

Doyon Oil & Gas Exploration

Nenana Basin, Alaska

Senate Oil and Gas Exploration Tax Credit Working Group

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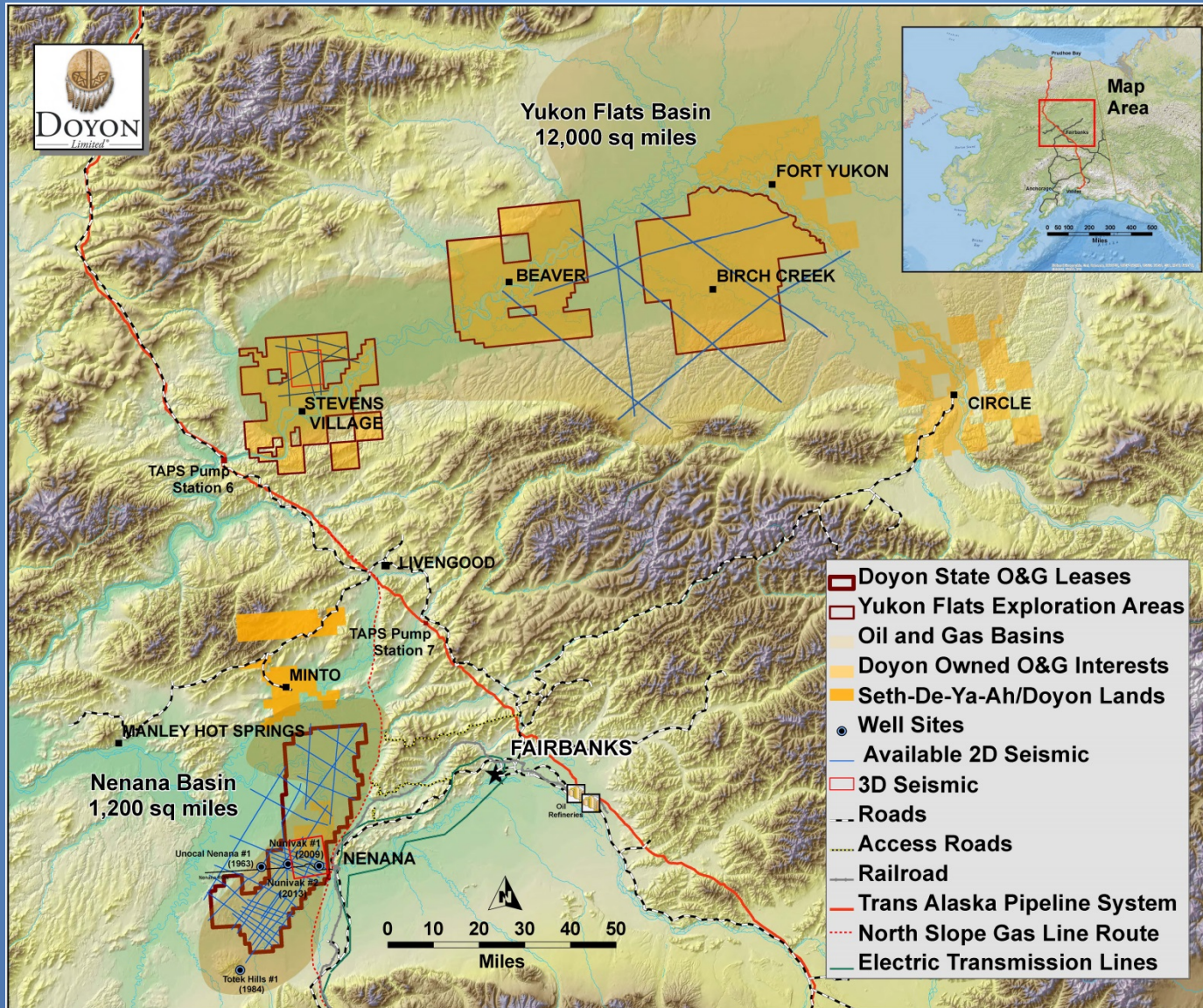


General Discussion Topics

- Advanced state of Doyon's frontier exploration efforts at Nenana for both 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
- All focused on oil
- Most heritage data licensed for use by Doyon

Doyon Nenana Basin Land Tenure

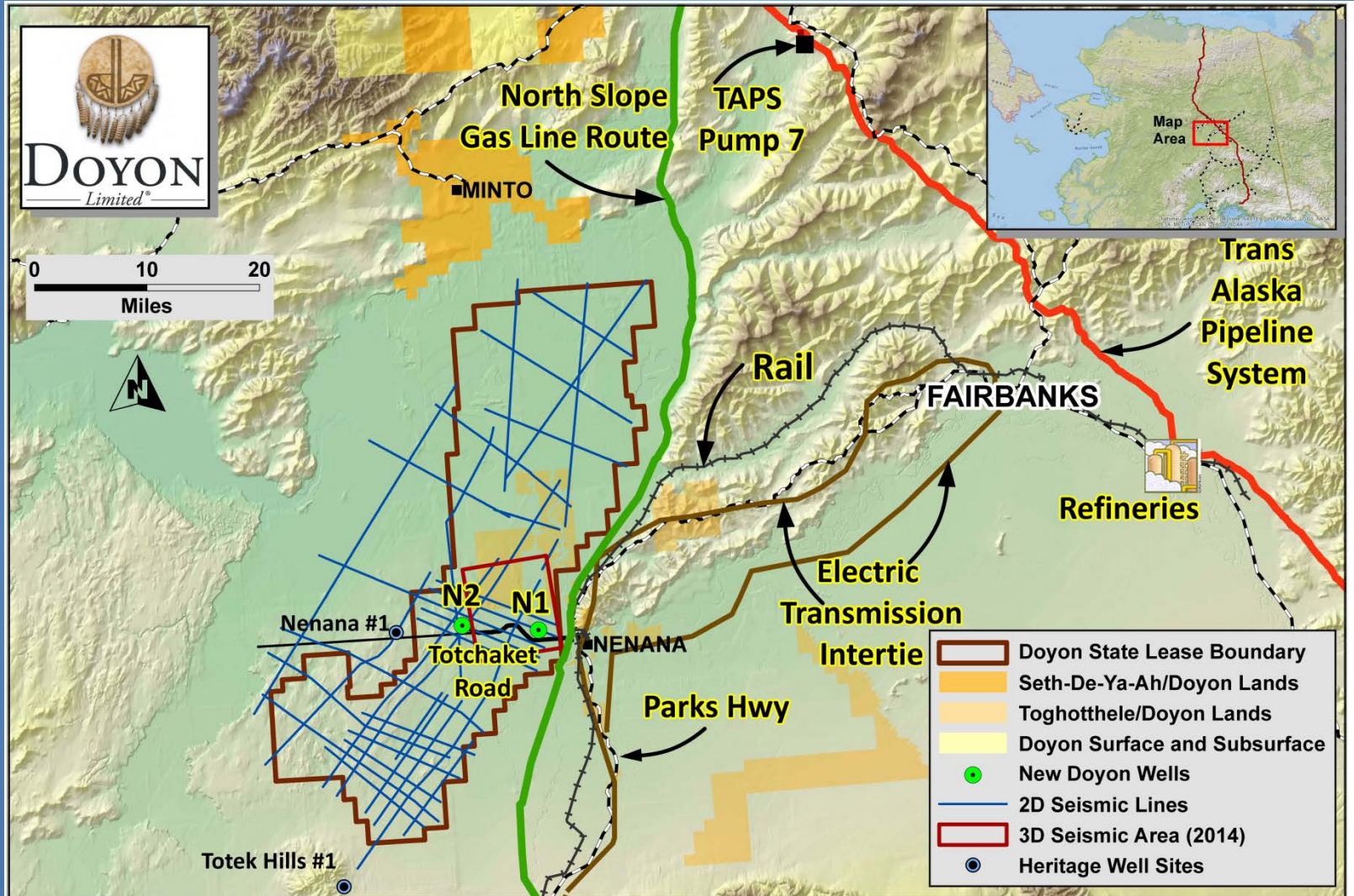
- 400,000 acres+ of State oil and gas leases
 - Primary terms expire end of 2019-2021
 - We pay \$1.2 million/year in rentals to State
- 43,000 acres of Doyon ANCSA subsurface ownership near Nenana
- 9,500 acre Mental Health Trust lands lease
- *Contrast*—over 1.5 million acres of Doyon owned oil and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

Recent Doyon Efforts-Nenana/Minto

- **Drilling and 2D seismic programs (2005-2013)**
 - **Demonstrated active hydrocarbon system**
 - Thick sections of “wet” gas through drill bit in 2013
 - **Multiple TCF gas and billion barrel oil potential**
 - 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

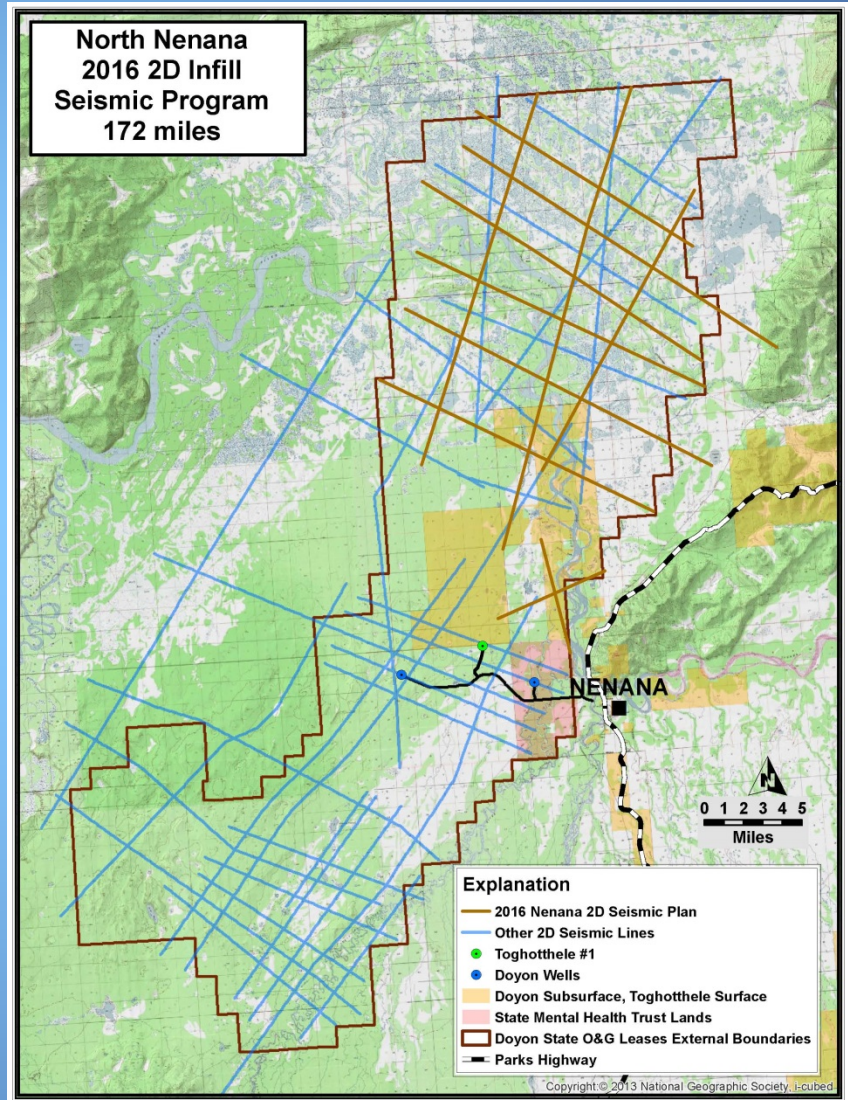
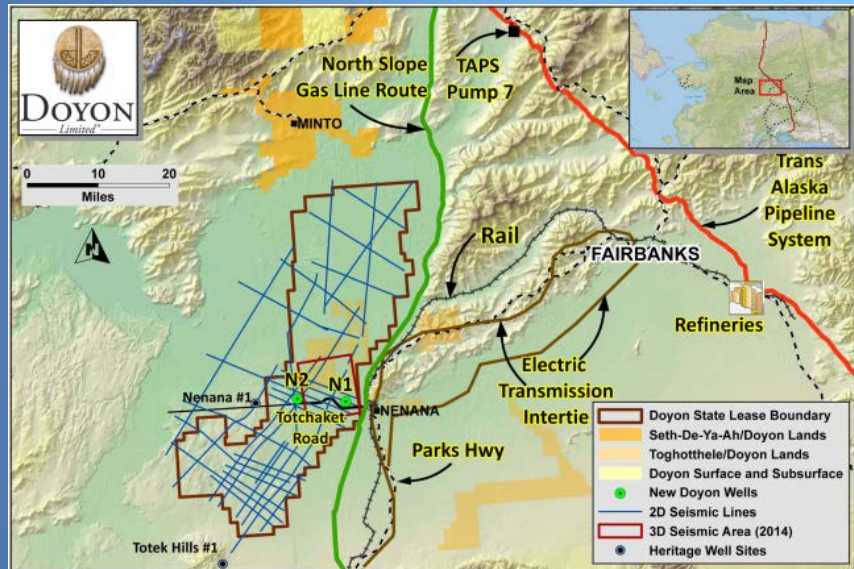
Nenana/Minto Gas Discovery Goals

- **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

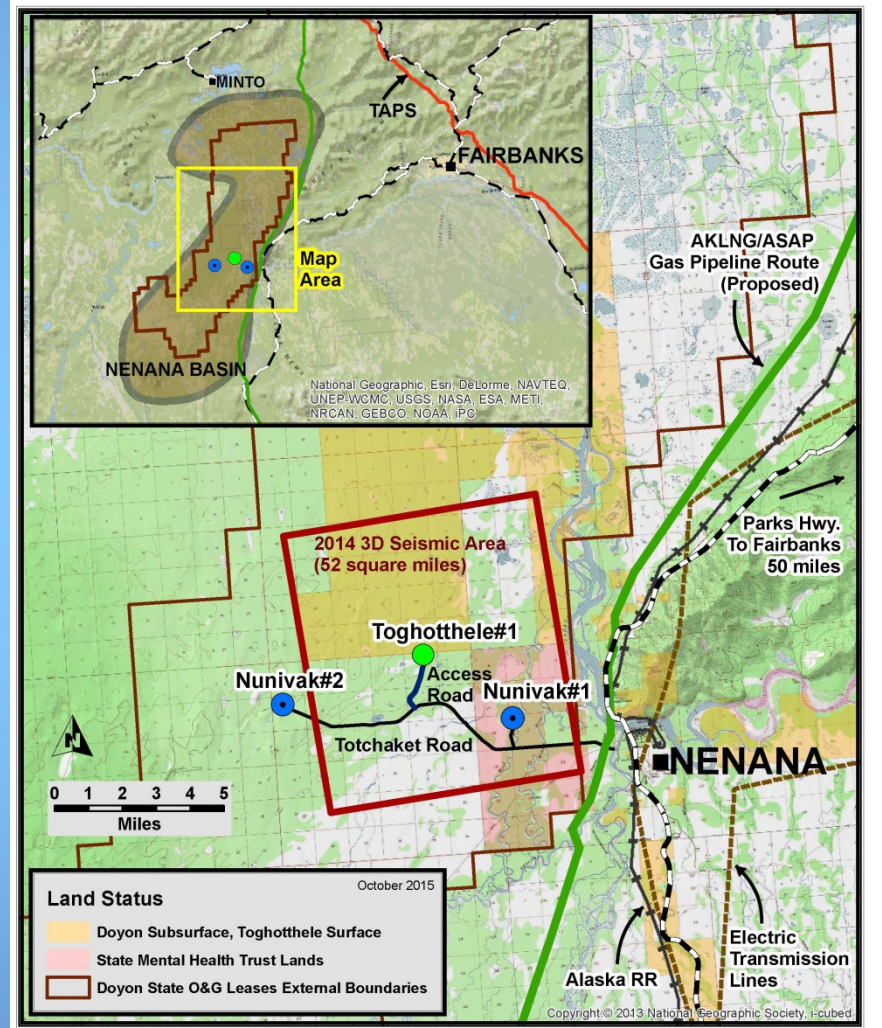
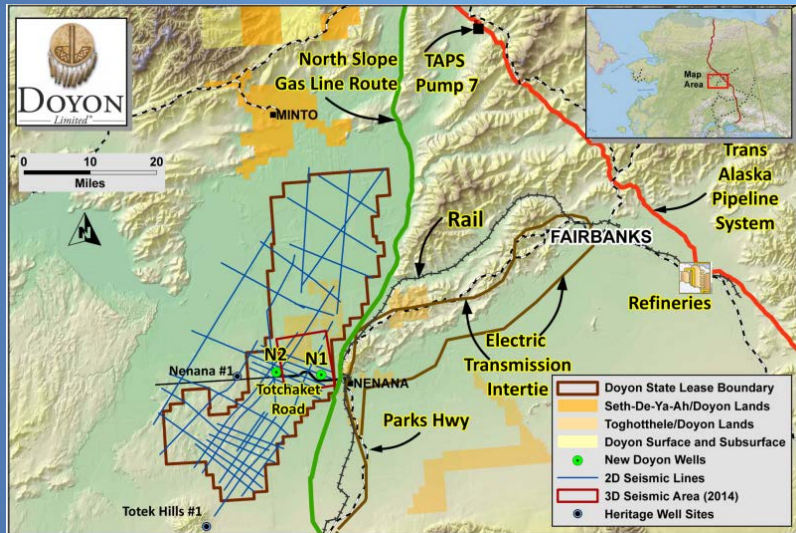
Winter 2016 2D Seismic



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 single trap:
 - $70\text{MM bbls} \times \$60/\text{bbl} \times 12.5\% = \$525,000,000$
- Plus production taxes, lease rentals, property taxes and possible gas royalties
- Repeatable opportunities throughout basin

Questions?

