

Nanushuk Development Project

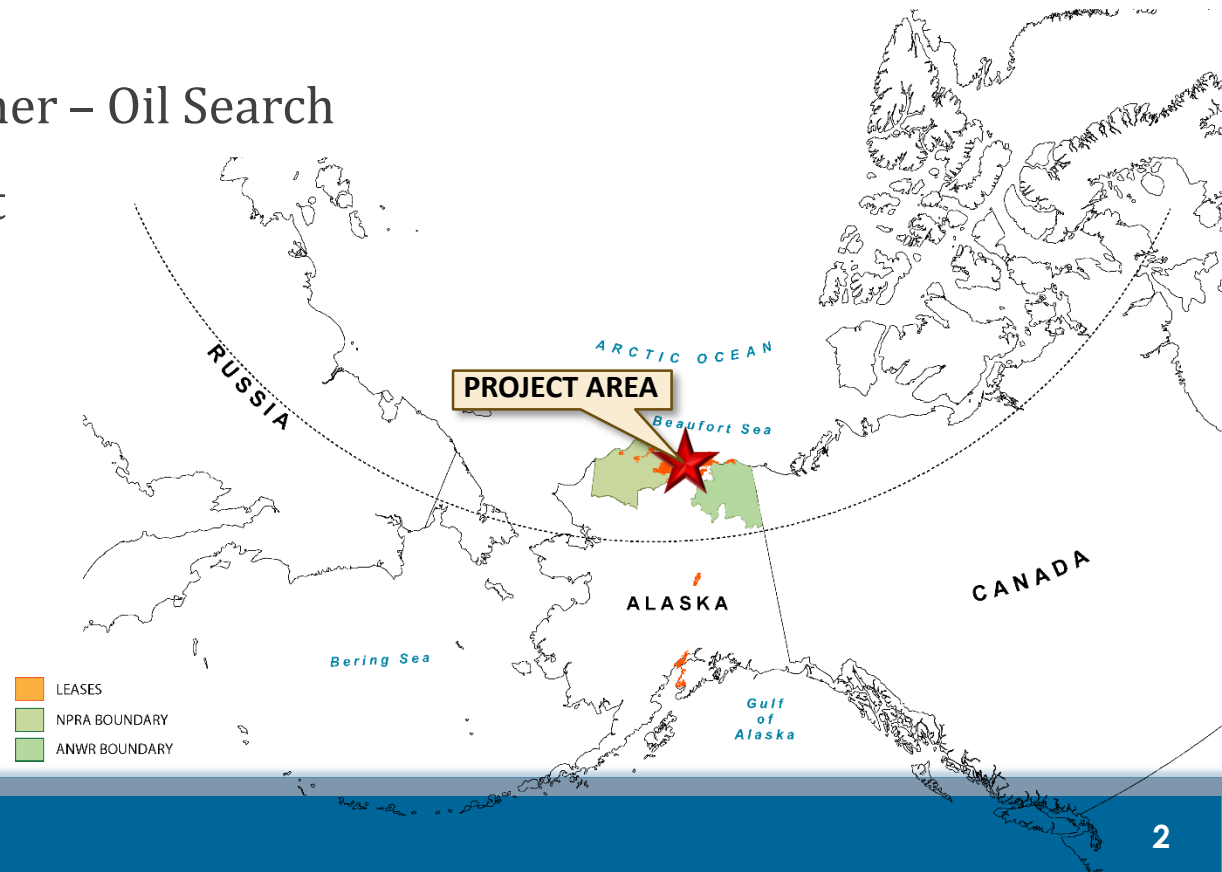
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Geologic Manager
Armstrong Energy, LLC

Resource Development Council 38th Annual
Alaska Resources Conference November 15, 2017

Introduction

- Armstrong Company
- History in Alaska
- Exploration Activity
- New Joint Venture Partner – Oil Search
- Nanushuk Development
- Benefits
- The Future

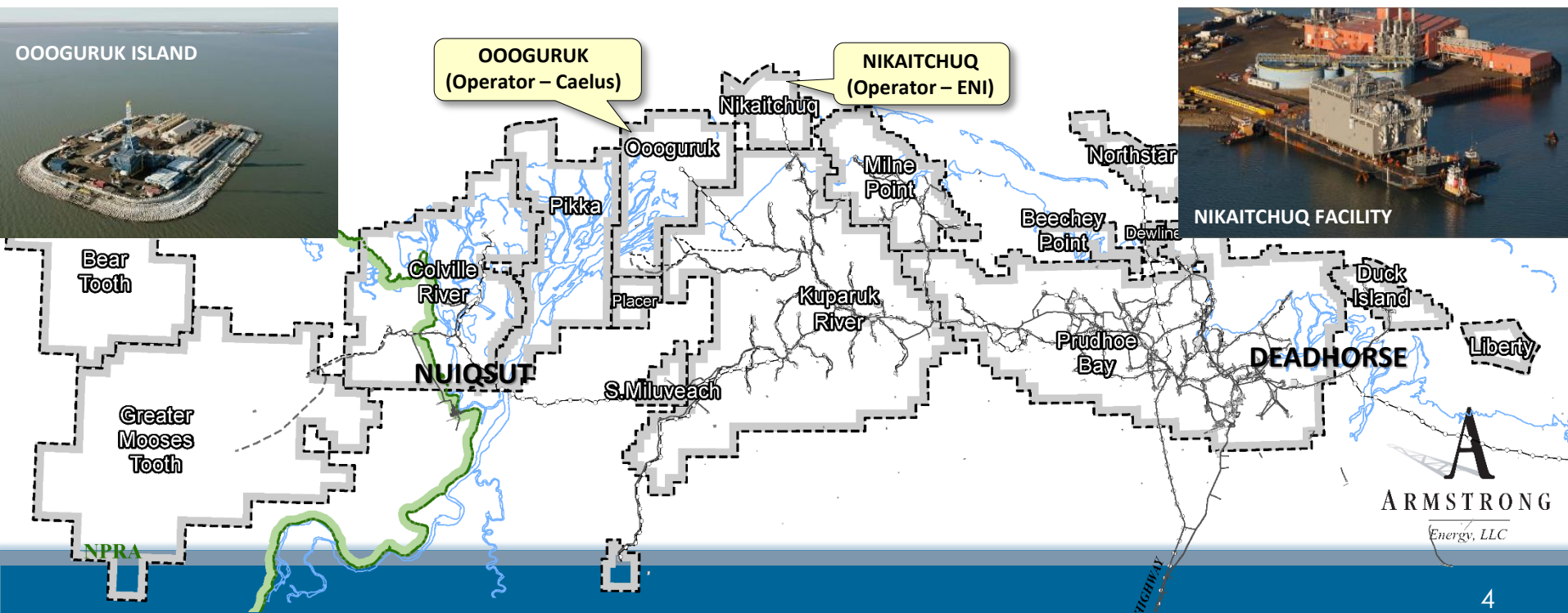


“Whenever you find yourself on the side of the majority, it is time to pause and reflect”

- Mark Twain

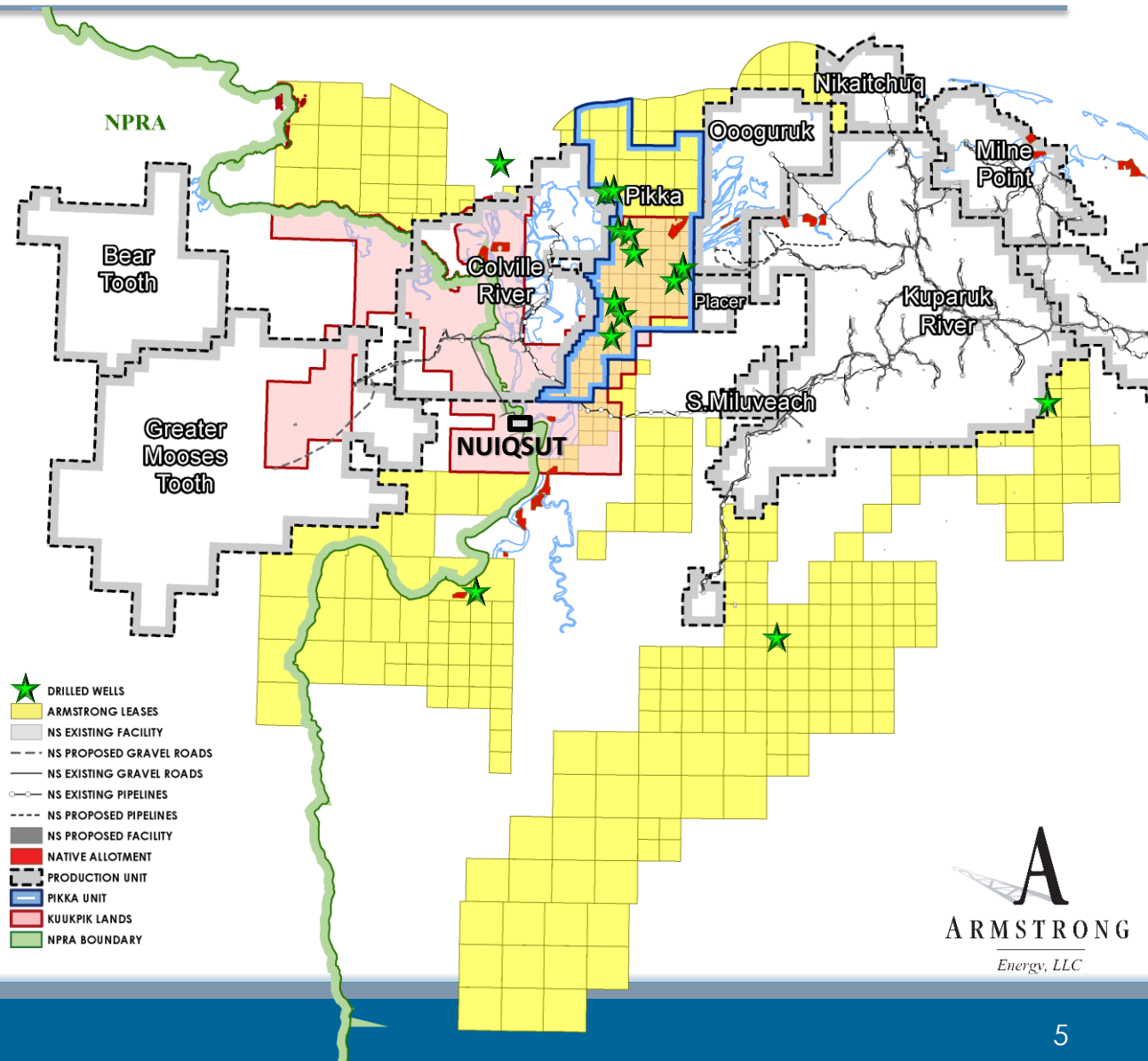
Armstrong Company: History

- Denver-based independent operator with satellite office in Anchorage
- Founded by Bill Armstrong in 1985
- Active in Alaska since 2001
- Originated Oooguruk and Nikaitchuq prospects
- Developed the North Fork gas field on the Kenai Peninsula in 2007
- Partnered in over 30 North Slope exploration wells



Armstrong Company: Current Joint Venture

- Started assembling acreage in 2008
- Partnered with Repsol in 2011
- 19 exploration wells
- Acquired three 3-D seismic surveys
- Currently holding approx. 715,000 gross acres
- Oil Search enters joint venture effective January 2018





- ◆ Established in Papua New Guinea in 1929
- ◆ ~1,250 employees
- ◆ World-class assets:
 - 29% interest in PNG LNG Project (ExxonMobil operator)
 - 23% interest in PRL15 Papua LNG Project (Total operator)
 - 38.5% in PRL 3 P'nyang (ExxonMobil operator)
 - 60% interest in all PNG's producing oil fields (OSH operator)
- ◆ 2016 net production: 30.2 MMBOE (~82,700 BOEPD)
- ◆ Market capitalization ~A\$11bn (~US\$8bn)
- ◆ Listed on ASX (Share Code: OSH)





SOCIAL RESPONSIBILITY AND MAINTAINING A STABLE OPERATING ENVIRONMENT

Long standing commitment to operating responsibly and to sustainable development in PNG, both directly and through Oil Search Foundation, with a focus on health, community, power, infrastructure, leadership and education and women’s empowerment



Oil Search Foundation



Community health and hospitals



Access to power



Leadership and education



Women’s protection and empowerment



Livelihood and local enterprise development



Supporting community organisations



Nationally significant infrastructure projects

Nanushuk Development: Lands

Kuukpik Corporation, Village of Nuiqsut

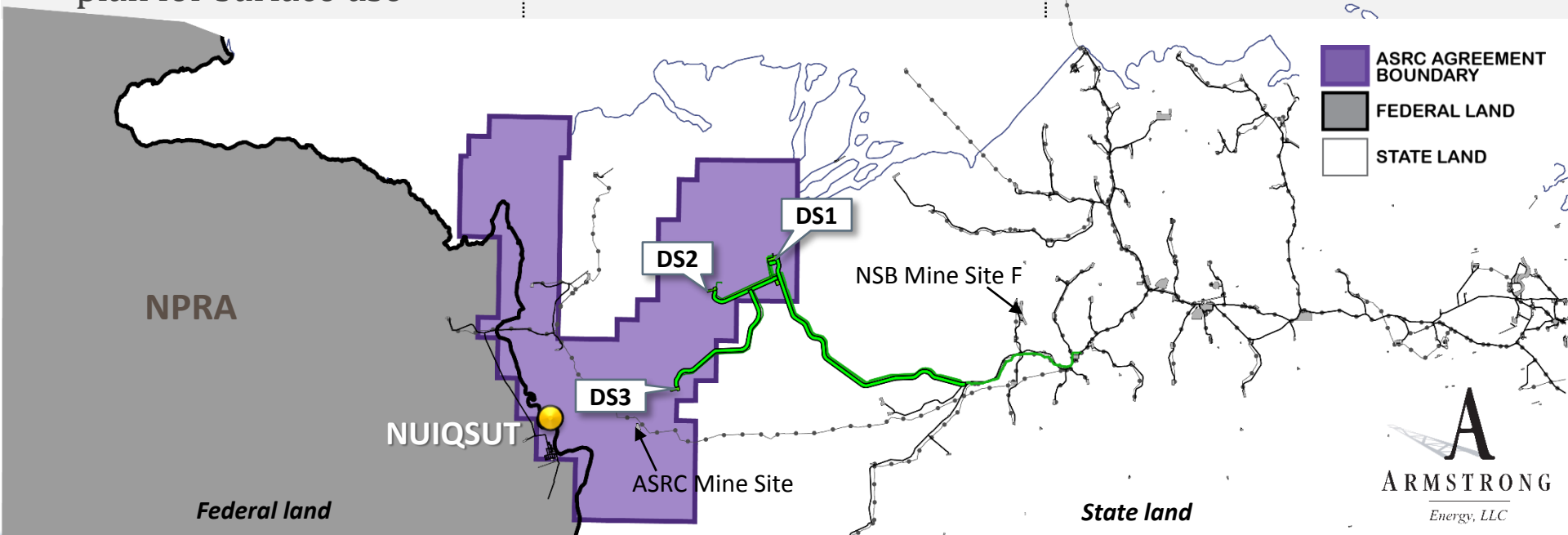
- Surface land owner
- Working closely to develop an equitable plan for surface use

State of Alaska

- Majority of surface lands crossed by Nanushuk pipeline and road
- Majority stake in mineral resources

Arctic Slope Regional Corporation

- Joint ownership of mineral resources



Nanushuk Development: Oil

- Nanushuk and Alpine C reservoirs
- 3 production pads, 146 wells
- Projected oil production rate: 120,000 BOPD
- 30° - 38° API gravity crude
- 750 MMBO of recoverable reserves
- First oil projected in 2023



Nanushuk Development: Benefits



COMMUNITY

- ❑ Sports, arts, traditional and cultural activities and celebrations
- ❑ STEM programs such as GeoForce and ANSEP

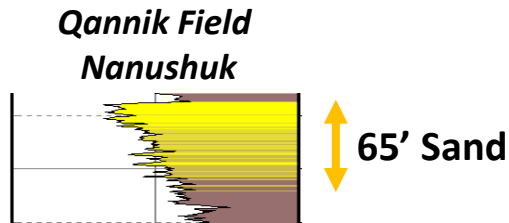
JOB

- ❑ Construction, drilling and operations
- ❑ Local hire / contracts

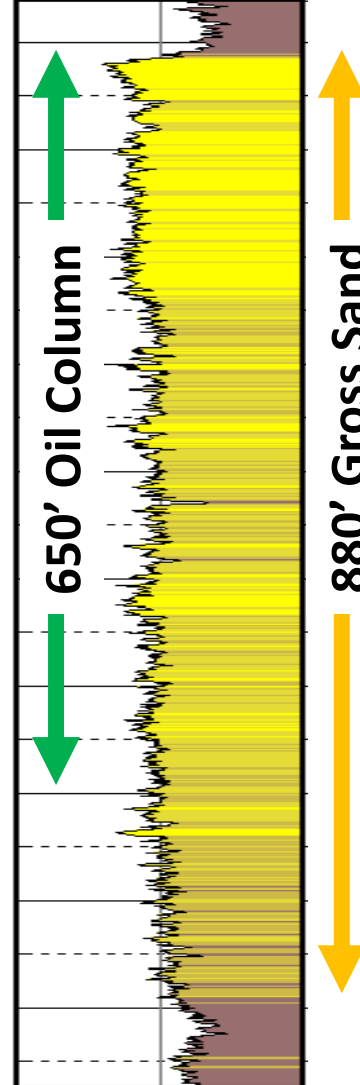
TAXES, REVENUES, FEES

- ❑ Corporate, income, property, regional taxes
- ❑ Royalties, rents and interest
- ❑ Fees

Pikka Nanushuk Discovery: A New Play Concept



**Pikka Nanushuk
2013 Discovery Well**



Pikka-Horseshoe Nanushuk Discovery

- Largest U.S. onshore oil discovery in 30 years
- 1.2 billion barrels of recoverable light oil
- 120,000 BOPD potential

- Repsol March 9, 2017 Press Release

Willow Nanushuk Discovery

- Recoverable resource > 300 MMBO
- 100,000 BOPD potential

- ConocoPhillips Jan 13, 2017 Press Release

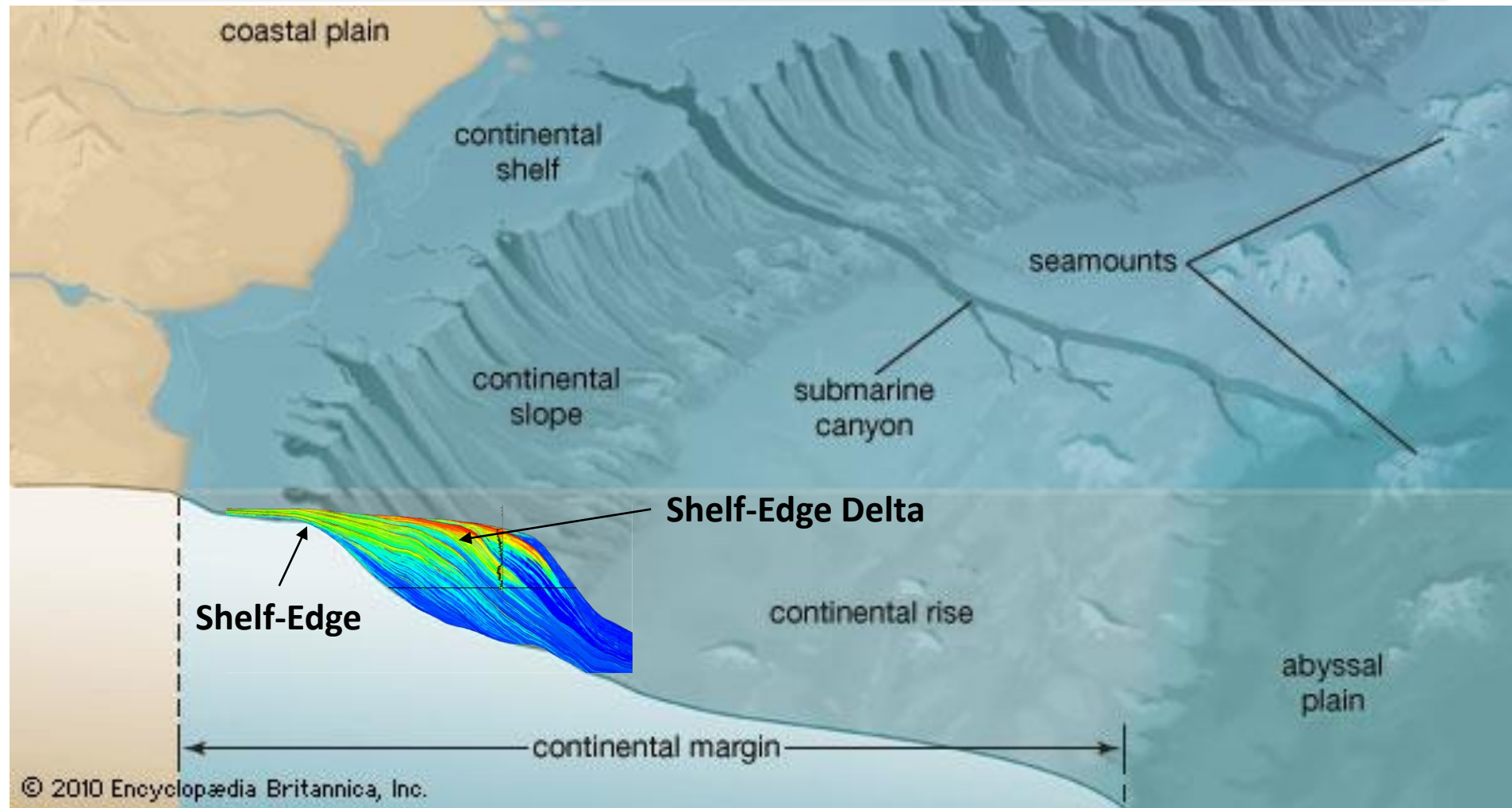
2010 USGS Resource Assessment for the NPRA:

Brookian Topset Play
(Nanushuk)

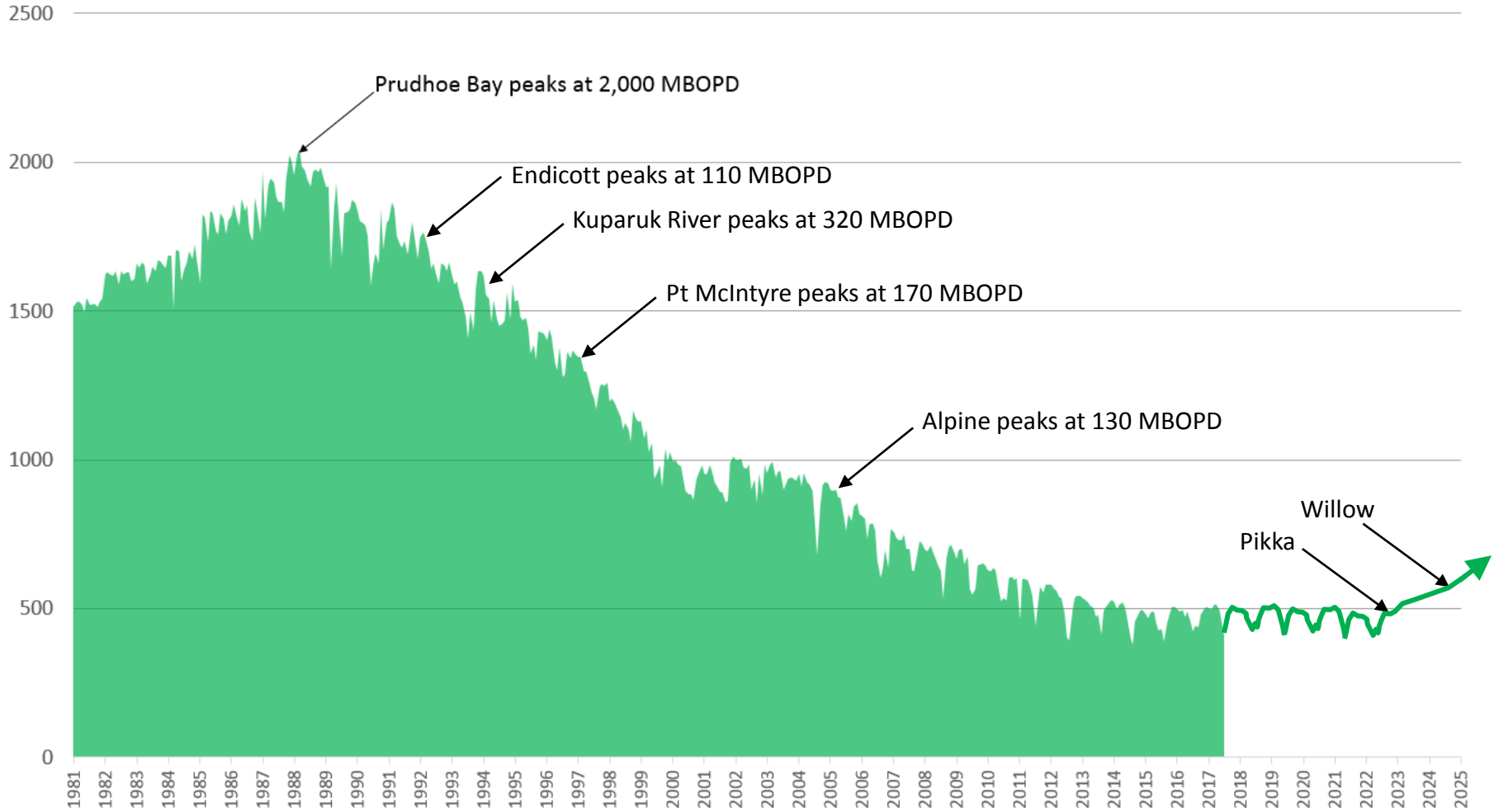
Recoverable Oil =
117 MMBO

What's Next?

New Play Type – Nanushuk Shelf-Edge Delta



North Slope Oil Production (MBOPD)



THANK YOU

