Doyon Oil & Gas Exploration

Nenana Basin, Alaska

Senate Oil and Gas Exploration Tax Credit Working Group

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DOYON

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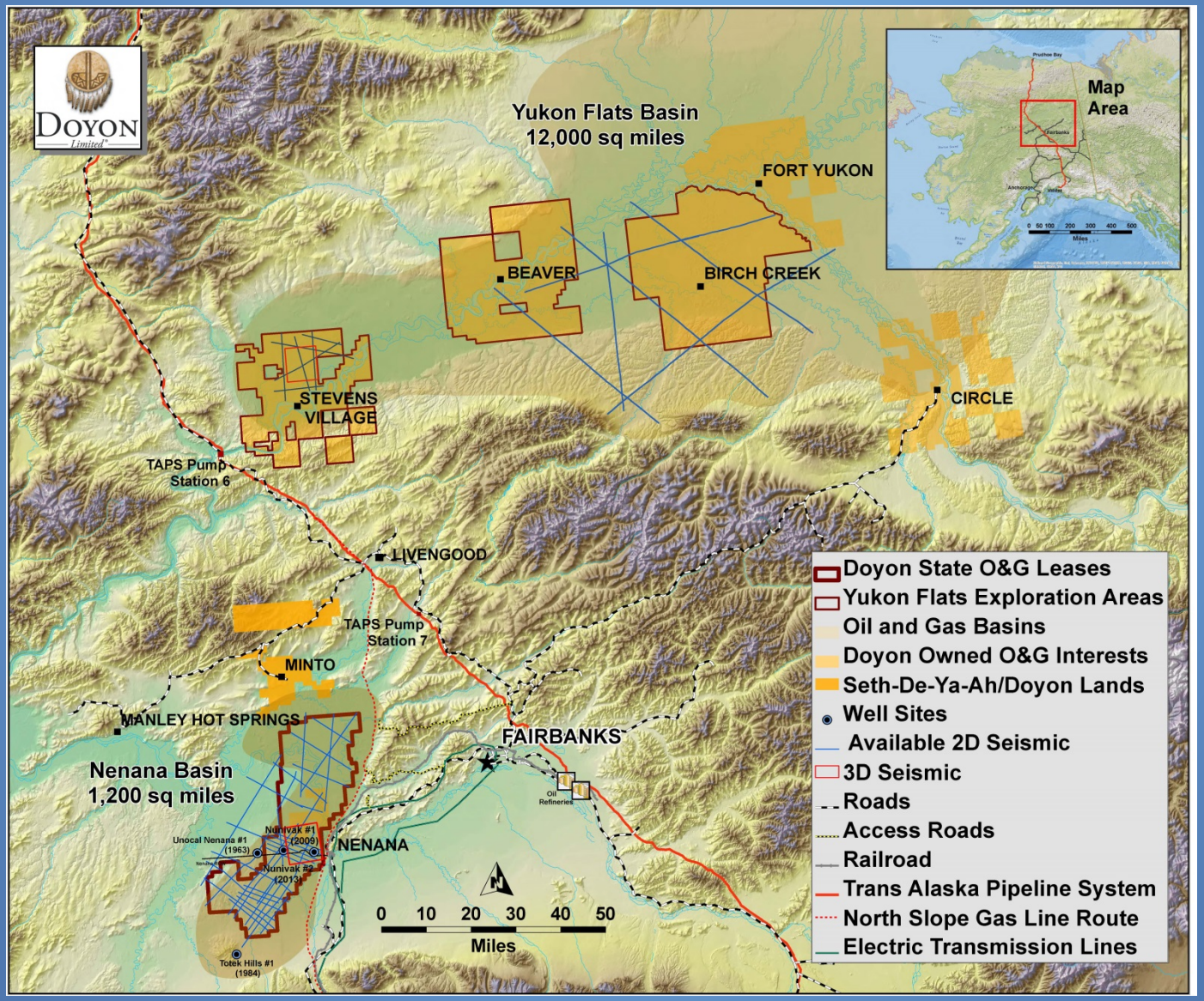
General Discussion Topics

- Advanced state of Doyon's frontier exploration efforts at Nenana for <u>both</u> oil and gas, including new drilling and seismic in 2016
- Success case goals, including
  - Oil into TAPS
  - Early shipper into AKLNG line
  - Pipeline gas to Fairbanks
- Critical role of State exploration credits to our efforts

Nenana/Minto and Yukon Flats Basins

Very Similar Geologically



Early Exploration History

- Prior efforts by
  - Exxon and Amoco (Yukon Flats) 1980s
  - Shell (Nenana) 1980s
  - ARCO Alaska (Nenana) 1980s
  - Union (Nenana) 1960s
- Seismic, shallow drilling (Nenana only), other studies
- <u>All focused on oil</u>
- Most heritage data licensed for use by Doyon

Doyon Nenana Basin Land Tenure

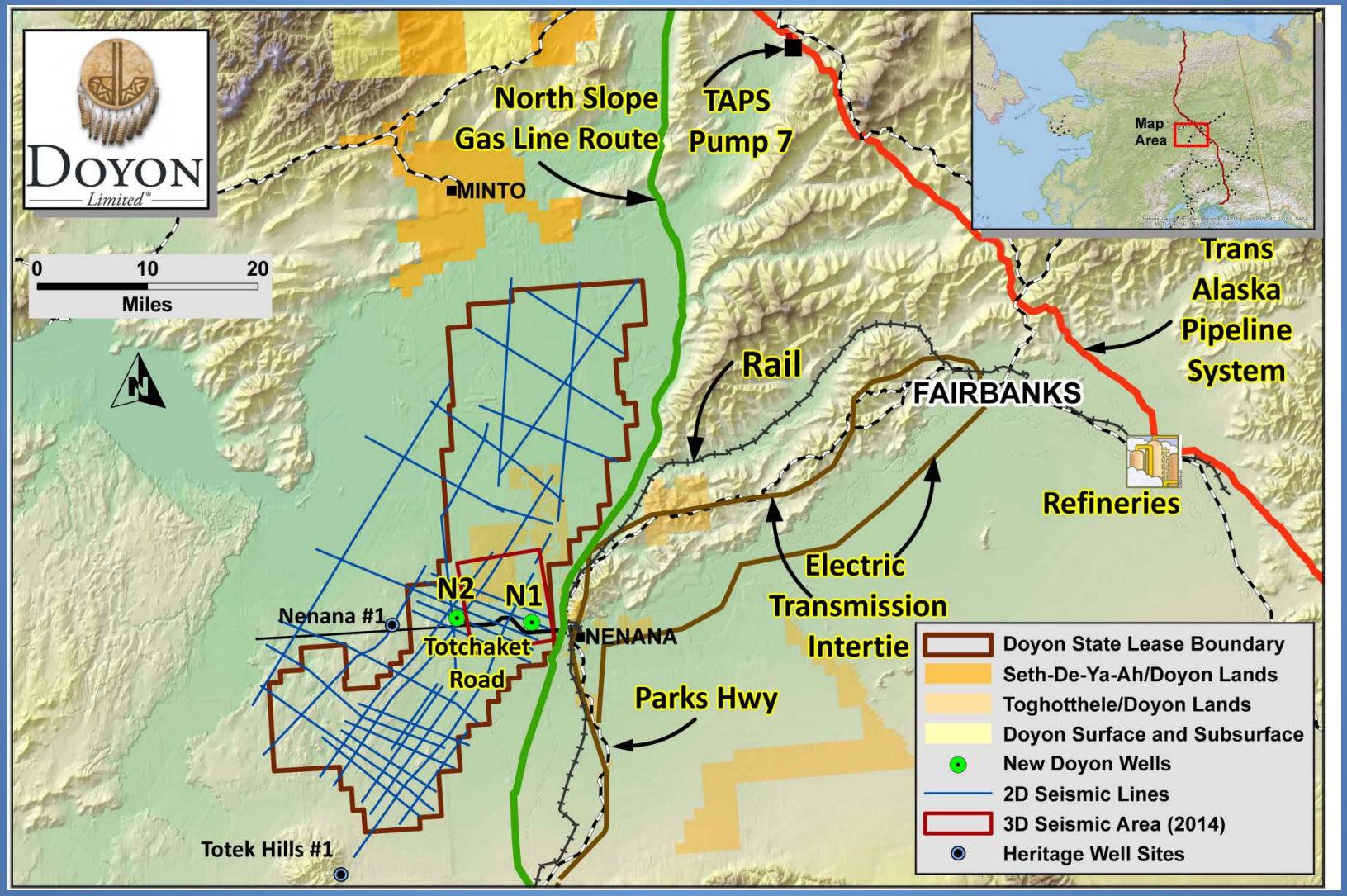
- 400,000 acres+ of State oil and gas leases
  - Primary terms expire end of 2019-2021
  - We pay $1.2 million/year in rentals to State
- 43,000 acres of Doyon ANCSA subsurface ownership near Nenana
- 9,500 acre Mental Health Trust lands lease
- *Contrast*—over 1.5 million acres of Doyon owned oil and gas interests in 3 sub basins in Yukon Flats

Recent Doyon Efforts-Nenana/Minto

- **Drilling and 2D seismic programs (2005-2013)**
  - **<u>Demonstrated active hydrocarbon system</u>**
    - Thick sections of “wet” gas through drill bit in 2013
  - **<u>Multiple TCF gas and billion barrel oil potential</u>**
    - Basin-wide modeling
  - Constructed new public ROW access
    - All weather road benefitting local forestry, agriculture and recreation
- **3D seismic fall 2014**
  - 2+ drill prospects in 52 square mile block
    - Only 30,000 acres out of 450,000 acres of promise in basin
    - Repeatable throughout basin

Nenana/Minto Basin Area

Plus Regional Infrastructure



Current Assessment and Plans

- **Significantly de-risked basin via Doyon efforts**
  - 1 in 2 chance of commercial gas discovery next well
  - 1 in 4 chance for oil
- **Doyon Board sanctioned new well in central basin 3D area for summer 2016**
  - Success estimates in one of four targets in 3D area
    - Oil: Mean case of 70 million bbls of oil recoverable
    - Gas: Mean case of 200 Bcf of gas recoverable
- **New 2D seismic sanctioned in northern deep-winter 2016**
  - Better define areas of interest from 2012 seismic

Doyon Strategic Objectives

- Establish a new industry in Interior Alaska
- Create new markets and profits for Doyon companies and others—oil and/or gas
  - Help grow current significant Doyon presence in oil field support industry
- Provide new opportunities for local businesses, including nearby village corporations
- Increase shareholder and other local hire and training opportunities
- Broaden local and state tax bases

Nenana/Minto Oil Discovery Goals

- **Delivery to TAPS—North Pole or Pump 7**
  - Oil discovery drives current exploration
  - Modest start-up minimum economic field size (for Alaska) 15 million bbls to 50 million bbls, dependent on oil price and scale of development
  - Opportunities for at least several fields of this scale
  - Transport by truck, rail or feeder pipeline
- **Proof of concept for oil should trigger**
  - Ramped up exploration at Nenana and
  - Renewal of exploration in larger Yukon Flats basin

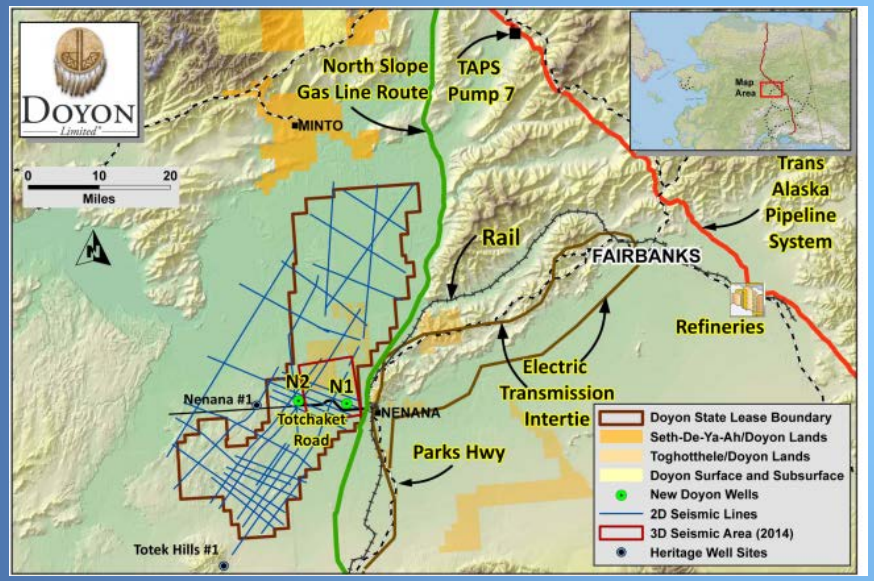
Nenana/Minto Gas Discovery Goals

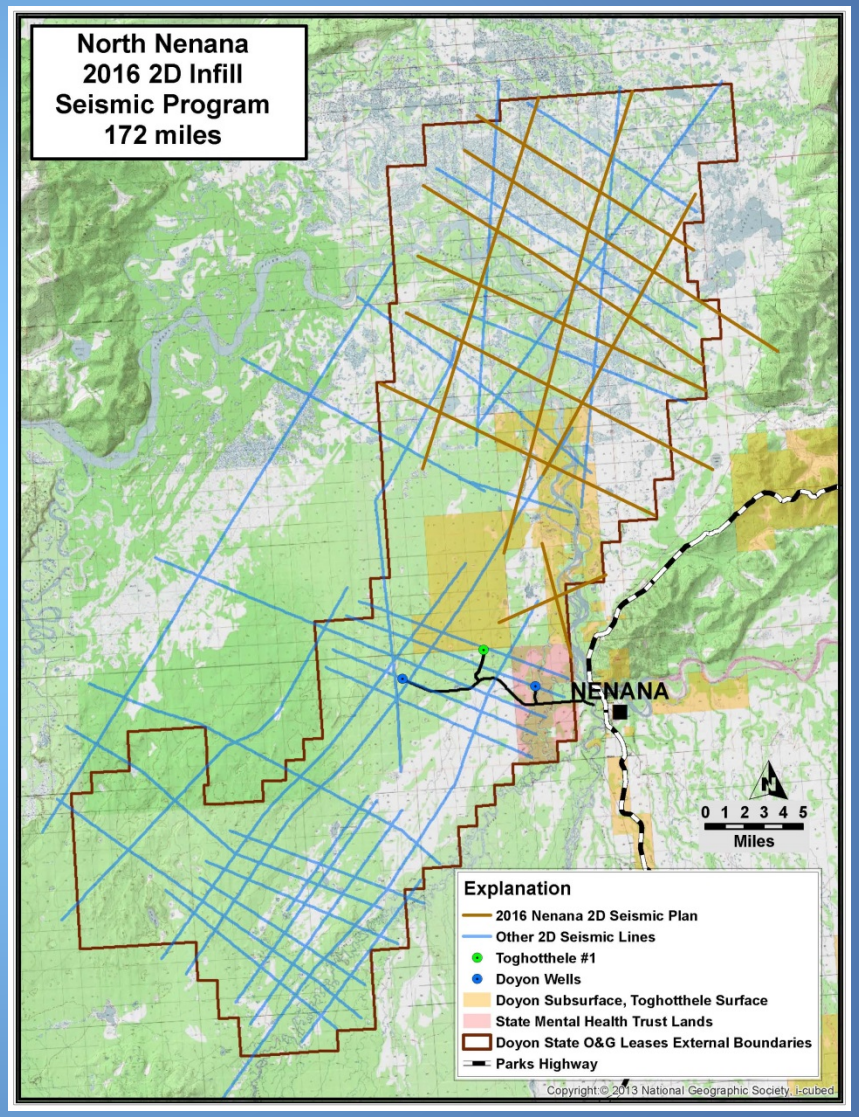
- **Deliver gas to AKLNG line as early shipper**
  - Route adjacent to Doyon leases
- **Long term propane supplier to rural communities in Interior Alaska**
  - Barge and truck from Nenana
- **Long term natural gas supplier to Fairbanks**

Exploration Seismic 2016

- **2D Seismic Survey Winter 2016**
  - Northern deep—partly in Minto Flats
    - Follow up on 2012 program in same area
    - Not connected to summer 2016 drilling in central basin
  - Up to 172 line miles; helicopter supported
  - Permitting and seismic contractor selected
    - SAExploration
  - Objective: identify areas that are drill targets in 2-3 years
    - Likely will need a 3D seismic survey in 2017 or 2018 before drilling in northern area

Winter 2016 2D Seismic

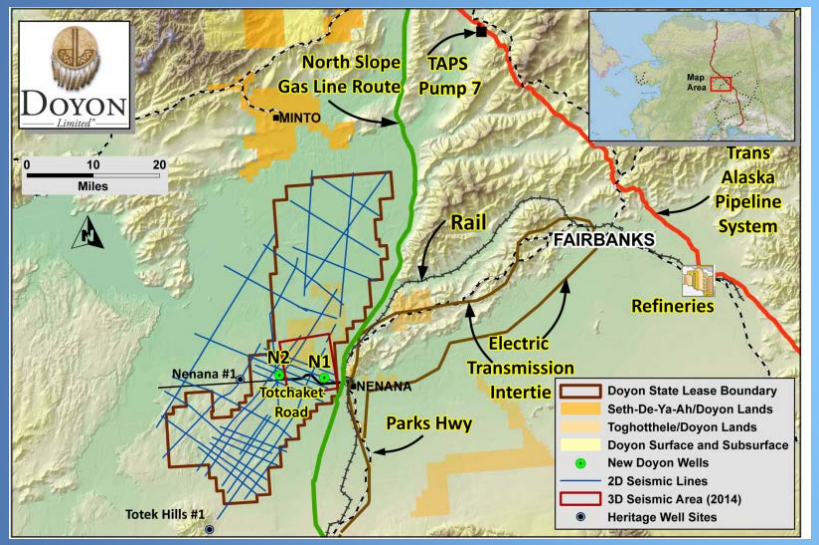


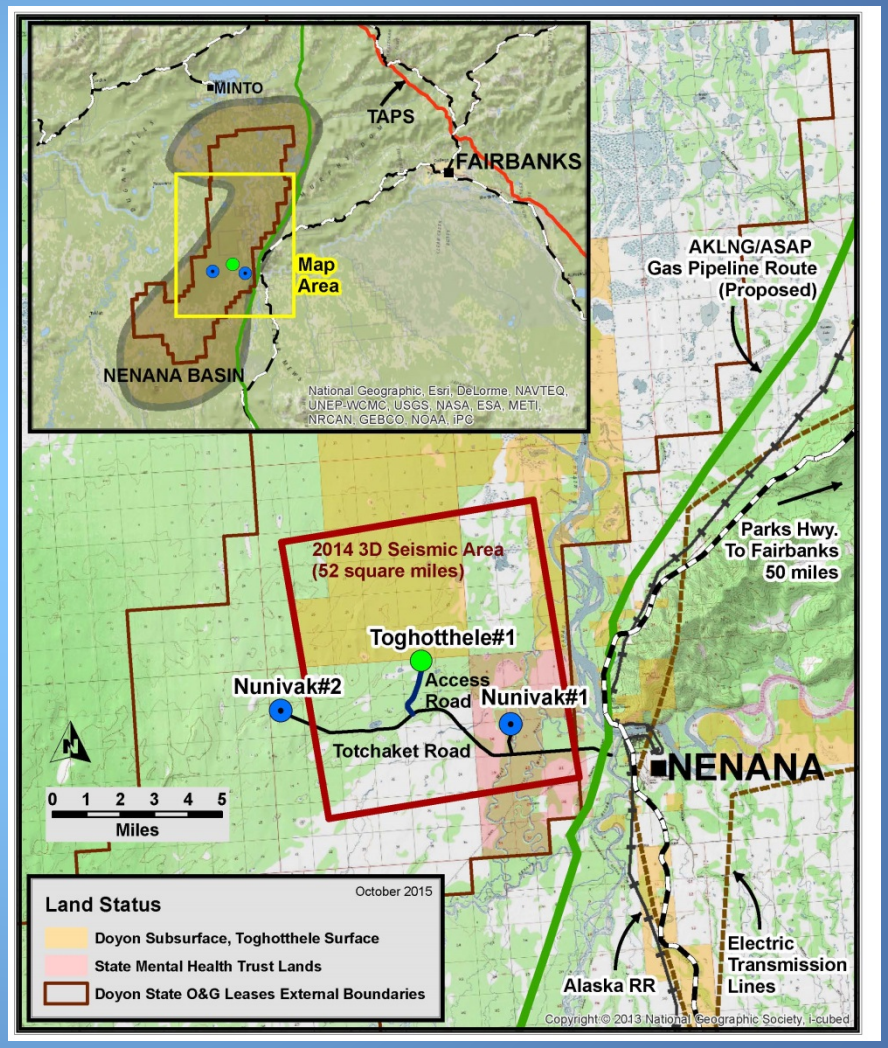


Exploration Drilling 2016

- **Drill in summer 2016**
  - Near Nenana and existing wells
    - About 2 miles off existing Totchaket road system
  - Winter road construction
  - 10,000 ft. vertical depth objective
  - Permitting and procurement underway
    - Doyon Drilling Arctic Fox
    - Multiple local contractors and service providers
  - Objective
    - Commercial quantities of conventional oil and gas

Summer 2016 Well





State Exploration Credits
Doyon Perspective

- Credits have been critical to Doyon's ongoing success
  - Will be key to upcoming drilling and seismic campaigns
- State is our "partner"
  - "investment" returns via royalties and production taxes
  - data share
- Local economic stimulus—companies and hire
- Credits generated in Interior are small compared to other parts of state
- Credits stay here and are re-invested here
- Uncertainty over future of credit programs chills new investor interest

Exploration Credits and Doyon

- Confusing array of applicable statutory provisions
- Some are "Middle Earth" specific which we don't use or only use in part
- For drilling, we now use the AS 43.55.023 suite of credits adding up to about 65% of allowed expenses
  - same credits used by Cook Inlet explorers
  - no sunset and money comes back much faster compared to other credits
- For seismic not in a unit (none at Nenana), we use a combination of
  - AS 43.55.025(a) exploration incentive credit (40%) which sunsets in 2022 plus
  - AS 43.55.023(b) carry forward loss (25%) which has no current sunset
  - Note: AS 43.55.025(a) exploration incentive credit sunsets for Middle Earth in 2022, all others in 2016
- We do not use "frontier" credits under AS 43.55.025(m) to drill
  - Middle Earth only
  - Theoretical 80% for drilling costs
  - Limited number of programs which sunset in June 2016

Doyon Credits Use Summary

- Nenana basin 2005-2014
  - 3 seismic surveys, 2 wells total, other geoscience, including:
    - 100% Doyon owned---1 well, 2 seismic surveys (2012-2015)
    - 60% Doyon owned---1 well (2009)
    - 30% Doyon owned---1 seismic survey (2005)
  - Doyon gross spend: $68MM
  - State credits: $43MM or 63% of Doyon expenses
- Nenana basin 2016
  - 1 seismic survey (winter) and 1 well (summer)
  - Estimated gross spend by Doyon at $30MM-$35MM
  - Estimated State credits at 63% is $19MM to $22MM
- **Doyon gross spend 2005-2016 (estimate)**
  - **$98MM-$103MM**
- **Doyon net spend 2005-2016 (net of tax credit rebates-estimate)**
  - **$36MM-$39MM**
- **State credits rebates to Doyon 2005-2016 (estimate)**
  - **$62MM-$65MM**
  - **Add perhaps another $5MM rebated to early co-venturers**

Local Hire and Local Vendors

- Over 30 local groups will provide services for our 2016 programs
- Over 150 people will be directly employed

- Examples of local vendors we use
  - Cruz Construction
  - Fairweather
  - Brice Construction
  - Olgoonik
  - OIT, Inc.
  - Toghotthele (Nenana village corporation)
  - Minto Development Corp. (village corp.)
  - Nenana Heating
  - Owl Ridge Natural Resource Consultants
  - Arctic Contracting (village corp. JV)
  - PenAir
  - Petrotechnical Resources Alaska
  - Peak Oilfield Services
  - Recon LLC
  - Pioneer Wells
  - Doyon Drilling
  - Doyon Universal Services
  - Doyon Remote Services
  - Wright Air
  - City of Nenana

Alaska's Investment Returns

- Simple royalty math if oil discovery in 2016 for Doyon mean case in a <u>single</u> trap:
  - 70MM bbls x $60/bbl x 12.5% = $525,000,000
- Plus production taxes, lease rentals, property taxes and possible gas royalties
- Repeatable opportunities throughout basin

Questions?

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