House Resources Committee

Alaska Fiscal System Discussion Slides

April 2 2013

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$5 production credit like ‘reverse progressivity’…

Taxable Production (mmb)	50	50	50	50	50	50	50	50	50	50	50
ANS West Coast	**$ 60**	**$ 70**	**$ 80**	**$ 90**	**$ 100**	**$ 110**	**$ 120**	**$ 130**	**$ 140**	**$ 150**	**$ 160**
Transportation	$ 10	$ 10	$ 10	$ 10	$ 10	$ 10	$ 10	$ 10	$ 10	$ 10	$ 10
Gross Value at Point of Production	$ 2,500	$ 3,000	$ 3,500	$ 4,000	$ 4,500	$ 5,000	$ 5,500	$ 6,000	$ 6,500	$ 7,000	$ 7,500
Lease Expenditures	$ 1,500	$ 1,500	$ 1,500	$ 1,500	$ 1,500	$ 1,500	$ 1,500	$ 1,500	$ 1,500	$ 1,500	$ 1,500
GVPP/bbl	$ 50	$ 60	$ 70	$ 80	$ 90	$ 100	$ 110	$ 120	$ 130	$ 140	$ 150
Lease Expenditures / bbl	$ 30	$ 30	$ 30	$ 30	$ 30	$ 30	$ 30	$ 30	$ 30	$ 30	$ 30
PTV before GRE	$ 1,000	$ 1,500	$ 2,000	$ 2,500	$ 3,000	$ 3,500	$ 4,000	$ 4,500	$ 5,000	$ 5,500	$ 6,000
Prod tax without GRE	$ 350	$ 525	$ 700	$ 875	$ 1,050	$ 1,225	$ 1,400	$ 1,575	$ 1,750	$ 1,925	$ 2,100
GRE	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
PTV	$ 1,000	$ 1,500	$ 2,000	$ 2,500	$ 3,000	$ 3,500	$ 4,000	$ 4,500	$ 5,000	$ 5,500	$ 6,000
PTV/bbl	$ 20	$ 30	$ 40	$ 50	$ 60	$ 70	$ 80	$ 90	$ 100	$ 110	$ 120
Production Tax without Allowance	$ 350	$ 525	$ 700	$ 875	$ 1,050	$ 1,225	$ 1,400	$ 1,575	$ 1,750	$ 1,925	$ 2,100
Production Allowance / bbl	$ 5	$ 5	$ 5	$ 5	$ 5	$ 5	$ 5	$ 5	$ 5	$ 5	$ 5
Production Allowance	$ 250	$ 250	$ 250	$ 250	$ 250	$ 250	$ 250	$ 250	$ 250	$ 250	$ 250
Production Tax	$ 100	$ 275	$ 450	$ 625	$ 800	$ 975	$ 1,150	$ 1,325	$ 1,500	$ 1,675	$ 1,850
Nominal Tax Rate	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%
Rate after Allowance	**10.0%**	**18.3%**	**22.5%**	**25.0%**	**26.7%**	**27.9%**	**28.8%**	**29.4%**	**30.0%**	**30.5%**	**30.8%**
Progressive Tax Rate Deduction	25.0%	16.7%	12.5%	10.0%	8.3%	7.1%	6.3%	5.6%	5.0%	4.5%	4.2%

Just sufficiently ‘progressive’ to counteract effect of royalty and achieve overall neutrality

PFC Energy

…variable production credit increases progressive effect…

Taxable Production (mmb)	50	50	50	50	50	50	50	50	50	50	50
ANS West Coast	**$ 60**	**$ 70**	**$ 80**	**$ 90**	**$ 100**	**$ 110**	**$ 120**	**$ 130**	**$ 140**	**$ 150**	**$ 160**
Transportation	$ 10	$ 10	$ 10	$ 10	$ 10	$ 10	$ 10	$ 10	$ 10	$ 10	$ 10
Gross Value at Point of Production	$ 2,500	$ 3,000	$ 3,500	$ 4,000	$ 4,500	$ 5,000	$ 5,500	$ 6,000	$ 6,500	$ 7,000	$ 7,500
Lease Expenditures	$ 1,500	$ 1,500	$ 1,500	$ 1,500	$ 1,500	$ 1,500	$ 1,500	$ 1,500	$ 1,500	$ 1,500	$ 1,500
GVPP/bbl	$ 50	$ 60	$ 70	$ 80	$ 90	$ 100	$ 110	$ 120	$ 130	$ 140	$ 150
Lease Expenditures / bbl	$ 30	$ 30	$ 30	$ 30	$ 30	$ 30	$ 30	$ 30	$ 30	$ 30	$ 30
PTV before GRE	$ 1,000	$ 1,500	$ 2,000	$ 2,500	$ 3,000	$ 3,500	$ 4,000	$ 4,500	$ 5,000	$ 5,500	$ 6,000
Prod tax without GRE	$ 350	$ 525	$ 700	$ 875	$ 1,050	$ 1,225	$ 1,400	$ 1,575	$ 1,750	$ 1,925	$ 2,100
GRE	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
PTV	$ 1,000	$ 1,500	$ 2,000	$ 2,500	$ 3,000	$ 3,500	$ 4,000	$ 4,500	$ 5,000	$ 5,500	$ 6,000
PTV/bbl	$ 20	$ 30	$ 40	$ 50	$ 60	$ 70	$ 80	$ 90	$ 100	$ 110	$ 120
Production Tax without Allowance	$ 350	$ 525	$ 700	$ 875	$ 1,050	$ 1,225	$ 1,400	$ 1,575	$ 1,750	$ 1,925	$ 2,100
Production Allowance / bbl	$ 8	$ 8	$ 8	$ 7	$ 6	$ 5	$ 4	$ 3	$ 2	$ 1	$ -
Production Allowance	$ 400	$ 400	$ 400	$ 350	$ 300	$ 250	$ 200	$ 150	$ 100	$ 50	$ -
Production Tax	$ -	$ 125	$ 300	$ 525	$ 750	$ 975	$ 1,200	$ 1,425	$ 1,650	$ 1,875	$ 2,100
Nominal Tax Rate	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%
Rate after Allowance	**0.0%**	**8.3%**	**15.0%**	**21.0%**	**25.0%**	**27.9%**	**30.0%**	**31.7%**	**33.0%**	**34.1%**	**35.0%**
Progressive Tax Rate Deduction	35.0%	26.7%	20.0%	14.0%	10.0%	7.1%	5.0%	3.3%	2.0%	0.9%	0.0%

More progressive, reducing rates below $110, and increasing them above

…but rates with fixed $5/bbl credit and GVR are lower

Taxable Production (mmb)	50	50	50	50	50	50	50	50	50	50	50
ANS West Coast	**60**	**70**	**80**	**90**	**100**	**110**	**120**	**130**	**140**	**150**	**160**
Transportation	10	10	10	10	10	10	10	10	10	10	10
Gross Value at Point of Production	$ 2,500	$ 3,000	$ 3,500	$ 4,000	$ 4,500	$ 5,000	$ 5,500	$ 6,000	$ 6,500	$ 7,000	$ 7,500
Lease Expenditures	$ 1,500	$ 1,500	$ 1,500	$ 1,500	$ 1,500	$ 1,500	$ 1,500	$ 1,500	$ 1,500	$ 1,500	$ 1,500
GVPP/bbl	$ 50	$ 60	$ 70	$ 80	$ 90	$ 100	$ 110	$ 120	$ 130	$ 140	$ 150
Lease Expenditures / bbl	$ 30	$ 30	$ 30	$ 30	$ 30	$ 30	$ 30	$ 30	$ 30	$ 30	$ 30
PTV before GRE	$ 1,000	$ 1,500	$ 2,000	$ 2,500	$ 3,000	$ 3,500	$ 4,000	$ 4,500	$ 5,000	$ 5,500	$ 6,000
Prod tax without GRE	$ 350	$ 525	$ 700	$ 875	$ 1,050	$ 1,225	$ 1,400	$ 1,575	$ 1,750	$ 1,925	$ 2,100
GRE	$ 500	$ 600	$ 700	$ 800	$ 900	$ 1,000	$ 1,100	$ 1,200	$ 1,300	$ 1,400	$ 1,500
PTV	$ 500	$ 900	$ 1,300	$ 1,700	$ 2,100	$ 2,500	$ 2,900	$ 3,300	$ 3,700	$ 4,100	$ 4,500
PTV/bbl	$ 20	$ 30	$ 40	$ 50	$ 60	$ 70	$ 80	$ 90	$ 100	$ 110	$ 120
Production Tax without Allowance	$ 175	$ 315	$ 455	$ 595	$ 735	$ 875	$ 1,015	$ 1,155	$ 1,295	$ 1,435	$ 1,575
Production Allowance / bbl	$ 5	$ 5	$ 5	$ 5	$ 5	$ 5	$ 5	$ 5	$ 5	$ 5	$ 5
Production Allowance	$ 250	$ 250	$ 250	$ 250	$ 250	$ 250	$ 250	$ 250	$ 250	$ 250	$ 250
Production Tax	$ -	$ 65	$ 205	$ 345	$ 485	$ 625	$ 765	$ 905	$ 1,045	$ 1,185	$ 1,325
Nominal Tax Rate	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%
Rate after Allowance and GRE	**0.0%**	**4.3%**	**10.3%**	**13.8%**	**16.2%**	**17.9%**	**19.1%**	**20.1%**	**20.9%**	**21.5%**	**22.1%**
Progressive Tax Rate Deduction	35.0%	30.7%	24.8%	21.2%	18.8%	17.1%	15.9%	14.9%	14.1%	13.5%	12.9%

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Linear Function for Credit may be preferable to Step Function

Stepped Credit Linear Credit

Stepped Credit Linear Credit

GVPP Below	Stepped Credit
$80	$8
$90	$7
$100	$6
$110	$5
$120	$4
$130	$3
$140	$2
$150	$1
$160	$0

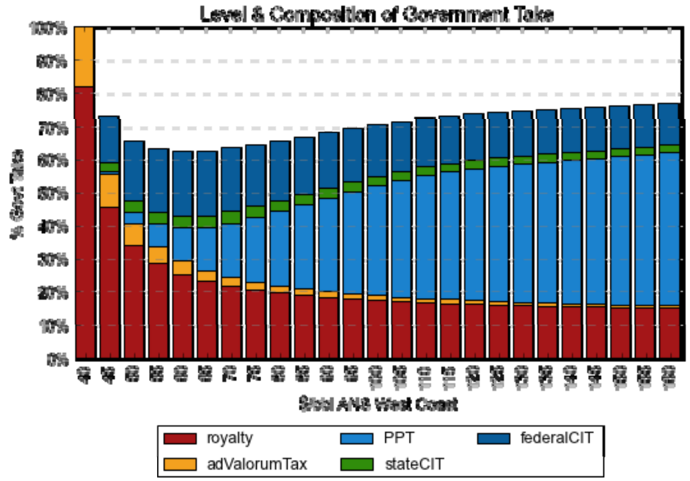
Linear Credit Function

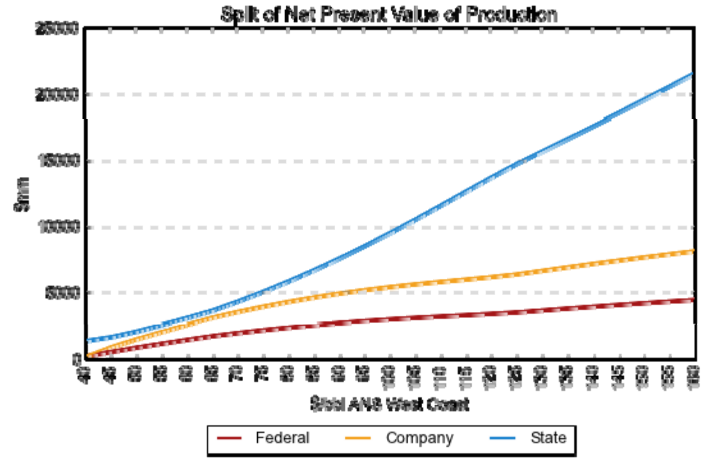
Credit = Max(0,Min(8,16-(GVPP/10)))

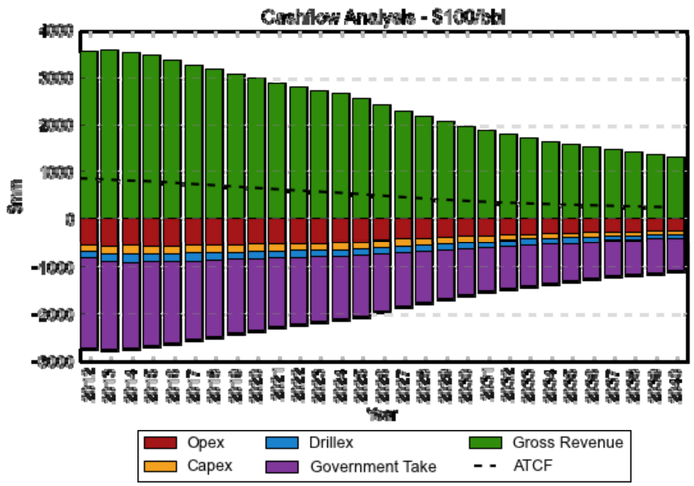
$16 minus one tenth of the Gross Value of Production; not to exceed $8 or be below $0

ACES – Base Production

ACES, 12.5% Royalty, Base Production







Economic Summary

	GT0	NPV/boe	IRR	Cash Margin
$80/bbl	65.89%	4.18		19.04
$100/bbl	70.65%	5.26		23.92
$120/bbl	73.92%	6.0		27.09
$140/bbl	75.46%	6.97		31.89

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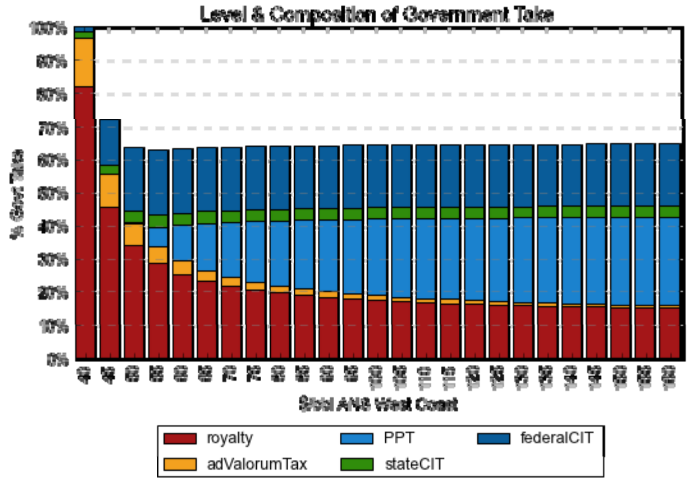
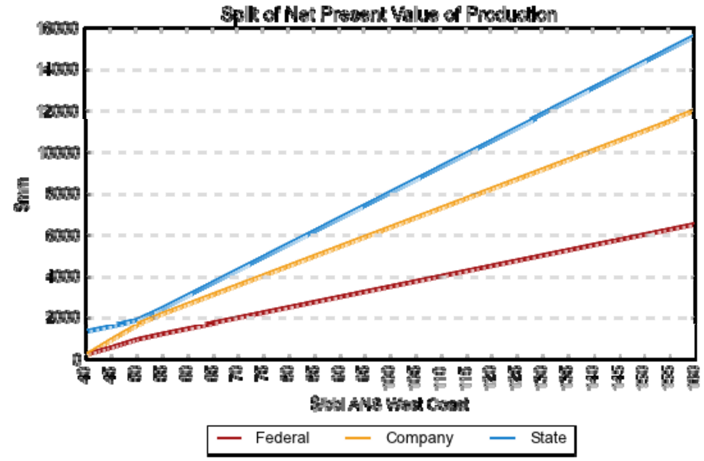
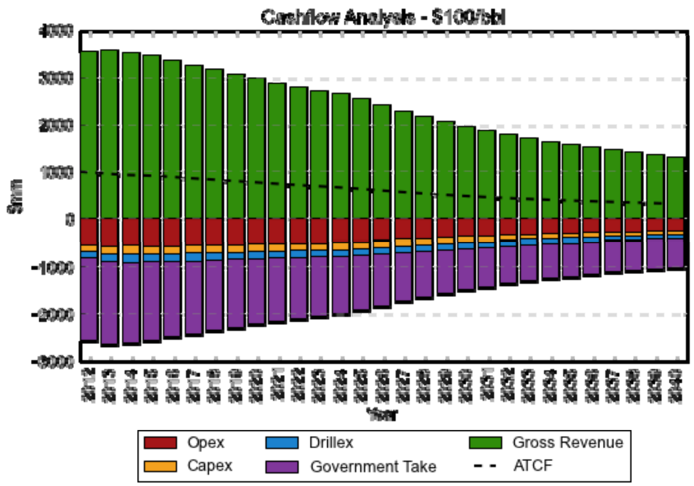
SB21
Base Production

SB21, 12.5% Royalty, Base Production







Economic Summary

	GT0	NPV/boe	IRR	Cash Margin
$80/bbl	64.22%	4.37		19.77
$100/bbl	64.54%	6.18		28.11
$120/bbl	64.71%	8.0		36.45
$140/bbl	64.81%	9.82		44.78

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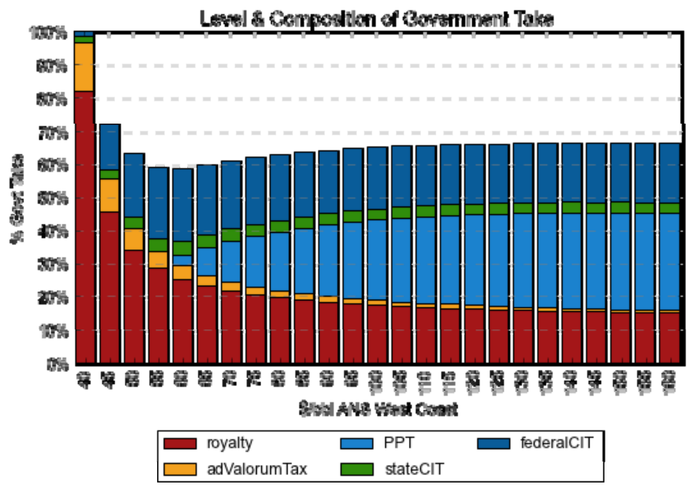
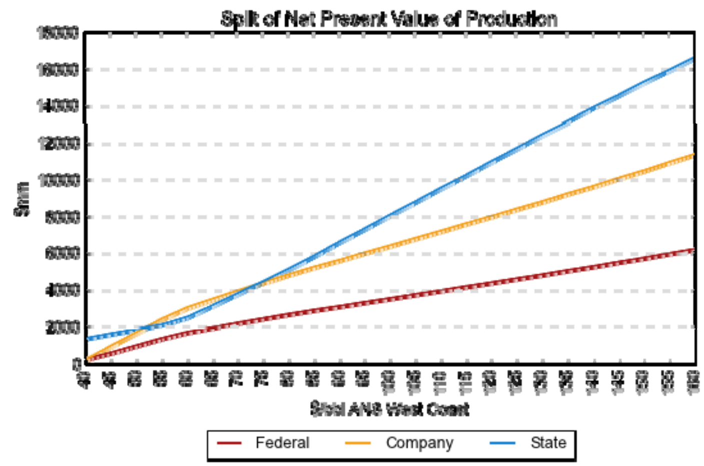
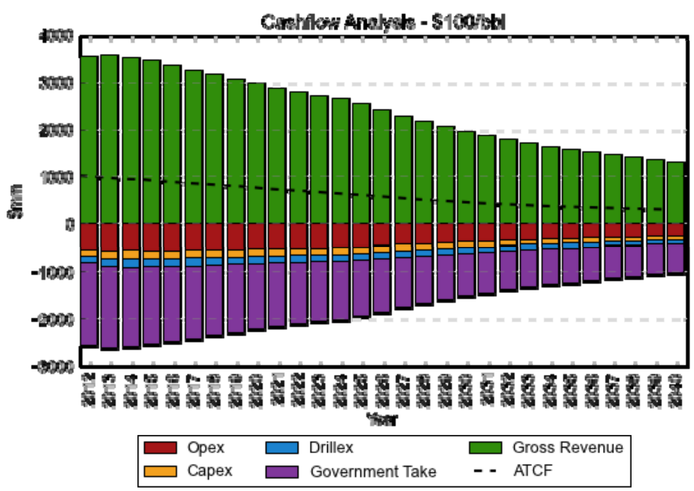
SB21 with variable production credit
Base Production

SB21, 12.5% Royalty, variable production credit, Base Production







Economic Summary

	GT0	NPV/boe	IRR	Cash Margin
$80/bbl	62.94%	4.66		20.94
$100/bbl	65.26%	6.19		27.95
$120/bbl	66.23%	7.75		34.96
$140/bbl	66.56%	9.33		42.21

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Why is Government Take Higher at $100/bbl?

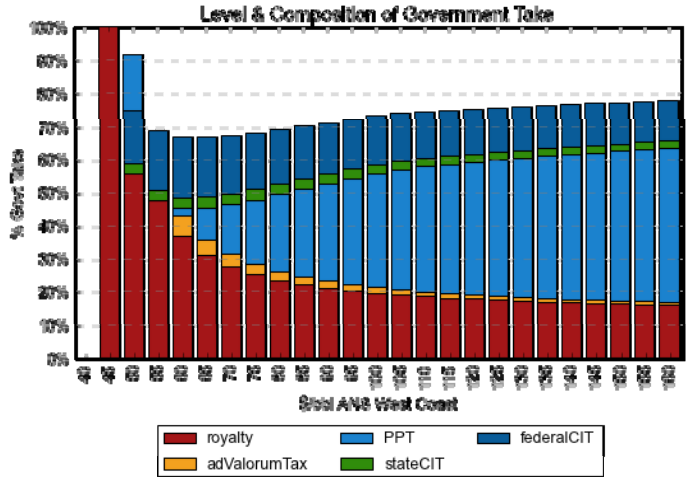
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
ANS West Coast	100	102.5	105.0625	107.6891	110.3813	113.1408	115.9693	118.8686	121.8403	124.8863	128.0085	131.2087	134.4889	137.8511
Transport Cost	9	9.32	9.64	9.98	10.33	10.69	11.06	11.45	11.85	12.27	12.7	13.14	13.6	14.08
GVPP / bbl	91	93.18	95.4225	97.70906	100.0513	102.4508	104.9093	107.4186	109.9903	112.6163	115.3085	118.0687	120.8889	123.7711
$/bbl Credit	6	6	6	6	5	5	5	5	5	4	4	4	3	3

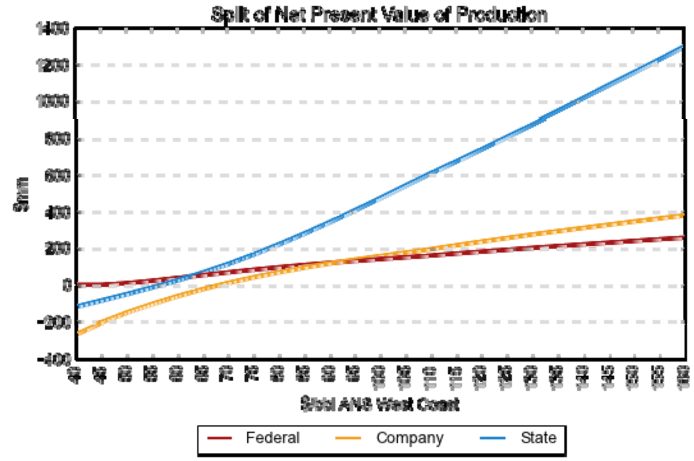
	2026	2027	2028	2029	2030	2031	2032	2033	2034
ANS West Coast	141.2974	144.8298	148.4506	152.1618	155.9659	159.865	163.8616	167.9582	172.1571
Transport Cost	14.57	15.08	15.61	16.15	16.72	17.3	17.91	18.53	19.18
GVPP / bbl	126.7274	129.7498	132.8406	136.0118	139.2459	142.565	145.9516	149.4282	152.9771
$/bbl Credit	3	3	2	2	2	1	1	1	0

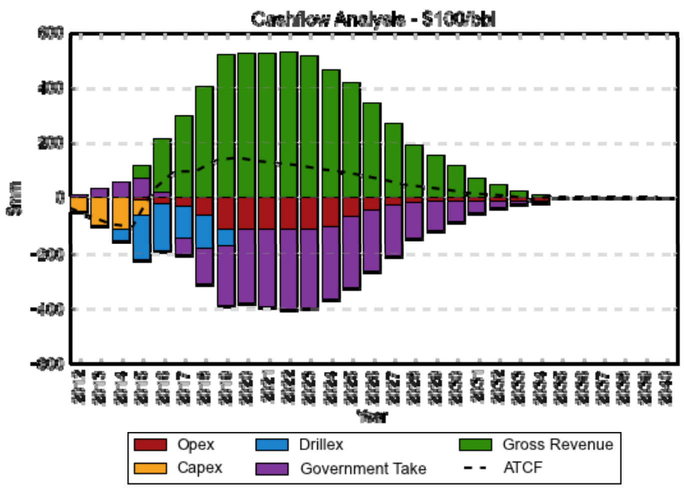
GVPP Below	Stepped Credit
$80	$8
$90	$7
$100	$6
$110	$5
$120	$4
$130	$3
$140	$2
$150	$1
$160	$0

ACES
$18/bbl New Development

ACES, 12.5% Royalty, $18/bbl New Development





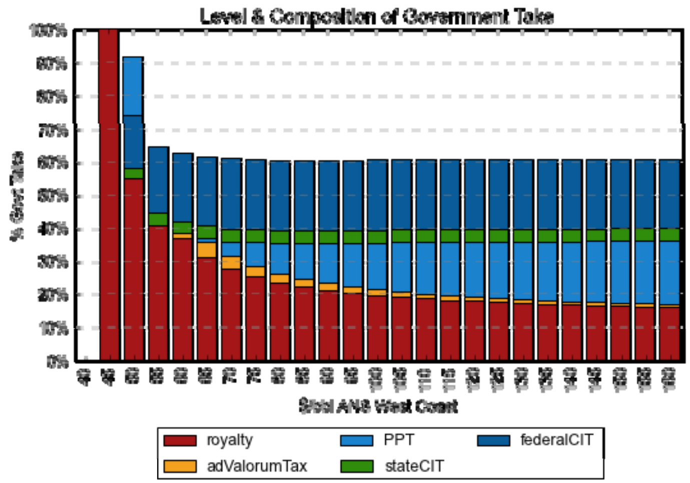


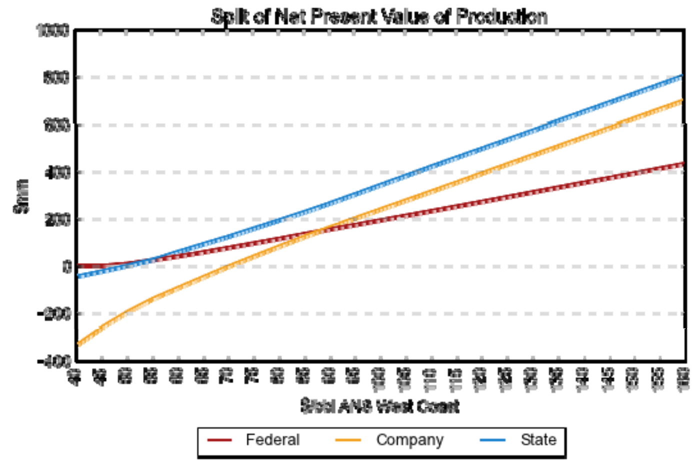
Economic Summary

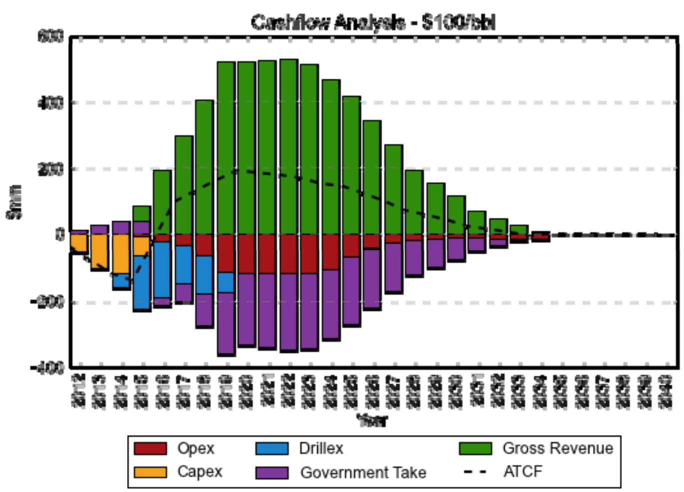
	GT0	NPV/boe	IRR	Cash Margin
$80/bbl	69.25%	1.44	16.15%	22.21
$100/bbl	73.03%	3.21	20.95%	27.06
$120/bbl	75.13%	4.78	24.84%	30.63
$140/bbl	76.52%	6.27	28.18%	34.71

SB21
$18/bbl New Development, 12.5% Royalty, 20% GRE

SB21, 12.5% Royalty, $18/bbl New Development With GRE







Economic Summary

	GT0	NPV/boe	IRR	Cash Margin
$80/bbl	60.56%	1.67	15.83%	26.56
$100/bbl	60.60%	4.83	22.23%	35.76
$120/bbl	60.76%	7.89	27.63%	44.59
$140/bbl	60.81%	10.95	32.47%	53.36

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Government Take Competitiveness