



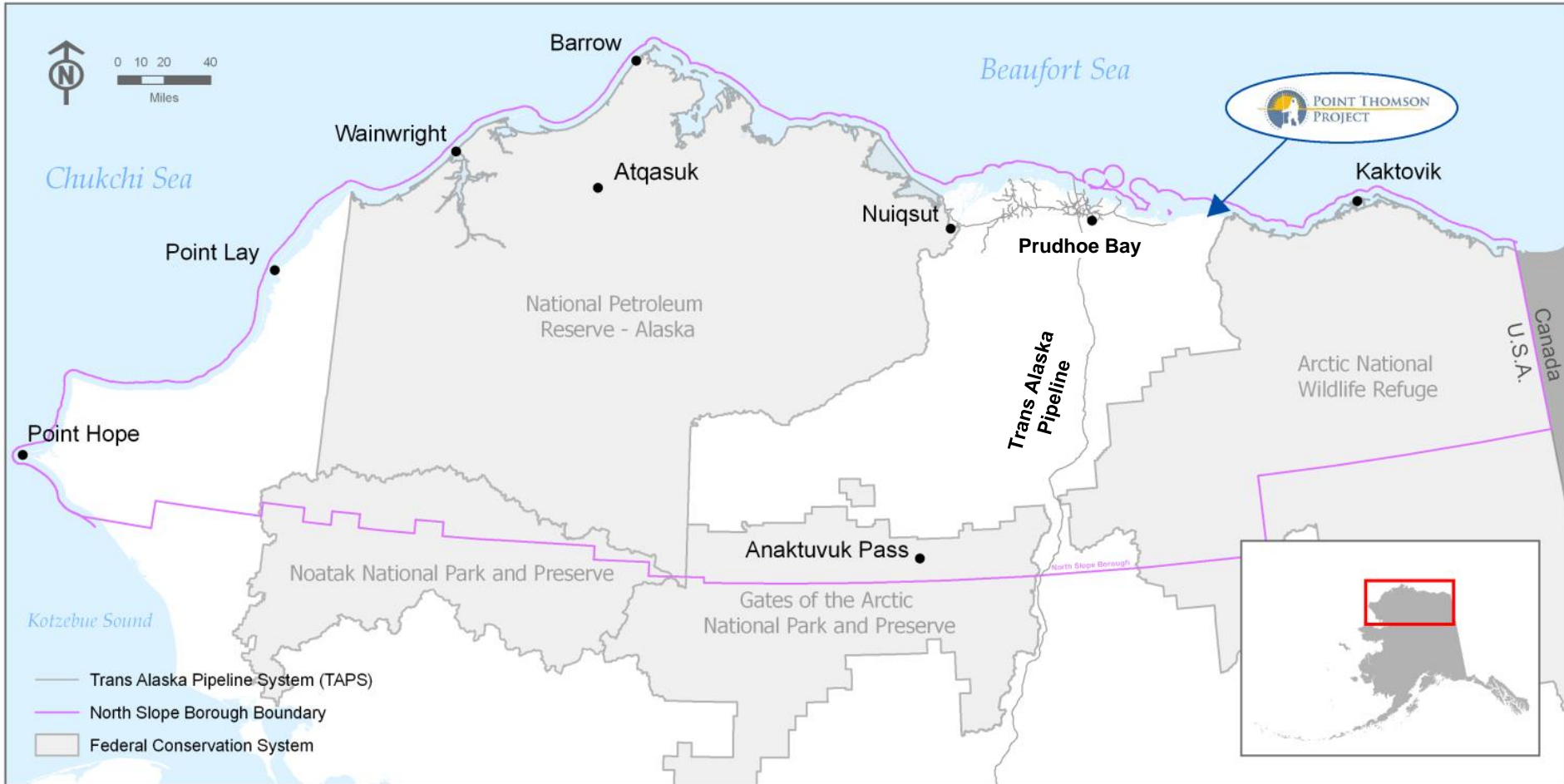
POINT THOMSON  
PROJECT

# Ecosystem Management on Alaska's Arctic Coast

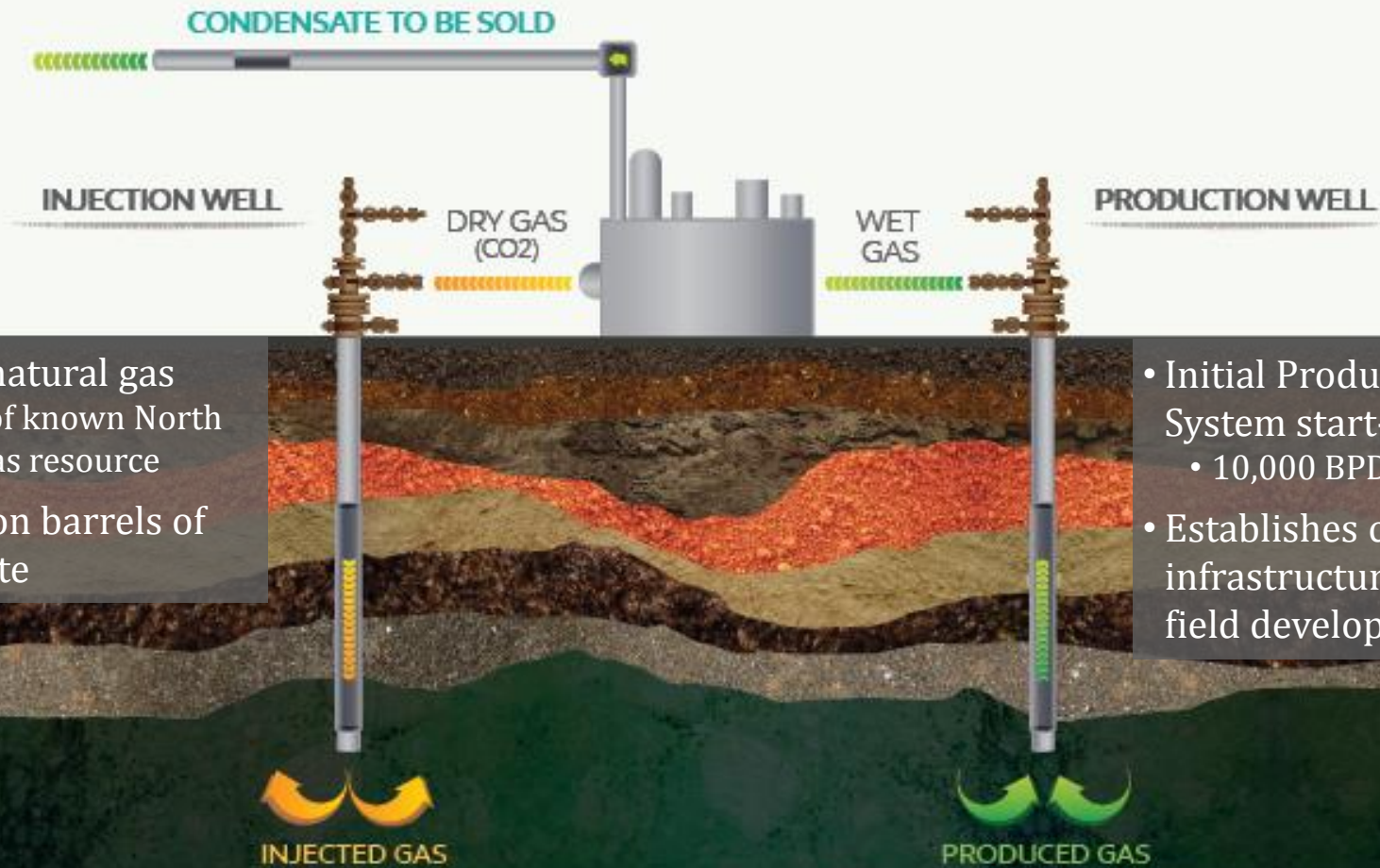


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# North Slope and Point Thomson Project (PTP) Background



## Initial Production System for Gas Cycling



- 8 TCF of natural gas
  - ~25% of known North Slope gas resource
- 200 million barrels of condensate

- Initial Production System start-up 2016
  - 10,000 BPD production
- Establishes critical infrastructure for full-field development



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# Video



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## Understanding the Environment



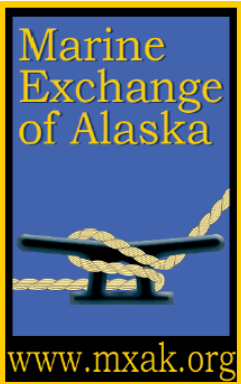
- Complex regulatory, social and environmental challenges
- Transparency and credibility in communications have been key
- Effective Government/Agency engagement strategy for resolving key issues

## Local Community Engagement



- Understanding local concerns and priorities
- Sustainable initiatives to support culture, health, and education

## INITIATIVE 1: Conflict Avoidance with Subsistence Users



- Successful pilot of vessel tracking and communication equipment with local villages
- Provides upgraded safety and communications for whaling crews
- Empowers villages with increased visibility of transiting vessels

## INITIATIVE 2: Improving Traditional Food Storage

- Climate change poses challenges to traditional food storage in ice cellars
- Collaboration with North Slope stakeholders on sustainable ice cellar design



Concept studies  
with local  
community begin

2009-2010



PTP assists in development  
of Community Foundation  
and initial funding

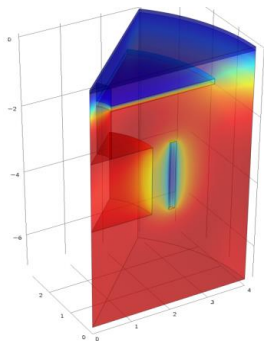
2012



Foundation and local  
volunteers continue  
construction

2014

PTP sponsors temperature  
modeling studies



Community Foundation  
leads design and  
construction with donor  
and volunteer support





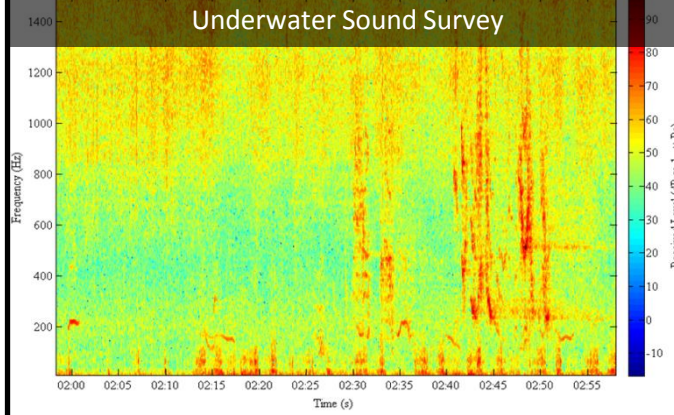
# Wildlife Conservation and Monitoring

- Avoiding negative human-wildlife interaction
- Understand existing conditions and responding to possible impacts on wildlife or subsistence

Wildlife Surveillance



Underwater Sound Survey



Caribou Migration Monitoring



Bird Strike Hazards



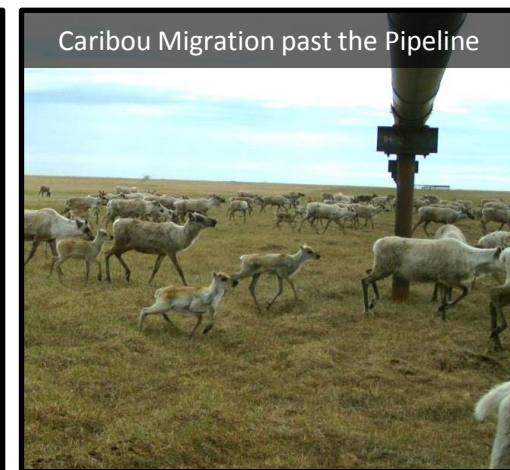
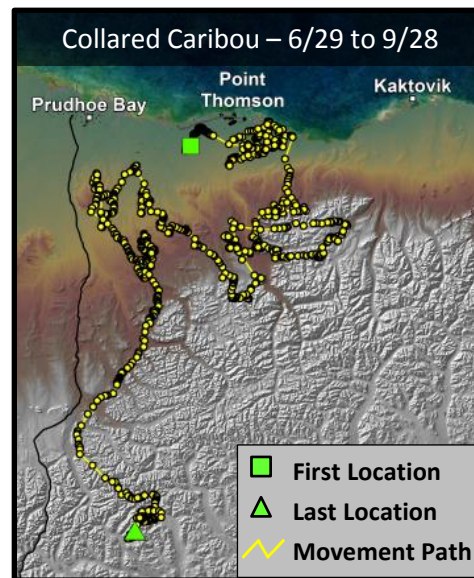
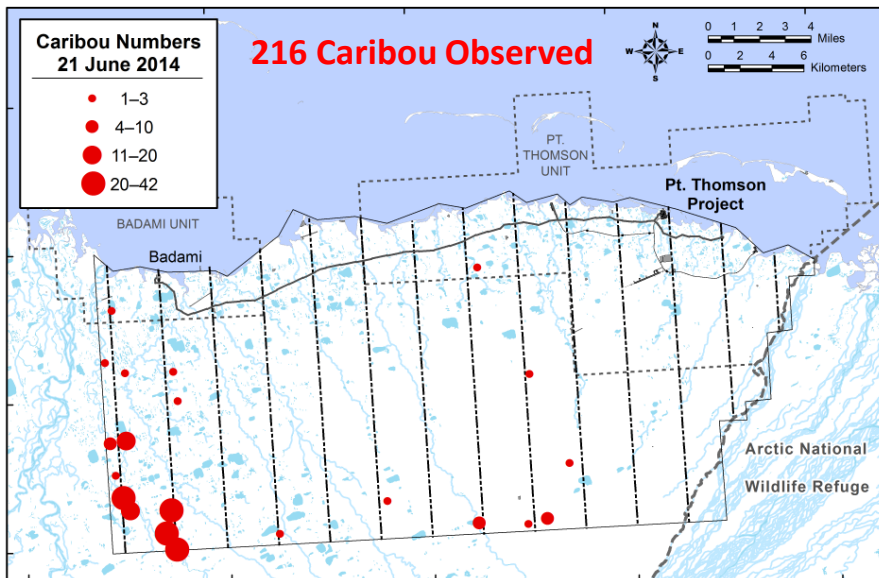
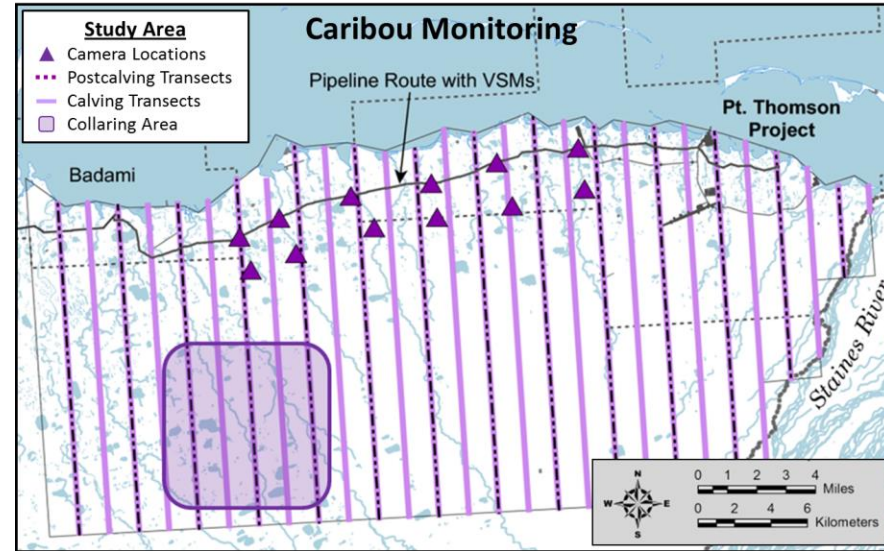
Infrastructure Design



Local Sediment & Fish Population Surveys

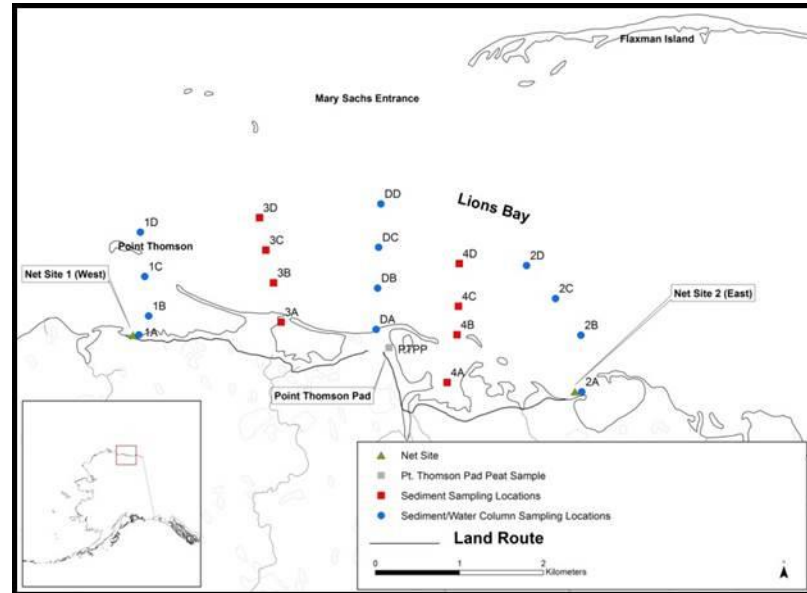
# Caribou Migration Monitoring

- **Aerial Transect (2013/2014)**
  - Performed in early and late June to count caribou in the PTP area
- **Time Lapse Cameras (2013/2014)**
  - Cameras are deployed in May and retrieved in September
  - Document movement of caribou near the export pipeline
- **Collaring (2014)**
  - 9 females were collared in the PTP area by Alaska Dept. of Fish & Game to help understand migration patterns

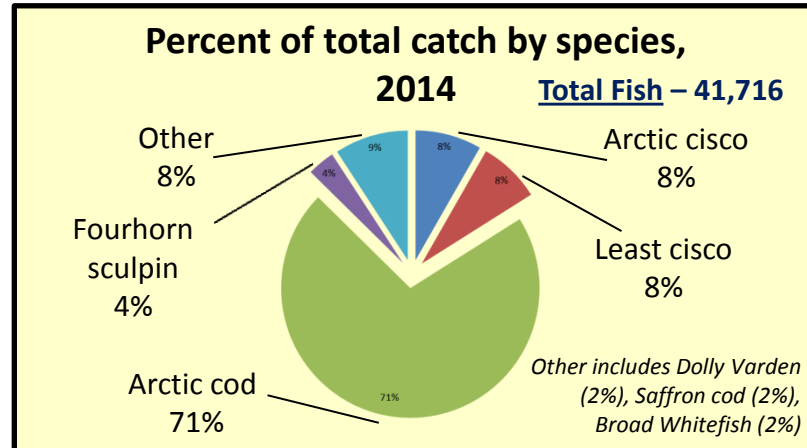
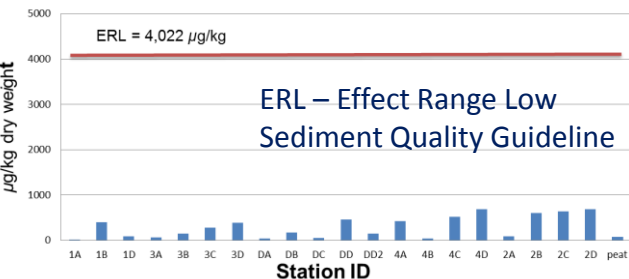


## Nearshore Fish/Sediment Surveys

- Fish Population (2013/2014)
  - Performed mid-July & mid-August using fyke & gill nets to identify type and number of marine fish near PTP
- Fish & Sediment Sampling (2013/2014)
  - Fish tissue & sediment tested to understand baseline contaminant levels (polycyclic aromatic hydrocarbons - PAH)
- Conclusions
  - Overall fish catch patterns and relative abundance similar between years (Arctic cod significantly higher in 2014)
  - Concentrations in sediment & fish were consistently low and typical of natural Beaufort sea background



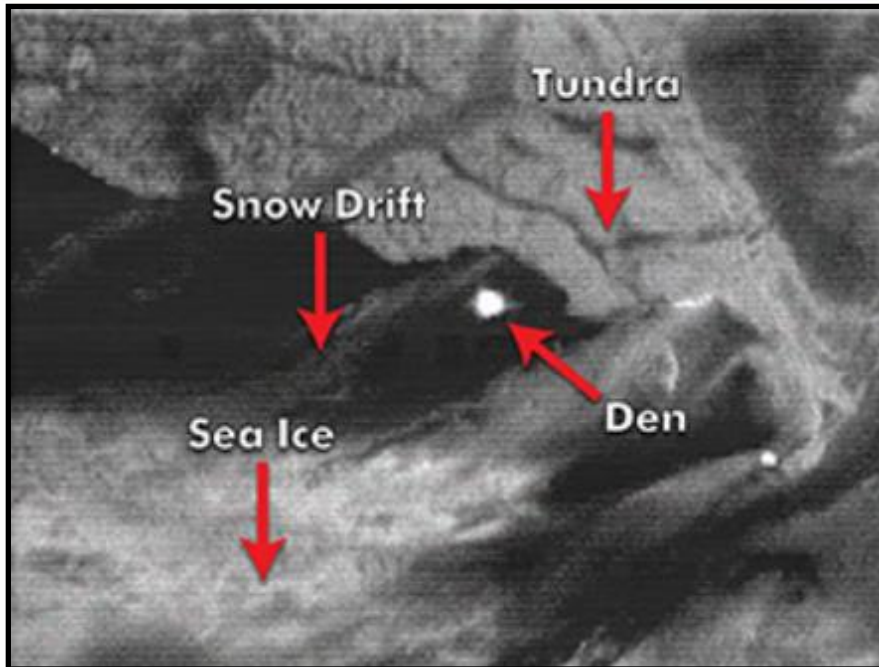
**Sediments Total PAH**



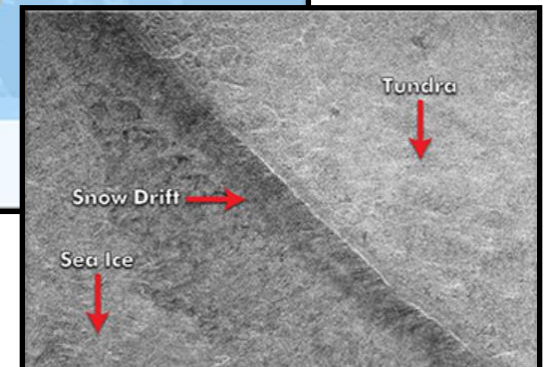
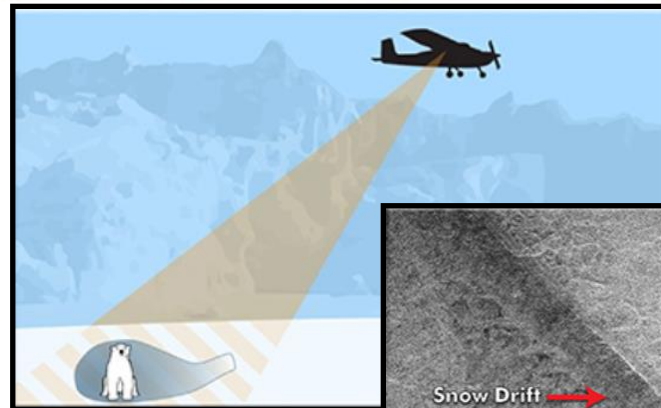


# INITIATIVE 1: Polar Bear Den Detection

## Forward-looking Infrared

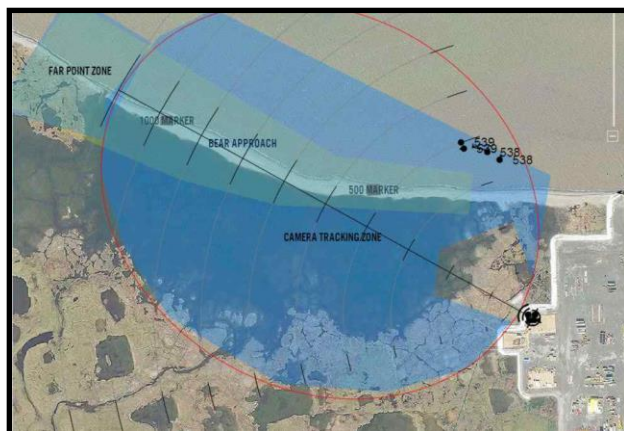


## Synthetic Aperture RADAR



## INITIATIVE 2: Ground Surveillance RADAR Pilot

- Determine ability for improved early detection of polar bears
- Test detection reliability and range of ground surveillance RADAR





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# Thank You

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# Back-Up



## Tundra Sod Rehabilitation



State & Federal requirements to rehabilitate Alaska State C-1 Pad & experimentally reuse tundra sod, furthering agency & industry knowledge for future rehabilitation efforts

## Tundra Sod Rehabilitation continued



- Alaska State C-1 Pad Placement
- Experimental storage & placement on side slope