



**Great Bear Petroleum LLC**

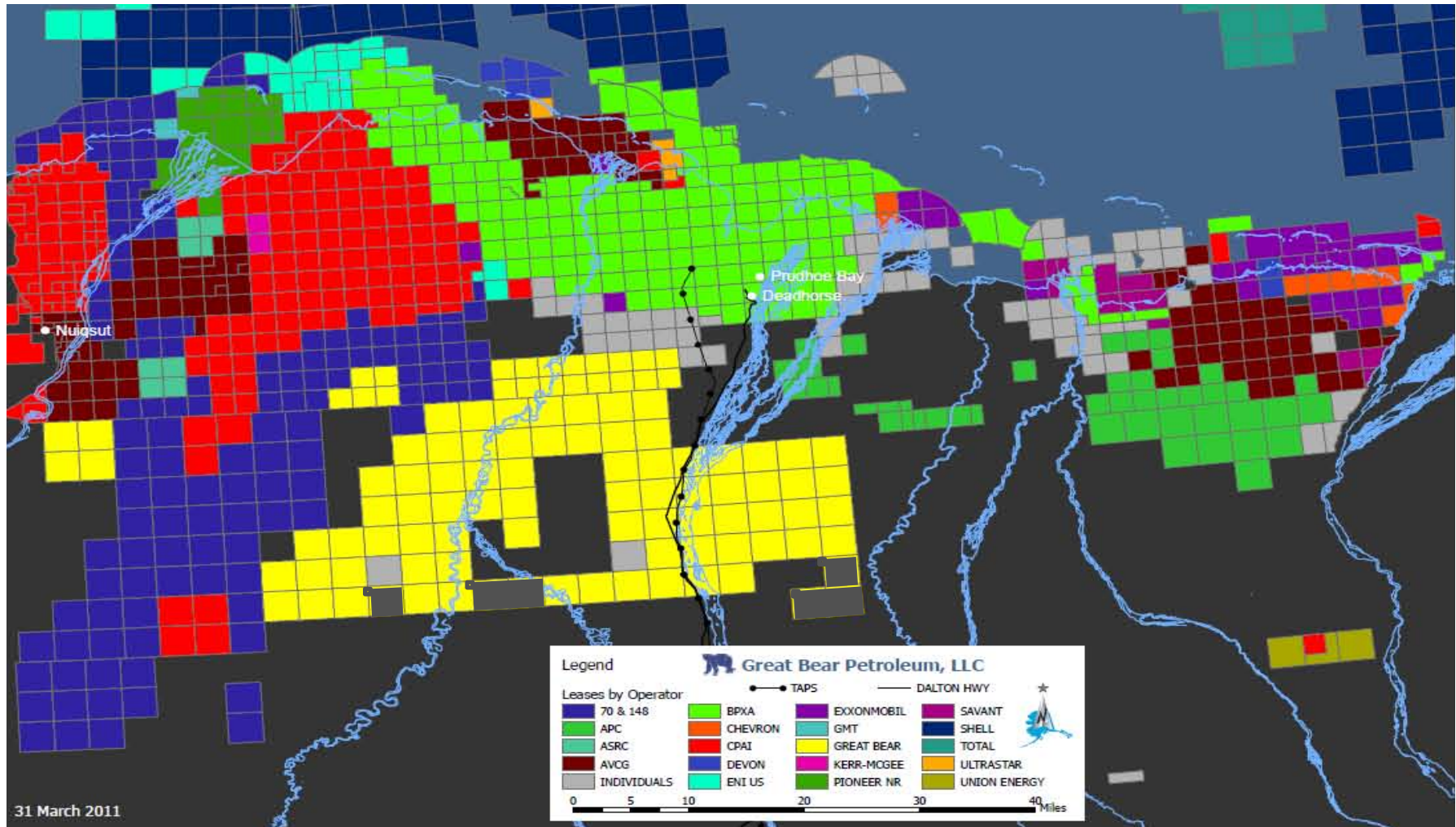
*Great Bear Petroleum Update*

***Presentation to the  
Resource Development Council  
Anchorage, November 17, 2011***



# Regionally Vested Onshore Lease Holders

## The Solution to Alaska's Grand Challenge

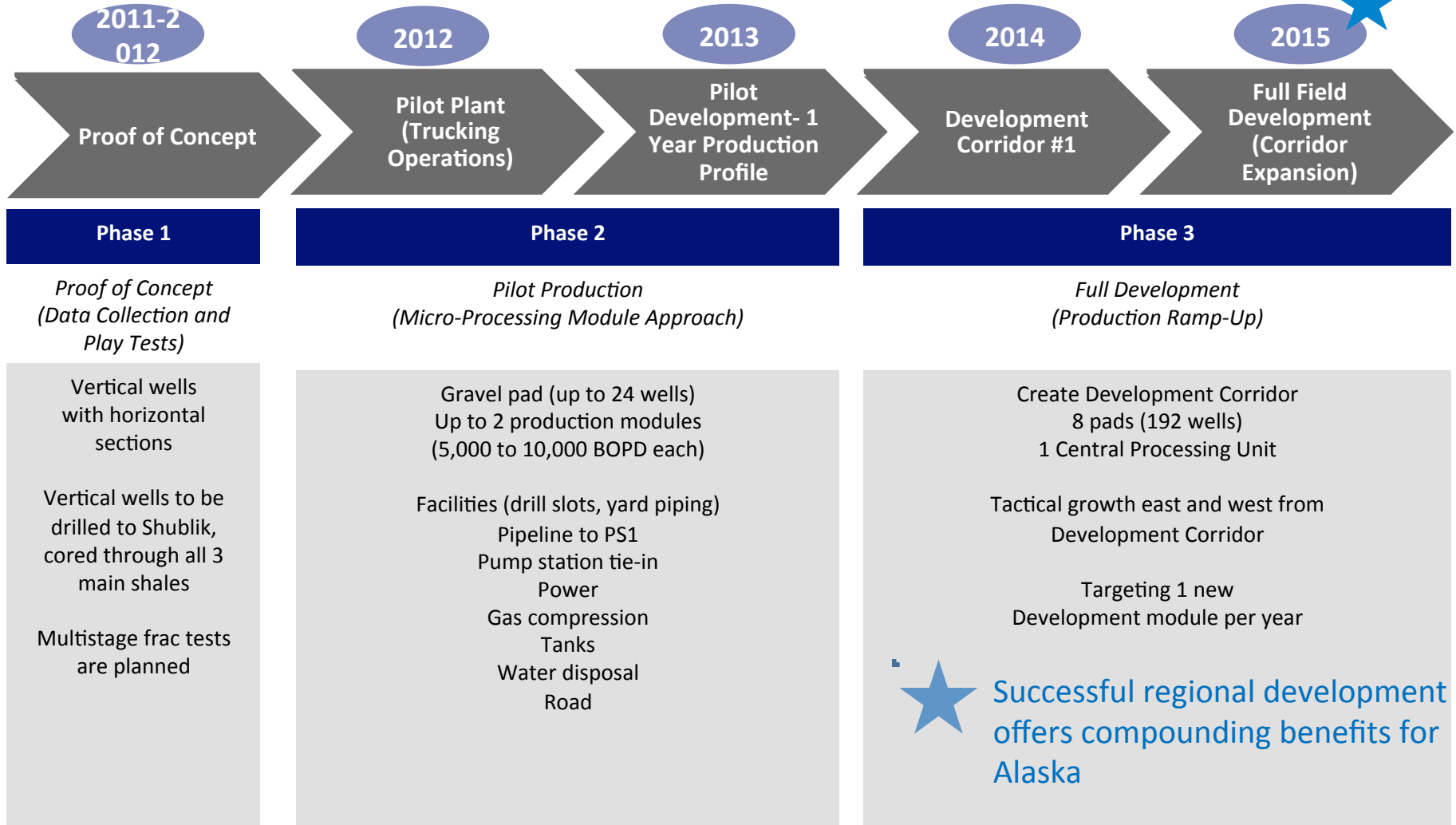



*Reestablishing Alaska's Energy Prominence through Responsible Resource Development* 2



# Plan of Development

## A Staged Development Approach




**Successful regional development offers compounding benefits for Alaska**



## North Alaska Shale Resource Play Realization: Challenges and Business Development Opportunities

*What “mission critical” challenge is missing from the list below?*

- Gravel Supply: *Regionally available*
- Water Supply: *Extensive subsurface brackish aquifer sources*
- Sand (Proppant) Supply: *Intra-State opportunity and global suppliers*
- Gathering Systems (Tanks/Trucks or Pipelines or Both): *Long term, skilled employment*
- Fluid Disposal/Recycling: *Existing and new facilities*
- Gas use/disposal in area: *Power generation, liquids and longer term gas line export*
- Surface Impacts/Dust and Emissions: *AC Rigs and multi-well development pads*
- Centralized Service Area with power source: *Modular startup transitioning to centralized*
- Power distribution – Stand alone per pad; through power lines: *“Utility” grid corridors*
- Use of Insulation and composite pads to extend ice pads and roads: *Not fit for development*
- Staging area for pipe, equipment, housing, warehousing: *Existing facilities and purpose built*
- Road and bridge requirements: *Design to minimize surface impact*
- Fuel Refining, Storage and Distribution: *Existing facilities and custom*
- Drinking Water Supply: *Multiple options identified included desalination of subsurface water*
- Sewage Treatment/Disposal: *Existing and custom in-field facilities planned*
- Trucking Impacts: *Maximize development design efficiencies*

*Challenges are Opportunities that inspire and drive innovation*



## Critically Skilled Work Force: Attracting, Developing and Retaining

How do we, as an industry, best insure that we have adequate access to critical skillsets?

This is just not about raw numbers. The oil and gas industry is built on the back of high level science and engineering skills that create the opportunities for large scale, long term employment.

A huge challenge is forecasting large increases in demand, far enough in advance, to allow us to act proactively.

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What a great problem to have –

In 2010, in the Commonwealth of Pennsylvania, Marcellus associated activity generated approximately 44,000 jobs (Penn St, 2011)

By 2020, within a 24 county region of Eagle Ford Shale development in South Texas, there is a forecasted creation of 68,000 fulltime jobs (UTSA, 2011)

*Our success case for Alaska shale development and success by our “conventional” industry peers will have major impact on the long term Alaskan job market.*





How do we construct an environment that encourages our young Alaskans to pursue technically challenging careers?

**GEOFORCE**  
A L A S K A  
UNIVERSITY OF ALASKA FAIRBANKS

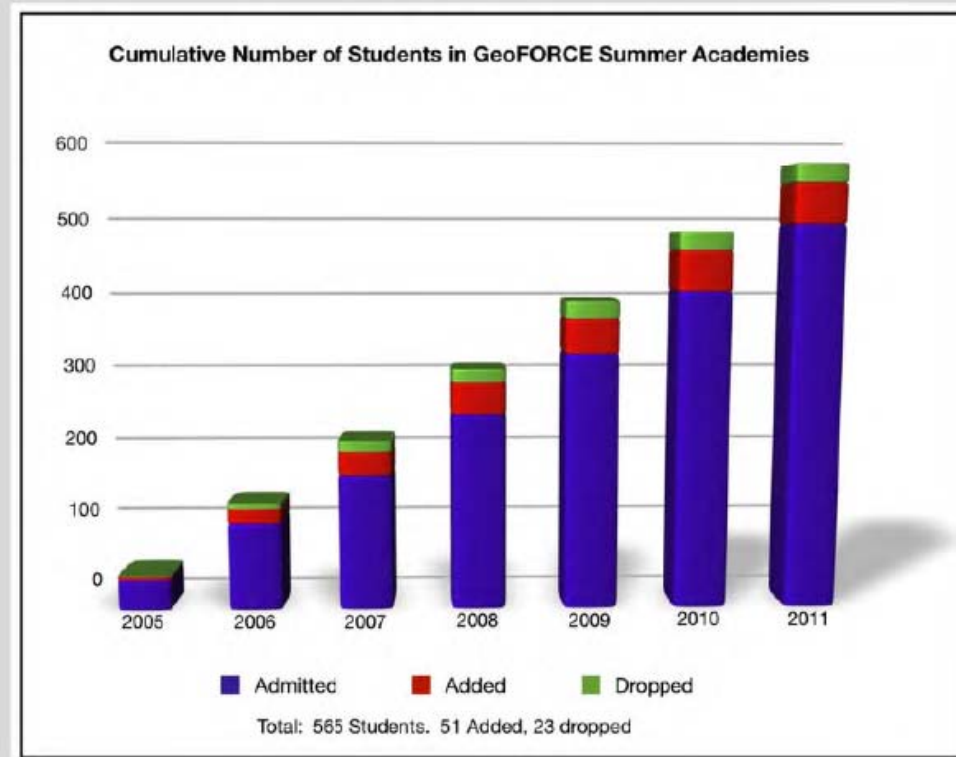
A Partnership for Success





# Success Based Growth and Recognition

## Retention

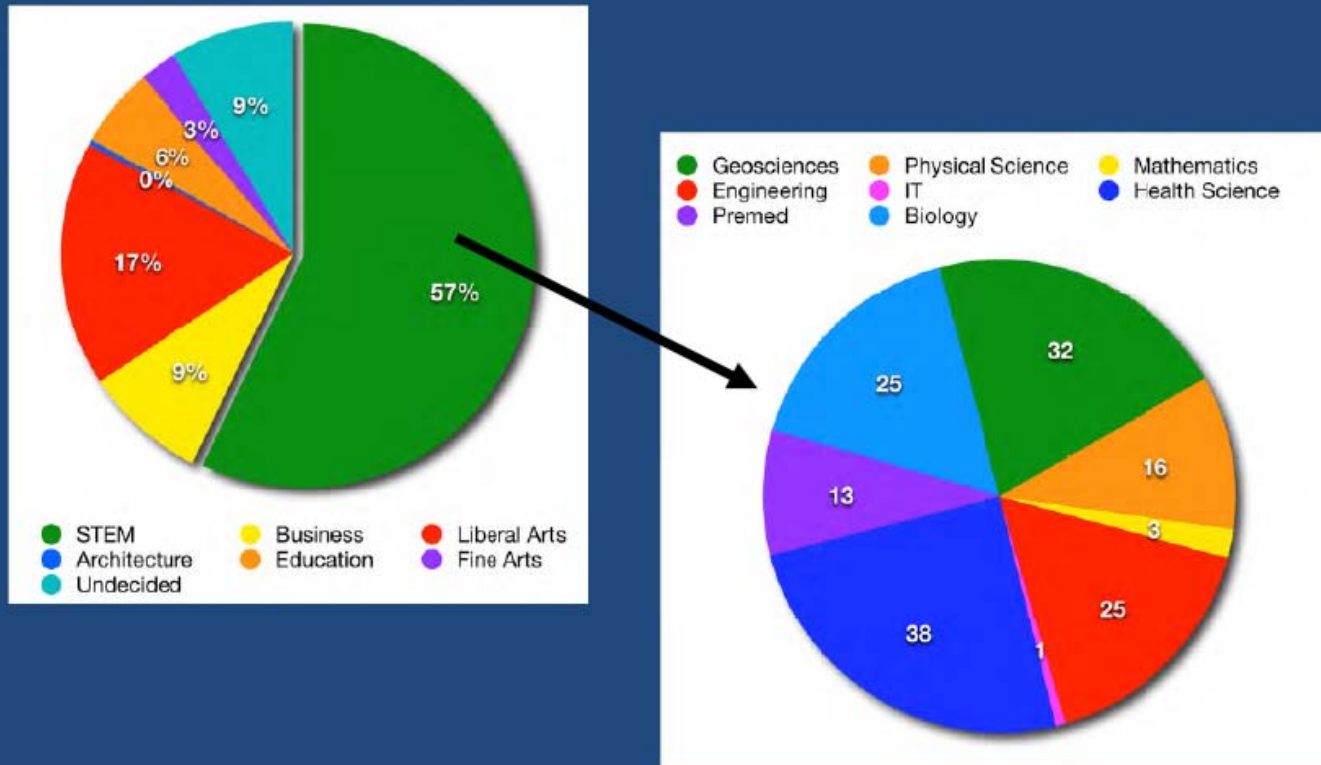


GeoFORCE is not summer camp. It is academically oriented and career directed.



# 97% of GeoFORCE Graduates Continue Their Education

## College Degree Programs



*GeoFORCE delivers great students to colleges and technical trade schools*





# GeoFORCE Alaska: Teacher-Student-Family Engagement



North Slope Villages starting 9<sup>th</sup> grade academy (40 students) summer of 2012

Future CEO



Ed and Karen Duncan of Great Bear Petroleum initiated the idea and provided seed funding. Denise Butler of Shell brought University of Alaska Fairbanks into the program.

*GeoFORCE is all about our collective future success!*



## Support STEMS programs in Alaska

**GeoFORCE – ANSEP – RAHI and others are complimentary programs.**

**Contact Denise Wartes  
at the University of Alaska-Fairbanks  
(GeoFORCE Alaska and RAHI Director)**

**or**

**Karen Duncan at Great Bear Petroleum  
to pledge your support.**

**Pick up an Information Circular  
from me before you leave today - THANKS**

**Give Generously - Please**