



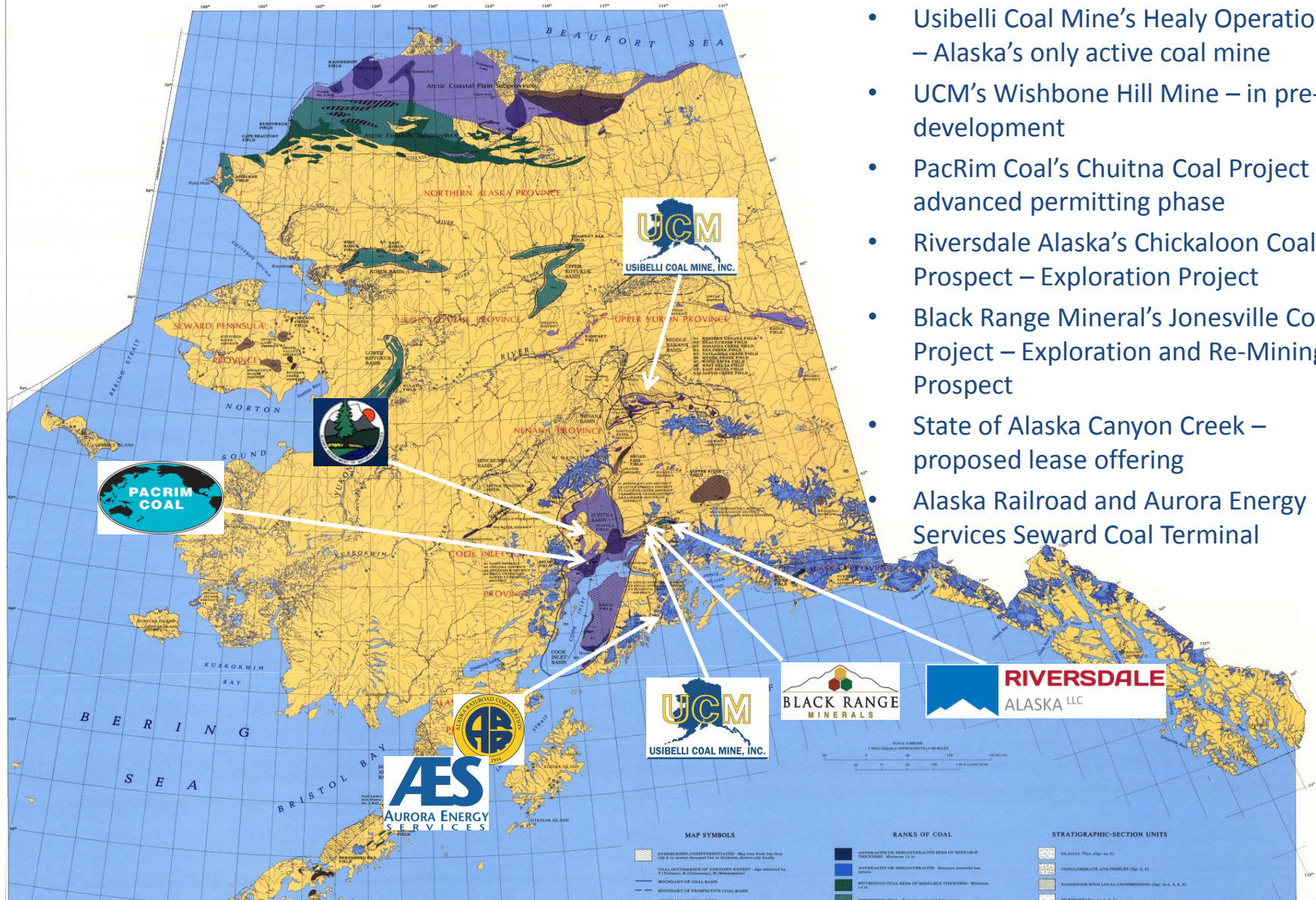
## State of the State's Coal Industry

Alaska Legislative Lunch and Learn  
January 2013

Dan Graham, PE, President, Alaska Coal Association  
Loralie Simon, Secretary/Treasurer, Alaska Coal Association



# Alaska's Coal Resources



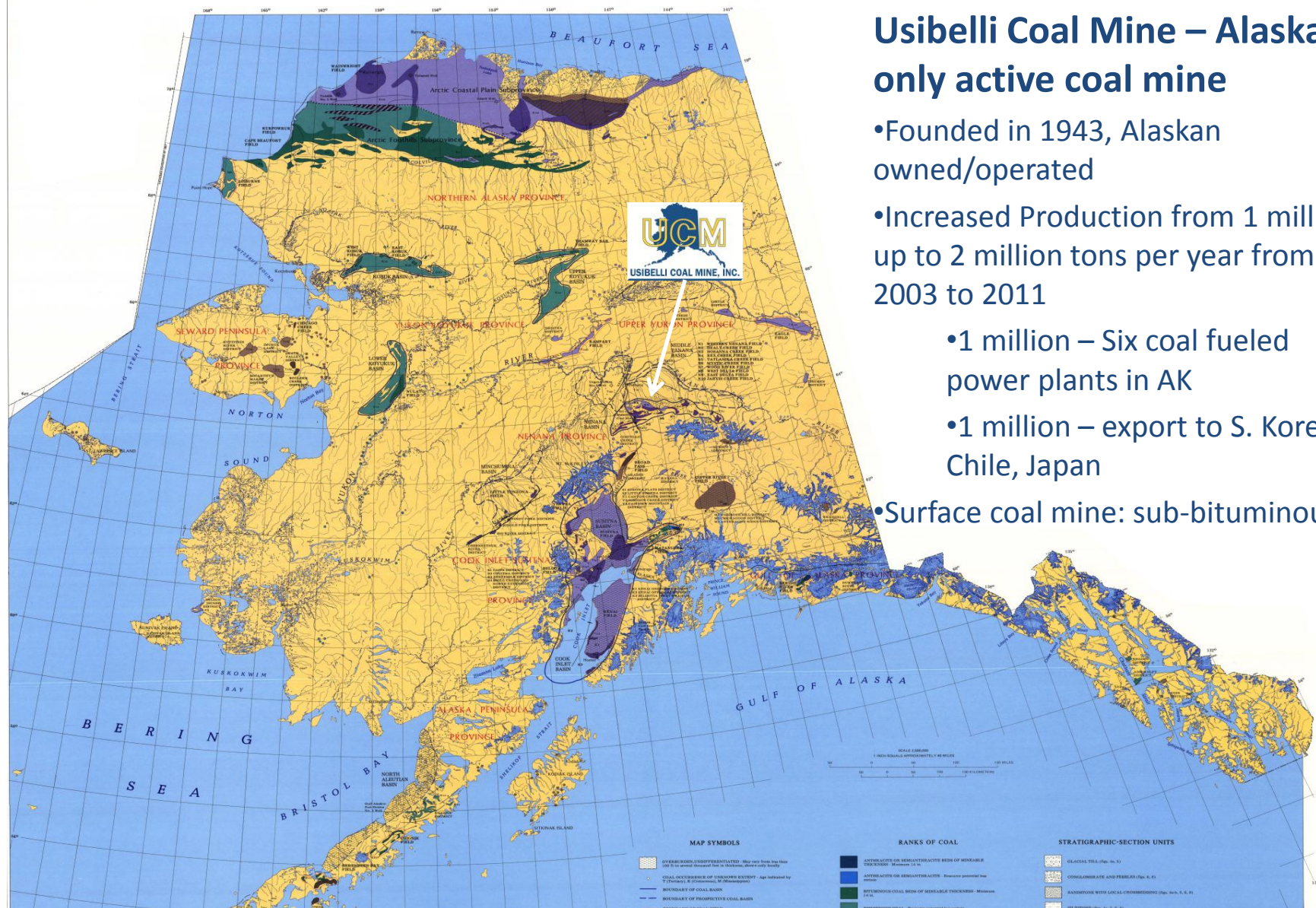
- Usibelli Coal Mine's Healy Operations – Alaska's only active coal mine
- UCM's Wishbone Hill Mine – in pre-development
- PacRim Coal's Chuitna Coal Project – in advanced permitting phase
- Riversdale Alaska's Chickaloon Coal Prospect – Exploration Project
- Black Range Mineral's Jonesville Coal Project – Exploration and Re-Mining Prospect
- State of Alaska Canyon Creek – proposed lease offering
- Alaska Railroad and Aurora Energy Services Seward Coal Terminal



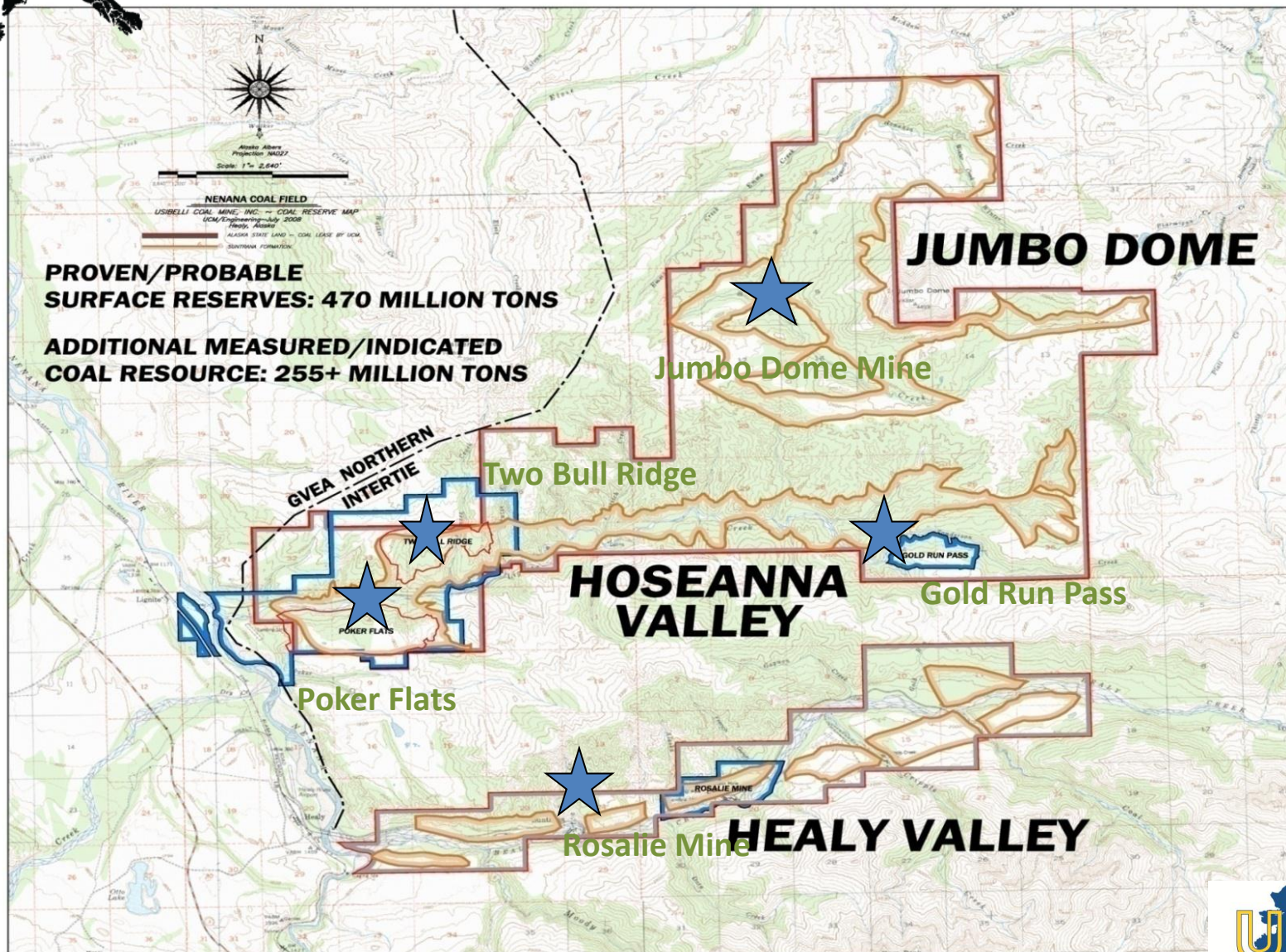
# Active Coal Mine Operations

## Usibelli Coal Mine – Alaska's only active coal mine

- Founded in 1943, Alaskan owned/operated
- Increased Production from 1 million up to 2 million tons per year from 2003 to 2011
- 1 million – Six coal fueled power plants in AK
- 1 million – export to S. Korea, Chile, Japan
- Surface coal mine: sub-bituminous











## Ace in the Hole at Two Bull Ridge Mine





# Poker Flats Mine 9 Years Later





- Located about 10 miles north of Palmer

- Early Mining: 1916 to 1982

- Roughly 7 million tons mined from 18 mines

- 1983 - exploration drilling started on WBH project

- By 1992 all permits were approved

- 14 million tons of surface minable coal identified

- The only Bituminous coal deposit on Alaska's road system





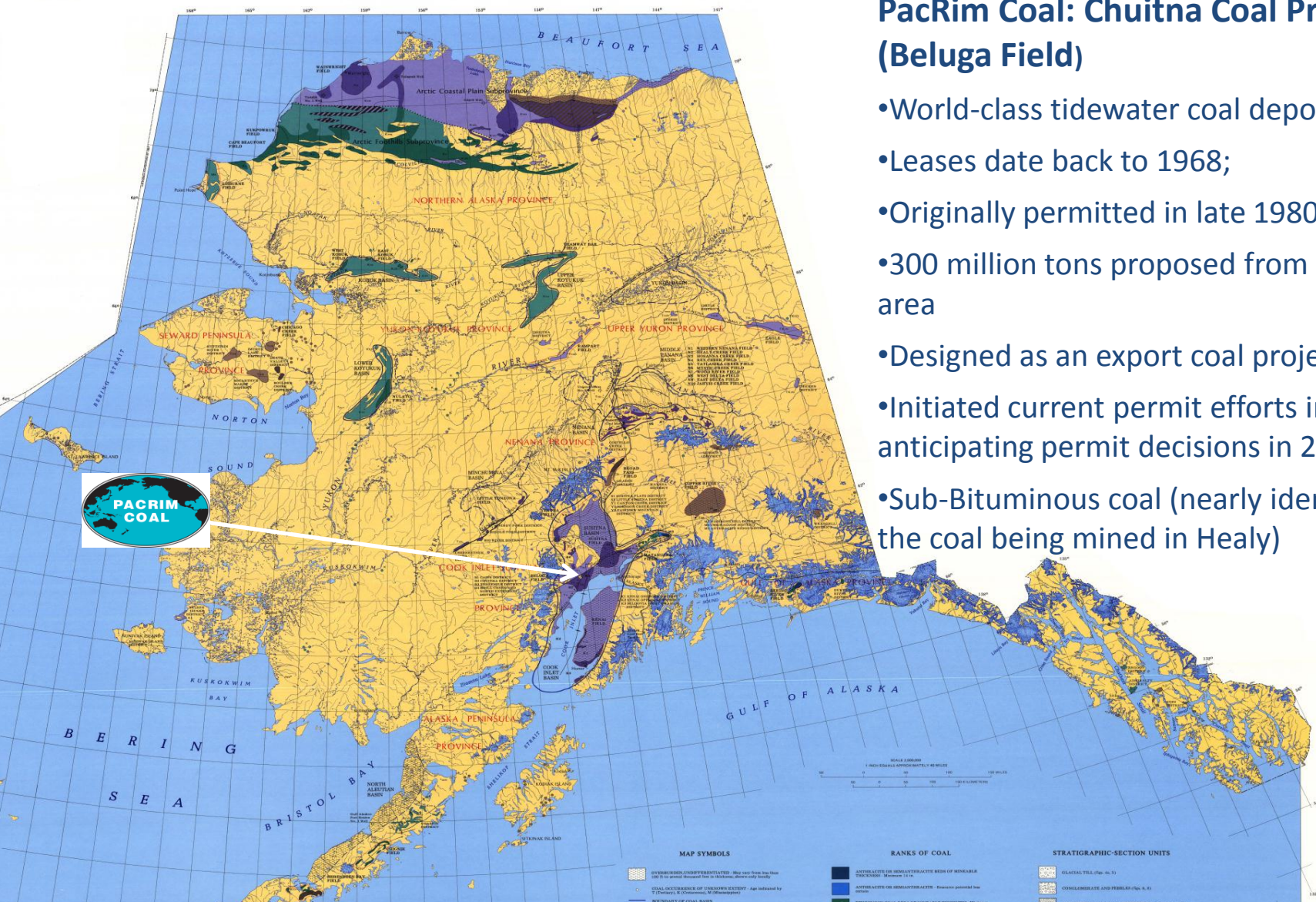




# Advanced Permitting Projects

## PacRim Coal: Chuitna Coal Project (Beluga Field)

- World-class tidewater coal deposit
- Leases date back to 1968;
- Originally permitted in late 1980's
- 300 million tons proposed from main mine area
- Designed as an export coal project
- Initiated current permit efforts in 2006; anticipating permit decisions in 2014
- Sub-Bituminous coal (nearly identical to the coal being mined in Healy)





Area to be mined ~5000 acres

Camp facilities for crew housing; optional airstrip

New private mine access road ~ 5 miles

Elevated Conveyor 8 miles

Beluga Airstrip and Powerplant

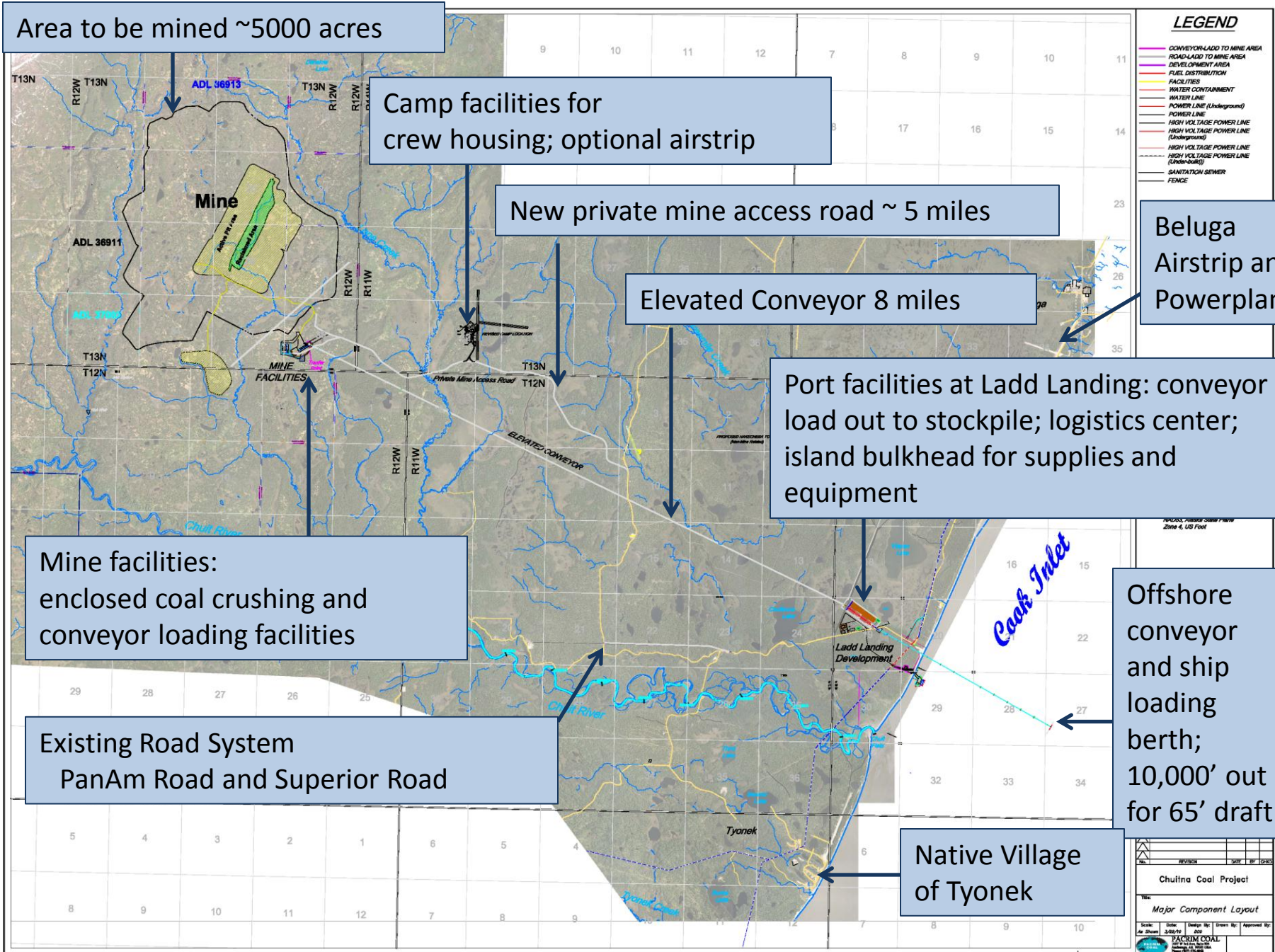
Port facilities at Ladd Landing: conveyor load out to stockpile; logistics center; island bulkhead for supplies and equipment

Mine facilities: enclosed coal crushing and conveyor loading facilities

Existing Road System  
PanAm Road and Superior Road

Native Village of Tyonek

Offshore conveyor and ship loading berth; 10,000' out for 65' draft

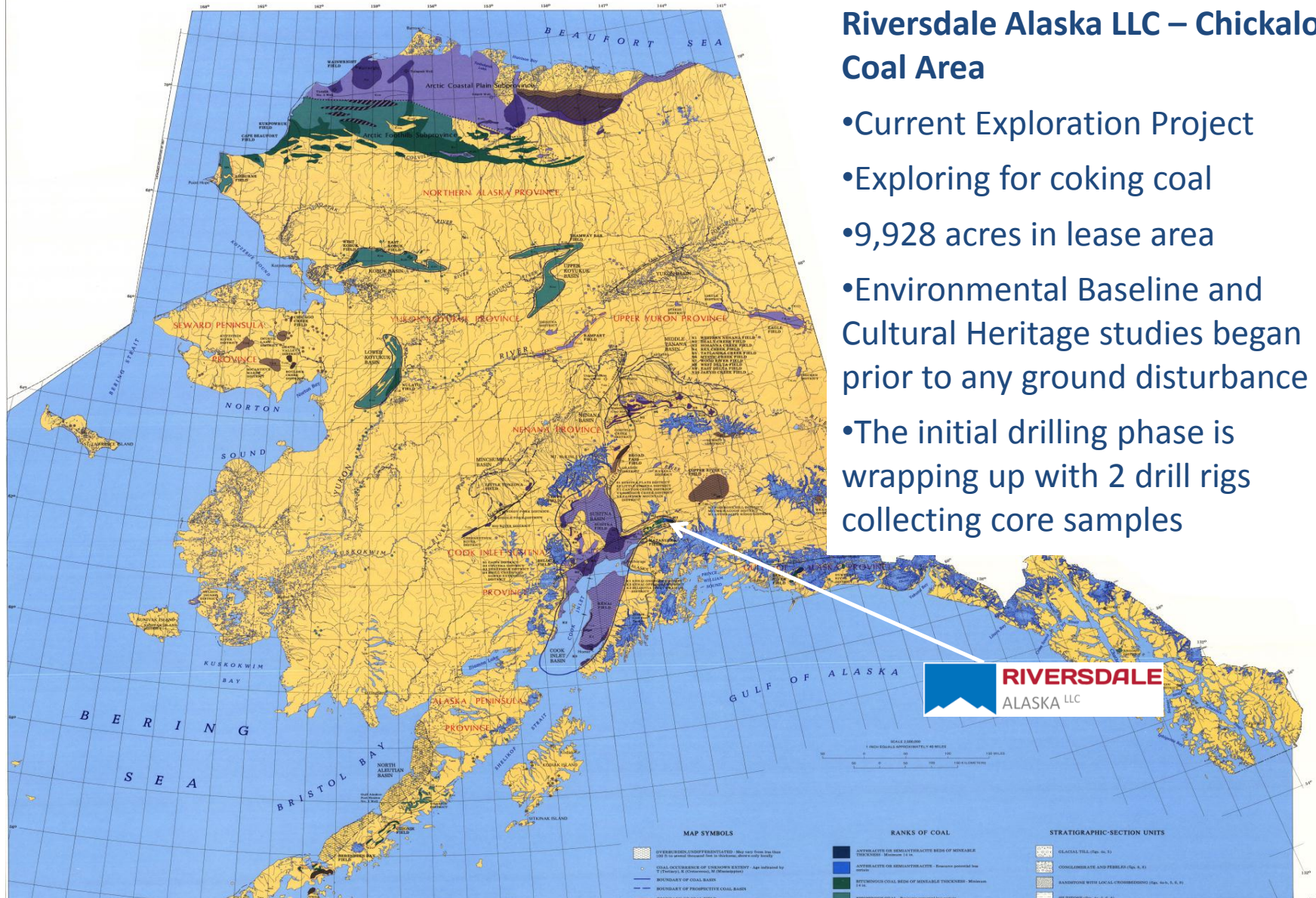




# Exploration Projects

## Riversdale Alaska LLC – Chickaloon Coal Area

- Current Exploration Project
- Exploring for coking coal
- 9,928 acres in lease area
- Environmental Baseline and Cultural Heritage studies began prior to any ground disturbance
- The initial drilling phase is wrapping up with 2 drill rigs collecting core samples





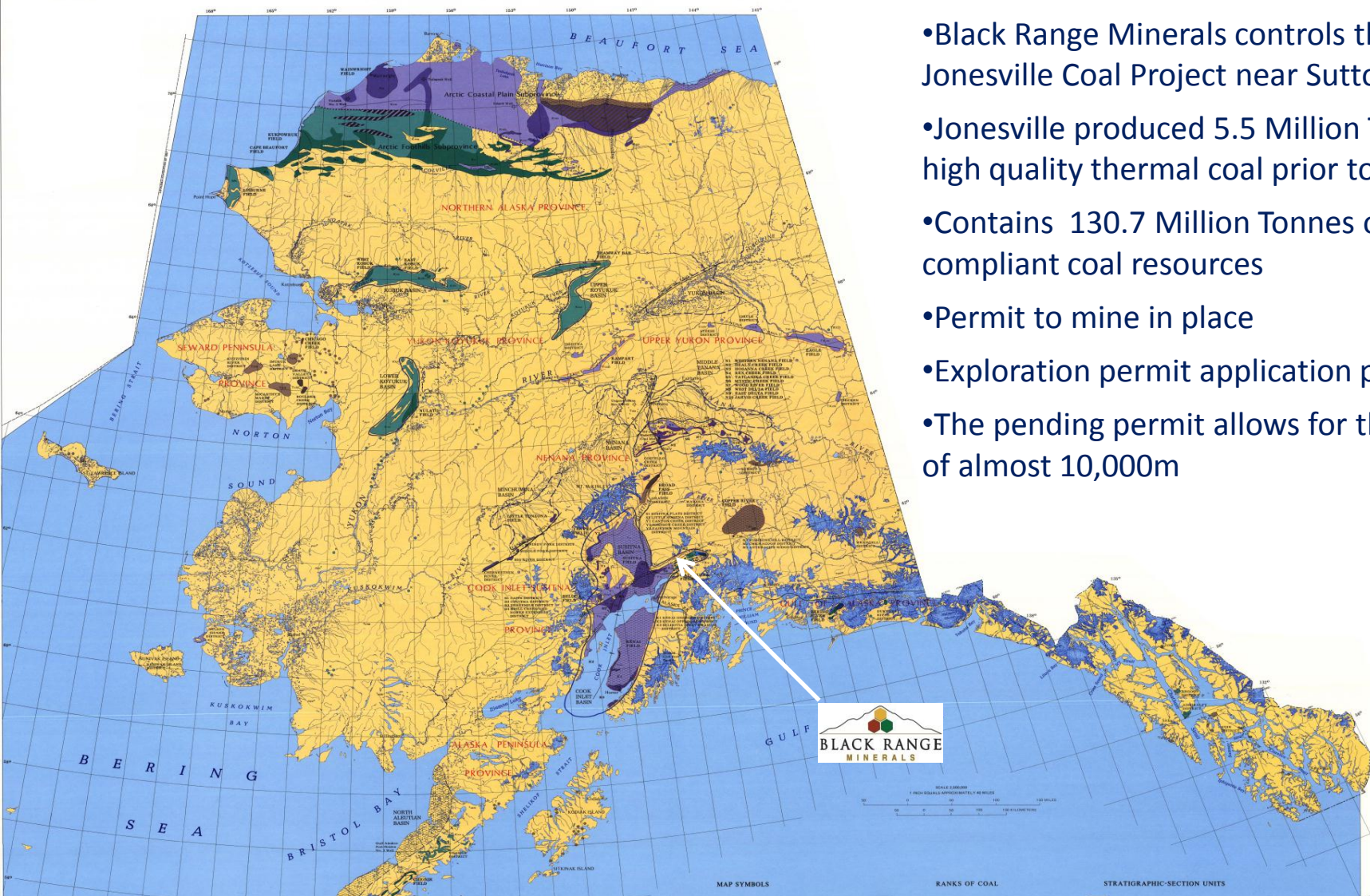




# Exploration Projects (cont.)

## Jonesville – Black Range Minerals

- Black Range Minerals controls the Jonesville Coal Project near Sutton, Alaska
- Jonesville produced 5.5 Million Tonnes of high quality thermal coal prior to 1968
- Contains 130.7 Million Tonnes of compliant coal resources
- Permit to mine in place
- Exploration permit application pending
- The pending permit allows for the drilling of almost 10,000m

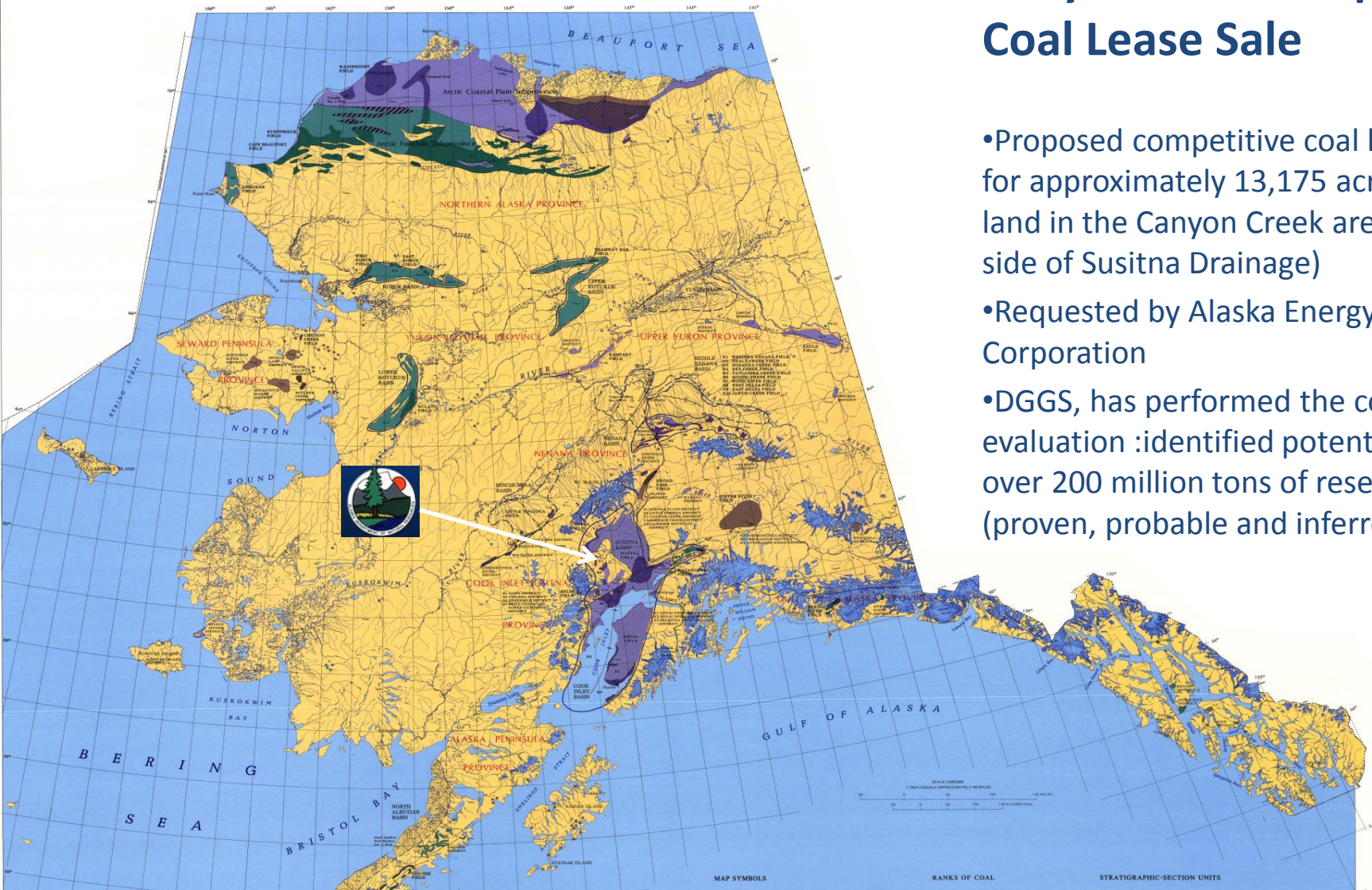




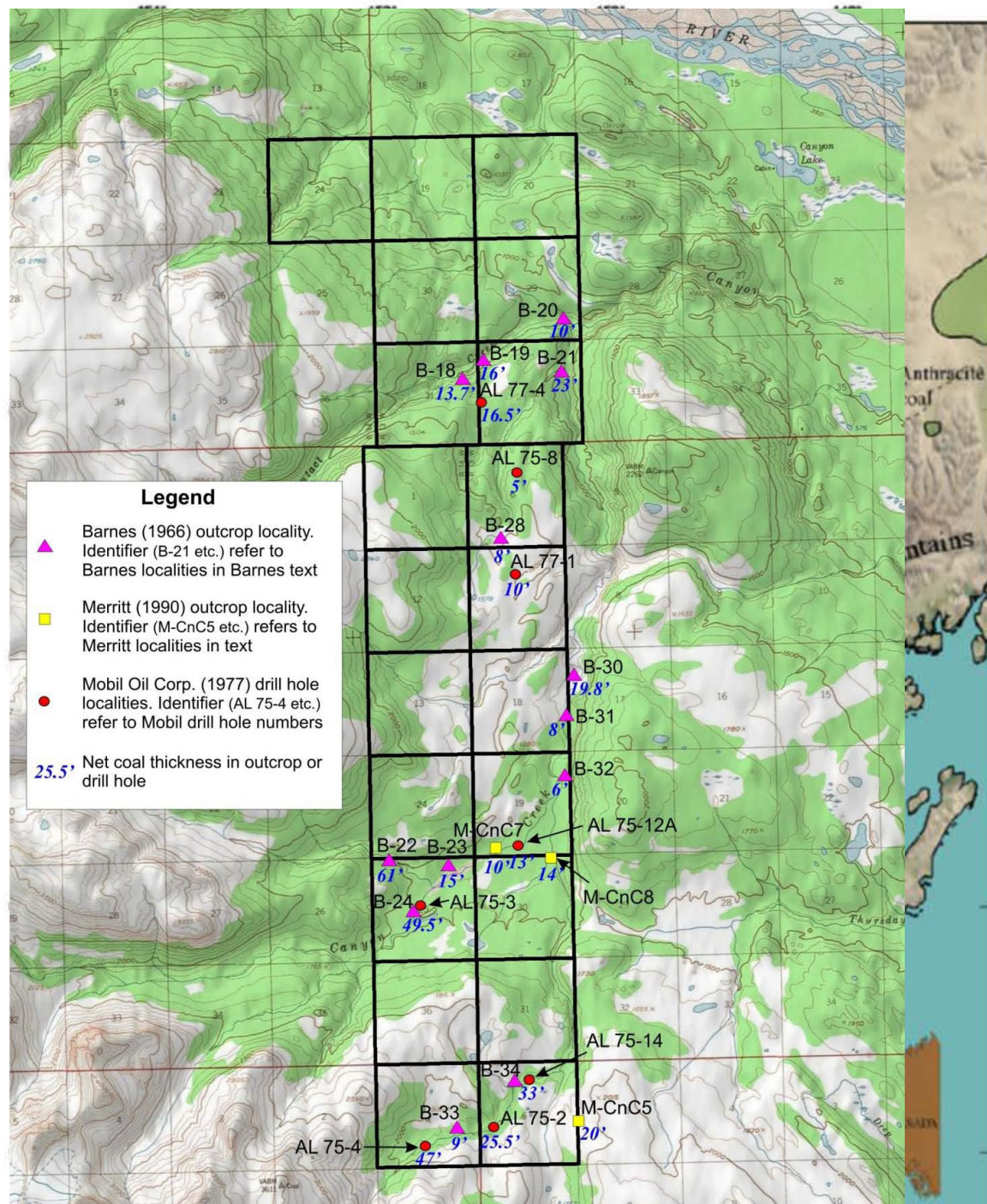
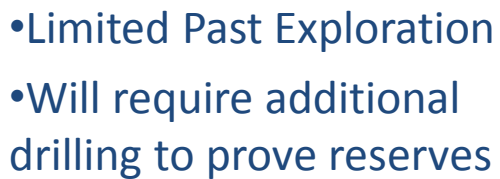
# Alaska's Coal Resources

## Canyon Creek Proposed Coal Lease Sale

- Proposed competitive coal lease sale for approximately 13,175 acres of land in the Canyon Creek area (west side of Susitna Drainage)
- Requested by Alaska Energy Corporation
- DGGs, has performed the coal evaluation :identified potential of over 200 million tons of reserves (proven, probable and inferred)



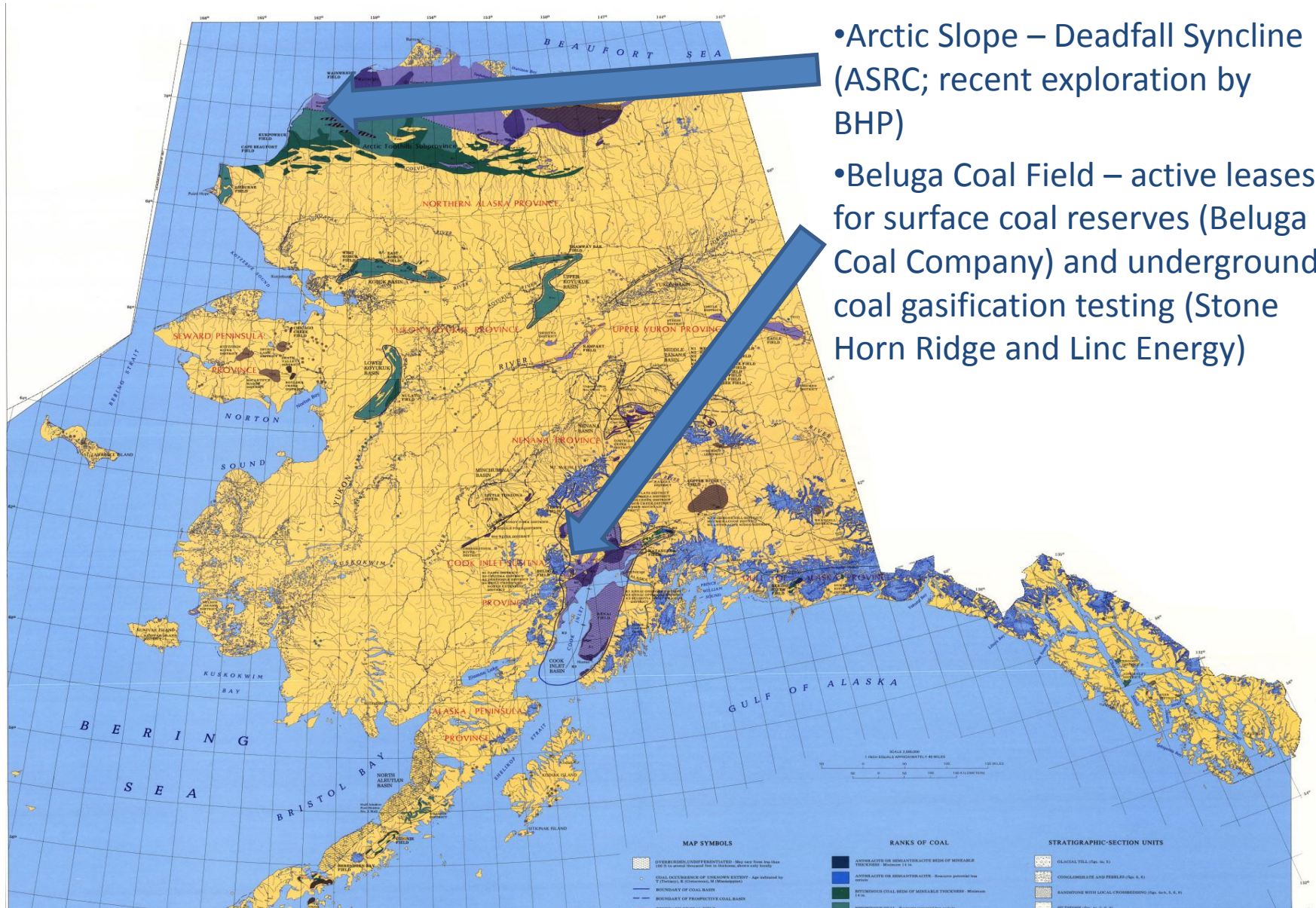






# Other Known Resource Areas

- Arctic Slope – Deadfall Syncline (ASRC; recent exploration by BHP)
- Beluga Coal Field – active leases for surface coal reserves (Beluga Coal Company) and underground coal gasification testing (Stone Horn Ridge and Linc Energy)







# Coal Transportation







# Alaska Railroad Corporation

## Export Coal Numbers

Year	Metric Tons	# of Trains	Tons per Train
2007	336,234	54	6264
2008	471,060	74	6366
2009	801,254	132	6070
2010	954,509	158	6041
2011	1,073,725	168	6391
2012	878,794 (est)	146 (est)	6019

Between 2007 and 2011 tonnage increased by 317%. In 2011 average tons per train increase dramatically as Usibelli maximized coal loadings and ARRC invested in 70 low-tare aluminum hoppers. **2011 was the best year on record and the first time 1 million metric ton mark had been exceeded.**





# Seward Coal Terminal

- Owned by Alaska Railroad Corporation
- Operated by Aurora Energy Services, LLC





# Seward Coal Terminal

## Co-Exist with Tourism

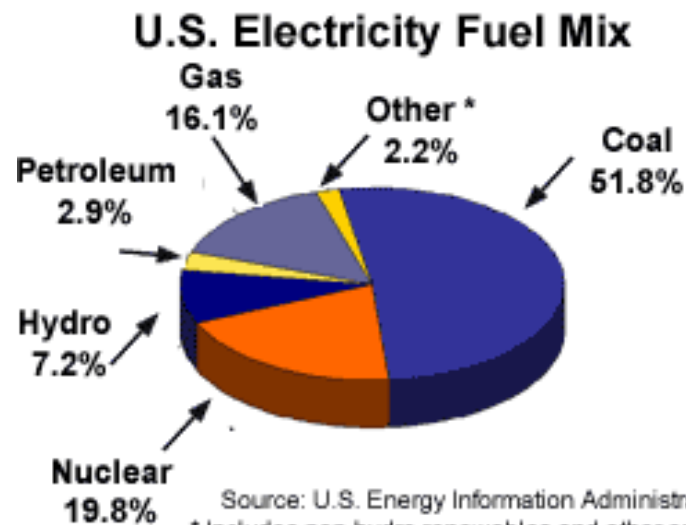
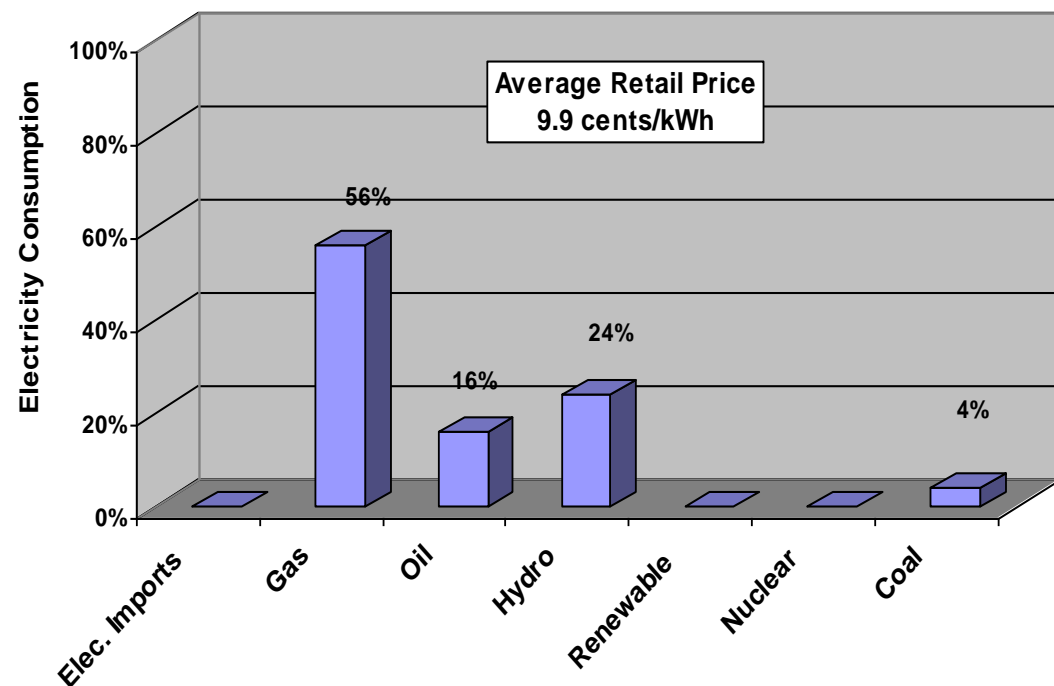






# In-State Coal Use

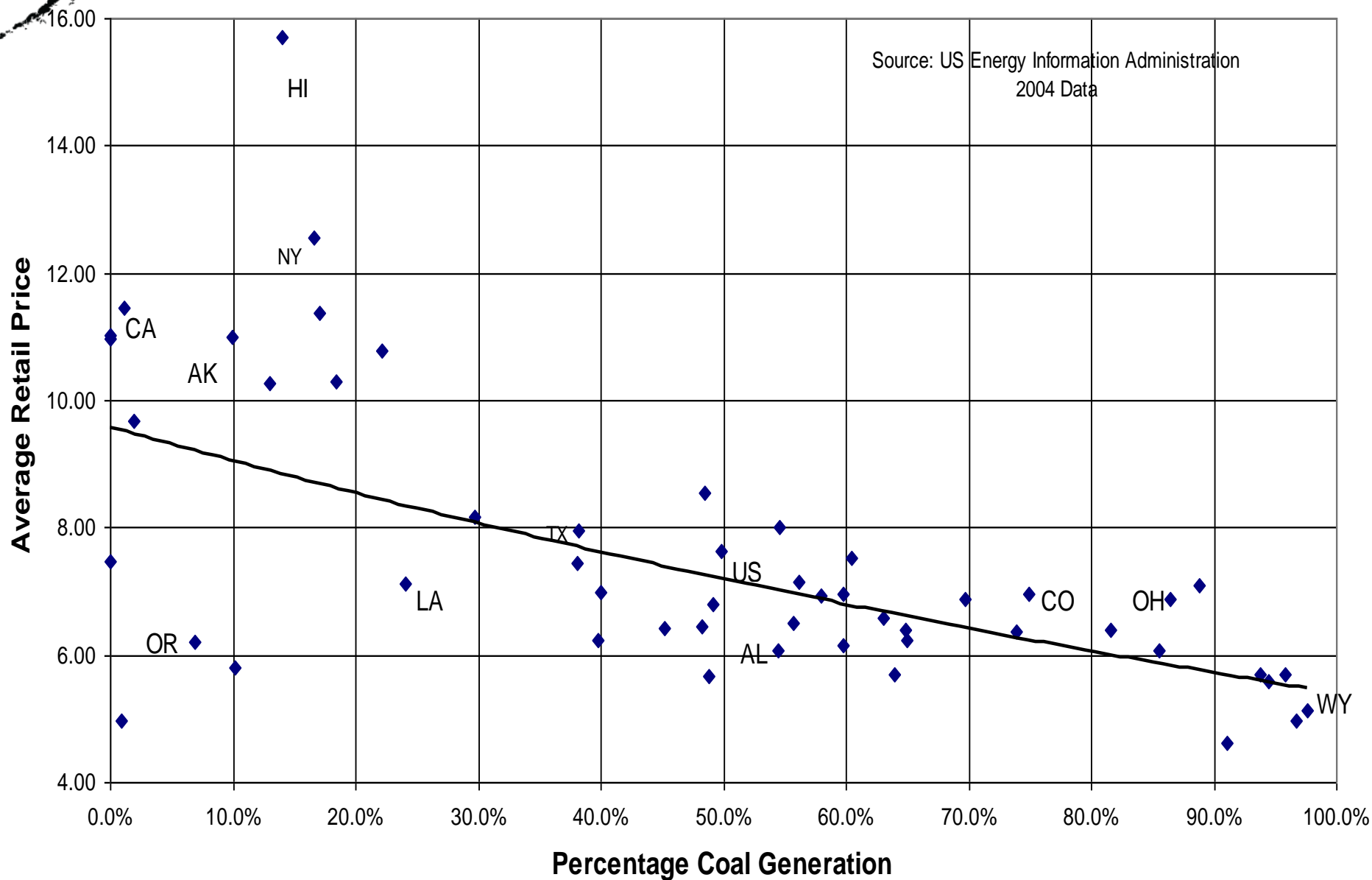
ALASKA







## Coal Effect on Electricity Rates By State







# Alaskan Coal-based Generation

\* cogeneration

- Fort Wainwright (US Army)\*
- Eileson Air Force Base (US Air Force)\*
- Clear Air Force Station (US Air Force)\*
- Aurora Energy, Fairbanks, Alaska\*
- University of Alaska Fairbanks\*
- Golden Valley Electric Association







# Proposed New Coal Fired Generation: University of Alaska Fairbanks



- Cogeneration Facility
- Current Plant Has Four Boilers (nearly 50 years old)
- New CFB Plant targeted 2017





## “Reborn” Coal Fired Generation: Healy Clean Coal Plant Background and Status

- 1989 – DOE selected HCCP as Clean Coal Technology Program demonstration plant
- 1996-1999 – Construction and Start Up of HCCP
- 2000 – 2009 – The Dark Period...
- 2009 – AIDEA agrees to sell HCCP to GVEA
- 2012 - State air permit issued; consent decree approved (November 19)
- Waiting last approvals to allow asset transfer
- Restart anticipated to take 18 months –  
Anticipate 15 to 20 new jobs







# HCCP







# Coal Industry Jobs - DIRECT

UCM	130
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Alaska Railroad Corp. (coal trains)	15
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Seward Coal Terminal	15
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State and Federal Agencies	7
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Power Plants:

Fort Wainwright	42
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Eielson AFB	55
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Clear AFS	34
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Aurora Energy	26
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GVEA Healy #1/HCCP	34
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University of Alaska	35
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Exploration and Development Projects	15
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Total	408
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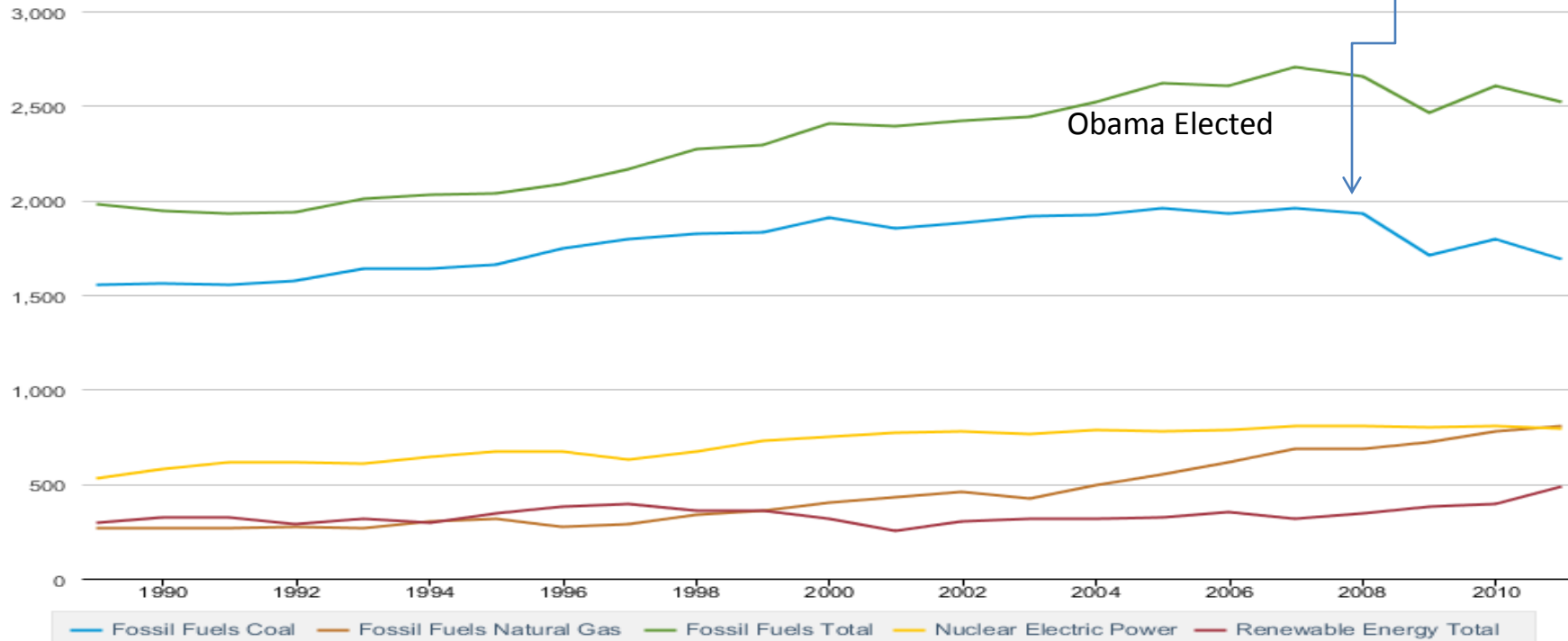


# Challenges to Development

- Current federal administration's policies on coal and fossil fuels

**Table 8.2c Electricity Net Generation: Electric Power Sector by Plant Type, 1989-2011**

Billion Kilowatthours





## Challenges to Development

- Accelerated anti-coal spending campaigns in Alaska from outside sources

Year	Anti-Coal Spending by FY
2008	\$68,500
2009	\$874,226
2010	\$1,712,322
2011	\$1,371,000

(Note: This is just one funding source – The Alaska Conservation Foundation - with no Alaska-based funding sources listed in their top donors list)





Lorali Simon  
(907) 745-6028



Or

Dan Graham  
(907) 276-6868

