ALASKA’S OIL & GAS INDUSTRY
Overview & Activity Update
Commonwealth North

Presented by:
Mark Wiggin, Deputy Commissioner
Alaska Department of Natural Resources
June 9, 2017
Cross disciplinary team:
- Scientists
- Engineers
- Land managers
- Economists

Manages 24.7 million acres of world class resources:
- Beaufort Sea
- North Slope
- North Slope Foothills
- Cook Inlet
- Alaska Peninsula

Over 4 million acres under lease
OVERVIEW

- Cook Inlet and Frontier Basins:
  - Resources and Reserves
  - Current Activity & New Developments
  - Leasing Activity or Exploration Licensing & Lease Conversion
**SOUTHERN LEASE SALES**

- Spring 2016:
  No bids received
COOK INLET RESOURCE & RESERVES
OVERVIEW

- Undiscovered, Technically Recoverable Oil & Gas (USGS, 2011):
  - mean conventional oil 599 MMBO
  - mean conventional gas 13.7 TCF
  - mean unconventional gas 5.3 TCF

- Natural Gas Reserves (ADNR 2015)
  - 1.18 TCF (Proved + Probable)

- 1.2 TCF additional mean resource assessed in OCS waters (BOEM, 2011)
**COOK INLET**  
**CURRENT ACTIVITY & NEW DEVELOPMENTS**

- **Conoco Phillips**  
  - Sale of Gas Plant  
  - Transferred North Cook Inlet Unit to Hilcorp

- **Furie Operating Alaska**  
  - Kitchen Lights Unit:

- **BlueCrest Energy, Inc.**  
  - Cosmo Unit: Restarted production March 2016; plans to drill up to 3 wells

- **Cook Inlet Energy**  
  - Continued production from North Fork, Redoubt, and West McArthur River Units
COOK INLET
CURRENT ACTIVITY & NEW DEVELOPMENTS

- Hilcorp Alaska, LLC:
  - 13 State managed units in Cook Inlet
  - Cannery Loop Unit:
    - Completed 1 workover in 2016, plan 1 workover and one sidetrack in 2017
  - Deep Creek Unit:
    - Stratigraphic test wells planned for 2017
  - Granite Point Unit:
    - Plan 3 side tracks
  - Ninilchik Unit:
    - Drilled two new gas wells in 2016 and plan 1 additional in 2017
  - Trading Bay Unit:
    - 11 workover jobs and 4 sidetracks in 2016, 4 more sidetracks and 3 new wells in 2017
New Exploration & Development Wells Drilled 2010-2014
- 24 Exploratory Wells and Well Branches
- 65 Development & Service Wells and Well Branches

2D & 3D Seismic Data Acquired (Tax Credit Data) 2004-2014
- Line Miles 2D (onshore/offshore) ~ 725
- Square Miles 3D (onshore/offshore) ~ 660
COOK INLET
RECENTLY ISSUED SEISMIC PERMITS

- **Global South Kenai 2D**
  - Requested 50 linear miles

- **SAE Shadura 3D and 2D**
  - Requested 16 square miles
  - Requested 42 linear miles

- **SAE Lower Cook Inlet 3D Marine (2015)**
  - Requested 547.8 square miles

- **SAE Upper Cook Inlet 3D (2015)**
  - Requested 821 square miles
WHO’S WORKING COOK INLET?

- **Mid-Sized Independents:**
  - Hilcorp Alaska, LLC

- **Small Independents & LLCs:**
  - AIX Energy LLC
  - Aurora Exploration, LLC
  - BlueCrest Energy Inc.
  - CIRI Production Company
  - Chugach Electric Association
  - Cook Inlet Energy LLC
  - Cornucopia Oil & Gas Company LLC
  - Corsair Oil & Gas Company LLC
  - Furie Operating Alaska LLC
  - Municipality of Anchorage dba Municipal Light and Power
  - NordAq Energy LLC
  - Taylor Minerals LLC
  - Woodstone Resources, LLC
FRONTIER BASINS TAX CREDIT AREAS

- Kotzebue/Selawik Basin
- Yukon Flats & Nenana Basins
- Yukon River Delta
- Copper River Basin
- Alaska Peninsula

Map showing locations such as Chukchi Sea, Norton, Minchumina, Holitna, Cook Inlet, Anchorage, Kodiak Shelf, Gulf of Alaska, and Bering Sea.
### Statewide Resource Assessments

**- Undiscovered, Technically Recoverable Resource -**

<table>
<thead>
<tr>
<th>Region</th>
<th>Mean Oil Estimate (Million Barrels)</th>
<th>Mean Gas Estimate (Billion Cubic Feet)</th>
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<tbody>
<tr>
<td>Interior Basins (only partially assessed)</td>
<td>234</td>
<td>5,641</td>
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<tr>
<td>Upper Cook Inlet</td>
<td>599</td>
<td>19,037</td>
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<tr>
<td>Other Southern Alaska</td>
<td>2,859</td>
<td>23,458</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td><strong>2.8 BBO</strong></td>
<td><strong>48.1 TCF</strong></td>
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- Includes Yukon Flats and Kandik basins (Nenana, Kotzebue, Copper River, Holitna, & Susitna basins not assessed)
- Mainly federal OCS waters, minor AK Peninsula onshore
EXPLORATION LICENSE PROGRAM

- DNR accepts proposals for exploration activity outside existing leasing areas (April)
- Supplemental to the state's oil and gas leasing efforts
- Encourages exploration outside of known oil & gas provinces
- DNR may request proposals to explore a designated area (encourages competition)
- Applicant have up to 90 days to submit proposal
- Three exploration licenses have been converted to lease: Susitna II, Copper River, & Nenana
WHO’S WORKING THE FRONTIER BASINS?

- **Ahtna**
  - Copper River Basin, Tolsona Exploration License:
    - Reprocessed 2D seismic data & acquired new Tolsona 2D seismic in spring 2014
    - Plan to drill Tolsona #1 gas exploration well in early 2016; follow up to the Ahtna #1-19 well drilled in 2007-2009 (Rutter & Wilbanks)

- **Doyon**
  - Nenana Basin:
    - Drilled Nunivak #1 and #2 exploratory wells, 2009-2013
    - Acquired 2D and 3D seismic, gravity, magnetics, and lakebed geochemical surveys, 2005 - 2014
    - Converted exploration license to leases between 2013 & 2014
    - Additional 2D/3D seismic completed
    - Toghotthele #1 drilled in 2016
    - Application to drill Tokchakket No. 1 well winter 2018
WHO’S WORKING THE FRONTIER BASINS?

- **Doyon**
  - Yukon Flats Basin:
    - Acquired 2D seismic, gravity, magnetics, and lakebed geochemical surveys

- **NANA**
  - Kotzebue Basin:
    - Evaluating and marketing prospects based on legacy industry seismic

- **Usibelli Coal Mine Inc.**
  - Healy Basin Gas-Only Exploration License:
    - Drilled one well in 2014
FRONTIER BASINS WELLS DRILLED & SEISMIC ACQUIRED

- **New Exploration Wells Drilled 2004-2014**
  - 7 Exploratory Wells and Well Branches

- **2D & 3D Seismic Data Acquired (Tax Credit Data) 2004-2014**
  - Line Miles 2D (onshore) ~ 1,220
  - Square Miles 3D (onshore) ~ 340