



# DOR Additional Information requested



*Prepared for Senate Finance*

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*March 14, 2013*



# Lease Expenditures Forecast and projects included therein



# Lease Expenditure Forecast Methodology



- Request capital and operating lease expenditure projections from North Slope unit operators in the fall and the spring of each year in writing for the next five years from the current year
- Meet with and request spending projections from companies that are not currently producing but have announced drilling and/or development plans
- Review and coordinate with production forecast regarding anticipated developments outside the five-year time horizon received from operators
- Update long-term capital and operating expenditure projections based on new information

# North Slope Projects Included in Fall 2012 Lease Expenditures Forecast



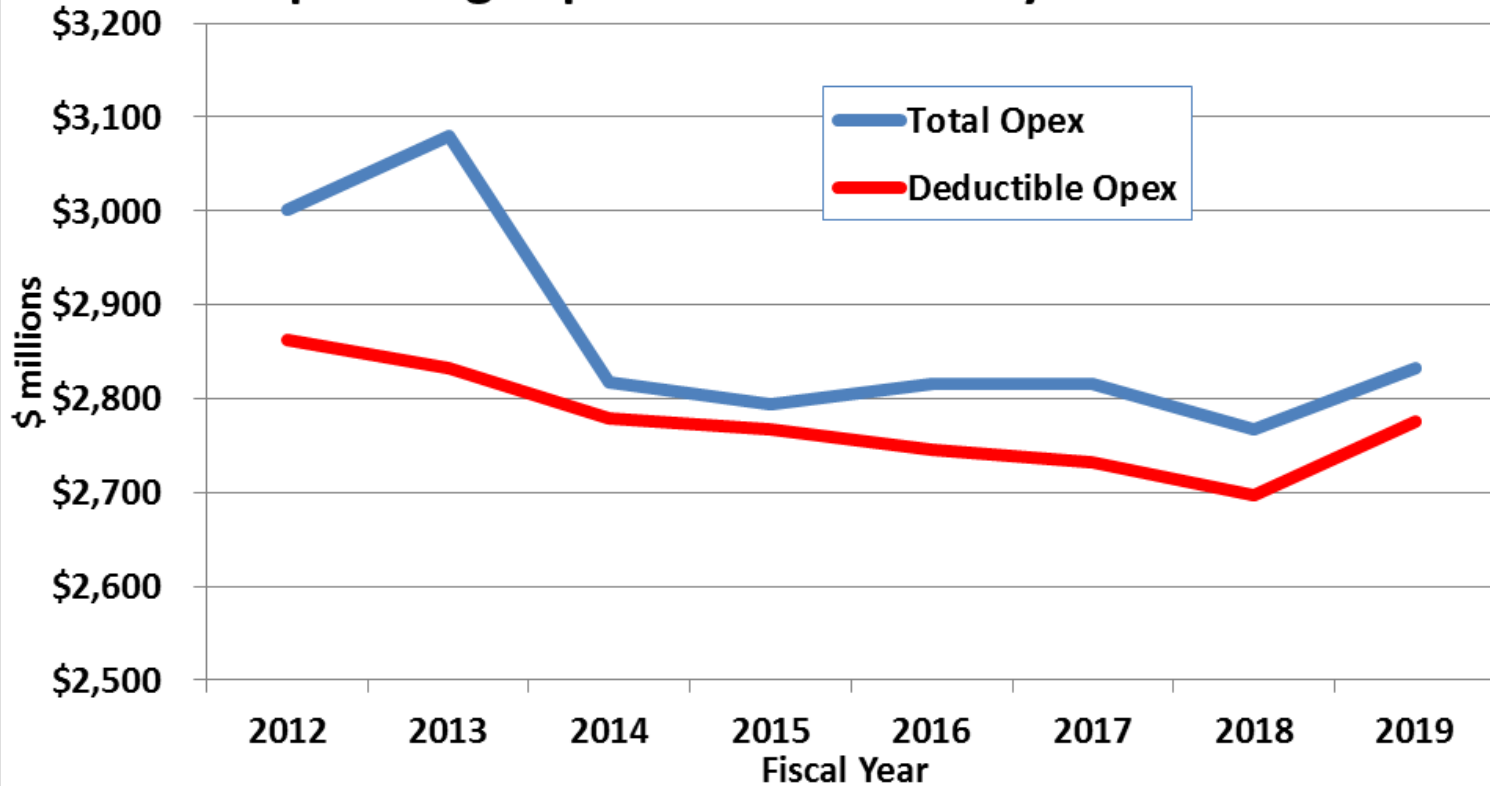
- Currently producing legacy fields
  - Includes ongoing cost of operating fields & maintenance capital
  - Includes facility upgrades and debottlenecking
  - Includes new wells and projects in legacy fields
    - Targeting new oil not in reach of production wells
    - Work-overs of existing wells
    - Advanced EOR projects
- Four new fields in Fall 2012 production forecast
  - Point Thomson
  - CD-5 (Alpine West)
  - Mustang
  - Umiat
- Exploration work at other prospects
  - Includes primarily announced exploration work only
  - Includes spending plans announced by companies like Repsol, Great Bear, and others
  - Does not include costs for development of possible discoveries



# North Slope Operating Expenditures



## Operating Expenditures - History and Forecast



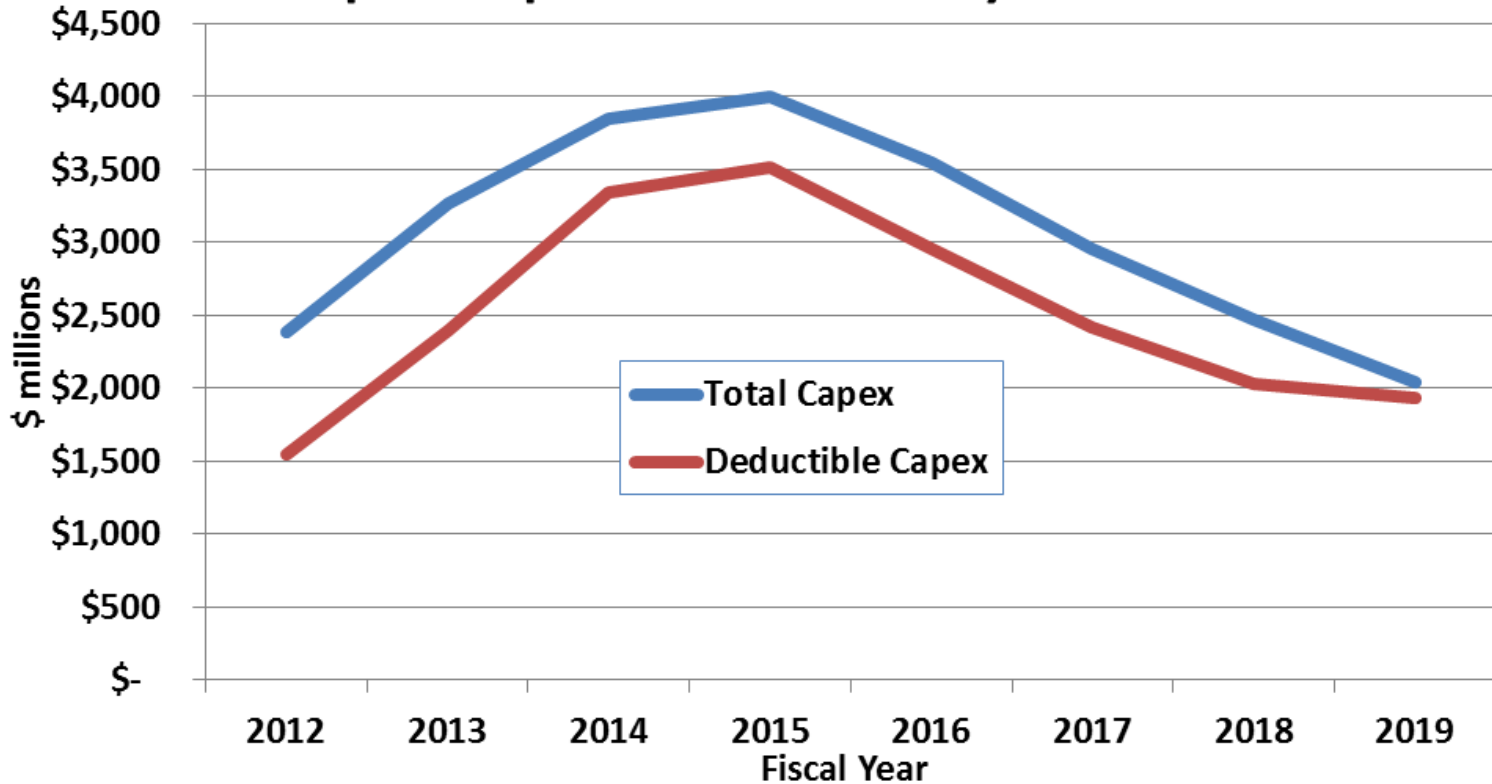
Source: Fall 2012 Revenue Sources Book and supporting documents. Expenditure data for FY 2012 prepared using unaudited company-reported estimates. FY 2013 and beyond forecasts prepared using company submitted expenditure forecast estimates and other documentation provided to the DOR.



# North Slope Capital Expenditures



## Capital Expenditures - History and Forecast



Source: Fall 2012 Revenue Sources Book and supporting documents. Expenditure data for FY 2012 prepared using unaudited company-reported estimates. FY 2013 and beyond forecasts prepared using company submitted expenditure forecast estimates and other documentation provided to the DOR.



# Fiscal Note Production Scenarios



# Additional Oil Production amounts



Average Daily Production – thousands of barrels per day

Total Production	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
Fall 2012 Forecast	538.4	518.6	499.7	476.1	442.9	421.6
Scenario A	538.4	518.6	499.7	479.4	449.6	431.6
Scenario B	554.4	548.2	540.9	527.1	502.2	472.0
Scenario C	569.4	578.2	585.9	597.9	598.9	572.0

Additional Daily Production – thousands of barrels per day

Added Production	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
Scenario A	0.0	0.0	0.0	3.3	6.7	10.0
Scenario B	16.0	29.6	41.2	51.0	59.3	50.4
Scenario C	31.0	59.6	86.2	121.8	156.0	150.4





# Scenarios: At forecasted production



## At Forecasted Production

Oil Price in \$/barrel	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
\$90	\$75	\$325	\$250	\$25	-\$150	-\$150
\$100	-\$100	\$50	-\$50	-\$300	-\$450	-\$425
\$110	-\$325	-\$375	-\$450	-\$725	-\$875	-\$800
\$120	-\$625	-\$925	-\$975	-\$1,250	-\$1,375	-\$1,300
\$130	-\$1,000	-\$1,600	-\$1,650	-\$1,925	-\$2,000	-\$1,875



# Scenarios: Scenario A



## Additional Production Scenario A

Forecasted production plus 50 million barrel field developed by a New Entrant

Oil Price in \$/barrel	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
\$90	\$75	\$325	\$250	\$25	-\$125	-\$125
\$100	-\$100	\$50	-\$50	-\$275	-\$425	-\$400
\$110	-\$325	-\$375	-\$450	-\$700	-\$850	-\$775
\$120	-\$625	-\$925	-\$975	-\$1,250	-\$1,375	-\$1,250
\$130	-\$1,000	-\$1,600	-\$1,650	-\$1,900	-\$1,975	-\$1,850

Assumes field outside of a current unit and subject to gross revenue exclusion, first oil in 2017 and peak production of 10,000 barrels per day in 2019. Total development cost of \$500 million.



# Scenarios: Scenario B



## Additional Production Scenario B

With addition of 4 oil rigs to legacy fields drilling from 2014-2019

	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
	\$90	\$100	\$450	\$475	\$325	\$250
	\$100	-\$50	\$225	\$250	\$75	\$25
	\$110	-\$275	-\$175	-\$100	-\$275	-\$275
	\$120	-\$550	-\$650	-\$575	-\$700	-\$700
	\$130	-\$925	-\$1,300	-\$1,200	-\$1,350	-\$1,225

Assumes each oil rig drills 4 new production wells per year, with each well producing 1,000 barrels of oil per day beginning in FY 2014, with a maximum production rate of 60,000 barrels per day for a total of 140 million barrels. Development costs for each well assumed to be \$20 million. One half of this oil is assumed to qualify for the GRE under the provisions of the CS (FIN)



# Scenarios: Scenario C



## Additional Production Scenario C

With new well pad and 4 additional rigs in legacy fields, plus new 10,000 bopd field starting in 2017

	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
\$90	\$0	\$300	\$425	\$425	\$900	\$825
\$100	-\$150	\$100	\$250	\$250	\$775	\$700
\$110	-\$350	-\$250	-\$50	\$0	\$550	\$500
\$120	-\$625	-\$700	-\$475	-\$400	\$200	\$200
\$130	-\$975	-\$1,300	-\$1,025	-\$925	-\$225	-\$225

Assumes new well pad within major North Slope unit producing a total of 125 million barrels of new production over an 8-year period starting in 2015 at total development costs of \$5 billion, all of which is assumed to qualify for the GRE. Also includes scenario B above with 4 oil rigs in legacy fields and scenario A above with the addition of a new field.



# Production forecast data



# Forecasted Oil Production on Alaska's North Slope

thousands of barrels per day



FY	Currently Producing	Decline Rate of Currently Producing	Risk Adjusted New Oil	Risk Adj Total Forecast	Net Decline	Percent New Oil
2013	517.6	-10.6%	35.3	552.8	-4.5%	6.4%
2014	486.1	-6.1%	52.3	538.4	-2.6%	9.7%
2015	440.0	-9.5%	78.6	518.6	-3.7%	15.2%
2016	401.1	-8.8%	98.6	499.7	-3.6%	19.7%
2017	367.4	-8.4%	108.7	476.1	-4.7%	22.8%
2018	337.9	-8.0%	105.0	442.9	-7.0%	23.7%
2019	312.2	-7.6%	109.4	421.6	-4.8%	25.9%
2020	289.9	-7.2%	104.9	394.8	-6.4%	26.6%
2021	269.6	-7.0%	96.3	365.9	-7.3%	26.3%
2022	251.2	-6.8%	87.3	338.5	-7.5%	25.8%



# Crude Oil Production – Forecast

## thousand barrels per day



FY	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Prudhoe Bay	267.5	256.1	250.0	240.3	228.8	218.1	207.8	197.0	186.9	177.3
PBU Satellites <sup>(1)</sup>	46.5	44.4	41.4	38.9	36.3	33.3	30.5	27.7	25.8	23.8
GPMA <sup>(2)</sup>	26.8	25.5	23.3	21.1	19.1	17.7	16.4	15.2	14.2	13.4
Kuparuk	85.0	84.8	82.8	79.0	75.3	71.7	68.3	65.0	61.3	56.2
Kuparuk Satellites <sup>(3)</sup>	23.9	23.4	21.9	21.8	20.8	18.6	16.4	14.7	13.2	11.9
Endicott <sup>(4)</sup>	10.1	10.0	10.9	10.5	8.9	7.6	6.7	6.1	5.5	4.9
Alpine <sup>(5)</sup>	67.3	64.3	60.3	60.5	55.4	47.3	40.0	34.4	29.8	26.0
Offshore <sup>(6)</sup>	25.6	29.9	28.0	26.3	24.3	21.8	19.6	17.9	16.5	15.1
NPR-A	0.0	0.0	0.0	0.0	0.0	0.1	9.8	11.2	7.5	5.1
Point Thomson	0.0	0.0	0.0	1.3	7.2	6.7	6.1	5.6	5.2	4.8
<b>Total ANS</b>	<b>552.8</b>	<b>538.4</b>	<b>518.6</b>	<b>499.7</b>	<b>476.1</b>	<b>442.9</b>	<b>421.6</b>	<b>394.8</b>	<b>365.9</b>	<b>338.5</b>
Cook Inlet	10.4	9.6	8.9	8.3	7.7	7.2	6.7	6.3	5.9	5.6
<b>Total Alaska</b>	<b>563.2</b>	<b>548.0</b>	<b>527.5</b>	<b>508.0</b>	<b>483.8</b>	<b>450.1</b>	<b>428.3</b>	<b>401.1</b>	<b>371.8</b>	<b>344.1</b>

<sup>(1)</sup> Aurora, Borealis, Midnight Sun, Orion, Polaris, Milne Point, Sag River, Schrader Bluff, Ugnu

<sup>(2)</sup> Lisburne, Niakuk, Point McIntyre, Raven, West Beach, West Niakuk

<sup>(3)</sup> Meltwater, NEWS, Tabasco, Tarn, West Sak

<sup>(4)</sup> Endicott, Minke, Sag Delta, Eider, Badami

<sup>(5)</sup> Alpine, Fiord, Nanuq, Qannik, Mustang (after 2016)

<sup>(6)</sup> Northstar, Oooguruk, Nikaitchuq, Liberty (delayed)



# North Slope Lease Expenditures

## Fall 2012 Revenue Forecast

FY	Total		Deductible	
	OPEX	CAPX	OPEX	CAPX
2013	3,079	3,263	2,833	2,393
2014	2,817	3,845	2,779	3,339
2015	2,794	3,992	2,767	3,507
2016	2,815	3,549	2,746	2,953
2017	2,815	2,958	2,733	2,421
2018	2,768	2,474	2,697	2,031
2019	2,833	2,046	2,776	1,932
2020	2,817	1,841	2,769	1,734
2021	2,680	1,756	2,639	1,655
2022	2,557	1,682	2,523	1,586