

# Alaska Department of Natural Resources: Oil & Gas Outlook & Permitting

*Senate Finance Committee*

Presented by:

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Chantal Walsh

*Division of Oil & Gas Director*

*January 17, 2019*



# DEPARTMENT OF NATURAL RESOURCES

## - LAND BASE & OWNERSHIP -

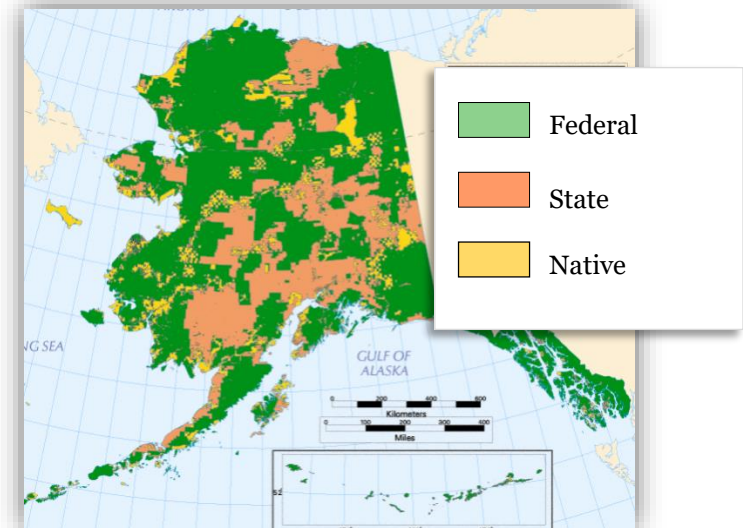


### Land Base

- 586,412 sq. miles—more than twice the size of Texas
- Larger than all but 18 sovereign nations
- More coastline than all other 49 states combined
- More than 3 million lakes; half of world's glaciers
- Approximately 40% of the nation's freshwater supply

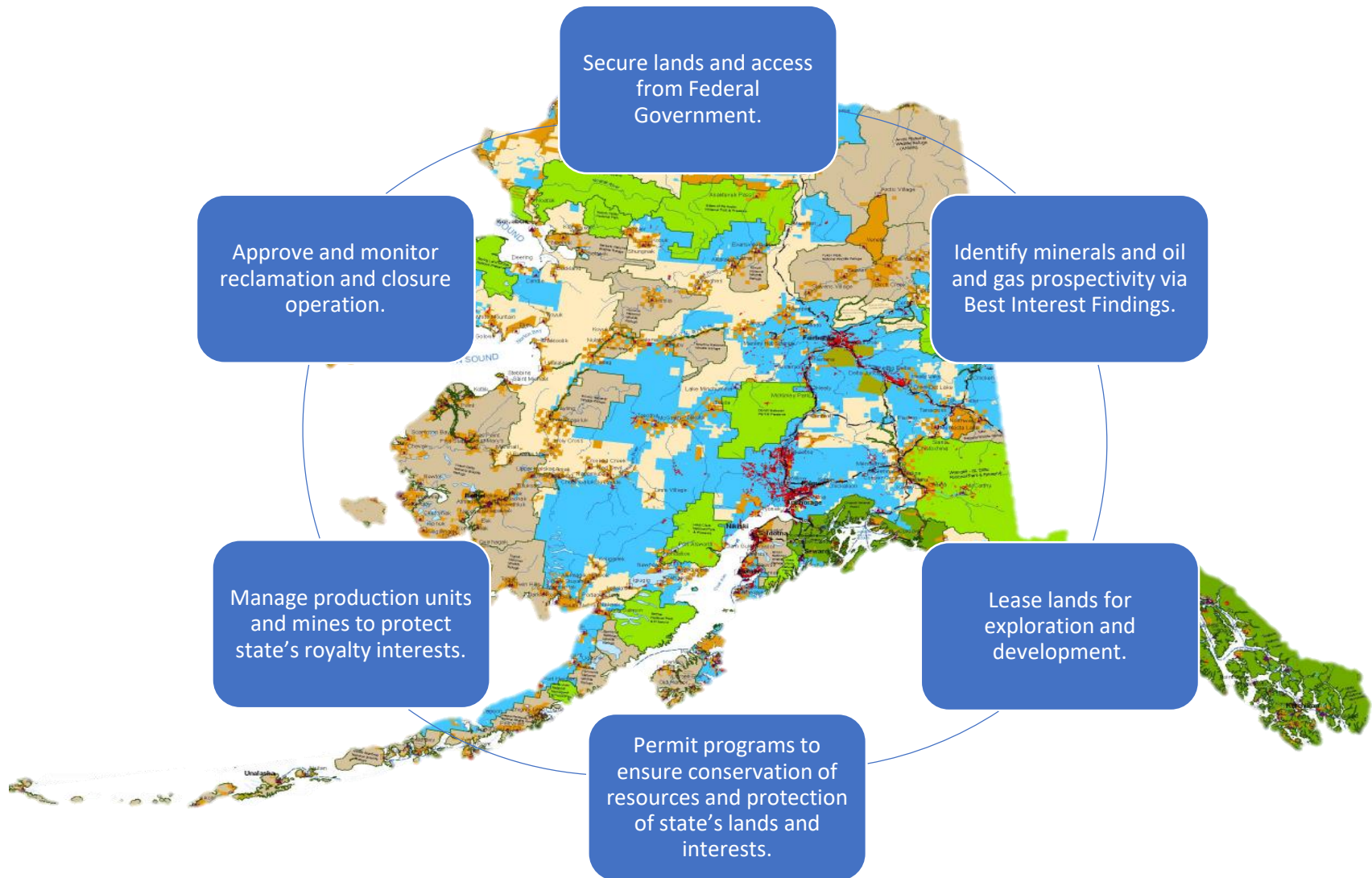
### Land Ownership

- *Federal Land*: more than 200 million acres
- *State Land*: Approx. 100 million acres of uplands, 60 million acres of tidelands, shore lands, and submerged lands, and 40,000 miles of coastline
- *Native Corporation Land*: 44 million acres



# DEPARTMENT OF NATURAL RESOURCES

## - LAND LIFE CYCLE -



# DEPARTMENT OF NATURAL RESOURCES

## - OIL & GAS RESOURCE POTENTIAL-

### North Slope

- More undiscovered, potentially recoverable oil than any other Arctic nation
  - **OIL:** Est. 40 billion barrels of conventional oil
  - **GAS:** Est. over 200 trillion cubic feet of conventional natural gas
- Untapped unconventional resource potential, including tens of billions of barrels of heavy oil, shale oil, and viscous oil, and hundreds of trillions of cubic feet of shale gas, tight gas, and gas hydrates

*Compared to most basins, Alaska is relatively underexplored, with 500 exploration wells on the North Slope, compared to Wyoming's 19,000.*

### Cook Inlet

- Significant undiscovered resources remain
  - 19 trillion cubic feet of natural gas
  - 600 million barrels of oil
  - 46 million barrels of natural gas liquids

*Sources: USGS & BOEM*



# DEPARTMENT OF NATURAL RESOURCES

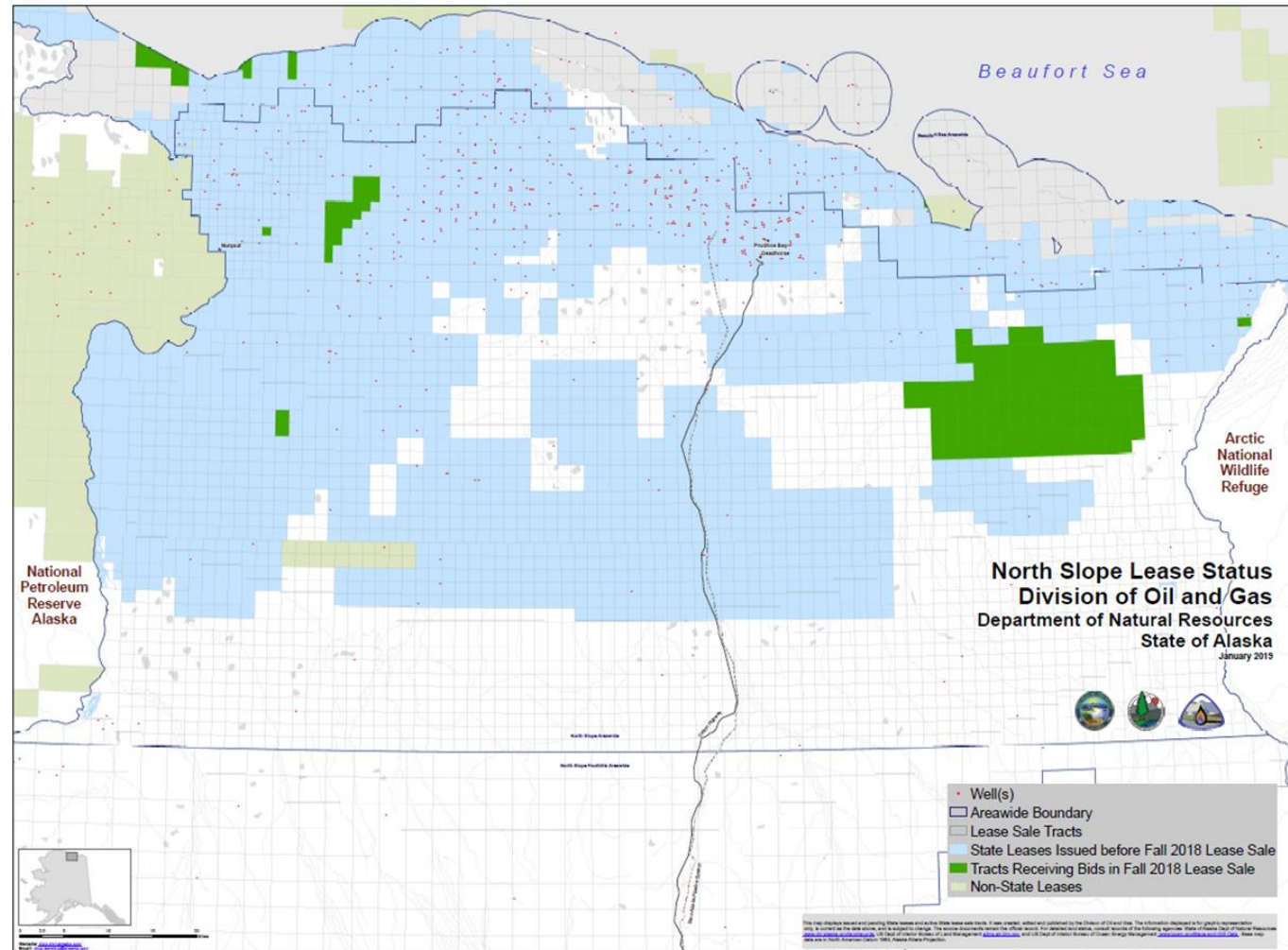
## - OIL & GAS OUTLOOK -

2018 Fall Lease Sale brought the 3<sup>rd</sup> highest amount of winning bids since 1998

Total Bonus Bid:  
**\$29,234,028.10**

Highest Bid Per  
Acre: **\$586.00**

Total Leased Acres:  
**243,950**

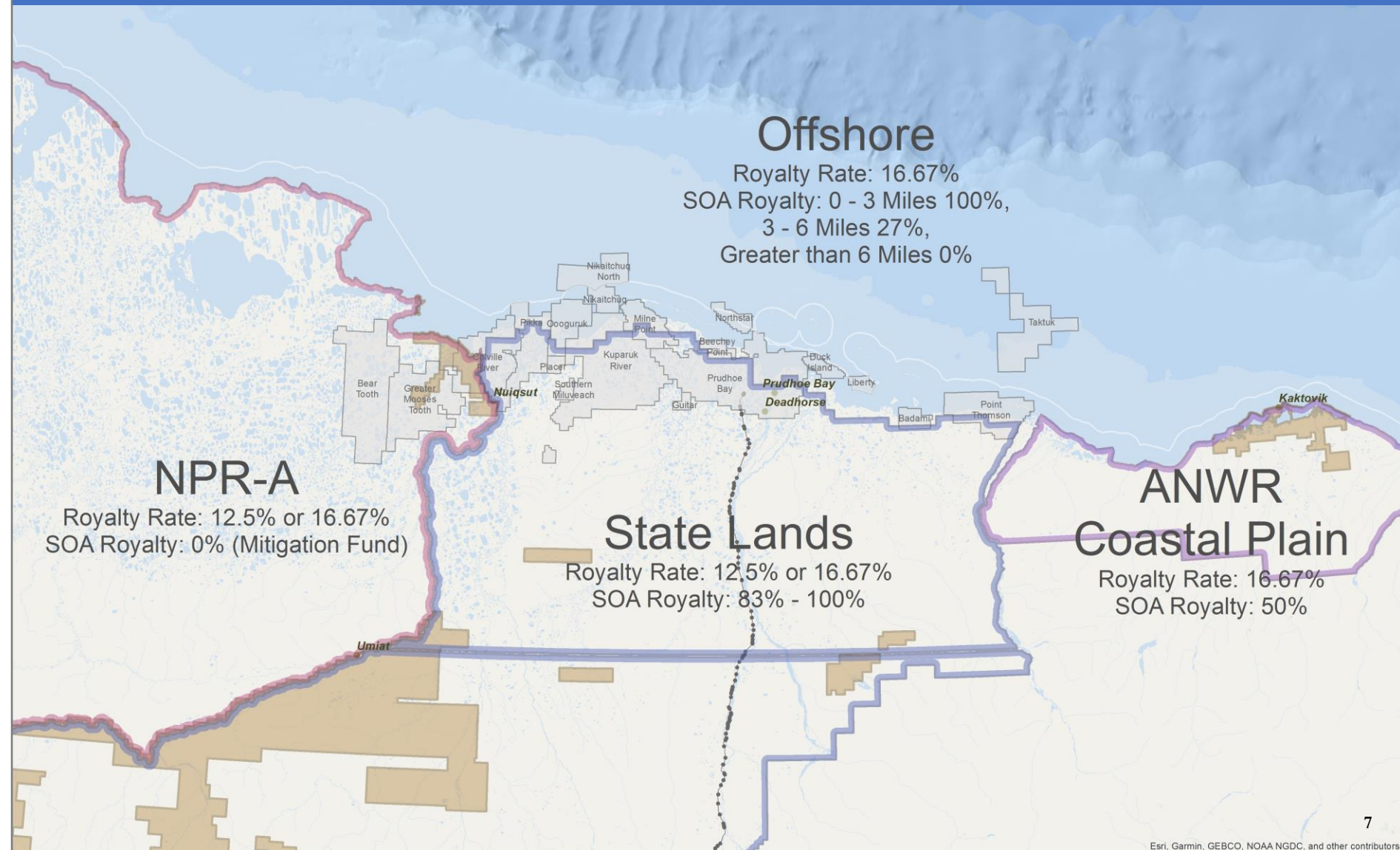


# Alaska Department of Natural Resources: Production Highlights



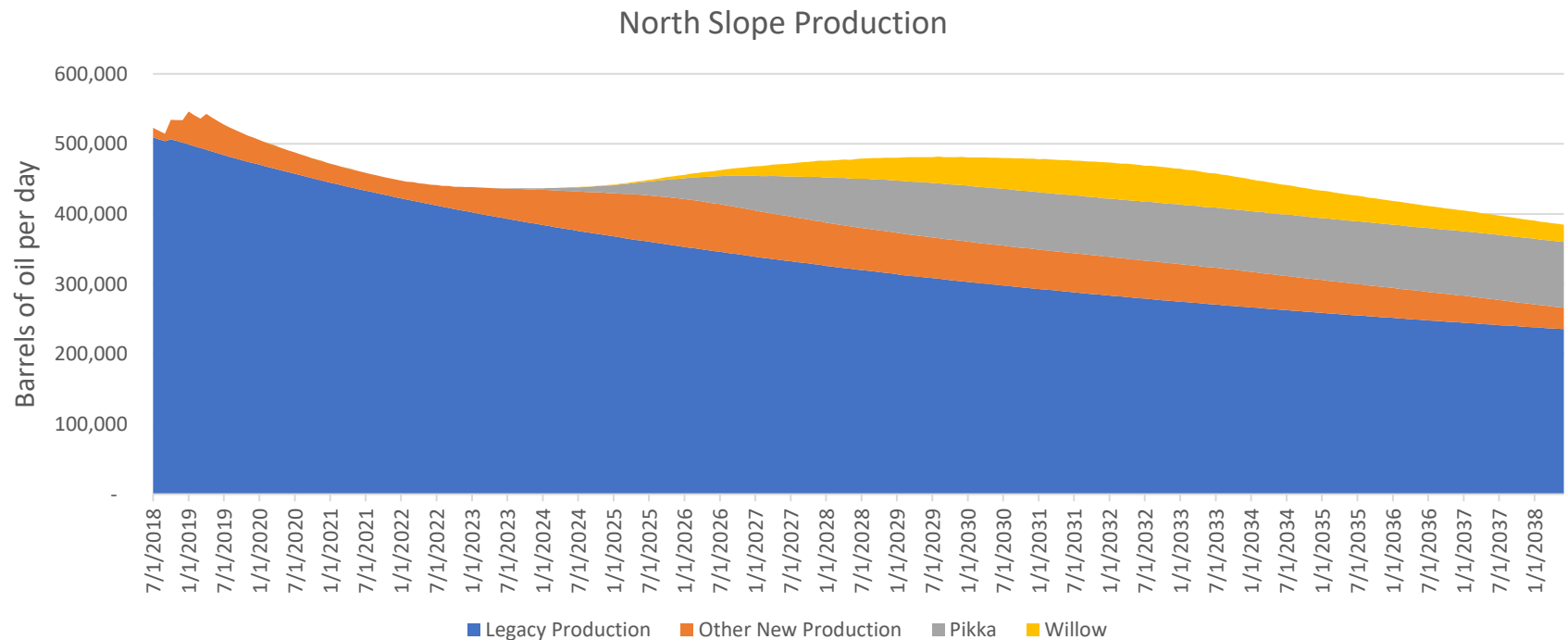
# STATE OF ALASKA

## - ROYALTY RATE -



# STATE OF ALASKA

## - 20-YEAR PRODUCTION OUTLOOK -

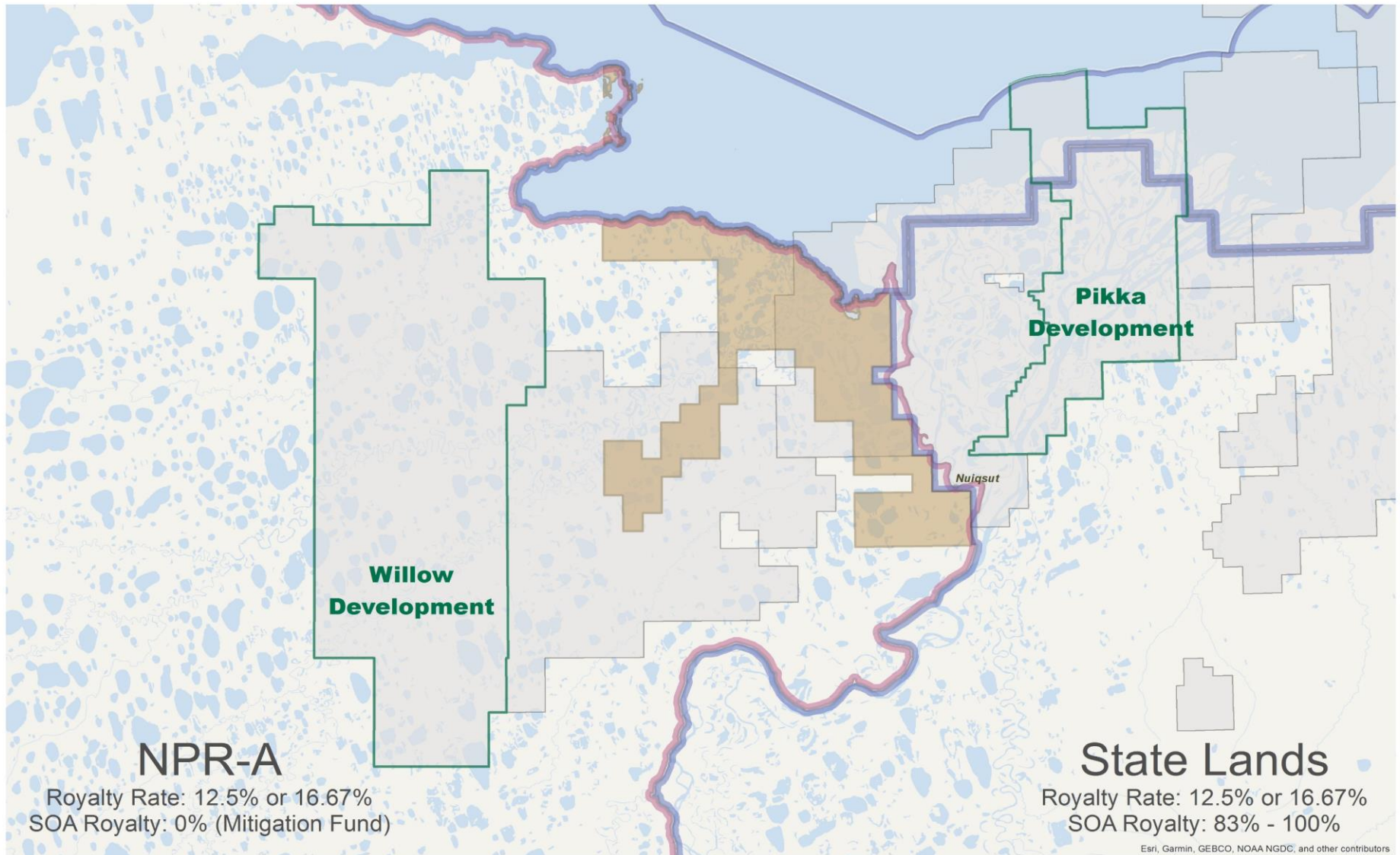


- Risked profiles (Includes risks of occurrence, start time and performance applied to success case profile)
- Legacy fields remain backbone of state oil production in near and medium term
- Future fields which are currently being evaluated by operators, begin to play a more significant role in production in the next 5-6 years



# STATE OF ALASKA

## - ANALYSIS OF WILLOW VS PIKKA



# STATE OF ALASKA

## - WILLOW DEVELOPMENT (SUCCESS CASE) -

### 2019 WIO:

100% ConocoPhillips

### Land Ownership:

Federal

### Project Milestones (operator):

- 2019 Further Appraisal
- 2024 or 2025 First Oil

### Project Scale (operator):

- Resource size (500 – 1100 mmboe)
- Likely plateau (over 100 mbbls/day)

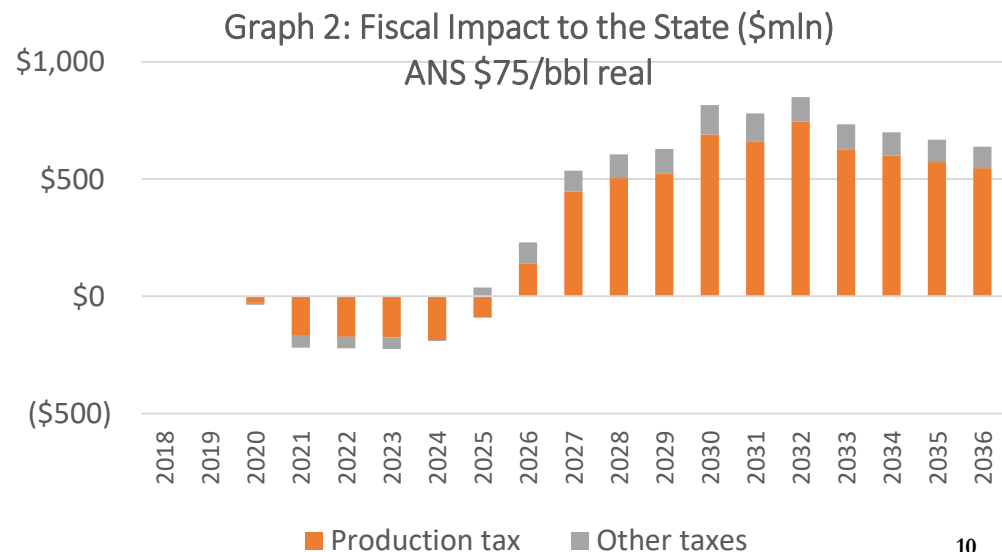
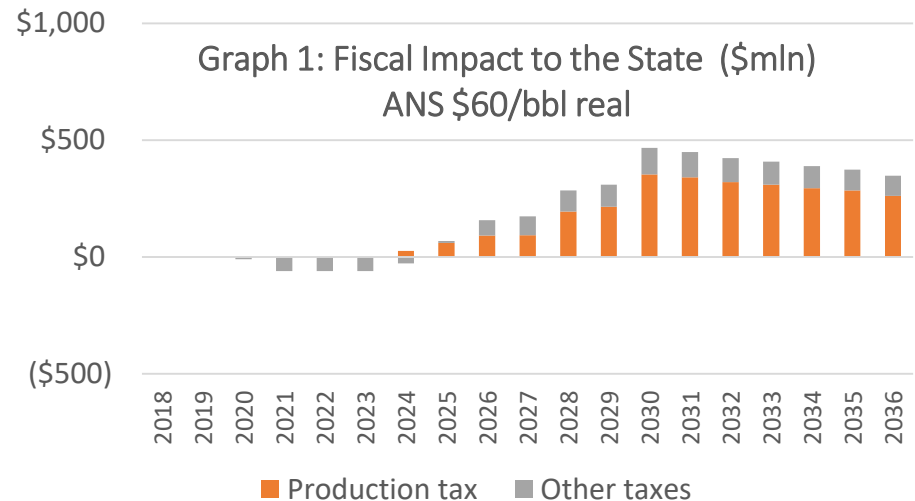
### Scenarios

- Graph 1: CPAI is a minimum tax payer
- Graph 2: CPAI is a net tax payer

### Tax Impacts:

- Expenditure
- Price

**Potential to generate over \$5B - \$9B to SOA through 2040 (undiscounted)**



# STATE OF ALASKA

## - PIKKA DEVELOPMENT (SUCCESS CASE) -

### 2019 WIO:

51% Oil Search, 49% Repsol

### Land Ownership:

83% State, 17% ASRC

### Project Milestones (operator)

- 2018 Winter Appraisal (2 wells)
- 2019 – 2020 FEED
- 2021 – 2023 Development
- 2023 or 2024 First Oil

### Project Scale (operator):

- Resource size (400 – 720 mmbbls)
- Likely plateau (120 mbbls/day)

### Scenarios

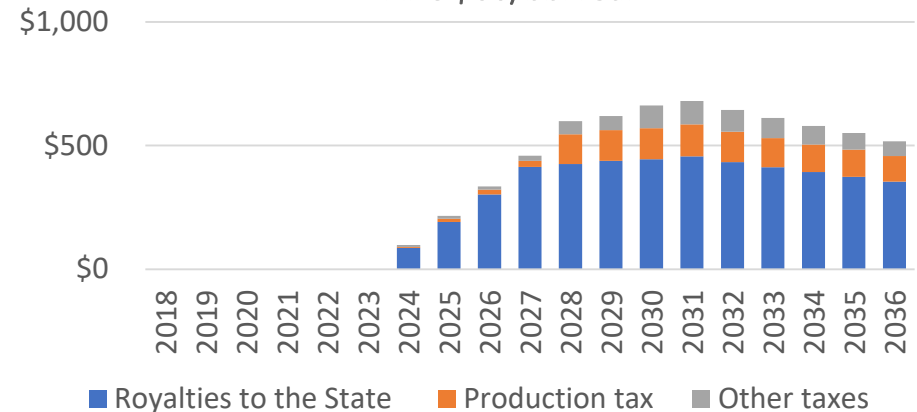
- Graph 1: Min tax for extended time due to spent and loss carryforward (LCF)
- Graph 2: LCF impacts fewer years of tax

### Tax impacts:

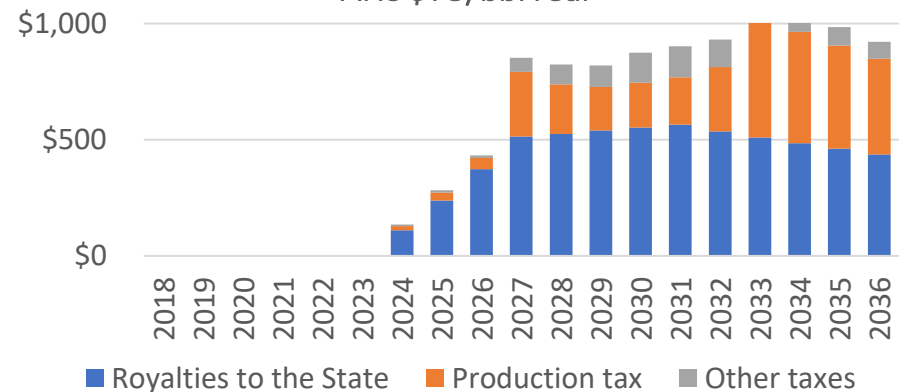
- No negative pre-production stream
- Little to no tax production for early years

**Potential to generate over \$8B - \$13B to SOA through 2040 (undiscounted)**

Graph 1: Fiscal Impact to the State (\$mln)  
ANS \$60/bbl real



Graph 2: Fiscal Impact to the State (\$mln)  
ANS \$75/bbl real



# STATE OF ALASKA

## - ROYALTY ANALYSIS -

Field or Area	Royalty Rate	Alaska Native Royalty*	Federal Royalty*	Mitigation Impact Fund Royalty	State Royalty	Publicly announced barrels/day	1 Year <i>Total Royalty Revenue</i> based on peak production	Estimated First Oil
<b>NPR-A</b>								
GMT-1	16.67%	82%	9%	9%	0%**	30,000	\$125 million	October 2018
GMT-2	16.67%	8%	46%	46%	0%**	38,000	\$149 million	2021
Willow	16.67% or 12.5%	0%	50%	50%	0%**	100k +	\$345 million	2024-2025
<b>State Land</b>								
Current Production	16.67 or 12.5%	n/a	0%	0%	100%	486,622 (state only production)	\$1.528 billion ***	n/a
Pikka	16.67%	17%	0%	0%	83%	100k +	\$345 million	2024/2025
<b>Offshore</b>								
0-3 miles	16.67%	n/a	0%	0%	100%	n/a		n/a
3-6 miles	16.67%	n/a	50%	0%	27%	n/a		
<b>ANWR</b>								
	16.67%	n/a	50%	0%	50%	n/a		First lease sale

\* Surface ownership. Until tract factors are allocated to individual tracts and it is determined which leases overlie the producing reservoirs, the Division can only estimate based on surface ownership.

\*\* Assumes there are more grant/project applications to the Impact Fund than there are funds, a highly likely occurrence based on previous years.

\*\*\* For comparison use only. Numbers do not comport with Revenue Sources Book or other published analyses. Assumes 486,622 barrels/day at blended average royalty rate of 12.2%.

# Alaska Department of Natural Resources: Status of Development



# STATE OF ALASKA

## - STATUS OF DEVELOPMENT -

- 2019 is expected to be the highest year in the last 20 years for exploration and production rig activity.
- Pikka, Mustang, and Placer finds demonstrate great potential.
- New data suggests enormous potential in Nanushuk and Torok formations.
- Legacy fields including Prudhoe and Kuparuk have exceeded internal expectations through infield work.
- Smaller companies, like Caelus, BlueCrest & Armstrong, are engaging in exploration plans that will help maximize TAPS throughput into the future.
- New players, like Oil Search, indicate industry acknowledgment of large, viable fields that were unknown.
- Continuous work with North Slope communities, presidential administration, and Congressional delegation on Arctic energy policy and decision making that support responsible development (ANWR Coastal Plain, OCS, NPR-A)

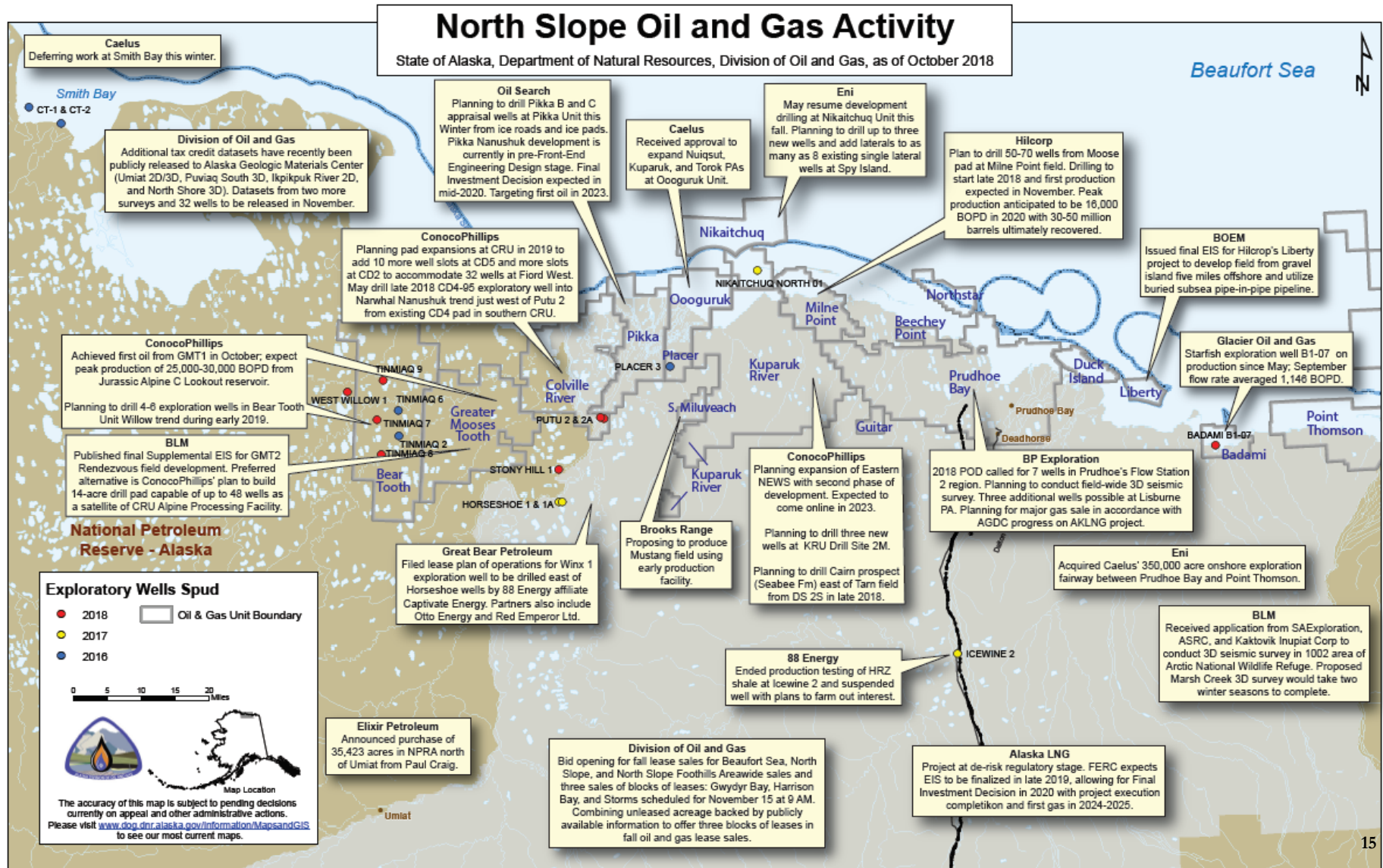
# DEPARTMENT OF NATURAL RESOURCES

## - STATUS OF DEVELOPMENT -

### North Slope Oil and Gas Activity

State of Alaska, Department of Natural Resources, Division of Oil and Gas, as of October 2018

Beaufort Sea





# DEPARTMENT OF NATURAL RESOURCES

## - STATUS OF DEVELOPMENT -

### Cook Inlet Oil and Gas Activity

State of Alaska, Department of Natural Resources, Division of Oil and Gas, as of October 2018

**Division of Oil and Gas**  
Issued call for substantial new information for Spring 2019 Alaska Peninsula Areawide oil and gas lease sale. Deadline for receiving information is October 26, 2018. Issued preliminary best interest finding for proposed Cook Inlet Areawide oil and gas lease sales, 2019-2028.

Visit  
<http://list.state.ak.us/mailman/listinfo/DOG> Leasing to subscribe to leasing announcements.

**Division of Oil and Gas**  
Soliciting Statewide Nominations of Lands with geothermal resources for potential future disposal.

**Amaroq Resources**  
(Previously Aurora Exploration)  
Nicolai Creek Unit 2018 plan included three well cleanouts and drilling NGU 12 well targeting Beluga and Upper Tyonek gas sands. Anticipated negotiating purchase of Apache's 3D seismic shot in 2012 to evaluate future exploration targets.

**Hilcorp**  
Planning to sidetrack a well from the Monopod platform in the Trading Bay Unit into the North Trading Bay field in an attempt to restore unit production. Sidetrack will target Tyonek G and Hemlock reservoirs.

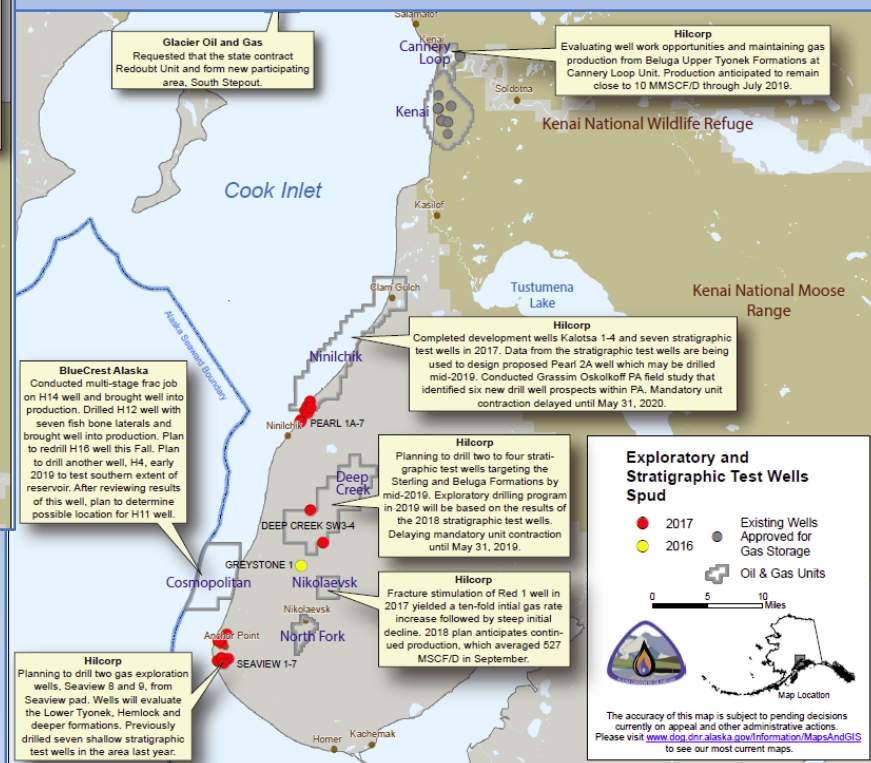
**Glacier Oil and Gas**  
Requested that the state contract Redoubt Unit and form new participating area, South Stepout.

**Doyon-CIRI**  
Totchaket 1 drilled this summer; encountered several gas shows but did not find commercial quantities of oil or gas.

**Division of Oil and Gas**  
Approved exploration license application in Houston-Willow area to Samuel Cade and Daniel Donkel.

**Furie**  
Completed KLU A-1 development well in Corsair block, with initial gas production from lower and middle Sterling zones. Drilled the KLU A-4 development well into Tyonek to evaluate identified 3D amplitude targets. Added perforations to KLU 3 at the Beluga interval. Contracted new technical team to evaluate previously acquired 3D seismic data and propose exploratory drilling targets over next several years. May drill one new development well in 2019 to stratigraphic equivalent of Sterling flow tested zones and add perforations to KLU A-2A and 3.

**Hilcorp**  
Evaluating well work opportunities and maintaining gas production from Beluga Upper Tyonek Formations at Cannery Loop Unit. Production anticipated to remain close to 10 MMSCF/D through July 2019.



# Alaska Department of Natural Resources: Permitting Status

# STATE OF ALASKA

## -ANATOMY OF A LARGE SCALE DEVELOPMENT PROJECT-

- Statewide or regional impact - infrastructure development, economic growth opportunities
- Generally require long term ***leases*** or dedicated legal access such as ***easements*** in order to obtain project financing
- Lease/Unit ***Plan of Operations*** or ***Plan of Development***
- Shorter term **land use permits** are necessary for construction
- ***Material sales*** for development
- ***Water Authorizations*** for development and operations



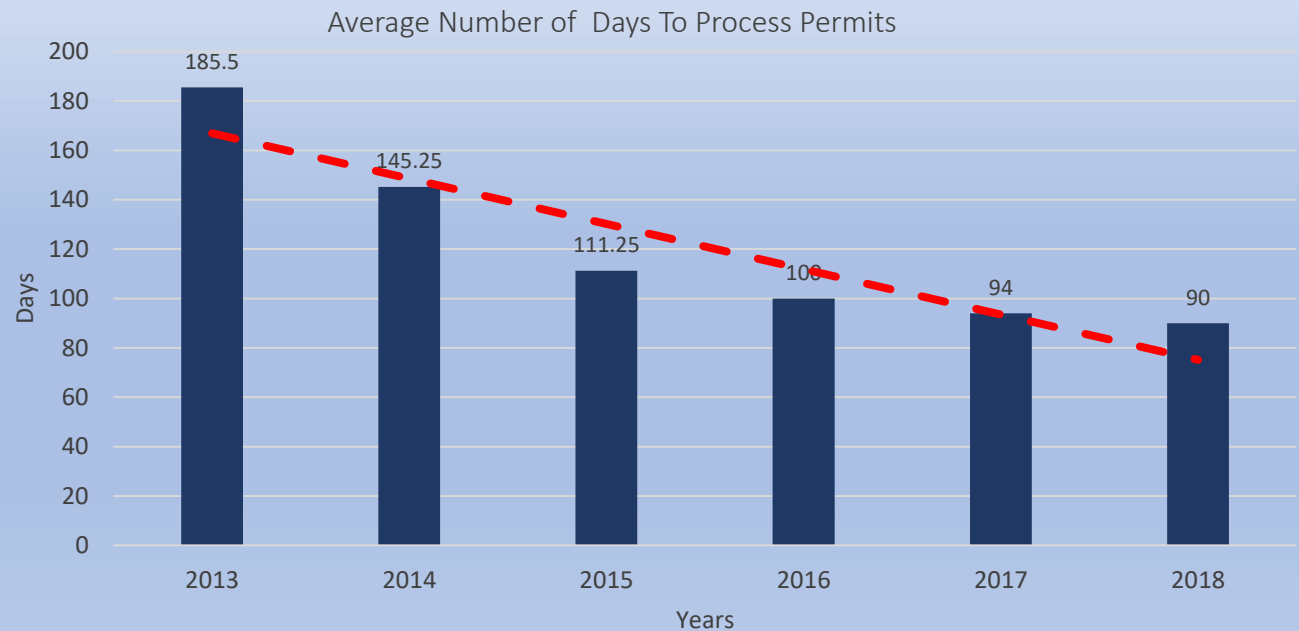


# OPERATING EFFICIENCIES

## - DIVISION OF OIL & GAS -

### Division of Oil & Gas

- Now includes the State Pipeline Section
- Average oil & gas permit timeline is 3 months
- **Currently no permit backlog**



### Automation

- Electronic applications
- Continuous feedback loop with applicants
- Updated guidance documents available online

# OIL & GAS RESOURCE POTENTIAL FROM FEDERALLY MANAGED LANDS

## Tax Act – Coastal Plain Activity

- BLM to administer an oil and gas leasing program in the Coastal Plain of ANWR
- Section 200001 PL 115-97 requires at least 2 lease sales to be held by 2024
- Each sale must offer 400,000 acres of highest hydrocarbon potential, up to 2,000 surfaces acres of Federal land to support production and support facilities
- SOA Royalty 50%

*SOA authorizes water withdrawal, fish habitat permits for activities on federal lands*

*SOA consultation, shares expertise on tundra travel, air quality, reclamation, etc.*

## NPR-A Activity

- Oil and Gas Leasing
- CPAI continued progress
  - CD-5 production
  - GMT-1 began production October 2018
  - GMT-2 & Willow Development
  - SOA Royalty 50% through NPR-A Impact Mitigation Grant Program

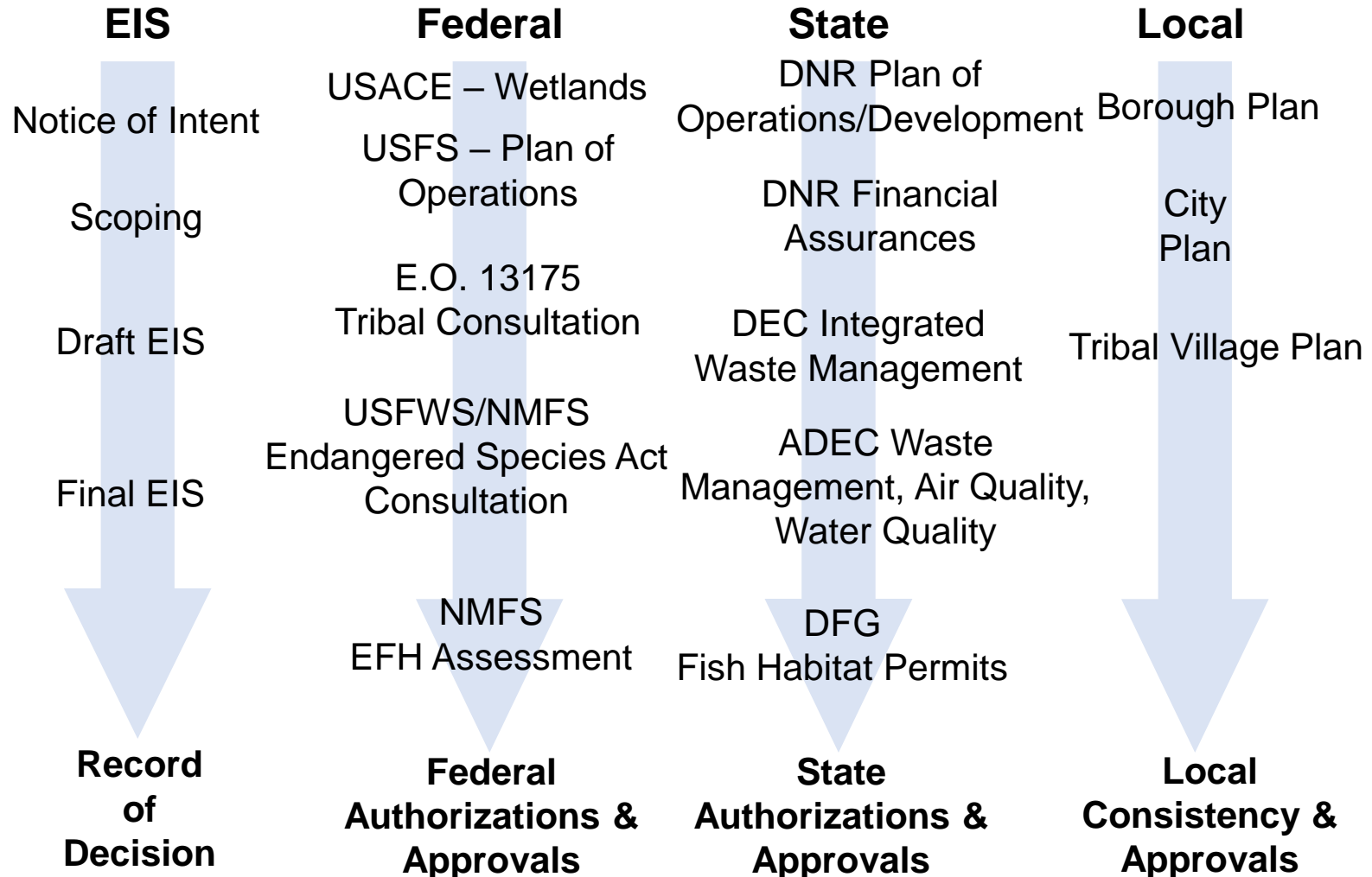


Sources: DOI BLM

# FEDERAL PROCESSES CAN DRIVE TIMELINES

## - NEPA -

### MULTIPLE PERMITTING/APPROVAL PROCESSES RUN IN PARALLEL



# STATE/FEDERAL COORDINATION IS KEY

## - OFFICE OF PROJECT MANAGEMENT & PERMITTING -

OPMP coordinates permitting of natural resource development projects in accordance with AS 38.05.020(b)(9):

*The commissioner may lead and coordinate all matters relating to the state's review and authorization of resource development projects.*

- OPMP is located in the DNR Commissioner's Office
- OPMP coordination is voluntary, reimbursable services



# OFFICE OF PROJECT MANAGEMENT & PERMITTING

## - STATE AGENCY COORDINATION -

- Department of Environmental Conservation
- Department of Fish & Game
- Department of Natural Resources
- Department of Health & Social Services
- Department of Transportation and Public Facilities
- Department of Law
- Department of Commerce, Community & Economic Development
- Department of Labor & Workforce Development
- Department of Public Safety
- Department of Revenue
- Alaska Railroad
- Regulatory Commission of Alaska
- Alaska Oil & Gas Conservation Commission



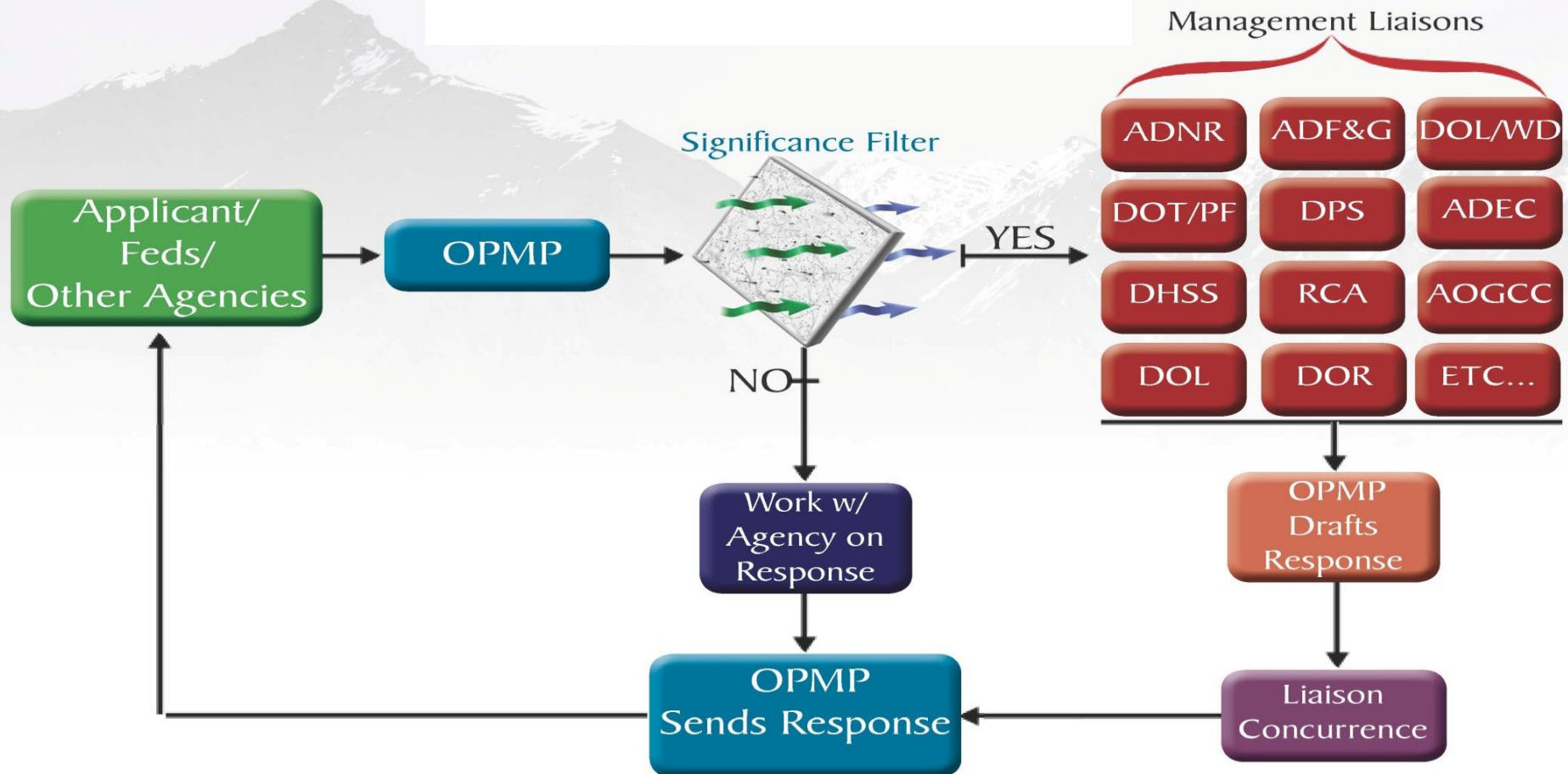
# OFFICE OF PROJECT MANAGEMENT & PERMITTING

## - FEDERAL AGENCY COORDINATION -

- Army Corps of Engineers
- Environmental Protection Agency
- Bureau of Land Management
- Bureau of Ocean Energy Management
- Bureau of Safety and Environmental Enforcement
- DOT Pipeline and Hazardous Materials Safety Administration
- National Park Service
- U. S. Forest Service
- U. S. Fish & Wildlife Service
- National Marine Fisheries Service
- Federal Aviation Administration
- Occupational Safety & Health Administration
- U. S. Coast Guard

# COMMUNICATION PROTOCOL

## - STATE AGENCY COORDINATION -



# THANK YOU!

On behalf of the DNR Oil & Gas Permit Teams

Chantal Walsh, Director, Division of Oil & Gas

Marty Parsons, Director, Division of Mining, Land & Water

Faith Martineau, Executive Director, Office of Project  
Management & Permitting



# STATE OF ALASKA

## - NEAR TERM IMPACTS OF NPR-A DEVELOPMENT ON SOA REVENUES -

