-63
Total Annual State Losses	52
Total Annual State Gains	860
Net State Gain (Loss)	809
State NPV 6.15%	373
Total Producer Cash Out	382
Total Producer Cash In	1,846
Net Producer Cash Flow	1,464
Producer Cash NPV 6.15%	630

# Middle Earth Life Cycle Modeling

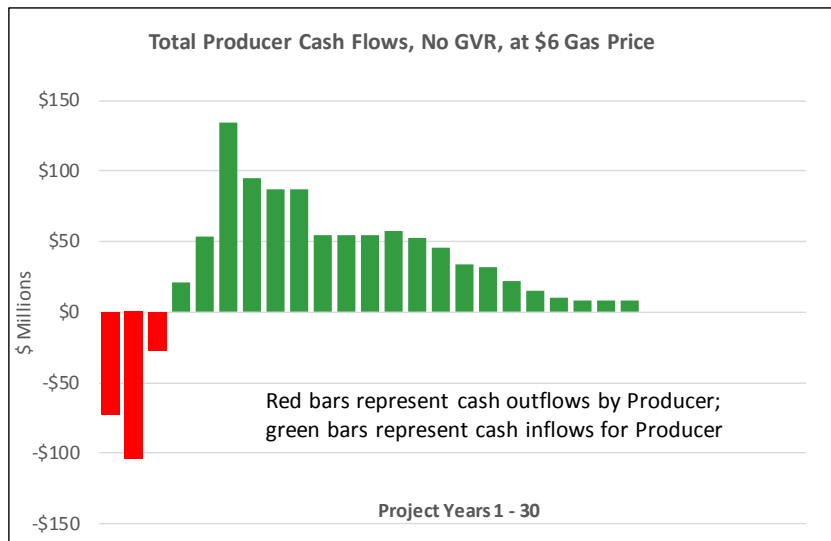
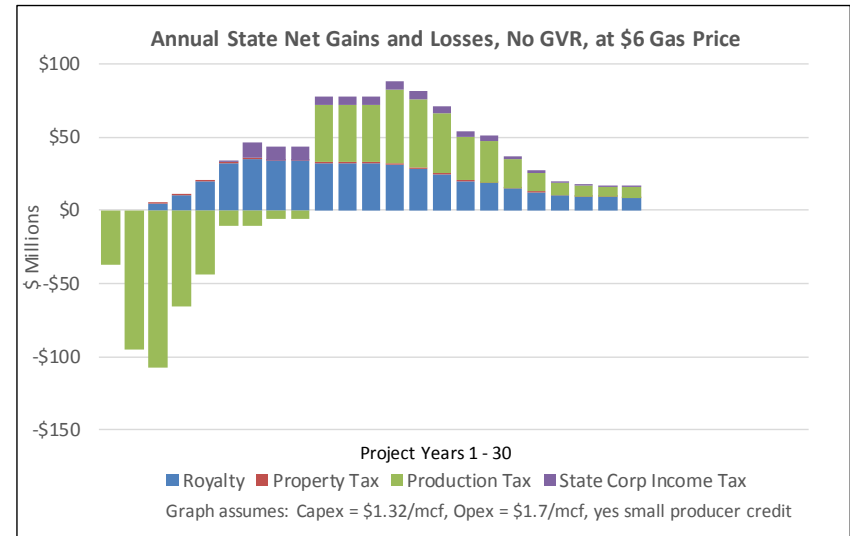
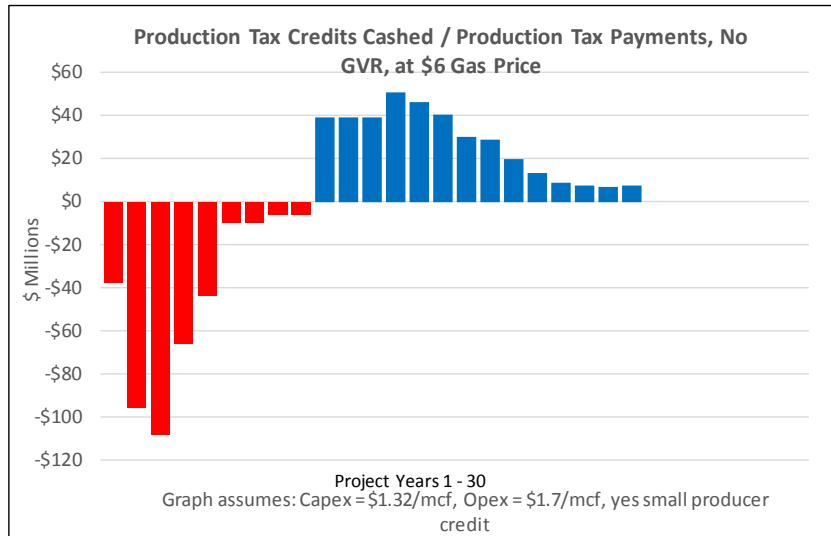
## Gas field Status Quo, \$4/mcf



Life Cycle Totals	\$Millions
Production Tax Credits Cashed	404
Production Tax Paid	123
Net Production Tax	-281
Production Tax NPV 6.15%	-277
Total Annual State Losses	334
Total Annual State Gains	408
Net State Gain (Loss)	73
State NPV 6.15%	-95
Total Producer Cash Out	222
Total Producer Cash In	411
Net Producer Cash Flow	189
Producer Cash NPV 6.15%	37

# Middle Earth Life Cycle Modeling

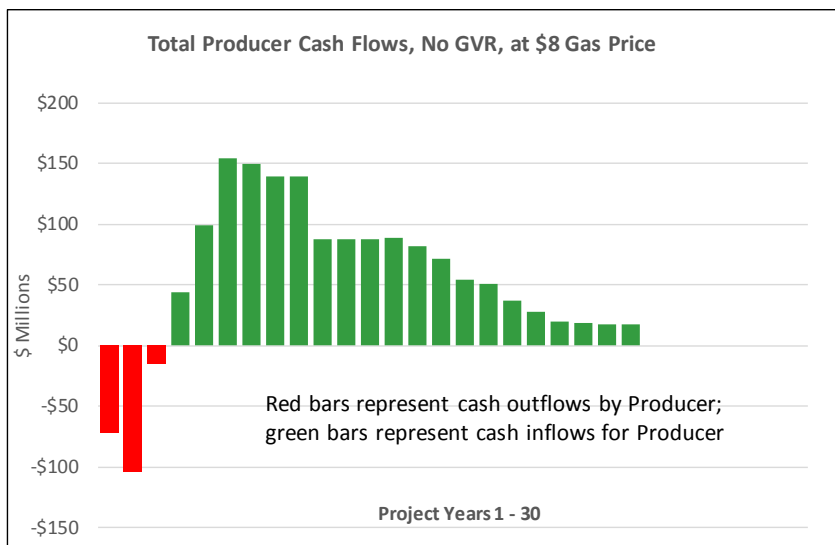
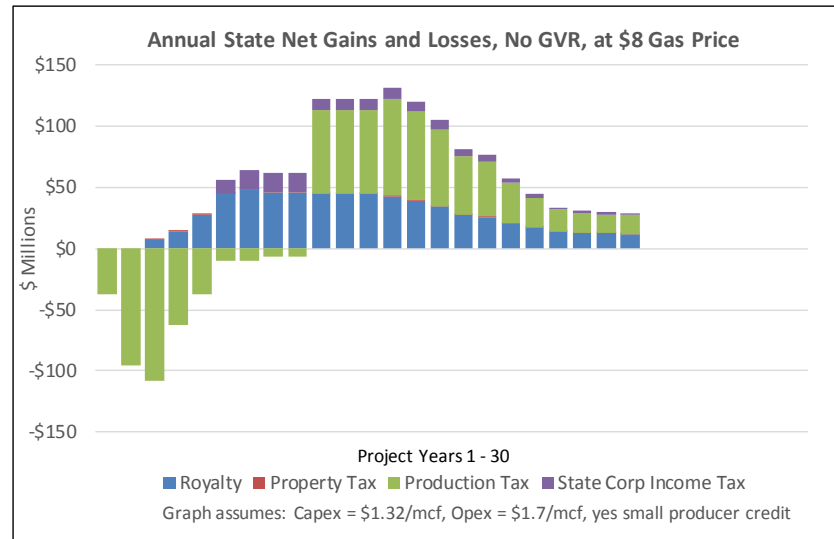
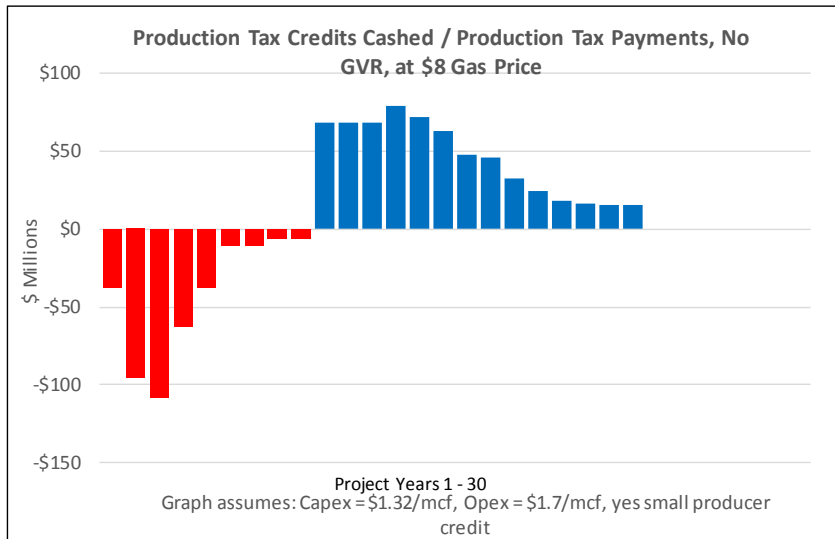
## Gas field Status Quo, \$6/mcf



Life Cycle Totals	\$Millions
Production Tax Credits Cash	383
Production Tax Paid	376
Net Production Tax	-6
Production Tax NPV 6.15%	-154
Total Annual State Losses	312
Total Annual State Gains	884
Net State Gain (Loss)	573
State NPV 6.15%	144
Total Producer Cash Out	204
Total Producer Cash In	935
Net Producer Cash Flow	731
Producer Cash NPV 6.15%	334

# Middle Earth Life Cycle Modeling

## Gas field Status Quo, \$8/mcf

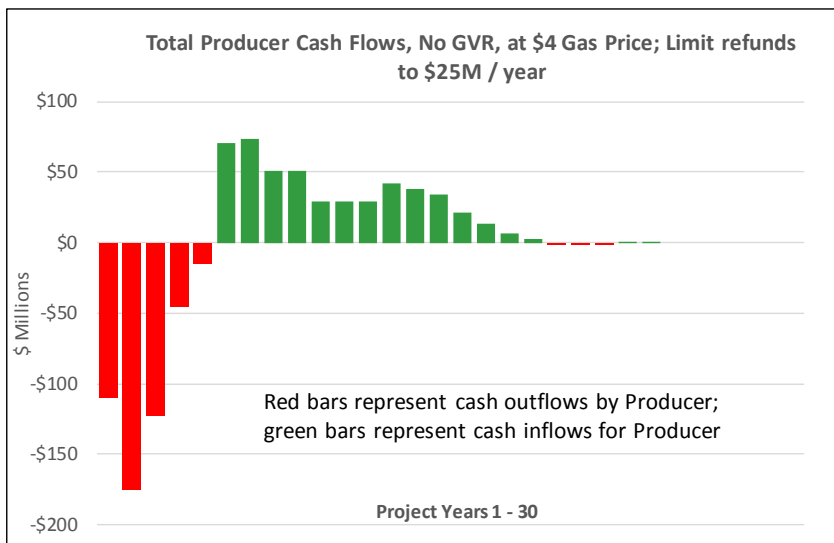
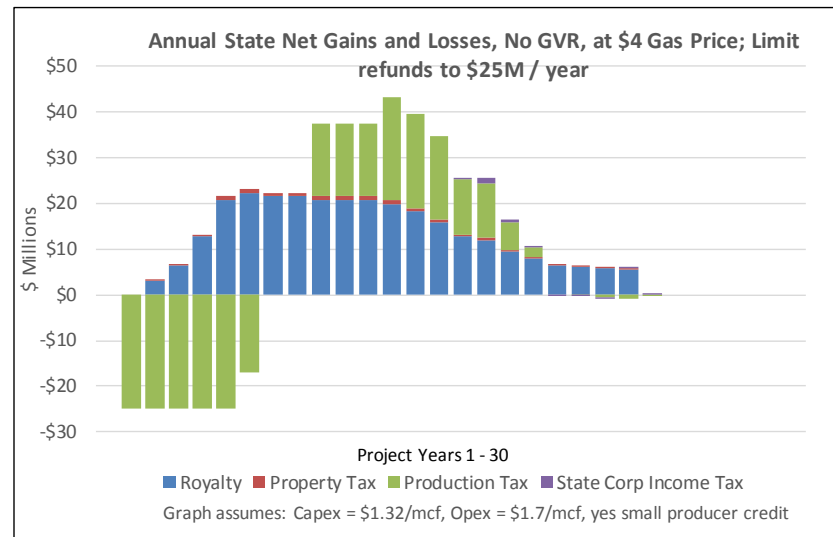
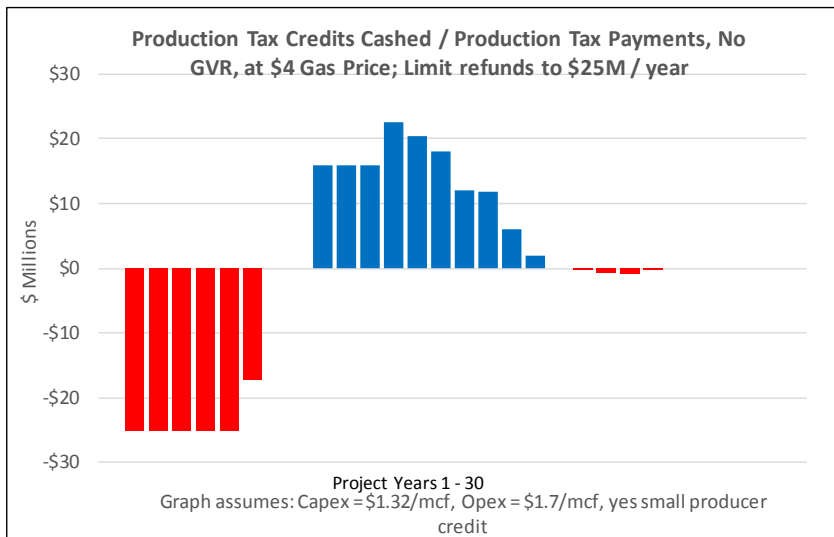


Life Cycle Totals	\$Millions
Production Tax Credits Cashed	373
Production Tax Paid	632
Net Production Tax	259
Production Tax NPV 6.15%	-37
Total Annual State Losses	289
Total Annual State Gains	1,353
Net State Gain (Loss)	1,063
State NPV 6.15%	377
Total Producer Cash Out	191
Total Producer Cash In	1,469
Net Producer Cash Flow	1,278
Producer Cash NPV 6.15%	630



# Middle Earth Life Cycle Modeling

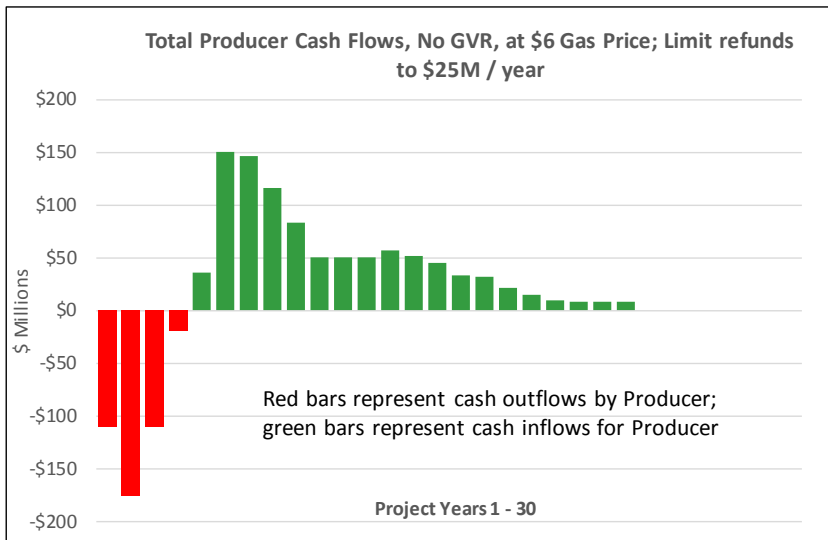
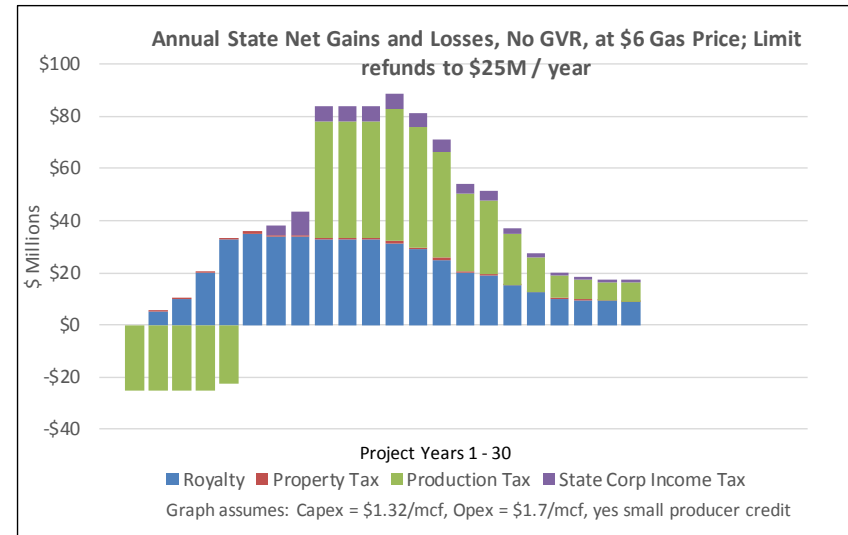
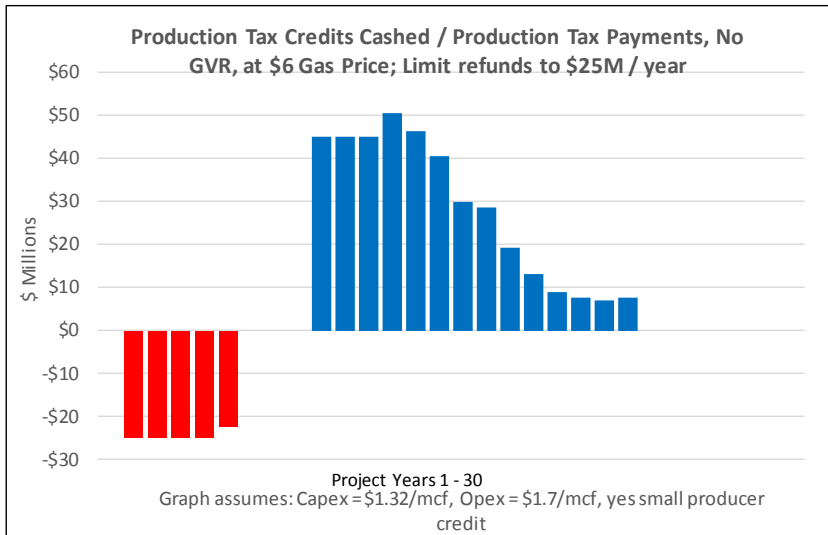
## Gas field HB247, \$4/mcf



Life Cycle Totals	\$Millions
Production Tax Credits Cashed	144
Production Tax Paid	141
Net Production Tax	-3
Production Tax NPV 6.15%	-47
Total Annual State Losses	76
Total Annual State Gains	409
Net State Gain (Loss)	333
State NPV 6.15%	126
Total Producer Cash Out	472
Total Producer Cash In	492
Net Producer Cash Flow	20
Producer Cash NPV 6.15%	-139

# Middle Earth Life Cycle Modeling

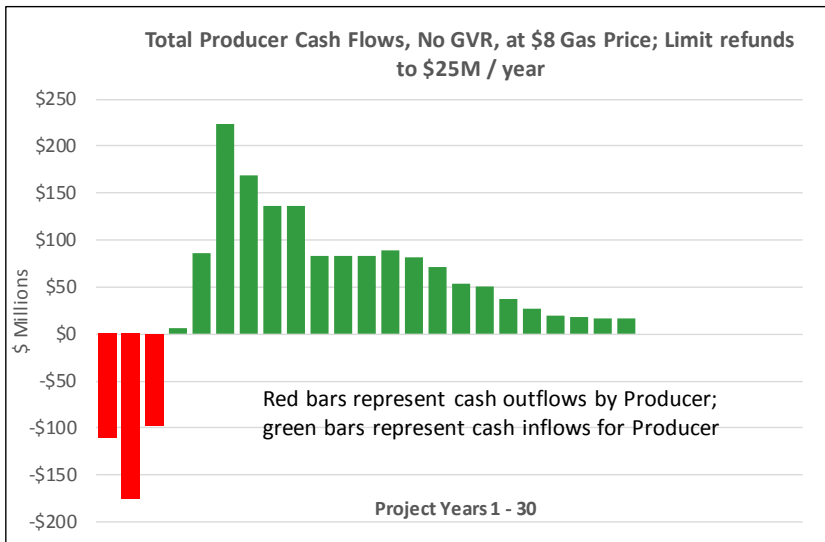
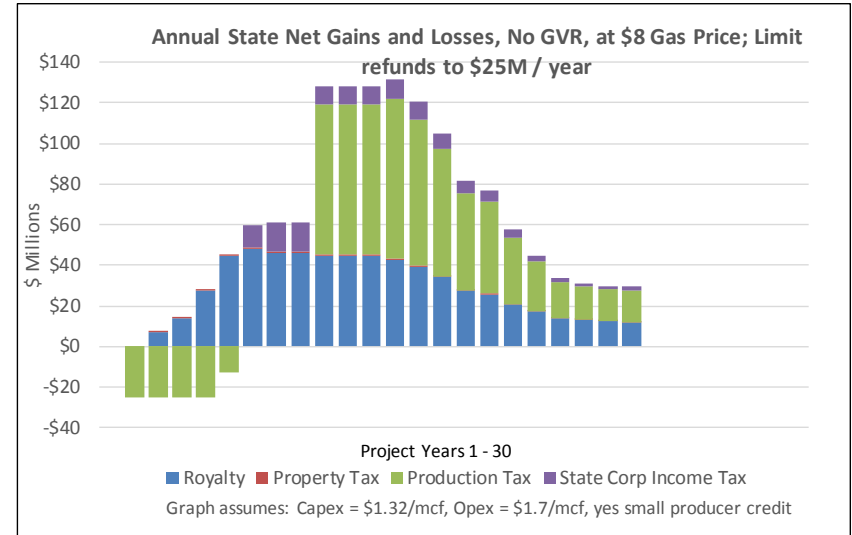
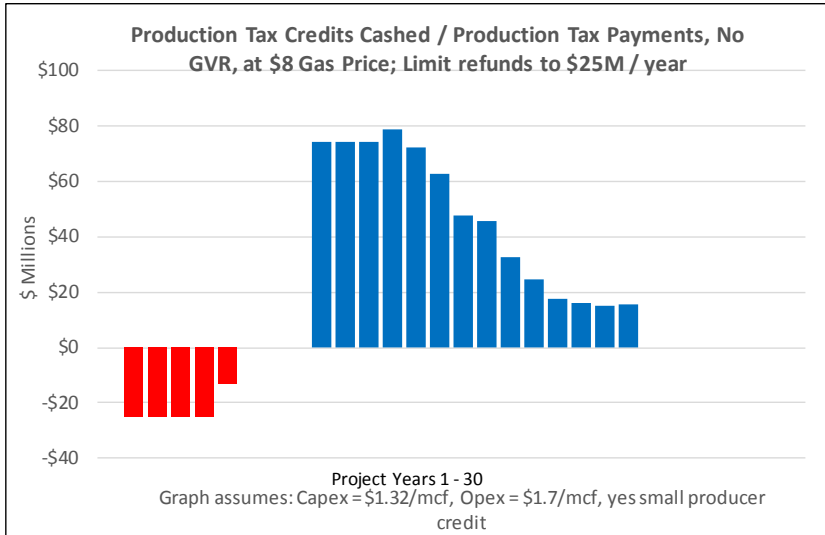
## Gas field HB247, \$6/mcf



Life Cycle Totals	\$Millions
Production Tax Credits Cashed	122
Production Tax Paid	394
Net Production Tax	272
Production Tax NPV 6.15%	74
Total Annual State Losses	62
Total Annual State Gains	894
Net State Gain (Loss)	833
State NPV 6.15%	361
Total Producer Cash Out	415
Total Producer Cash In	976
Net Producer Cash Flow	562
Producer Cash NPV 6.15%	175

# Middle Earth Life Cycle Modeling

## Gas field HB247, \$8/mcf



Life Cycle Totals	\$Millions
Production Tax Credits Cashed	113
Production Tax Paid	650
Net Production Tax	537
Production Tax NPV 6.15%	190
Total Annual State Losses	53
Total Annual State Gains	1,376
Net State Gain (Loss)	1,323
State NPV 6.15%	592
Total Producer Cash Out	382
Total Producer Cash In	1,491
Net Producer Cash Flow	1,109
Producer Cash NPV 6.15%	476

# Summary Table – Cook Inlet and Middle Earth Gas Scenarios

Geography	Tax Regime	Tax Caps Sunset?	Gas Price	Credits Paid (\$millions)	Net Production Tax Paid (\$millions)	Production Tax NPV 6.15% (\$millions)	Net State Gain (Loss) (\$millions)	State NPV 6.15% (\$millions)	Producer Cash Flow (\$millions)	Producer NPV 6.15% (\$millions)
Cook Inlet	Status Quo	yes	\$4.00	\$365	(\$262)	(\$264)	\$124	(\$67)	\$177	\$30
Cook Inlet	Status Quo	yes	\$6.00	\$360	\$105	(\$84)	\$709	\$226	\$663	\$292
Cook Inlet	Status Quo	yes	\$8.00	\$351	\$462	\$89	\$1,285	\$512	\$1,154	\$554
Cook Inlet	Status Quo	no	\$4.00	\$404	(\$367)	(\$315)	\$26	(\$114)	\$241	\$60
Cook Inlet	Status Quo	no	\$6.00	\$383	(\$336)	(\$297)	\$297	\$27	\$931	\$421
Cook Inlet	Status Quo	no	\$8.00	\$373	(\$326)	(\$290)	\$548	\$158	\$1,633	\$784
Cook Inlet	HB 247	yes	\$4.00	\$136	\$16	(\$35)	\$384	\$154	\$8	(\$148)
Cook Inlet	HB 247	yes	\$6.00	\$122	\$383	\$143	\$696	\$442	\$494	\$132
Cook Inlet	HB 247	yes	\$8.00	\$113	\$740	\$316	\$1,545	\$727	\$985	\$400
Cook Inlet	HB 247	no	\$4.00	\$144	(\$88)	(\$86)	\$286	\$106	\$72	(\$114)
Cook Inlet	HB 247	no	\$6.00	\$122	(\$58)	(\$69)	\$557	\$243	\$762	\$263
Cook Inlet	HB 247	no	\$8.00	\$113	(\$48)	(\$63)	\$809	\$373	\$1,464	\$630
Mid Earth	Status Quo	N/A	\$4.00	\$404	(\$281)	(\$277)	\$73	(\$95)	\$189	\$37
Mid Earth	Status Quo	N/A	\$6.00	\$383	(\$6)	(\$154)	\$573	\$144	\$731	\$334
Mid Earth	Status Quo	N/A	\$8.00	\$373	\$259	(\$37)	\$1,063	\$377	\$1,278	\$630
Mid Earth	HB 247	N/A	\$4.00	\$144	(\$3)	(\$47)	\$333	\$126	\$20	(\$139)
Mid Earth	HB 247	N/A	\$6.00	\$122	\$272	\$74	\$833	\$361	\$562	\$175
Mid Earth	HB 247	N/A	\$8.00	\$113	\$537	\$190	\$1,323	\$592	\$1,109	\$476