NORTH SLOPE OVERVIEW

Senator Giessel Working Group Presentation

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Alaska Division of Oil and Gas
NORTH SLOPE OVERVIEW

- Resources and Reserves
- Current Activity & New Developments
- Who’s Working the North Slope?
- Leasing Activity Trends
- Exploration Incentives & Tax Credit Applications
- Data Submitted Under Credit Programs
NORTH SLOPE RESOURCES OVERVIEW

Red Area – Gas Accumulations
Dark Green Area - Oil Accumulations

Black Dots - Exploration Wells
Red Outlines - State Areawide Lease Sale Boundaries.
Light Green Areas - Permanently Protected Federal Lands.
## Resources
Mean estimates of undiscovered, technically recoverable conventional resources in Arctic Alaska:

- ~40 billion barrels of oil
- ~207 trillion cubic feet of gas

### Table: Arctic Alaska

<table>
<thead>
<tr>
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<th>Mean Oil Estimate (Billions of Barrels)</th>
<th>Mean Gas Estimate (Billion Cubic Feet)</th>
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<tbody>
<tr>
<td>Onshore</td>
<td>15,908</td>
<td>98,960</td>
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<tr>
<td>Offshore</td>
<td>23,750</td>
<td>108,180</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td><strong>~40 BBO</strong></td>
<td><strong>~207 TCF</strong></td>
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Source: USGS 2014
Oil Reserves:

- The EIA carries ~ 2.9 billion barrels of proved oil reserves statewide in 2013.
- More than 2.8 billion barrels of this is estimated to be on the North Slope (~ 2% is in CI oil fields).

Gas Reserves:

- ~ 30 trillion cubic feet of associated gas estimated to be recoverable from producing or developing North Slope fields, mostly at Prudhoe Bay and Point Thomson. Without a pipeline, most of that gas is best described as contingent resource, not reserves.
CURRENT ACTIVITY & NEW DEVELOPMENTS

Operations Updates:

- **BP**
  - Prudhoe Bay Unit
    - 54 new wells (46 sidetracks & 8 new) in IPA

- **Caelus Natural Resources**
  - Oooguruk Unit
    - Upgrades to facilities
    - Plans for first Nuna Torok production in 2017

- **Conoco Phillips**
  - Kuparuk Unit
    - Increased oil production from 5.64 to 7.74 MBOP
    - Plans to drill 23 wells during 2015
    - Plans to drill 4 wells in West Sak PA
Operations Updates:

- **Conoco Phillips**
  - Colville River Unit
    - Expected first production from CD5 in late 2015

- **ExxonMobil**
  - Point Thomson Unit
    - Expected completion of Initial Production System in early 2016
    - Anticipated to produce 10,000 barrels of condensate per day with start-up in January 2016
    - Completed 12 inch, 22 mile liquid hydrocarbon pipeline from Point Thomson to Badami Field
CURRENT ACTIVITY & NEW DEVELOPMENTS

Operations Updates:

- **Hilcorp**
  - NorthStar Unit (Federal/State unit)
    - Returned 2 wells to production
  - Milne Point Unit
    - Plans to drill 14 wells 2015 – 2016

- **Repsol**
  - Pikka Unit formed
    - Drilled 3 exploration wells & sidetracked 1 in early 2015

- **ASRC**
  - Placer Unit
    - Expect first exploration well in 2016
WELLS DRILLED & SEISMIC ACQUIRED

- **New O&G Exploration & Development Wells Drilled 2004-2014**
  - 95 Exploratory Wells and Well Branches
  - 1741 Development & Service Wells and Well Branches

- **2D & 3D Seismic Data Acquired 2004-2014**
  - **North Slope:**
    - Line Miles 2D (onshore) = ~ 868.78
    - Square Miles 3D (onshore) = ~ 9946.56
  - **Outside of North Slope & Cook Inlet:**
    - Line Miles 2D (onshore) = ~ 1217.68
    - Square Miles 3D (onshore) = ~ 339.99
WHO’S WORKING NORTH SLOPE?

- **Large Majors:**
  - Anadarko Petroleum Corporation
  - BP Exploration, Inc.
  - Chevron USA, Inc.
  - ConocoPhillips Alaska
  - Exxon Mobil Corporation
  - Repsol E&P USA, Inc.
  - Shell Offshore, Inc.
WHO’S WORKING NORTH SLOPE?

- **Mid-Sized Independents:**
  - 70 & 148 LLC
  - Apache Alaska Corp
  - Caelus Natural Resources Alaska LLC
  - ENI Petroleum US LLC
  - Hilcorp Alaska, LLC
WHO’S WORKING NORTH SLOPE?

**Small Independents:**

- **Accumulate Energy Alaska, Inc.**
- Alaska, LLC
- Alaskan Crude Corp.
- ASRC Exploration LLC
- Aubris Resources, LP
- AVCG, LLC
- BG Alaska E&P, Inc.
- Brooks Range Development Corporation
- Burgundy Xploration LLC
- Caracol Petroleum LLC
- Chap-KDL, Ltd.
- Colt Alaska LLC
- Dewline Petroleum LLC
- Donkel Oil & Gas, LLC
- Eastland Property and Minerals
- GMT Exploration Company LLC
- Great Bear Petroleum Ventures
- MEP Alaska, LLC
- Mustang Operations Center 1, LLC
- NordAq Energy Inc.
- Pacific Lighting Gas Development
- Petro-Canada (Alaska) Inc.
- Petro-Hunt, LLC
- Pinta Real Development, LLC
- Rampart Alaska LLC
- Ramshorn Investments, Inc.
- Realeza Del Spear Limited Partnership
- Red Technology Alliance, LLC
- Renaissance Umiat, LLC
- Royale Energy
- Samson Offshore, LLC
- Savant Alaska, LLC
- Sunlight International Inc.
- Sun-West Oil & Gas, Inc.
- SWEPI Limited Partnership
- The Eastland Oil Company
- TP North Slope Development, LLC
- Transworld Oil & Gas Ltd.
- Ultrastar Exploration LLC
- URSA Major Holdings LLC
- Woodbine Petroleum, Inc.
- Woodstone Resources, LLC
LEASING ACTIVITY TRENDS

NORTH SLOPE FOOTHILLS AREAWIDE LEASE SALE RESULTS:
NUMBER OF TRACTS THAT RECEIVED BIDS

- **2001:** 156
- **2002:** 193
- **2003:** 4
- **2004:** 14
- **2009:** 2

- **2003:** only 1 tract received 1 bid.
- **2004:** 4 tracts received 1 bid each.
- **2009:** only 1 tract received 1 bid.
**Leasing Activity Trends**

**Beaufort Sea Areawide Lease Sale Results:**

Number of tracts that received bids

- # of tracts with single bids
- # of tracts with multiple bids

**2013:** only 2 tracts received 1 bid each.
LEASING ACTIVITY TRENDS

NORTH SLOPE AREAWIDE LEASE SALE RESULTS:
NUMBER OF TRACTS THAT RECEIVED BIDS

- # of tracts with single bids
- # of tracts with multiple bids

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<td>26</td>
<td>9</td>
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<td>28</td>
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<td>11</td>
<td>11</td>
<td>140</td>
<td>78</td>
<td>88</td>
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NORTH SLOPE AREAWIDE LEASE SALE
EXPLORATION INCENTIVES & TAX CREDIT APPLICATIONS – DNR

- **Credits**  AS 43.55.023(a)(2); AS 43.55.023(I)(2); AS 43.55.025

- Data submittal 30 days after completion of seismic or geophysical data processing, completion of well drilling or filing of a claim for credit, whichever is latest

- **Well Data**
  - Released 24 months after filing

- **Seismic or Other Geophysical Data**
  - Released 10 years after filing
AS 43.55.023 & AS 43.55.025 EXPLORATION PROJECTS

This reflects number of projects, many of which may have multiple applications in a given year.
AS 43.55.023 & AS 43.55.025 EXPLORATION PROJECTS NORTH SLOPE DATA RECEIVED IN EXCESS OF DOG LEASE AND PERMIT REQUIREMENTS
AS 43.55.023 & AS 43.55.025 EXPLORATION PROJECTS
NORTH SLOPE - LINE MILES ACQUIRED

Number of Line Miles

Year Work Began


0 0 393.481 170.429 304.866 0 0 0 0 0 0
AS 43.55.023 & AS 43.55.025 EXPLORATION PROJECTS
NORTH SLOPE - SQUARE MILES ACQUIRED

Number of Square Miles

Year Work Began

0 280.029 1081.638 4603.091 1844.619 565.074 435.44 768.342
ACQUISITION COST OF SEISMIC DATA

AS 43.55.023 & AS 43.55.025 EXPLORATION PROJECTS NORTH SLOPE
ESTIMATED ACQUISITION COST OF SEISMIC CREDIT DATA

Year Work Began  | Estimated Acquisition Cost
--- | ---
2004 | $0
2005 | $49,005,075
2006 | $333,017,725
2007 | $844,451,275
2008 | $376,159,875
2009 | $0
2010 | $0
2011 | $0
2012 | $98,887,950
2013 | $76,202,000
2014 | $134,459,850
Questions?
THANK YOU!

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