ALASKA OIL & GAS CREDITS

Presentation to Senate Resources Committee
Juneau, Alaska › Saturday, April 2, 2016

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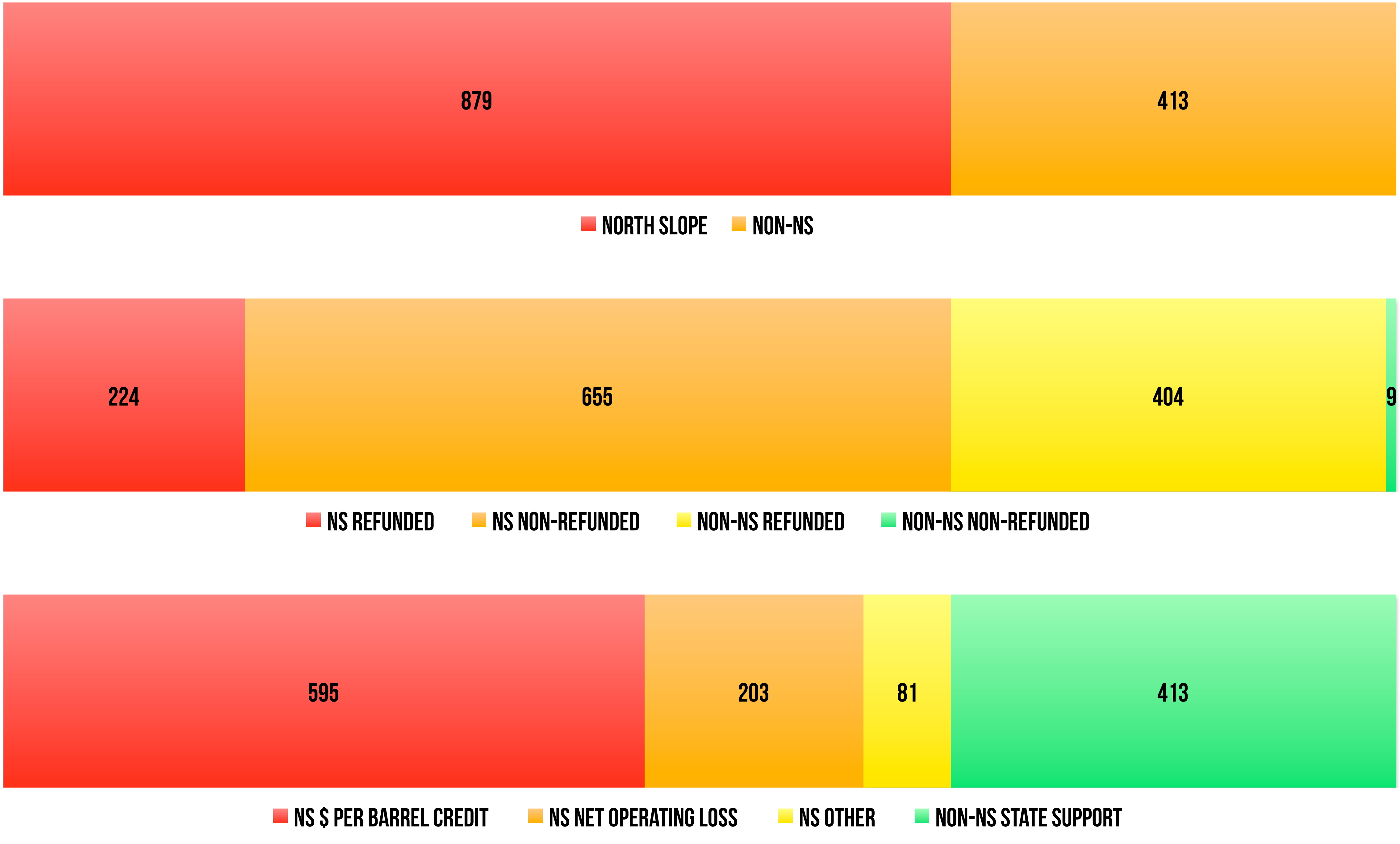
VISUALIZING ALASKA'S CREDIT SYSTEM (FY 2015)



SOURCE: ALASKA DEPARTMENT OF REVENUE, TAX DIVISION

NS CREDITS ARE INTEGRAL TO OVERALL TAX SYSTEM

Credit	Details	Status	Purpose
Net Operating Loss (NOL) or Carried Forward Annual Loss credit (.023b)	Credit of 35% of a carried forward annual loss Refundable for producers with <50,000 boe/d of production	Current From January 1 2014 to January 1 2016 was at elevated level of 45% (SB21 transition arrangements)	Make impact of tax system the same for new developer as incumbent producer
$/bbl Credit (.024 i&j)	$0-$8/bbl produced ('old' oil) or $5/bbl produced ('new' oil). Used against liability. Sliding credit may not reduce liability below 4% gross floor, fixed credit may not reduce below 0	Current	Provide a measure of 'progressivity' to tax system, reducing tax rates at lower oil prices; integral to component of tax system
Exploration Credits (.025)	30%-40% of qualifying exploration costs for exploration wells or seismic outside existing units	Expire on July 1 2016	Incentivize new exploration
Small Producer Credit (.024c)	$12mm/yr for producers with <50,000 boe/d production, tapering to 0 for producers with 100,000 boe/d	Closes to new applicants that do not have commercial production by May 1 2016 9 year 'tail' from first production for companies already eligible	Ease burden of previous fiscal system changes on new small companies that had come to the North Slope prior to changes

NON-NS CREDITS GEARED TO SUPPORT ACTIVITY

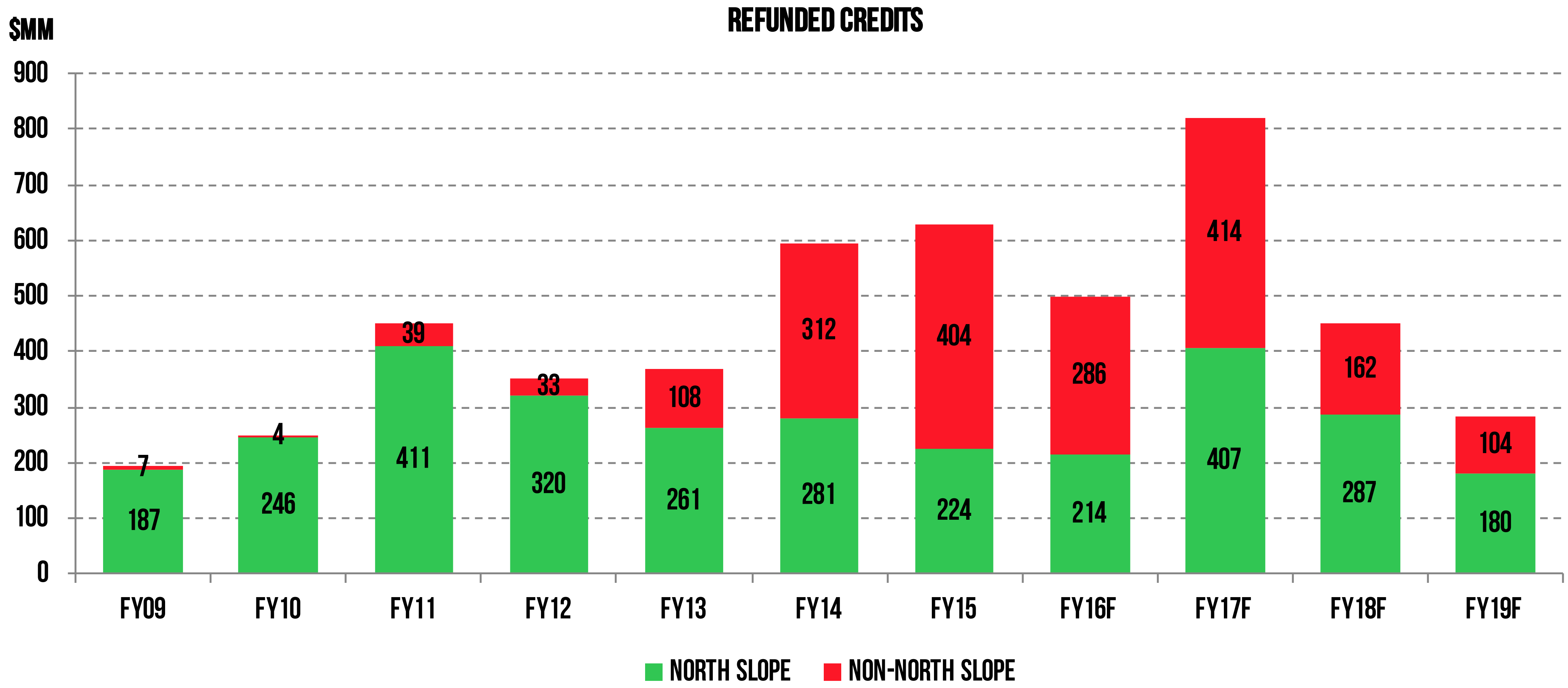
Credit	Details	Status	Purpose
Net Operating Loss (NOL) or Carried Forward Annual Loss credit (.023b)	Credit of 25% of a carried forward annual loss Refundable for producers with <50,000 boe/d of production	Current	Incentivize Cook Inlet Production
Capital & Well Expenditures (.023 a&l)	Credit of 20% for qualified capital expenditures (QCEs) Credit of 40% for QCEs that are intangible drilling costs	Current	Incentivize Cook Inlet Production
Exploration Credits (.025)	30%-40% of qualifying exploration costs for exploration wells or seismic based on distance from existing wells/units	Expire on July 1 2016	Incentivize new exploration
Small Producer Credit (.024c)	Up to $12mm/yr for producers with <50,000 boe/d production, tapering to 0 for producers with 100,000 boe/d Non-refundable	Closes to new applicants that do not have commercial production by May 1 2016 9 year 'tail' from first production for companies already eligible	Limited applicability given low to zero tax liabilities and other credits
Frontier Basin Credit (.024a)	Up to $6mm/yr	Closes to new applicants that do not have commercial production by May 1 2016 9 year 'tail' from first production for companies already eligible	Incentivize exploration & development outside North Slope and Cook Inlet

REFUNDED CREDITS REACHED NEW HIGH IN FY 2015

Refundable credits in FY 2015 reached $628 mm, the highest point ever

In both 2014 and 2015, the majority of these credits went to non-North Slope producers

Under DOR's current forecast, credits will exceed $1.3 billion across FY 2016 and FY 2017



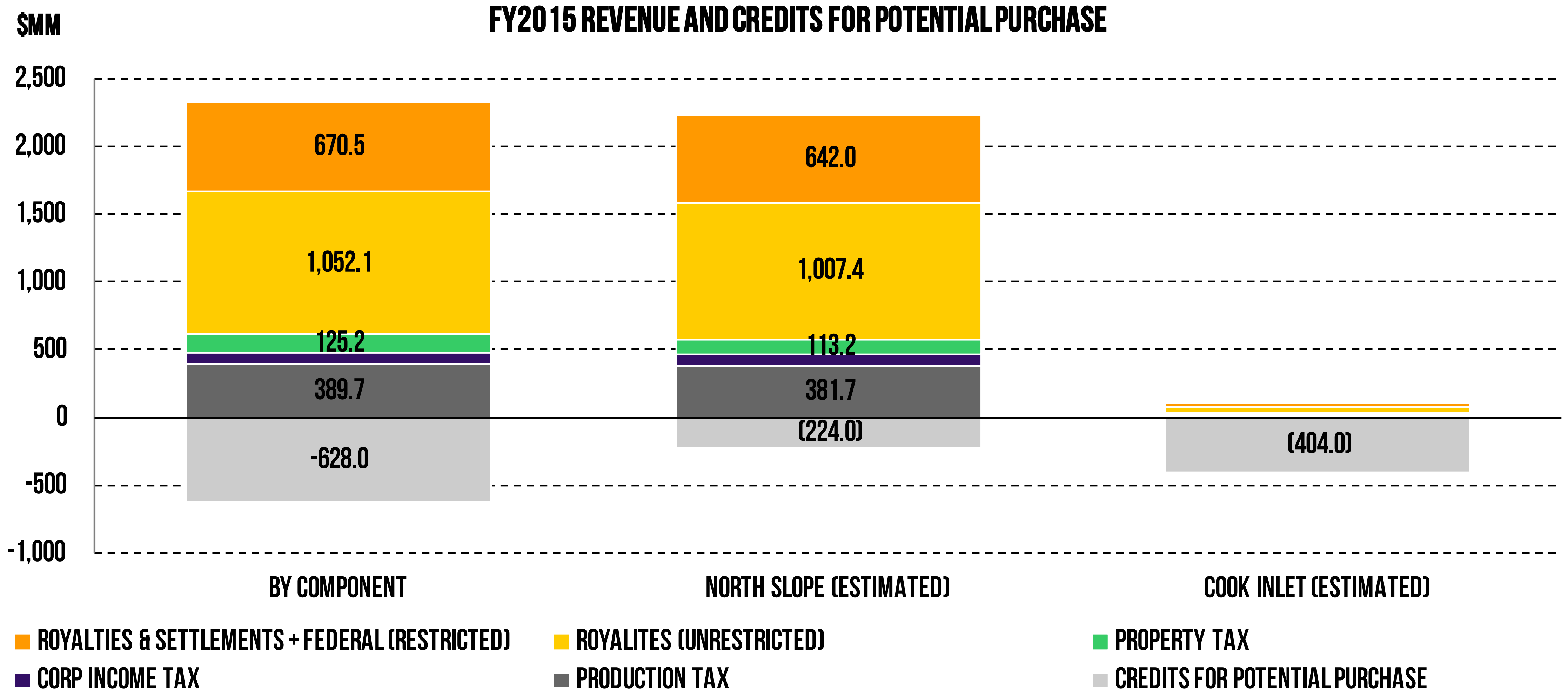
SOURCE: ALASKA DEPARTMENT OF REVENUE, TAX DIVISION

BIG DIFFERENCE BETWEEN NORTH SLOPE AND COOK INLET

The majority of refundable credits go to Cook Inlet producers

Cook Inlet production, however, generates limited direct revenue for the state

Credits on the North Slope are more limited but also a far smaller fraction of total value generated



SOURCE: ALASKA DEPARTMENT OF REVENUE, REVENUE SOURCES BOOK; TAX DIVISION; ENALYTICA ESTIMATES

HARD TO BE BOTH NORWAY & N. DAKOTA AT SAME TIME

Gross taxes

Less volatile, shift risk to private sector

Simple and easy to administer

High/low government take at low/high prices

Disadvantages marginal investment

Net taxes

More volatile revenues for government

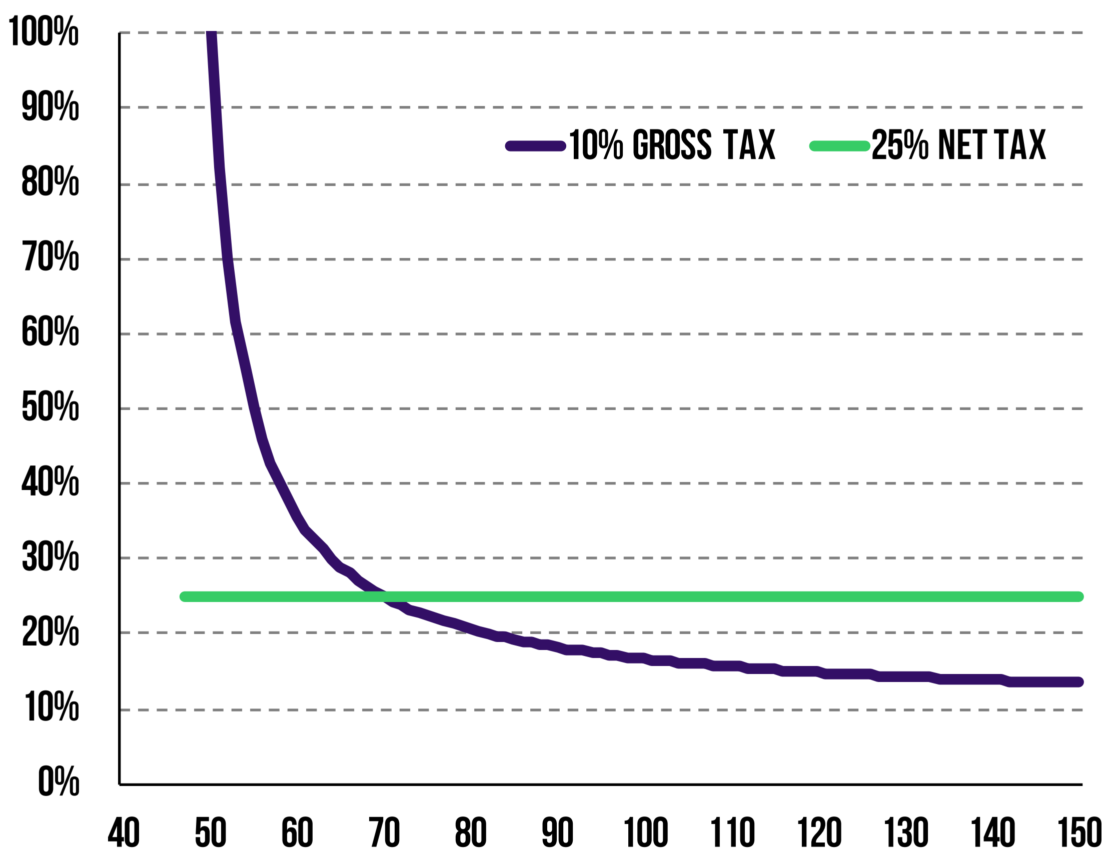
Harder to administer

Efficient—do not distort decision-making

Enable investment across commodity cycle

ANS WC	40	60	80	100	120	140
TRANSPORT	10	10	10	10	10	10
GVPP	30	50	70	90	110	130
OPEX	18	18	18	18	18	18
CAPEX	18	18	18	18	18	18
PTV/BBL	-6	14	34	54	74	94
10% GROSS TAX	3	5	7	9	11	13
% GROSS	10%	10%	10%	10%	10%	10%
% NET	#N/A	36%	21%	17%	15%	14%
25% NET TAX	-1.5	3.5	8.5	13.5	18.5	23.5
% GROSS	-5%	7%	12%	15%	17%	18%
% NET	25%	25%	25%	25%	25%	25%

EFFECTIVE TAX RATES



CASHFLOW TAXES: MORE EFFICIENT, MORE VOLATILE

Purpose of net tax is to minimize distorting impact on investment

Best achieved by making the state's fiscal cost/benefit as close as possible to equity investor

Results in outflows during development, receipts during production

HIGHLY SIMPLIFIED CASHFLOW AND INCOME EXAMPLE

YEAR	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
PRODUCTION (THOUSAND BBLS)	-	-	-	1,000	1,000	900	810	729	656	590
ANS WC	60	60	60	60	60	60	60	60	60	60
TRANSPORT	10	10	10	10	10	10	10	10	10	10
GVPP/BBL	50	50	50	50	50	50	50	50	50	50
GVPP ($THOUSANDS)	-	-	-	50,000	50,000	45,000	40,500	36,450	32,805	29,525
OPEX				18,000	18,000	16,200	14,580	13,122	11,810	10,629
CAPEX	20,286	60,857	33,809	20,286	-	-	-	-	-	-
PRE-TAX CASHFLOW	(20,286)	(60,857)	(33,809)	11,714	32,000	28,800	25,920	23,328	20,995	18,896
ASSET VALUE	-	-	-	135,238	108,190	86,552	69,242	55,393	44,315	35,452
DEPRECIATION	-	-	-	27,048	21,638	17,310	13,848	11,079	8,863	7,090
NET INCOME	-	-	-	4,952	10,362	11,490	12,072	12,249	12,132	11,805
25% CASHFLOW TAX	(5,071)	(15,214)	(8,452)	2,929	8,000	7,200	6,480	5,832	5,249	4,724
25% INCOME TAX	-	-	-	1,238	2,590	2,872	3,018	3,062	3,033	2,951

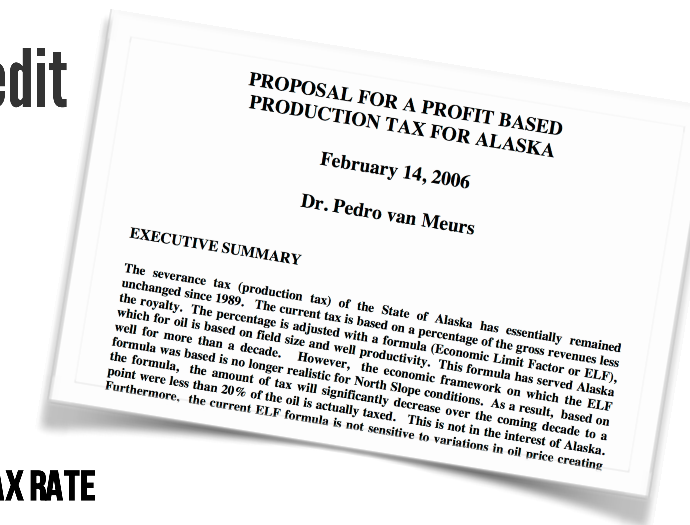
ALASKA'S PRODUCTION TAX: ORIGINS IN 2006 PROPOSAL

PPT as proposed by Dr Pedro van Meurs useful to understand core of system and evolution to date

25% flat cashflow tax, 25% credit for net operating losses (NOLs), 20% capital credit

45% government support for spending for new and incumbent players alike

Statewide floor of zero (credits tradable rather than reimbursable)


PROPOSAL FOR A PROFIT BASED PRODUCTION TAX FOR ALASKA

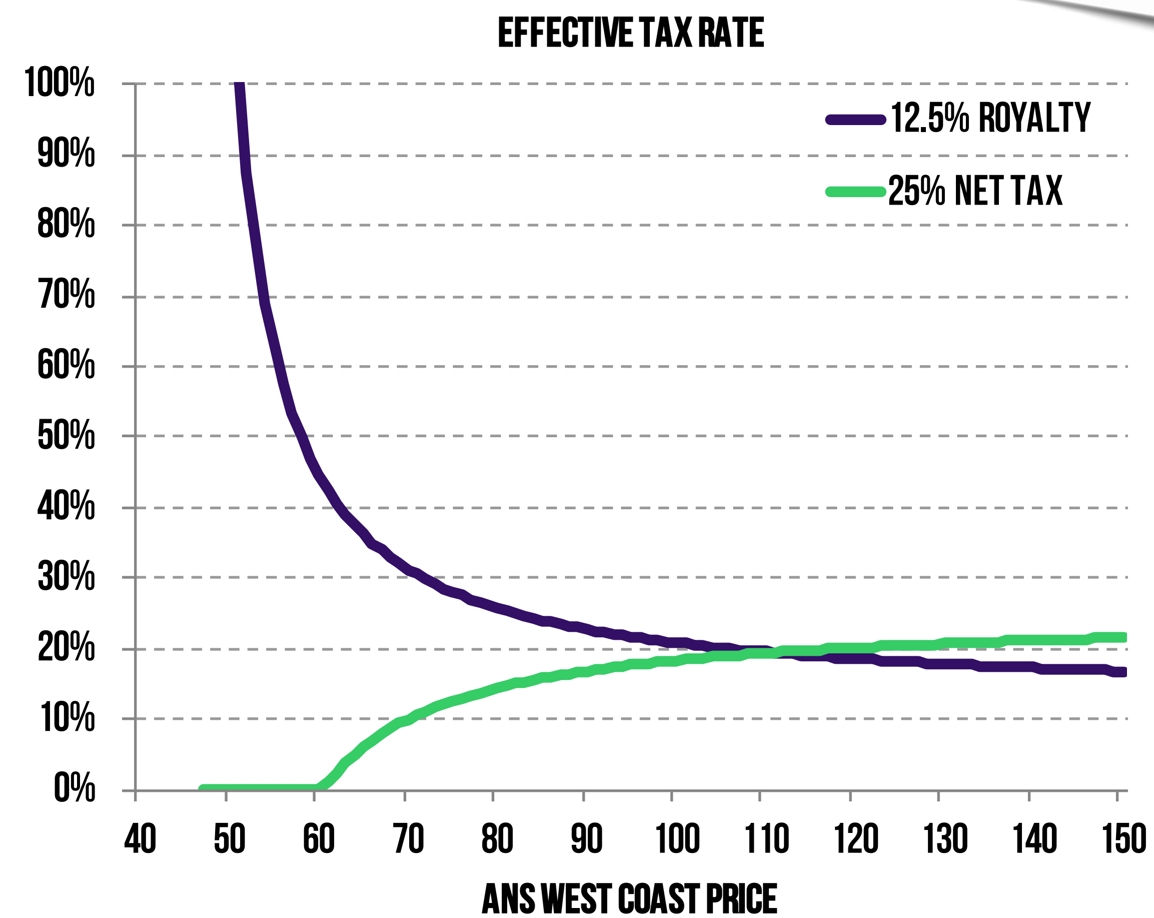
February 14, 2006

Dr. Pedro van Meurs

EXECUTIVE SUMMARY

The severance tax (production tax) of the State of Alaska has essentially remained unchanged since 1989. The current tax is based on a percentage of the gross revenues less the royalty. The percentage is adjusted with a formula (Economic Limit Factor or ELF), which for oil is based on field size and well productivity. This formula has served Alaska well for more than a decade. However, the economic framework on which the ELF formula was based is no longer realistic for North Slope conditions. As a result, based on the formula, the amount of tax will significantly decrease over the coming decade to a point were less than 20% of the oil is actually taxed. This is not in the interest of Alaska. Furthermore, the current ELF formula is not sensitive to variations in oil price creating

ANS WC	40	60	80	100	120	140
TRANSPORT	10	10	10	10	10	10
GVPP	30	50	70	90	110	130
OPEX	18	18	18	18	18	18
CAPEX	18	18	18	18	18	18
PTV/BBL	(6.0)	14.0	34.0	54.0	74.0	94.0
25% NET TAX	(1.5)	3.5	8.5	13.5	18.5	23.5
CAPITAL CREDIT	3.6	3.6	3.6	3.6	3.6	3.6
TAX AFTER CREDITS	(5.1)	(0.1)	4.9	9.9	14.9	19.9
% GROSS	-17%	0%	7%	11%	14%	15%
% NET	#N/	-1%	14%	18%	20%	21%



NOL CREDIT AIMS TO EQUALIZE TAX SYSTEM IMPACT

Incumbent can deduct spending against liability at marginal tax rate: 25% gov't spending support

Aim for NOL credit to ensure same impact for new developer with no liability

Alternative is to carry forward: same cash impact over time, but disadvantages new developer economics

In original proposal, credits not refundable but tradable

Aim was for new developers to sell to incumbent producers at close to face value

In reality credits sold for much less than face value - much value captured by incumbents

As a result, credits made refundable by the treasury, to direct full value to new developers

HIGHLY SIMPLIFIED CASHFLOW AND INCOME EXAMPLE

YEAR	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
PRODUCTION (THOUSAND BBLS)	-	-	-	1,000	1,000	900	810	729	656	590
ANS WC	60	60	60	60	60	60	60	60	60	60
TRANSPORT	10	10	10	10	10	10	10	10	10	10
GVPP/BBL	50	50	50	50	50	50	50	50	50	50
GVPP ($THOUSANDS)	-	-	-	50,000	50,000	45,000	40,500	36,450	32,805	29,525
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CAPEX	20,286	60,857	33,809	20,286	-	-	-	-	-	-
PRE-TAX CASHFLOW	(20,286)	(60,857)	(33,809)	11,714	32,000	28,800	25,920	23,328	20,995	18,896
25% CASHFLOW TAX	(5,071)	(15,214)	(8,452)	2,929	8,000	7,200	6,480	5,832	5,249	4,724

ACES: STEEP PROGRESSIVITY, HIGH SPENDING SUPPORT

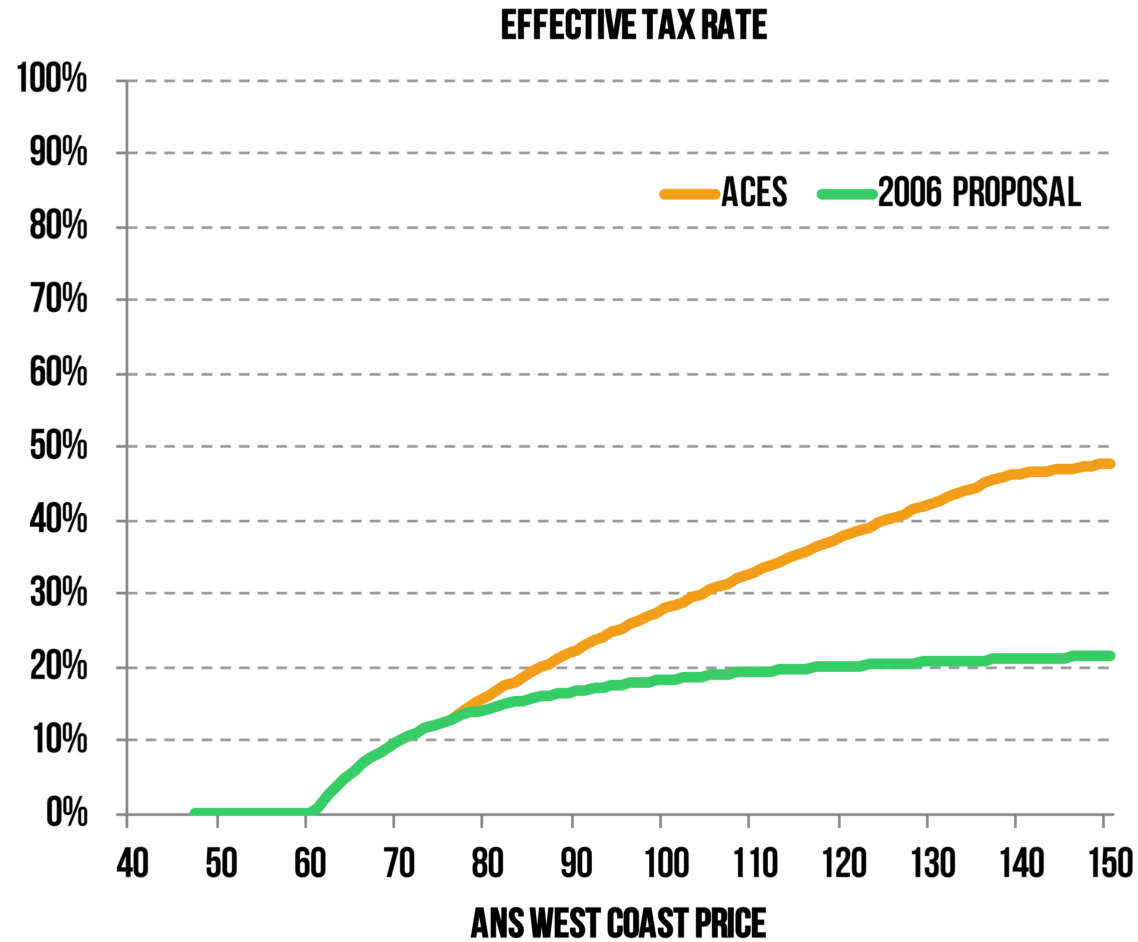
Tax rate 25% to 75% (variable with PTV/bbl), 20% capital credit, 40% exploration credit, 25% NOL credit

High progressivity: high marginal tax rates (up to 86%, higher at yet-unseen prices)

High marginal rates + credits = very high state support for spending (from 45% to over 100%)

With high prices and low spending, brought huge revenue; low prices and high spending major risks

ANS WC	40	60	80	100	120	140
TRANSPORT	10	10	10	10	10	10
GVPP	30	50	70	90	110	130
OPEX	18	18	18	18	18	18
CAPEX	18	18	18	18	18	18
PTV/BBL	(6.0)	14.0	34.0	54.0	74.0	94.0
NET TAX RATE	25%	25%	27%	35%	43%	50%
NET TAX CALC	-	3.5	9.0	18.7	31.5	47.1
4% GROSS FLOOR	1.2	2.0	2.8	3.6	4.4	5.2
TAX BEFORE CREDITS	1.2	3.5	9.0	18.7	31.5	47.1
NOL CREDIT	1.5	-	-	-	-	-
CAPITAL CREDIT	3.6	3.6	3.6	3.6	3.6	3.6
TAX AFTER CREDITS	(3.9)	(0.1)	5.4	15.1	27.9	43.5
% GROSS	-13%	0%	8%	17%	25%	33%
% NET	#N/A	-1%	16%	28%	38%	46%



SB21: PROTECT ON THE LOW END, GIVE BACK AT THE HIGH

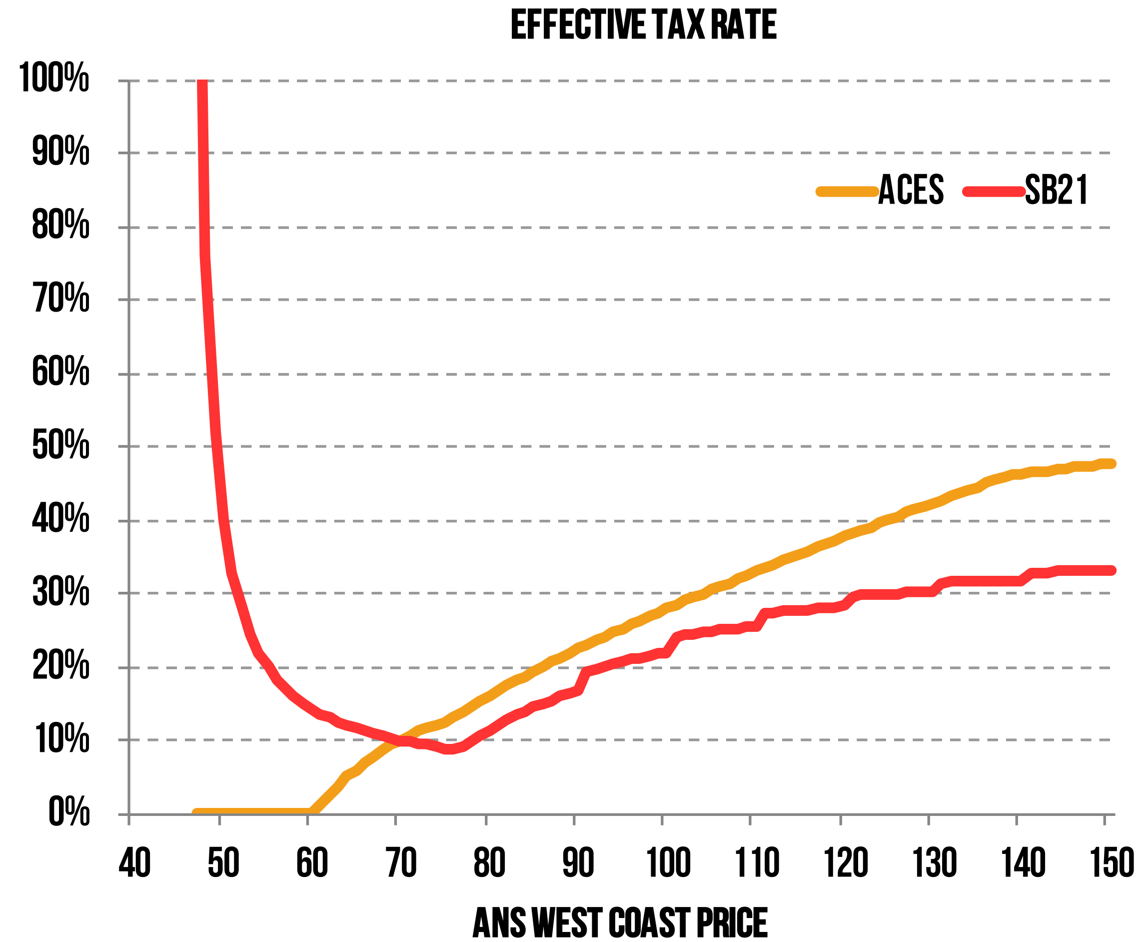
Tax rate 35%, $0 to $8 per-bbl credit, hardened gross floor, 35% NOL credit

Key aim was to reduce state support for spending and make predictable: 35% for everyone

Reduced rates at high prices for competitiveness, but 4% gross floor binding to protect at low end

Significantly reduced the risks brought by low prices and high spending

ANS WC	40	60	80	100	120	140
TRANSPORT	10	10	10	10	10	10
GVPP	30	50	70	90	110	130
OPEX	18	18	18	18	18	18
CAPEX	18	18	18	18	18	18
PTV/BBL	(6.0)	14.0	34.0	54.0	74.0	94.0
NET TAX RATE	35%	35%	35%	35%	35%	35%
NET TAX PRE $/BBL	-	4.9	11.9	18.9	25.9	32.9
$/BBL CREDIT	8.0	8.0	8.0	7.0	4.0	-
NET TAX CALC	(8.0)	(3.1)	3.9	11.9	21.9	32.9
4% GROSS FLOOR	1.2	2.0	2.8	3.6	4.4	5.2
TAX BEFORE NOL	1.2	2.0	3.9	11.9	21.9	32.9
NOL CREDIT	2.1	-	-	-	-	-
TAX AFTER CREDITS	(0.9)	2.0	3.9	11.9	21.9	32.9
% GROSS	-3%	4%	6%	13%	20%	25%
% NET	#N/A	14%	11%	22%	30%	35%



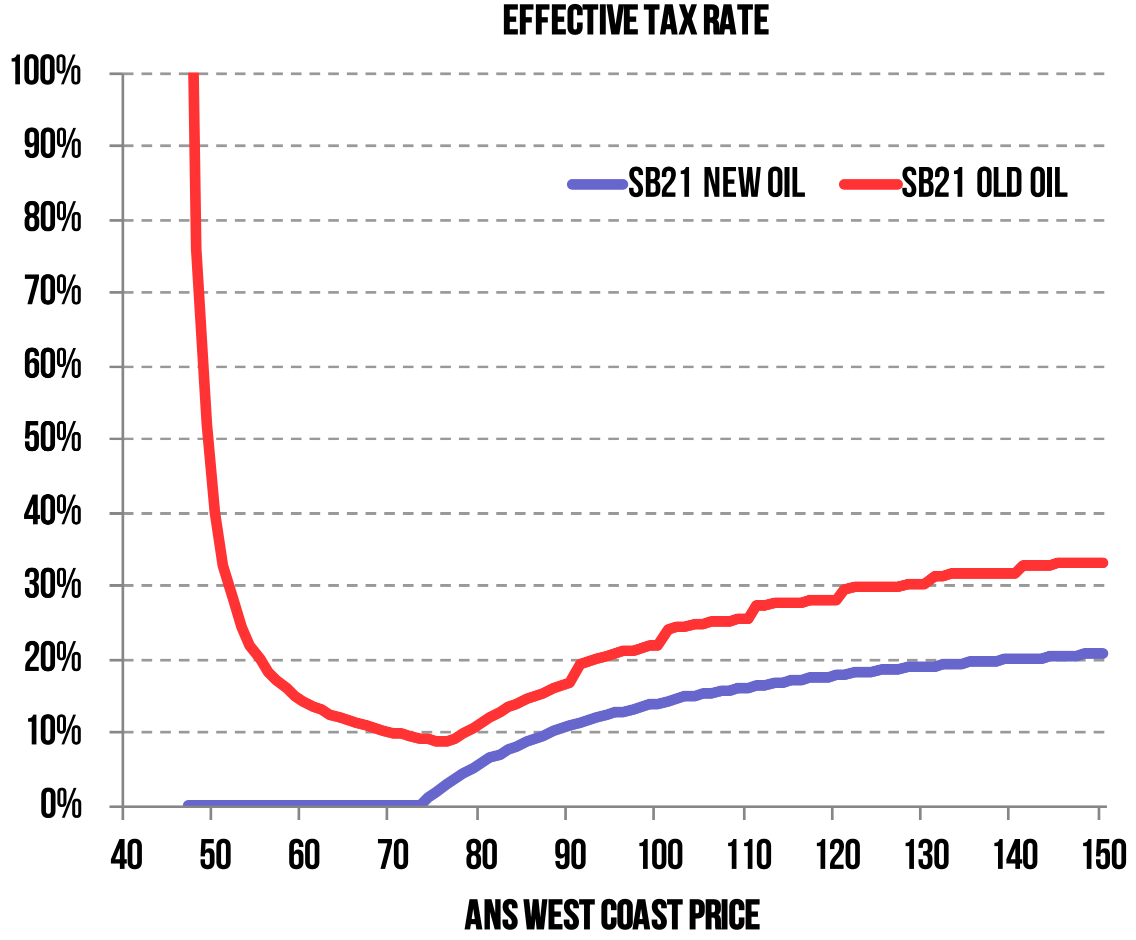
SB21: SPECIAL INCENTIVES FOR "NEW OIL"

Gross Value Reduction (GVR) - reduce GVPP by 20% or 10% for certain units / participating areas

Purpose of GVR - reduce effective tax rates for particular fields without ring-fencing costs

GVR-eligible production receives fixed $5/bbl credit, not variable $0-$8/bbl, no hard floor

ANS WC	40	60	80	100	120	140
TRANSPORT	10	10	10	10	10	10
GVPP BEFORE GVR	30	50	70	90	110	130
GVPP AFTER GVR	24	40	56	72	88	104
OPEX	18	18	18	18	18	18
CAPEX	18	18	18	18	18	18
PTV/BBL BEFORE GVR	(6.0)	14.0	34.0	54.0	74.0	94.0
PTV/BBL	(12.0)	4.0	20.0	36.0	52.0	68.0
NET TAX RATE	35%	35%	35%	35%	35%	35%
NET TAX	-	1.4	7.0	12.6	18.2	23.8
4% GROSS FLOOR	1.0	1.6	2.2	2.9	3.5	4.2
$/BBL CREDIT	5.0	5.0	5.0	5.0	5.0	5.0
TAX BEFORE NOL	(4.0)	(3.4)	2.0	7.6	13.2	18.8
NOL CREDIT	4.2	-	-	-	-	-
TAX AFTER CREDITS	(8.2)	(3.4)	2.0	7.6	13.2	18.8
% GROSS	-27%	-7%	3%	8%	12%	14%
% NET	#N/A	-24%	6%	14%	18%	20%



CI ACTIVITY HAS RESPONDED TO INCENTIVES

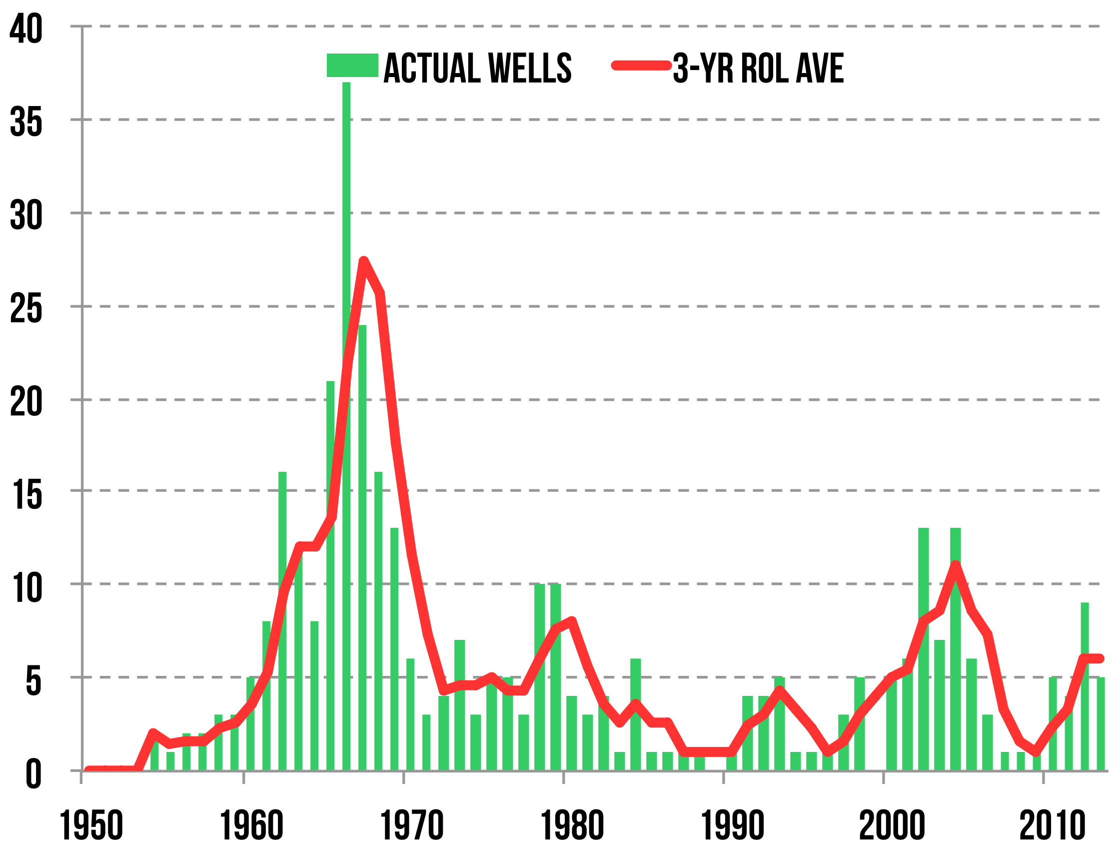
Exploration drilling in Cook Inlet has gone through several cycles since 1950s

Recent exploration activity (post 2010) on par with previous exploration peaks

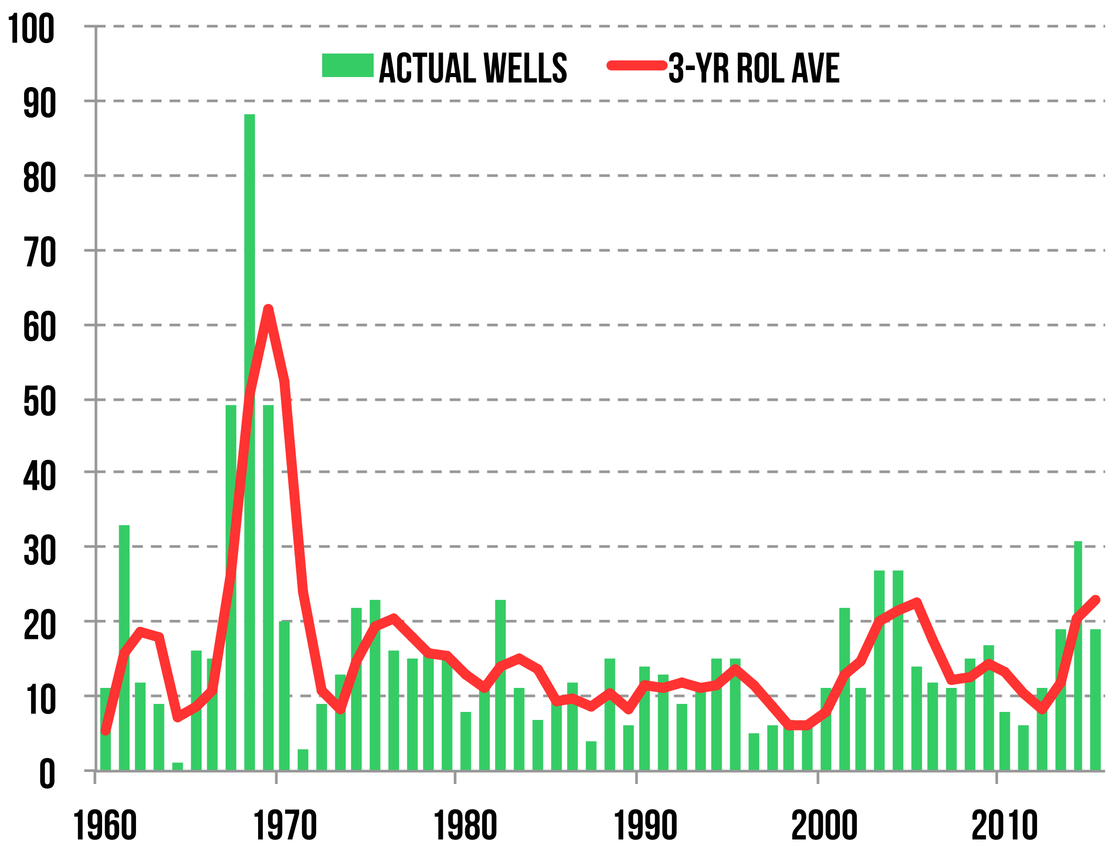
Development drilling has been more stable over the years

Recent growth placing three-year rolling average among highest in state's history

COOK INLET: EXPLORATORY WELLS SPUDDED



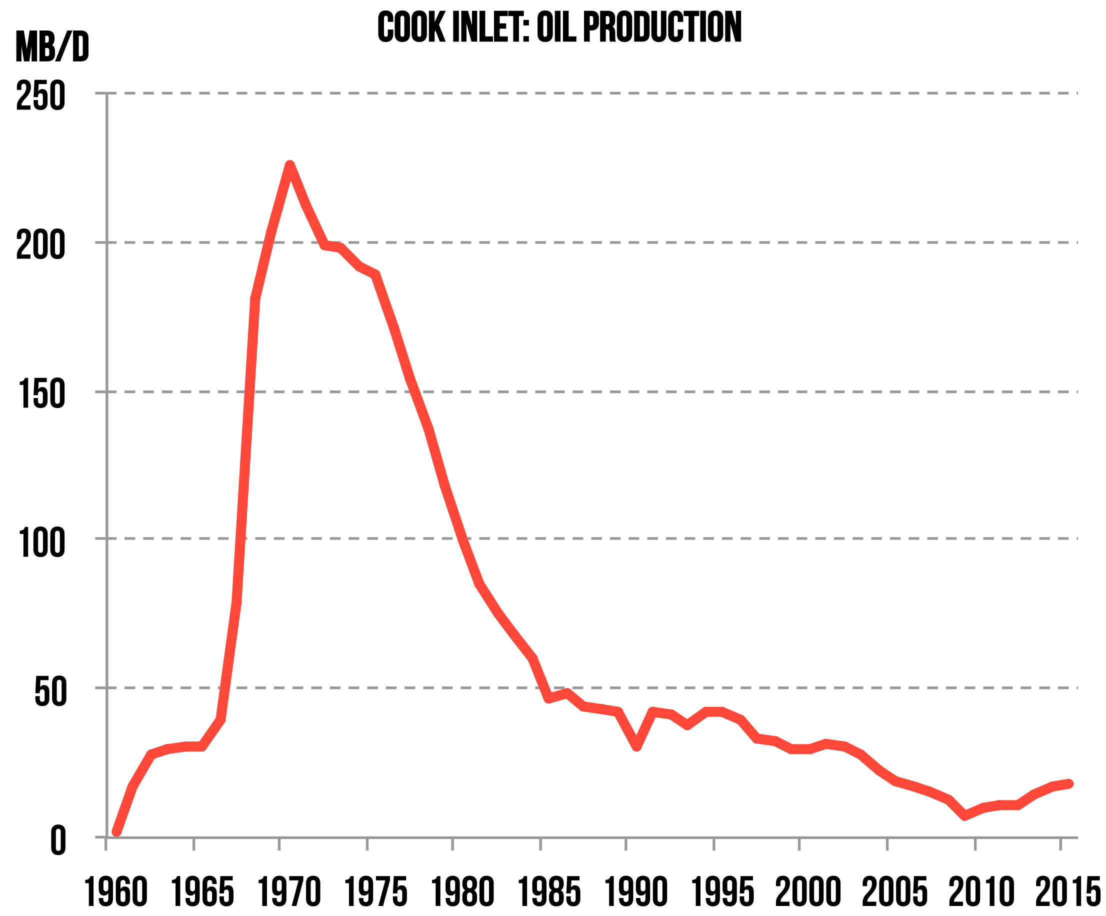
COOK INLET: WELLS BY YEAR OF FIRST OIL/GAS

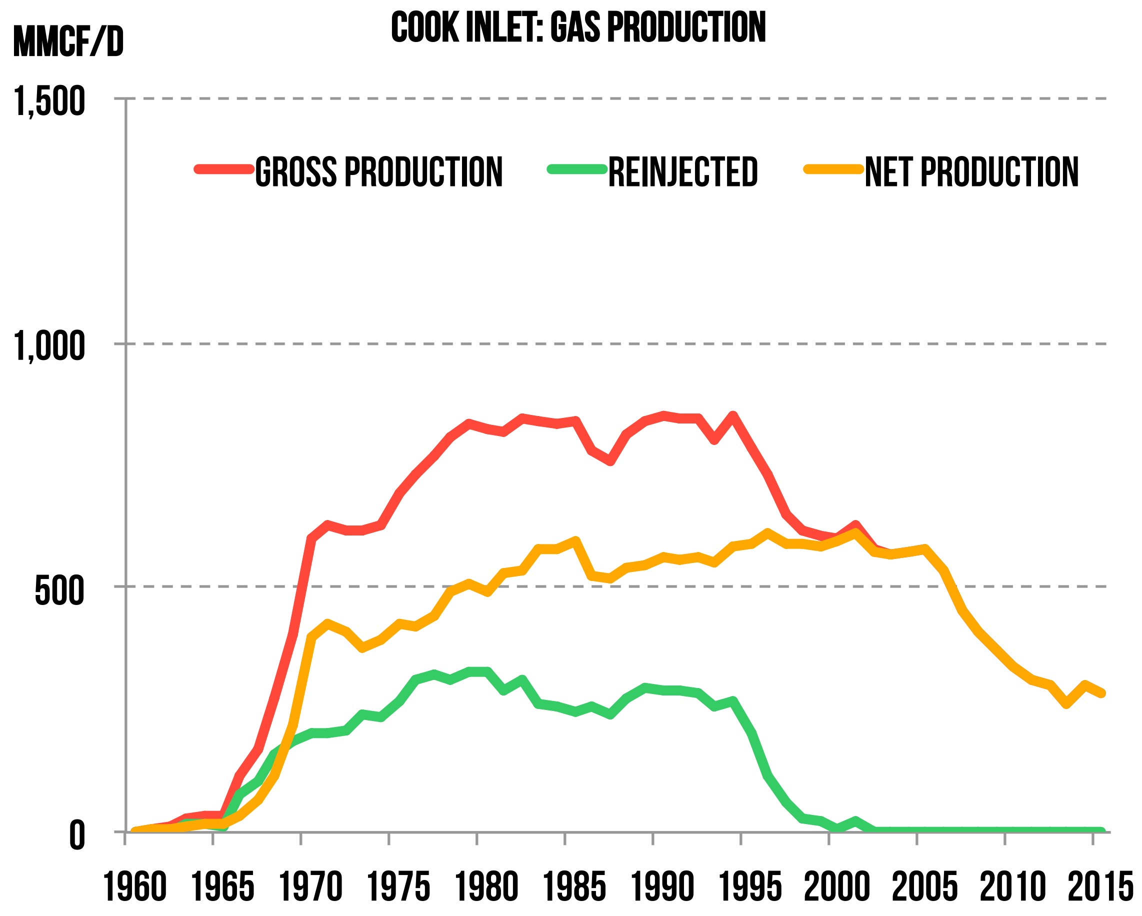


SOURCE: ALASKA OIL AND GAS CONSERVATION COMMISSION, OIL AND GAS DATA WEB APPLICATION (DATA THROUGH DECEMBER 2015)

COOK INLET OIL AND GAS PRODUCTION: BASIC FACTS

Oil	Peak in 1970 at 226 mb/d; trough in 2009 at 7.5 mb/d; upturn post 2010 (+10.5 mb/d)
Gross Gas	Peak in 1990 at 853 mmcf/d; big drops in 1994–1998 and 2005–2013; stable in 2014–15
Net Gas	Peak in 1996; 1990s plateau from blowdown at Swanson River; fall post 2005, then stable





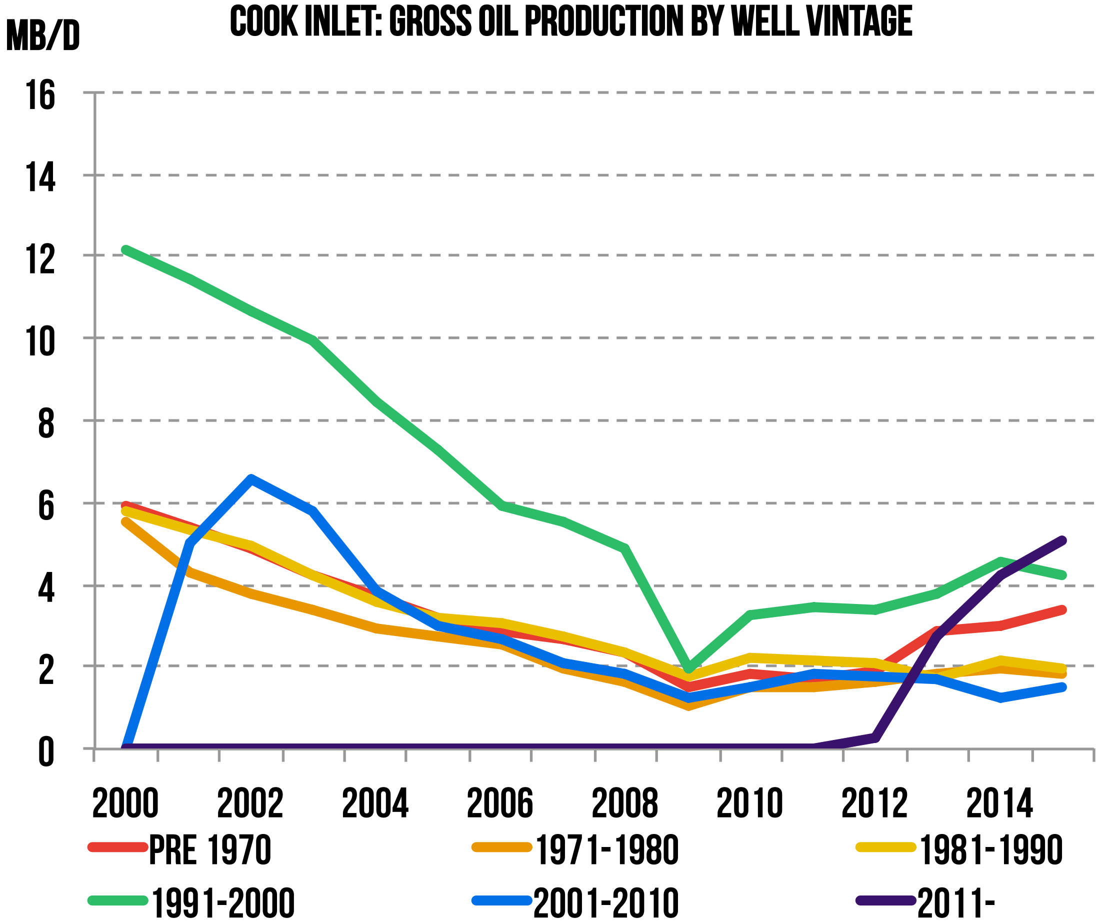
SOURCE: ALASKA OIL AND GAS CONSERVATION COMMISSION, OIL AND GAS DATA WEB APPLICATION (DATA THROUGH DECEMBER 2015)

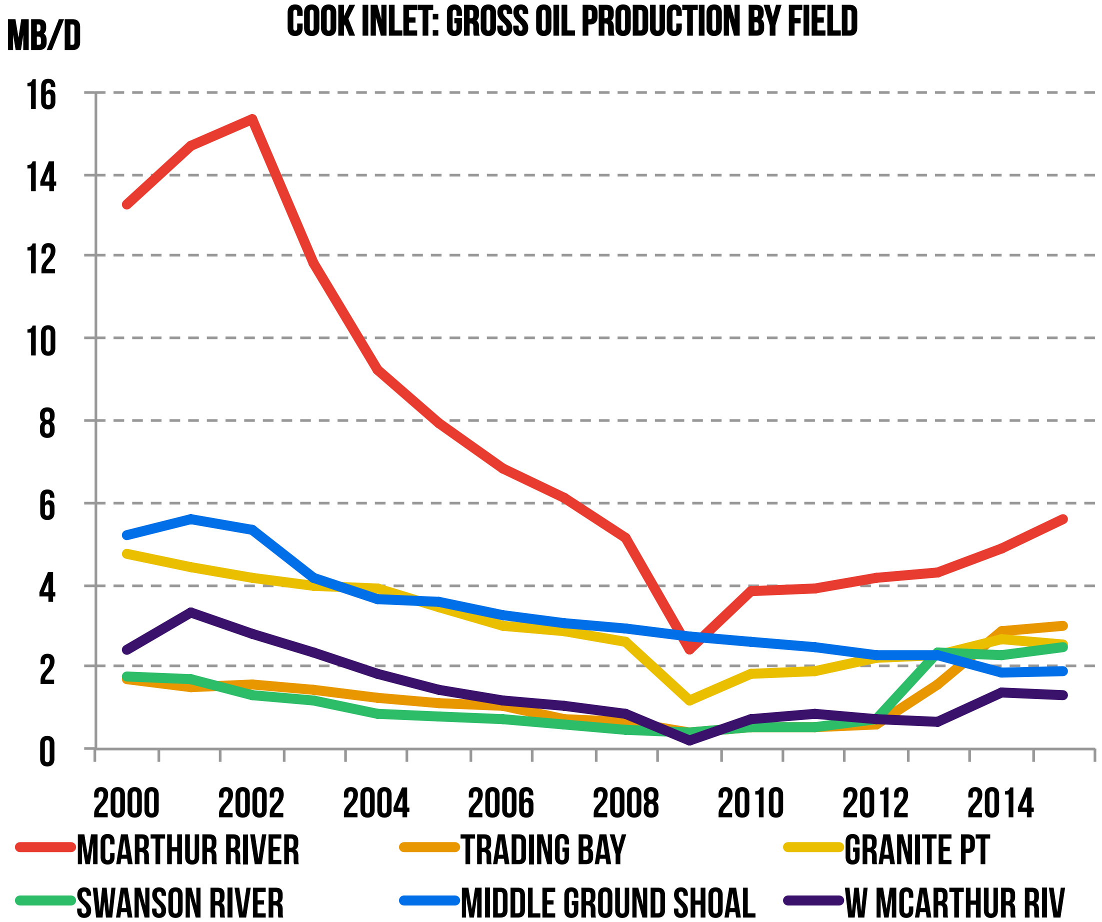
OIL UP FROM WORKOVERS, NEW WELLS IN EXISTING FIELDS

Production from old wells has risen, especially from wells drilled before 1970 and in 1990s

New wells drilled after 2011 have also added about 5 mb/d of production

Production is up in most fields; biggest gains from McArthur River field





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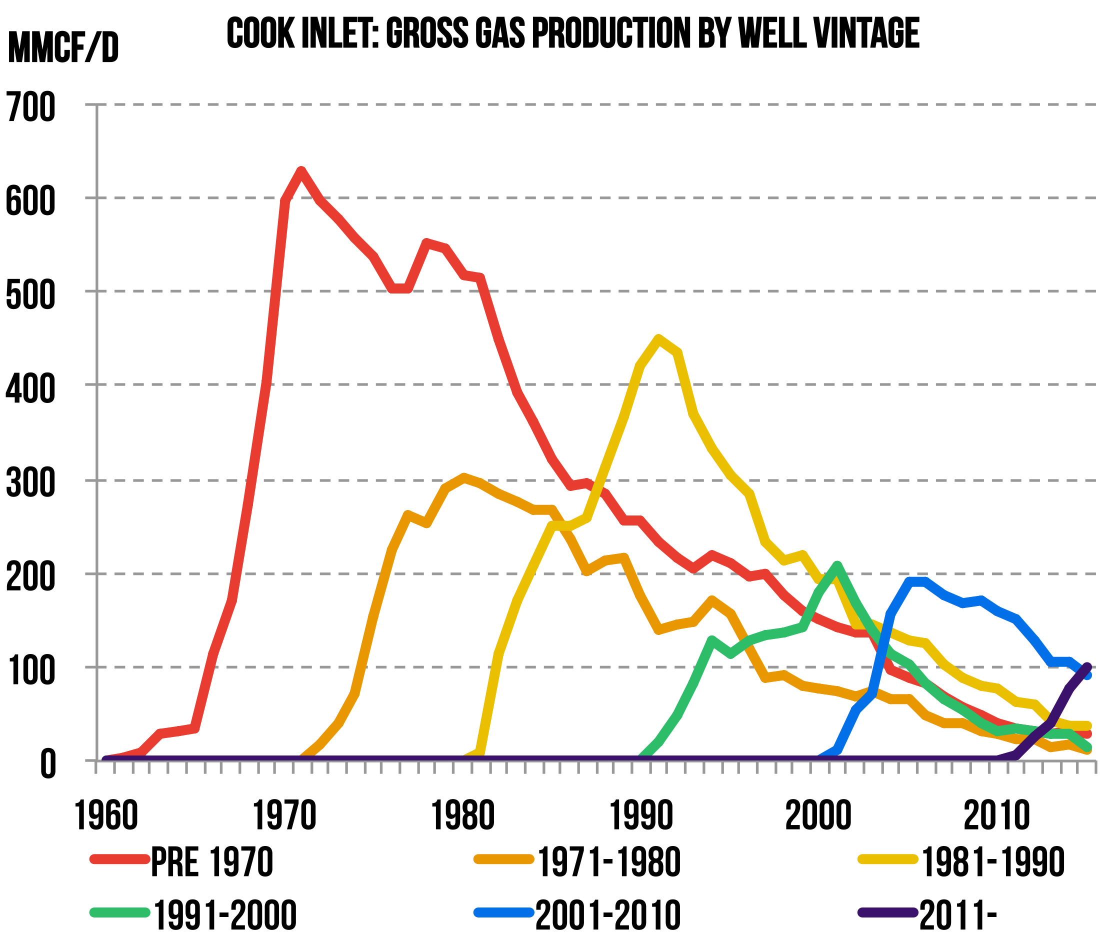
GAS FLATTENING FROM NEW WELLS IN EXISTING FIELDS

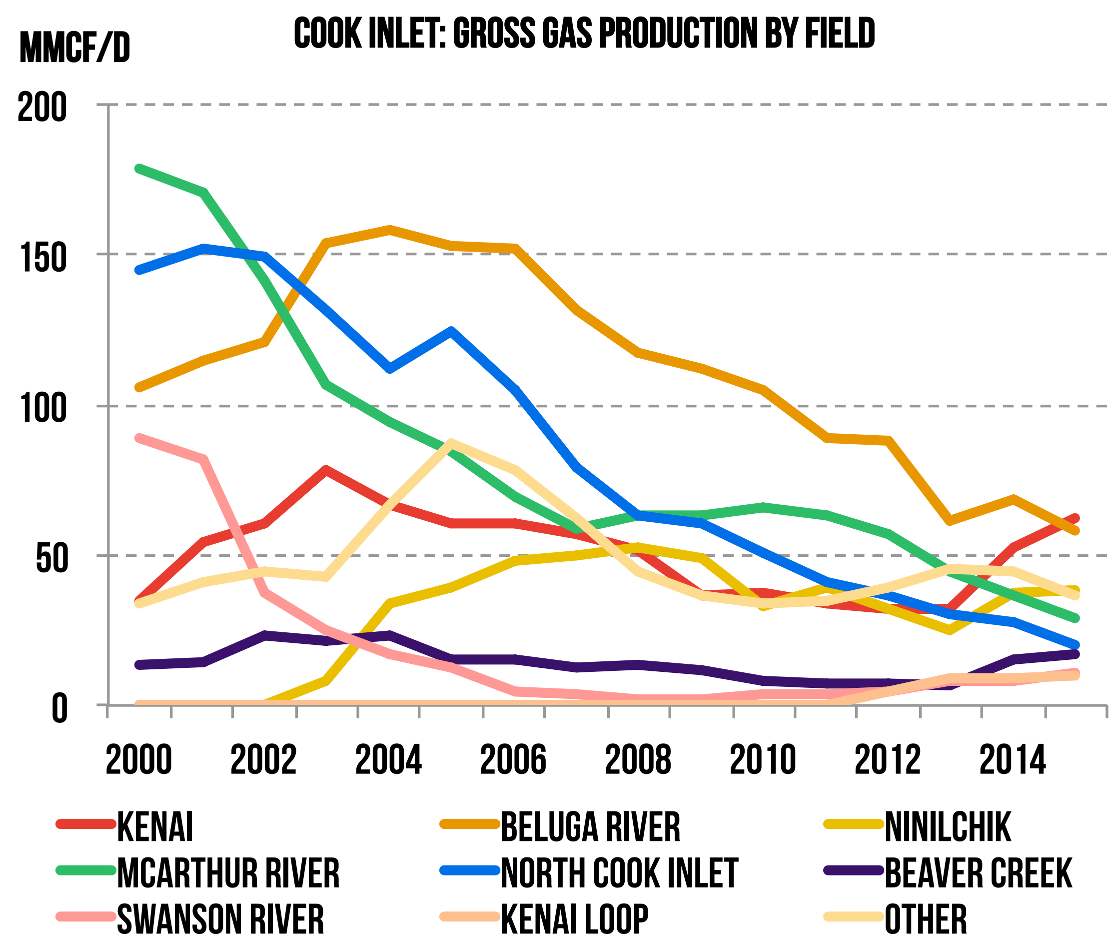
Wells drilled after 2011 have added about 100 mmcf/d of new production

Production from Beluga River, Ninilchik, and North Cook Inlet declined by 85.7 mmcf/d in 2011–2015

Growth from Kenai (+28 mmcf/d), Beaver Creek (+10), Kenai Loop (+9.7), and Swanson River (+7.3)

Only Kenai Loop is (major) new field (first gas in 2012); other growth from workovers and new wells





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THE COOK INLET OIL AND GAS MARKET: A SCORECARD

What has happened to oil and gas production and activity in the Cook Inlet in recent years?

Oil production has risen from 7.5 mb/d in 2009 to almost 18 mb/d

Gas production has stabilized after years of steadier decline

How has the gas market adjusted in recent years?

Cook Inlet has undergone major transition in supply, demand, prices, competition and expectations

Some of these changes are typical in mature basins—others are unique to Cook Inlet

What's the outlook and how sensitive is the outlook to changes in oil/gas fiscal system?

DNR: 1,183 bcf in remaining 2P reserves; 1,600 bcf w/ Cosmopolitan and Kitchen Lights (ballpark)

Continued drilling at old fields plus Cosmopolitan and Kitchen Lights: current market well supplied

At current (gas) price levels, brownfield investment should be profitable under stricter fiscal regime

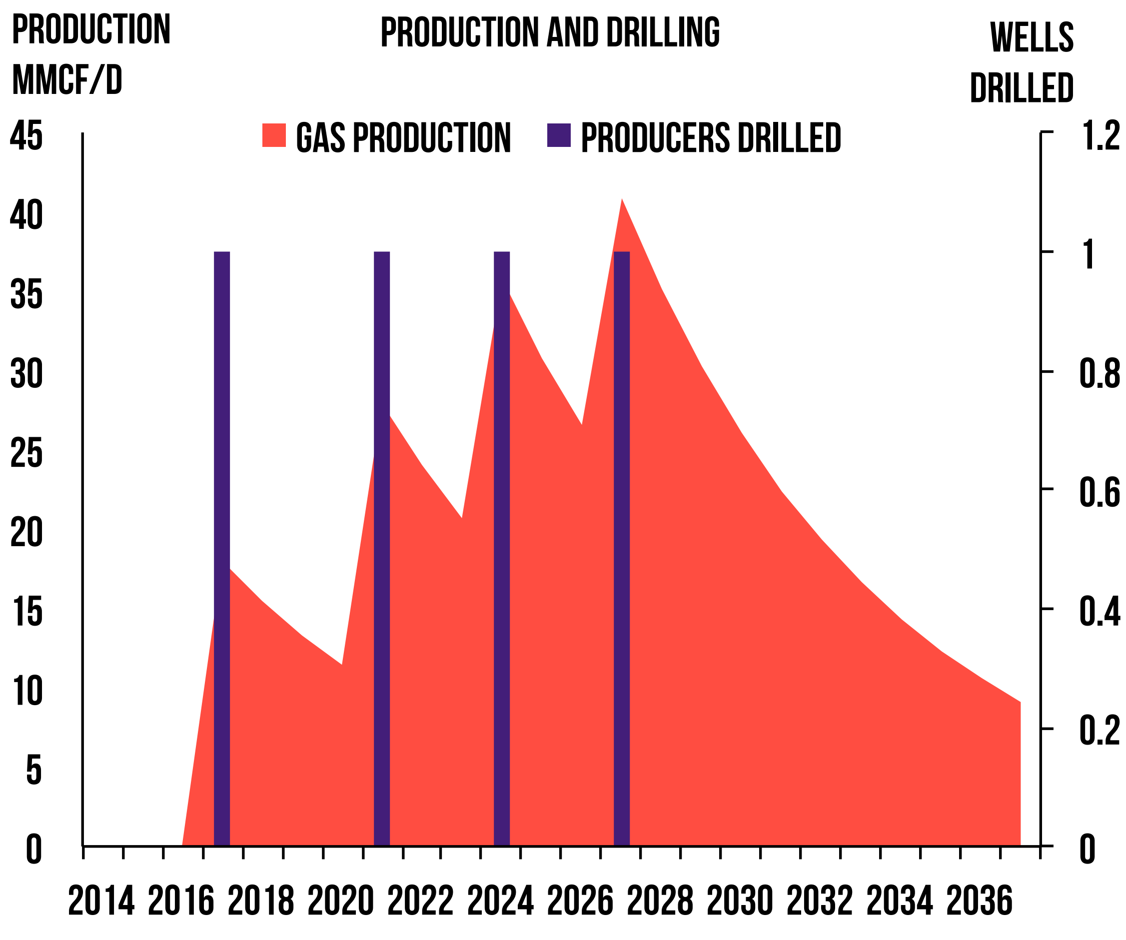
Credits more important for developing new resources, especially with demand constraints

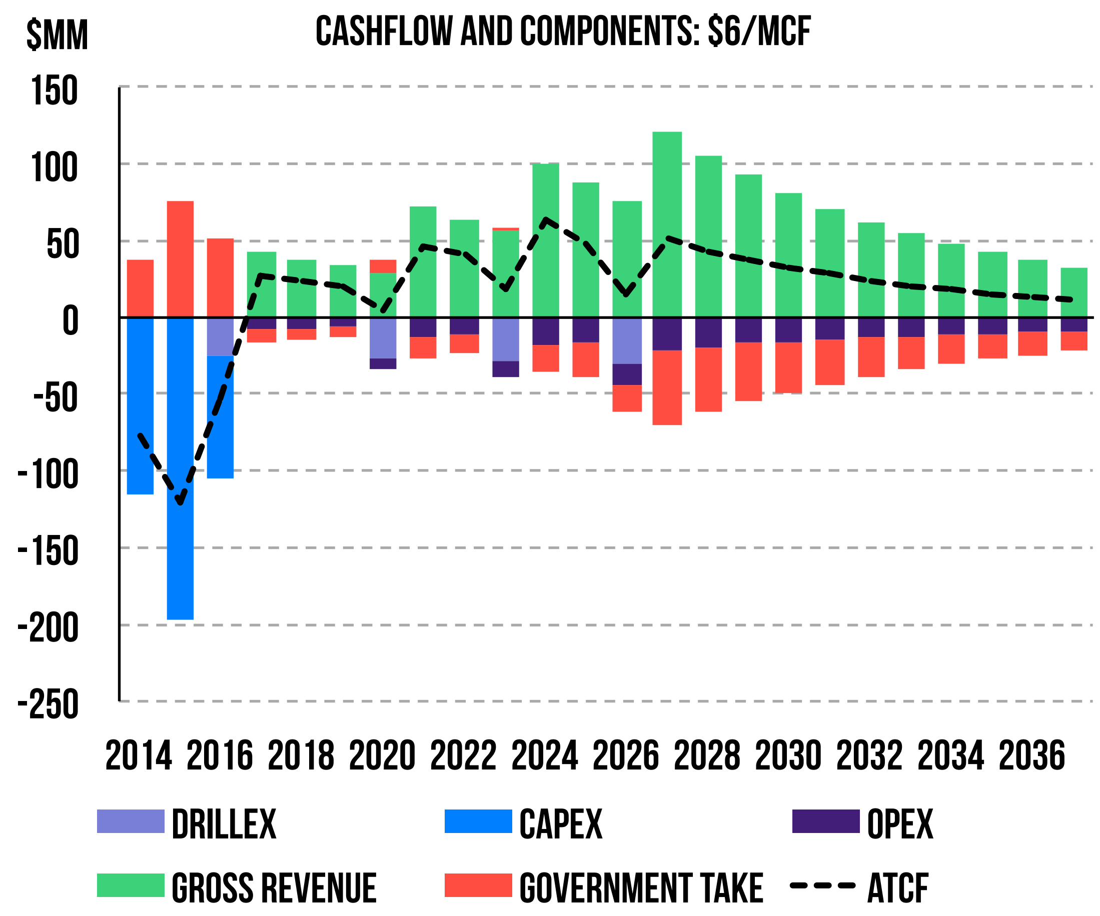
Currently much uncertainty over future regime - setting a stable, sustainable system is paramount

PROJECT #1: MARKET CONSTRAINED (ASSUMPTIONS)

Large upfront investment but constrained gas market

Limited ability to sell gas: can only drill a well every few years



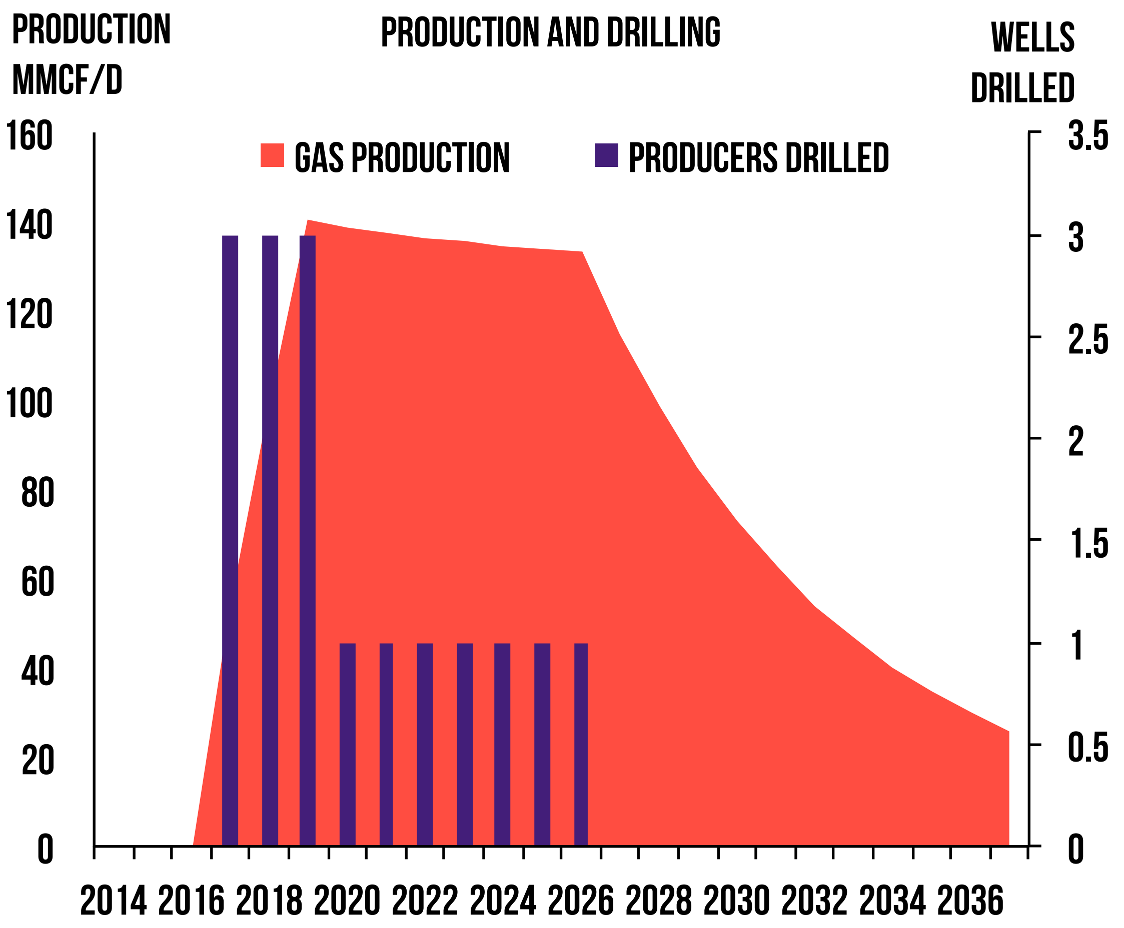


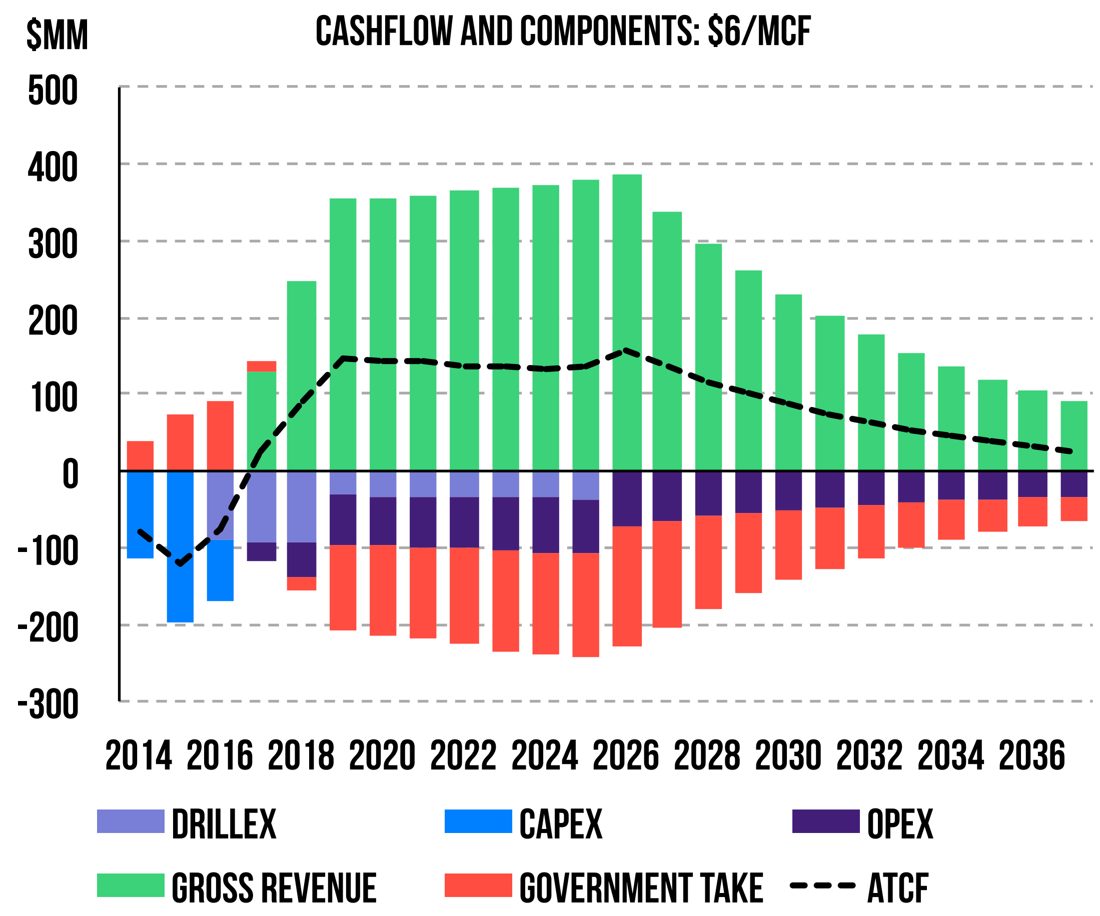
PROJECT #2: MARKET UN-CONSTRAINED (ASSUMPTIONS)

Large upfront investment but un-constrained gas market

Continued drilling lead to a plateau of 130 mmcf/d

Scenario would require a step change in existing supply-demand dynamics in Cook Inlet



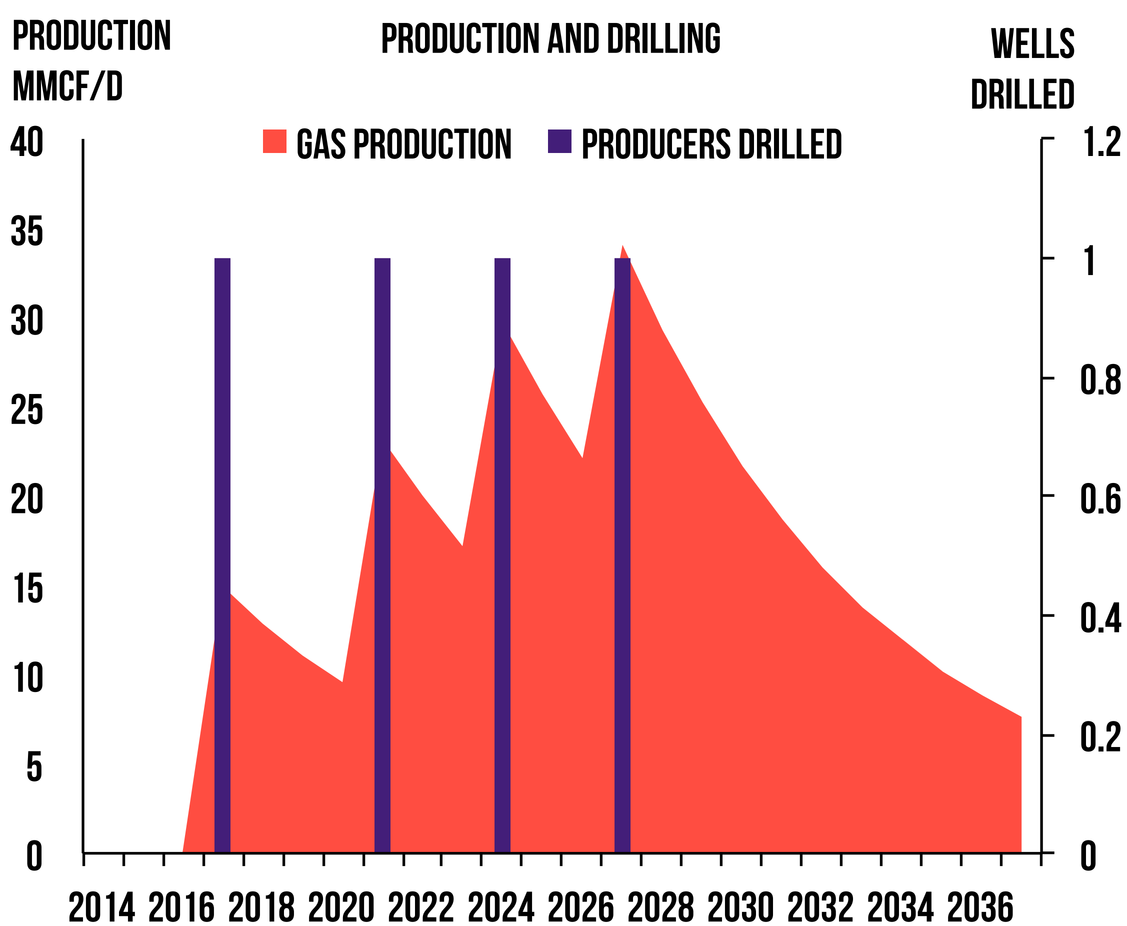


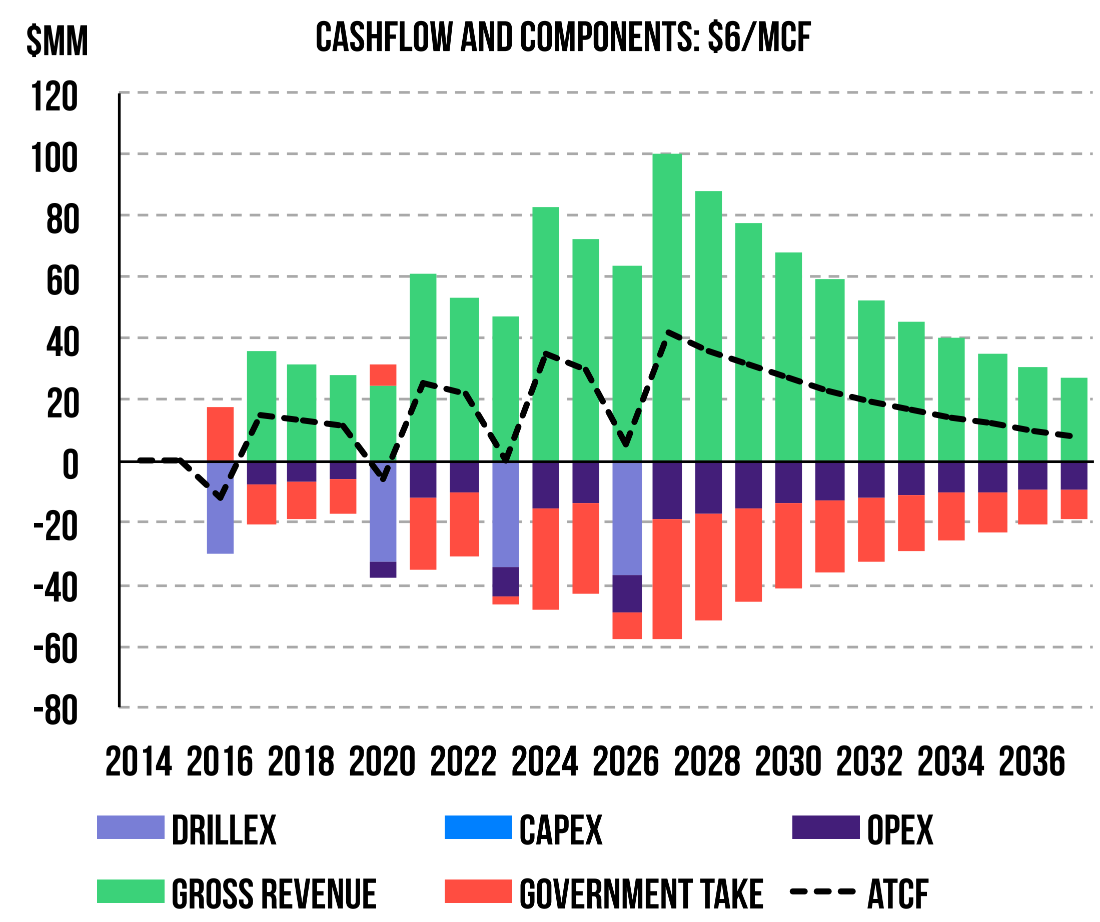
PROJECT #3: DRILLING IN EXISTING FIELD (ASSUMPTIONS)

Drilling expenditures at existing production—smaller upfront investment

No market constrains assumed

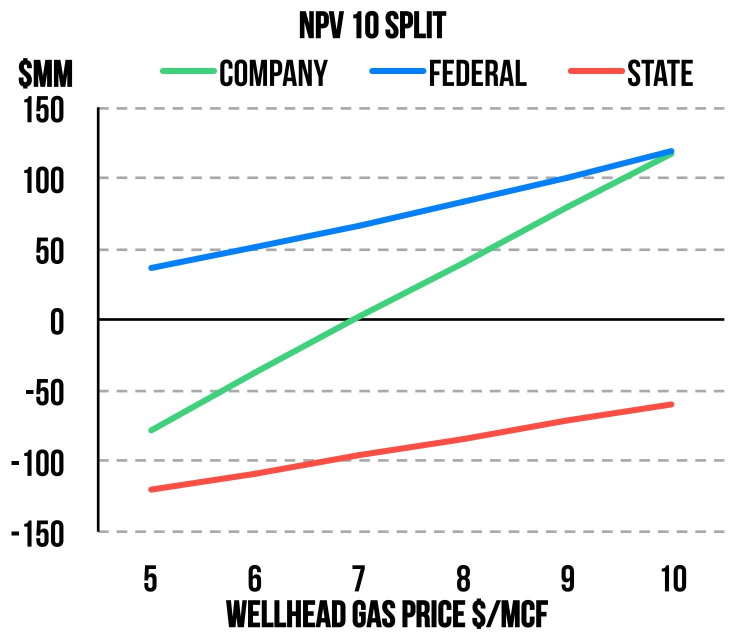
This is a point-forward analysis—it ignores sunk, entry or acquisition costs

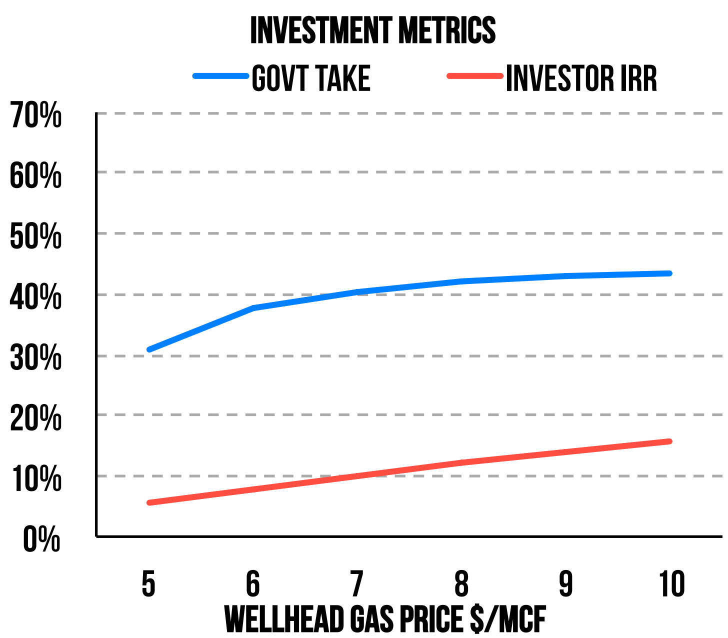




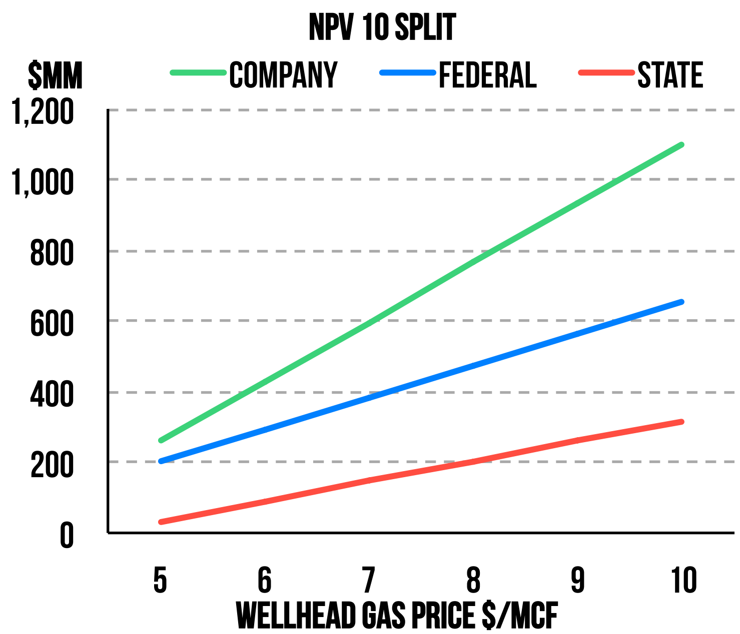
PROJECT ECONOMICS FOR DIFFERENT PROJECT TYPES

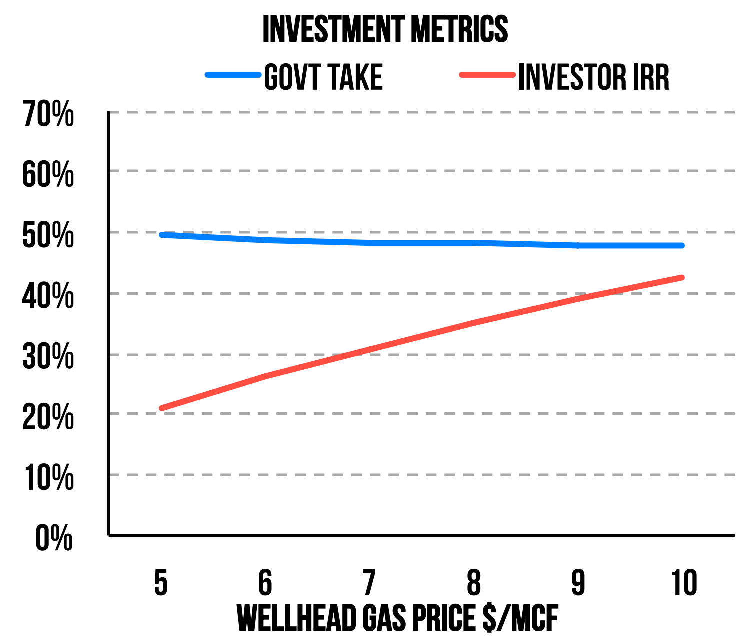
PROJECT 1 (CONSTRAINED)





PROJECT 2 (UN-CONSTRAINED)





PROJECT 3 (EXISTING)