



# Division of Oil & Gas and Geological & Geophysical Surveys Overview

*House Resources – Finance Subcommittee*

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Alaska Department of Natural Resources, March 8, 2021



# FY2022 GOVERNOR BUDGET CHANGES

## **O&G – Fund Change from UGF (-\$2,000.0) to GF/PR (\$2,000.0)**

- In FY2020 the Program Receipt Revenue exceeded \$9,500.0
- In FY2021 O&G is authorized to spend \$711.8 GF/PR
- In FY2021 O&G budget includes \$8,334.7 UGF
- Aligns the services with the revenues generated
- The receipts for this fund change are generated from Pipeline Right-of-Way Lease payments and material sales, along with easement Lease payments and Permitting application and filing fees



# FY2022 GOVERNOR BUDGET CHANGES

## **DGGS – Increase Federal Receipt Authority** **\$ 500.0**

- Additional federal receipts for critical, high profile projects
  - Alaska Volcano Observatory (AVO) with United States Geological Survey (USGS), National Aeronautics and Space Administration (NASA) Snow Observation Network, Environmental Protection Agency, and the Bureau of Land Management
- FY2021 Authority approved by LB&A on August 27, 2020

## **DGGS – Increase GF/PR for New Core Samples at the GMC** **\$ 375.0**

- New collection of core and other geologic materials to the GMC
- Authority is needed for increase in revenue and expenditures to store and manage this collection
- Increase in facility use and increased activity, request includes one permanent seasonal Geologist

# PROGRAM RECEIPTS FY 2020

- State Pipeline Coordinator
  - Lease Payments – \$7,426,569
  - Material Sales – \$642,108

Permit/Lease Actions	FY2020
Right of Way	10
Temporary Water Use Authorization	25
Temporary Land Use Permit	12
Material Sales Contract	5
Compliance Inspections	155

The State Pipeline Coordinator section is self-funded through its program receipts.

- Oil & Gas (other)
  - Filing Fees – \$ 608,448
  - Easement/Leases – \$832,161

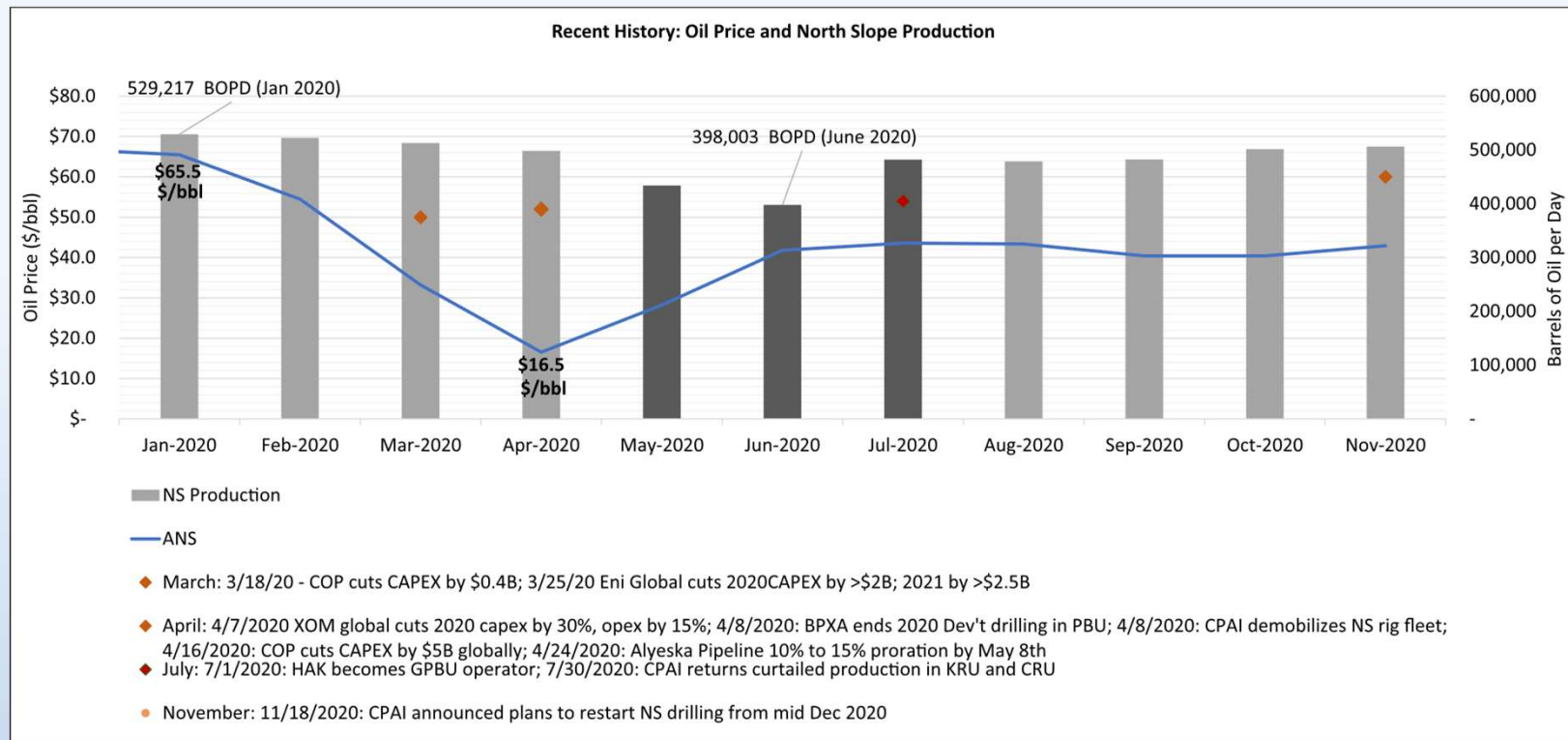
Permit Actions	FY2020
General Permit	48
Seismic Permit (MLUP)	4
Plan of Operations	7
Amendments	51
Field Inspections	12

# MANAGING COVID-19 IMPACTS

- Deferred/halted activity:
  - Rigs laid down across the North Slope in order to eliminate unnecessary personnel. New wells and remedial well work was effectively cancelled for most of the season.
  - BlueCrest pushed back Cook Inlet gas exploration project to 2022.
- Drawbacks in production rates due to low prices and demand:
  - Alyeska Pipeline Service Company - Prorations on TAPS throughput due to storage constraints
    - April 24 = 10% cut, increased to 15% on May 8, then lowered to 5% on May 15.
    - Lifted May 22. This was spread across all producers.
  - In addition, ConocoPhillips cut production from their fields by 100k bbls for the month of June.
  - Badami Unit was granted a suspension of production for several months.
- Some additional measures DOG has taken to keep the industry stable:
  - Allowed an additional 30 days in the lease award schedule for the Fall 2019 and Spring 2020 lease sales.
  - Granted extension requests on lease rental payments on 431 leases.
  - Extended deadlines for submitting updated plans, data, and other paperwork.



# COVID-19 IMPACTS



- April–May 2020 Proration announcements: 10-15% proration.
  - Estimated against daily 500 mbopd: 50 - 75 mbopd
- Production Curtailments:
  - ConocoPhillips announced production curtailment: 100 mbopd barrels of oil per day (between KRU and CRU units).
    - Production fully returned by July 2020
  - Glacier Oil and Gas:
    - North Slope: Badami (May – September ~1500 bopd): returned fully by October 2020
    - CI shut-in: West McArthur/Redoubt Units: 2000 bopd: Still shut in
- Prices dropped 75% from Jan 2020 to bottom at \$16.5/bbl in June 2020
- Oil production including prorations and curtailments declined by ~25% between January and June 2020.
  - Typical change in production over similar period in 2019 due to regular seasonal effects is ~10%.

# NORTH SLOPE

- North Slope Production = approximately 98% of all oil produced in AK
- FY16 to FY20 averaged 1% decline in production
- Recent Major Changes in Production
  - **Prudhoe Bay Unit:** Hilcorp already strong ongoing production optimization efforts
  - **Kuparuk River Unit :** Natural decline; pandemic related production disruption with interrupted rig activity
  - **Colville River Unit:** Natural decline; pandemic related production disruption /interrupted rig activity
  - **Milne Point Unit: 28% growth** (FY19 to FY 20), drilling several new wells, Moose Pad continuing to ramp up production
  - **Point Thomson Unit:** Progressively improved facility reliability; new compressor design
- Near future projects coming in:
  - **GMT2** in NPRA
  - **CD5 Expansion & Fiord West Development** in Colville River Unit
  - **Raven Pad** in Milne Point Unit
- Projects further out
  - **Pikka:** FEED 2021
  - **Willow:** FEED; FID YE 2021

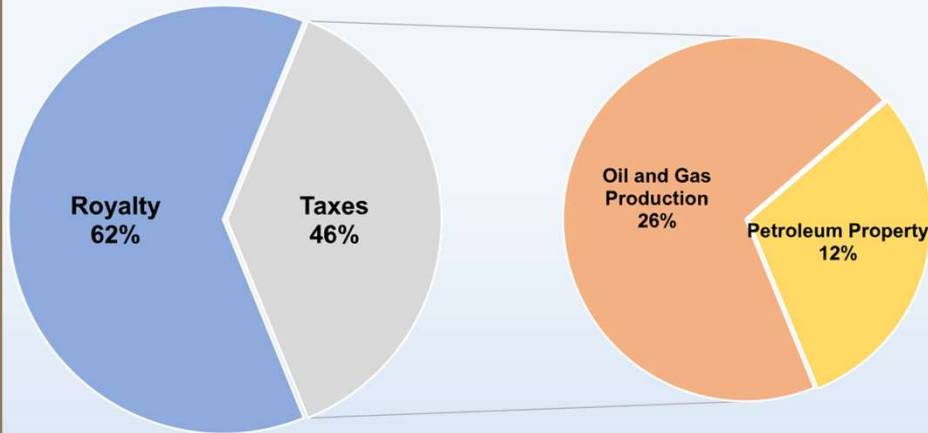
## ***First new units approved since 2017***

Unit Name	Region	Operator
Alkaid	North Slope	Great Bear Pantheon LLC
Talitha	North Slope	Great Bear Pantheon LLC
West Harrison Bay	Beaufort Sea	Shell Offshore Inc

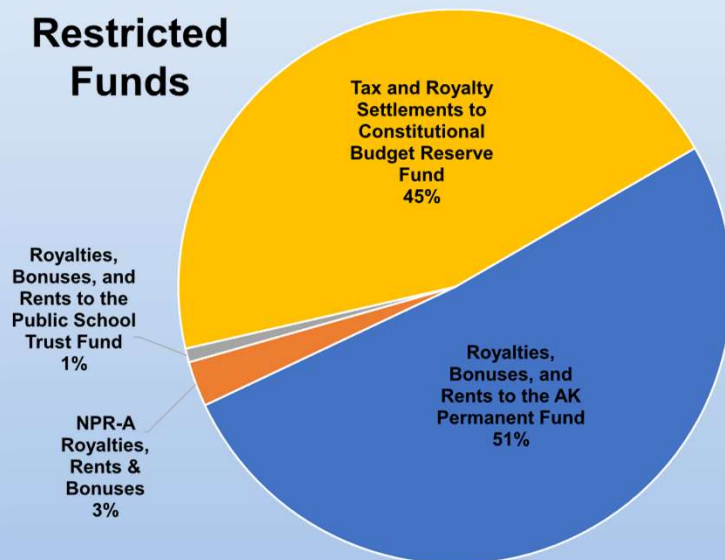
# FY 2020 PETROLEUM REVENUE

## - BY RESTRICTION AND TYPE, MILLIONS OF DOLLARS -

### Unrestricted Fund Sources



### Restricted Funds



### Unrestricted Petroleum Revenue

FY 2020

Royalties (including bonuses, rents, and interest)	675.3
Oil and Gas Production Tax	285.1
Petroleum Corporate Income Tax	-0.2
Petroleum Property Tax	122.9
<b>Total Unrestricted Petroleum Revenue</b>	<b>1,083.1</b>

### Restricted Petroleum Revenue

Royalties, Bonuses, and Rents to the AK Permanent Fund	318.9
Royalties, Bonuses, and Rents to the Public School Trust Fund	5.0
Tax and Royalty Settlements to Constitutional Budget Reserve Fund	281.2
NPR-A Royalties, Rents & Bonuses	16.4
<b>Total Restricted Petroleum Revenue</b>	<b>621.5</b>

### Total Petroleum Revenue

1,704.6



# PETROLEUM REVENUE

## - BY YEAR AND TYPE, MILLIONS OF DOLLARS -

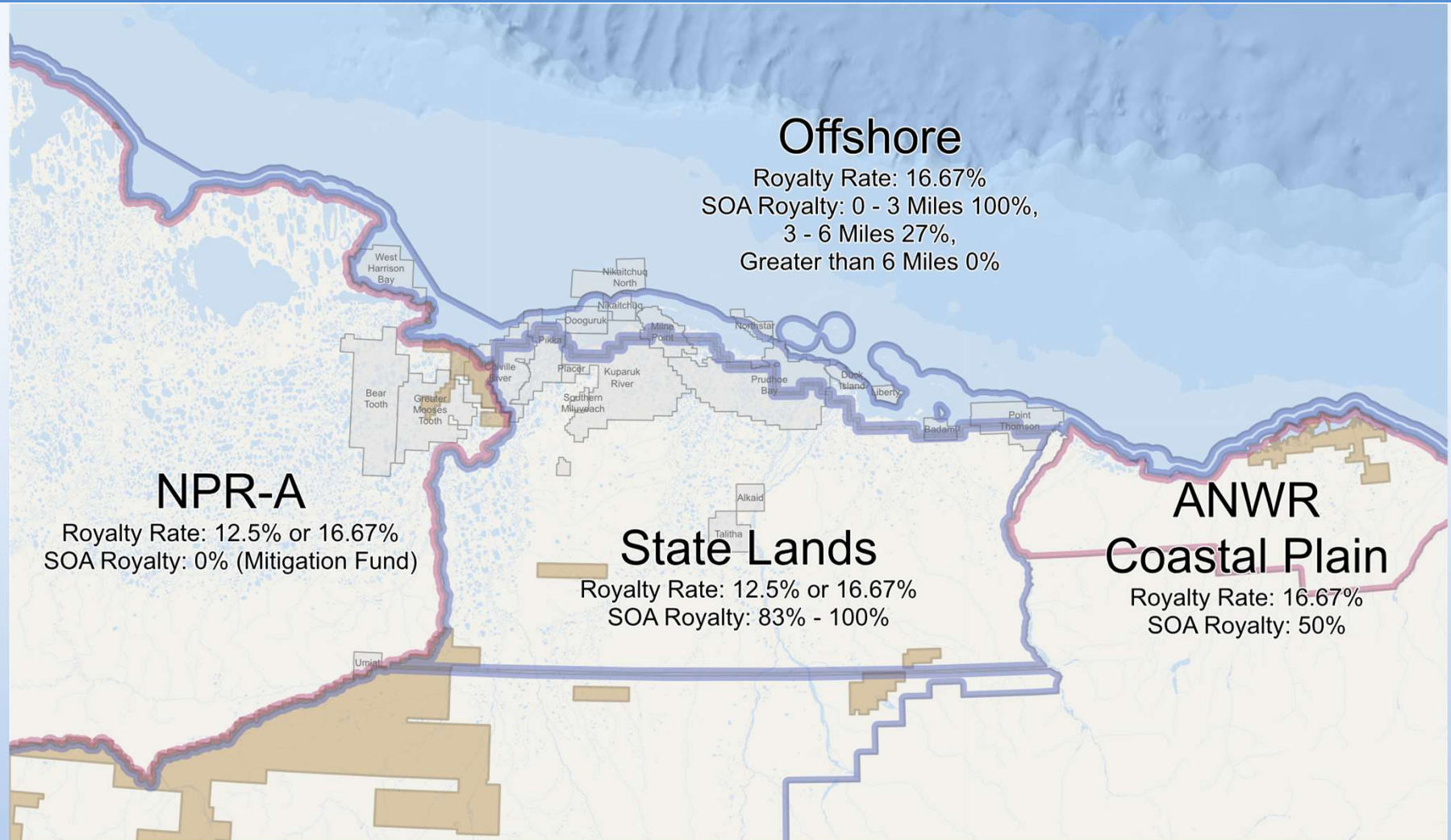
	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021 forecast	FY 2022 forecast
ANS oil price (\$/bbl)	\$ 49.43	\$ 63.61	\$ 69.80	\$ 52.12	\$ 45.32	\$ 48.00
ANS production (mbbl/day)	526.4	518.4	511.5	471.8	477.3	439.6
Property Tax*	\$ 120	\$ 122	\$ 123	\$ 123	\$ 116	\$ 113
Corporate Income Tax	\$ (59)	\$ 66	\$ 195	\$ (0)	\$ 5	\$ (20)
Production Tax	\$ 134	\$ 750	\$ 735	\$ 285	\$ 172	\$ 163
Royalties	\$ 1,021	\$ 1,365	\$ 1,453	\$ 999	\$ 824	\$ 797
CBRF Settlements	\$ 482	\$ 121	\$ 125	\$ 281	\$ 60	\$ 25
NPRA Shared Revenue	\$ 1	\$ 24	\$ 8	\$ 16	\$ 11	\$ 12
Total	\$ 1,700	\$ 2,448	\$ 2,639	\$ 1,705	\$ 1,187	\$ 1,091

Revenue amounts in millions of dollars.

Source: DOR Fall 2020 Revenue Sources Book

\* Property Tax does not include municipal share

# ROYALTY RATES

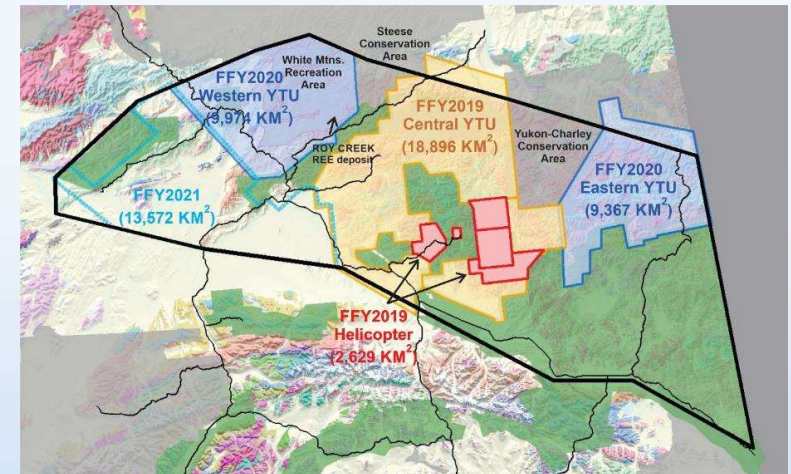


State's royalty take differs across State land

# GEOLOGICAL & GEOPHYSICAL SURVEYS

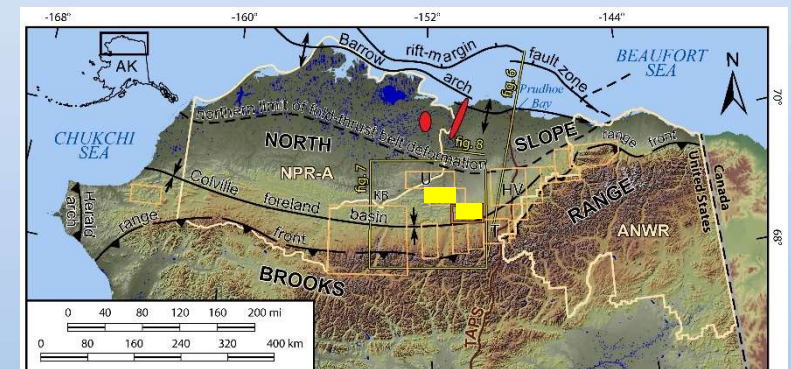
## Mineral Resources

- Complete three airborne geophysical surveys; Magnetic and radiometric surveys will cover >50,000 sq km and will complete coverage over Yukon-Tanana Upland
- ~2,440 sq. mi. of geologic mapping in the Yukon-Tanana Upland adjacent to prior mapping
- Complete re-analysis of stream sediment samples from the Yukon-Tanana Upland



## Energy Resources

- Complete geologic mapping of ~750 sq. mi in the central North Slope focusing on Brookian geology
- Collaborate with the U.S.G.S. to drill two core holes in the North Slope foothills. These units host the Willow and Pikka oil discoveries





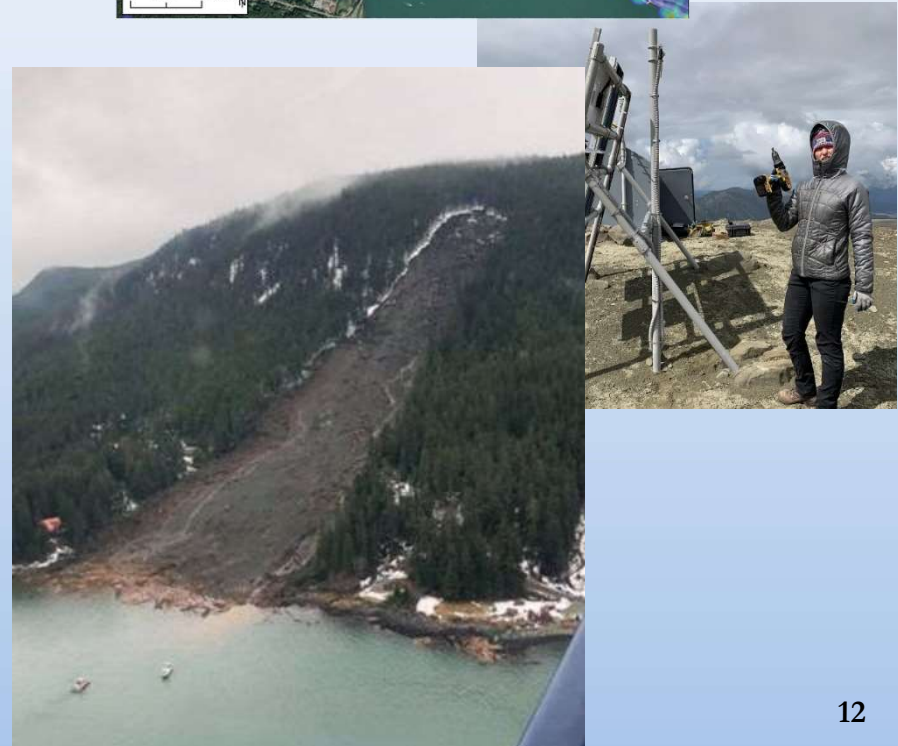
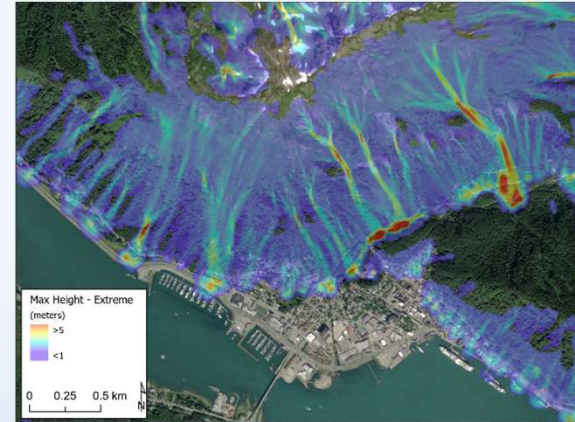
# GEOLOGICAL & GEOPHYSICAL SURVEYS

## Engineering Geology

- In collaboration with the NSB continue sand and gravel investigations in western NPRA to assist community development projects
- Community coastal hazards mapping along the Arctic coast
- Initiate a new, federally-funded, project to boost resilience in communities facing flood and erosion hazards along western coastlines
- Development of a statewide arsenic-in-groundwater database
- Establish a collaborative landslide hazards program with the USGS
- Publish the first regional avalanche hazard maps for southeast and south-central Alaska

## Volcanology

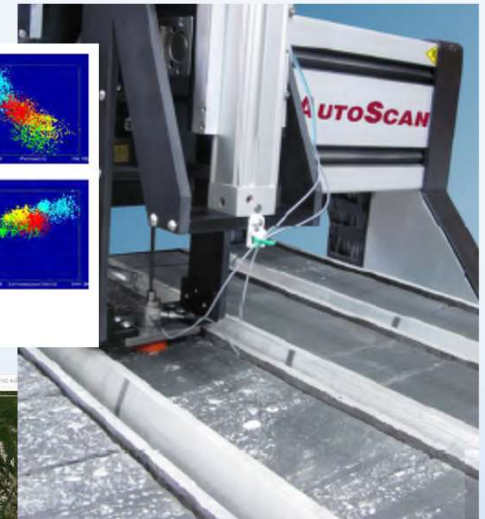
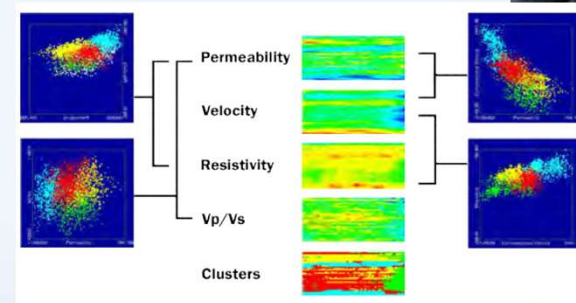
- Upgrading volcano monitoring instruments from analog to digital (Aleutians, AK Pen, & Cook Inlet)



# GEOLOGICAL & GEOPHYSICAL SURVEYS

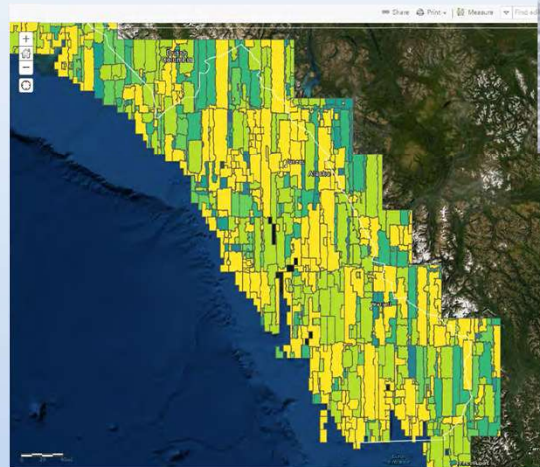
## GMC

- Curation of donated critical mineral cores
- Begin scanning and photographing the states oil and gas cores at the GMC
- Utilize GMC revenues to support increased activity at the GMC to reflect increased use



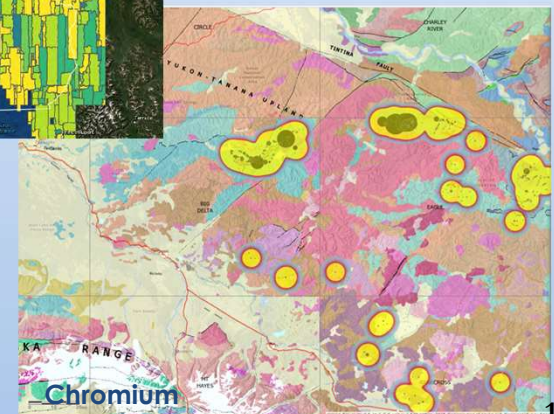
## Geospatial Information Office

- Develop and make available to the SEOC GIS datasets necessary to respond to natural disasters
- Deployment and operation of satellite imagery distribution service



## Geologic Information Center

- New web service for new and existing stream sediment analyses
- Continue to improve GIS data sharing across all levels of government ([gis.data.alaska.gov](http://gis.data.alaska.gov))



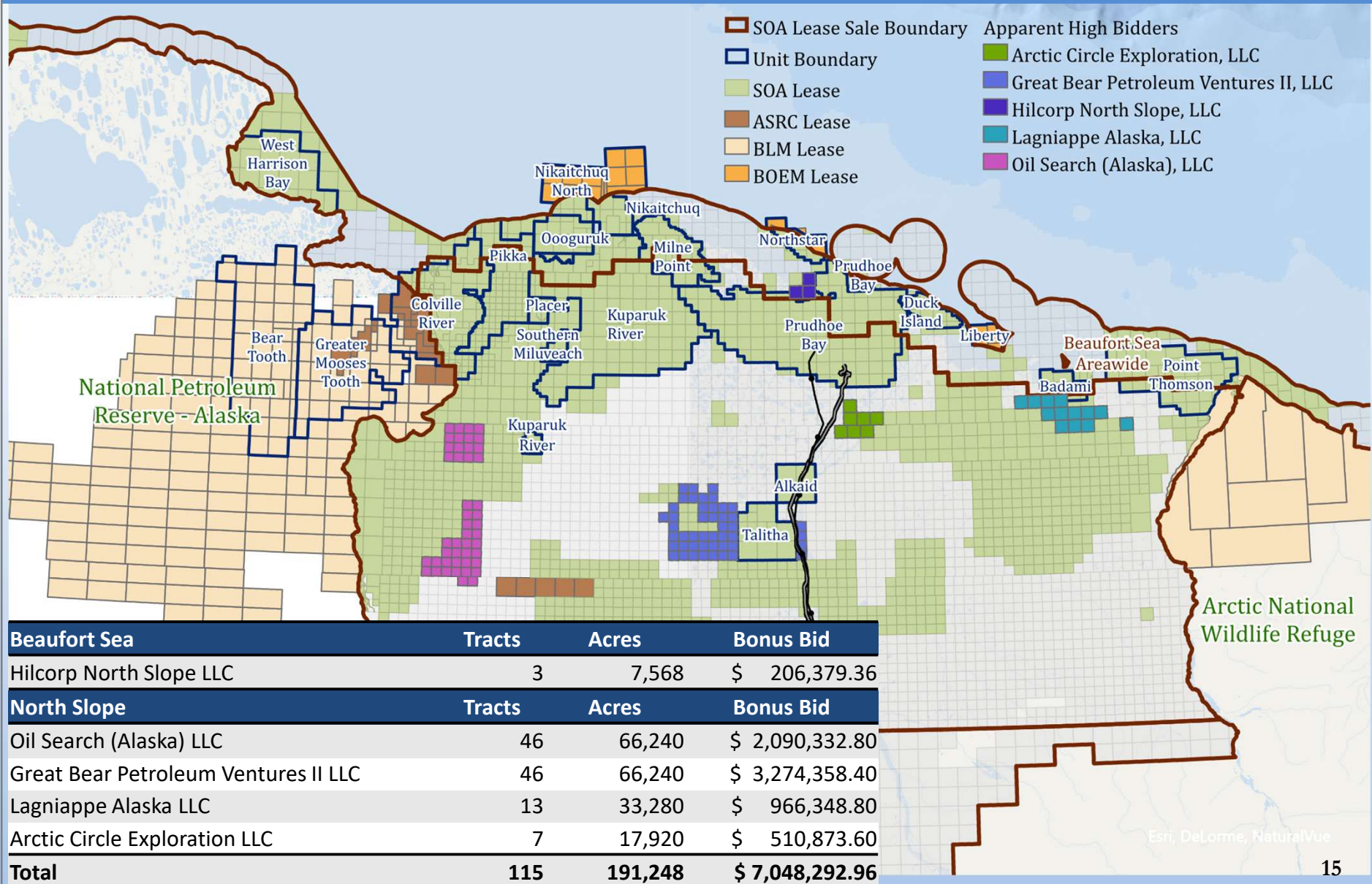


# QUESTIONS?

## THANK YOU!



# LEASE SALE RESULTS





# PROJECTS ON THE HORIZON

## North Slope Oil and Gas Activity

State of Alaska, Department of Natural Resources, Division of Oil and Gas, as of December 31, 2020

