



# **Southcentral Energy: Oil, Gas, Dollars & Workers**

**The Kenai Peninsula Borough Perspective**

**Presented to the Southcentral Alaska Energy Forum by:**

**Bill Popp, Oil, Gas & Mining Liaison**

**Kenai Peninsula Borough, Alaska**



# Today's Topics

- ➔ The Kenai Peninsula Borough: The 1<sup>st</sup> Oil & Gas Province
- ➔ The Cook Inlet hydrocarbon industry today
- ➔ Issues & Concerns
- ➔ The future?

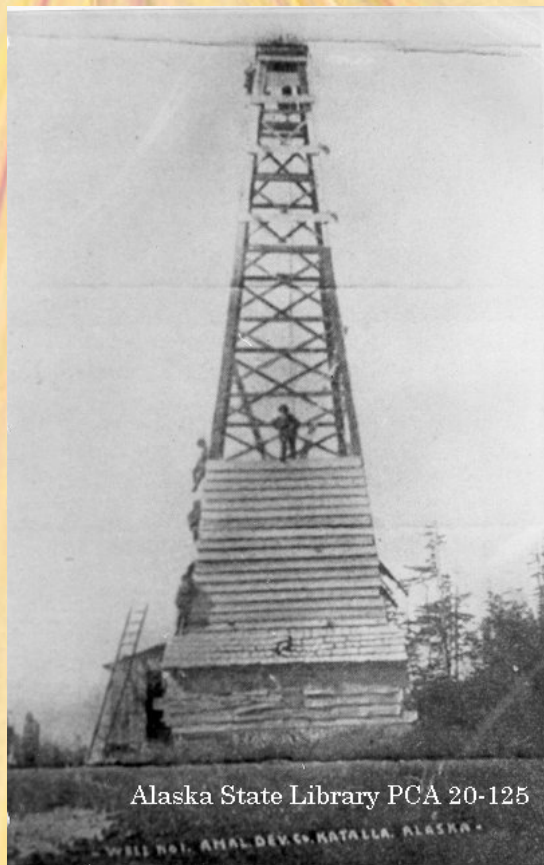


Nikiski Industrial Docks August, 2005

# The Kenai Peninsula Borough 150+ years of Cook Inlet Oil & Gas Exploration



1900



Alaska State Library PCA 20-125

Wood Derrick circa 1900

1957



Richfield's discovery at Swanson River, reported in the July 23, 1957, edition of the Anchorage Daily Times, set off an oil-leasing frenzy.

2003

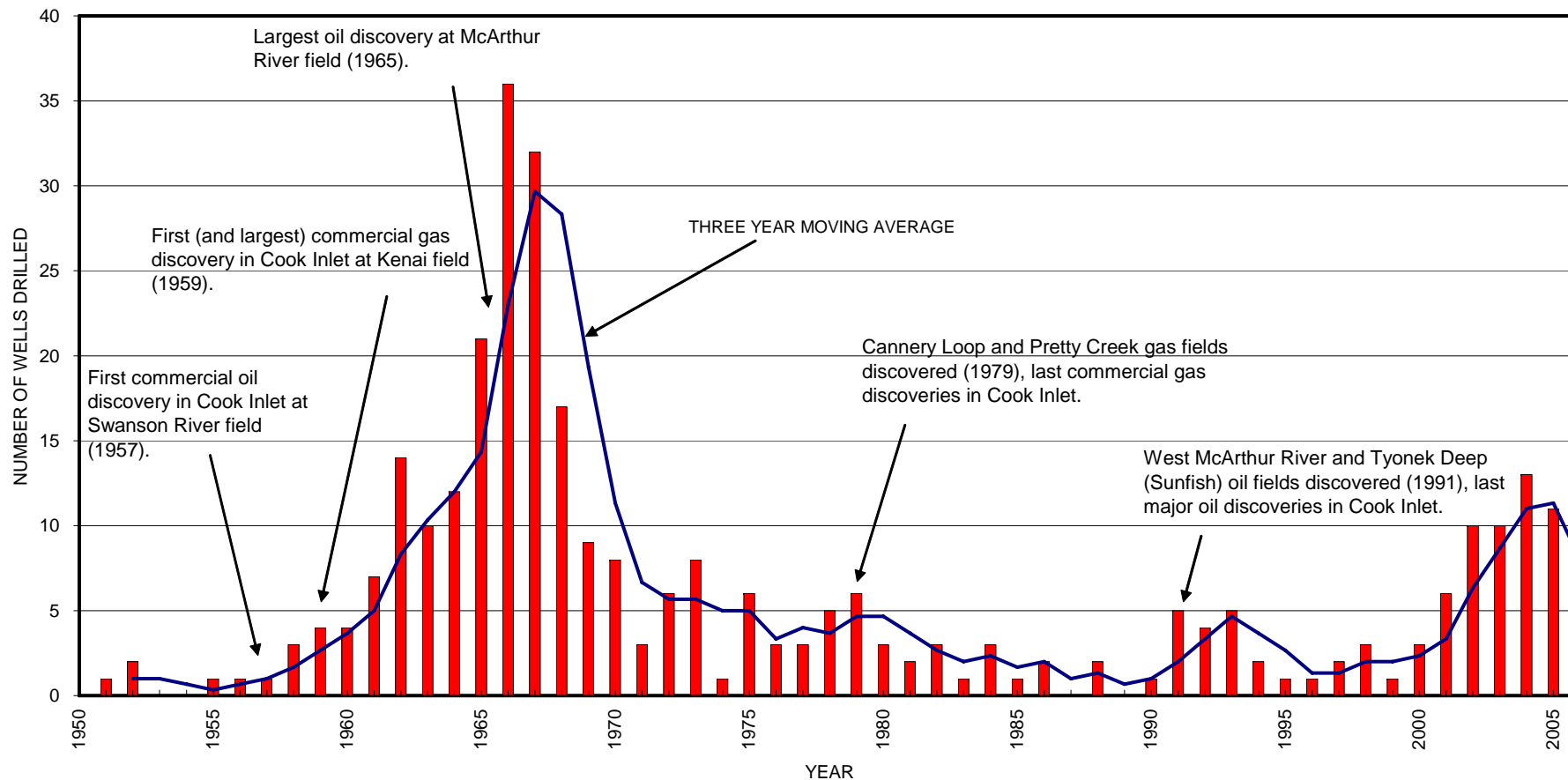


Nabors Drill Rig #273

# Timeline of Cook Inlet Exploration

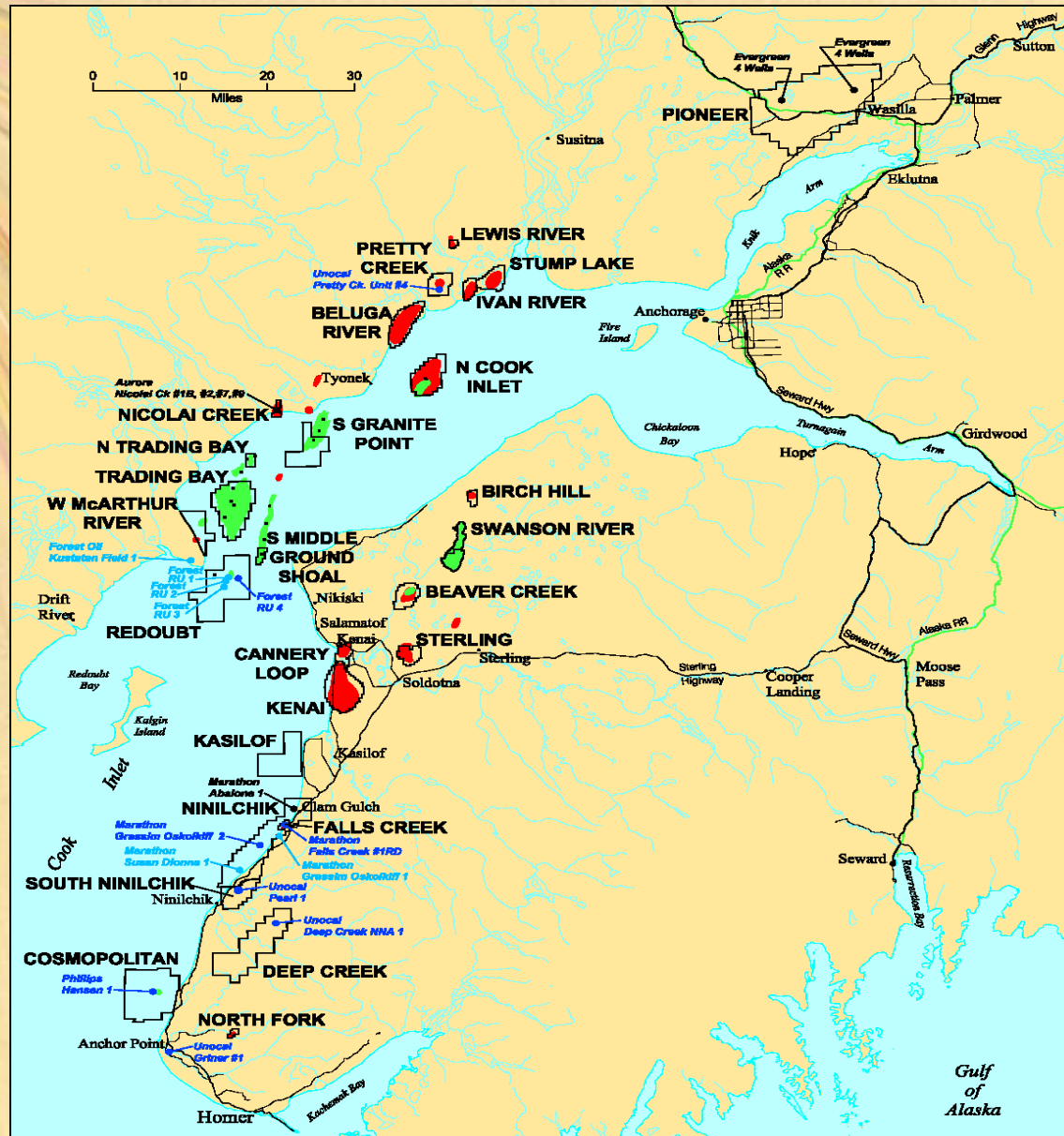


ALASKA EXPLORATION WELL DATA  
COOK INLET



Source: State of Alaska, Department of Natural Resources, Division of Oil & Gas 07/06

# Cook Inlet Oil & Gas Fields



Source: State of Alaska, Division of Oil & Gas 12/05

# The Kenai Peninsula Borough

- Incorporated January 1, 1964
- Total Area: 24,737 sq. miles
- 2005 Population: 51,268
- Median Age: 38.7
- School Enrollment: 9,392
- Per Capita Personal Income: \$29,443
- Total Assessed Property Values: \$10,766,300,00

Source: KPB "2005 Situations & Prospects Annual Report"

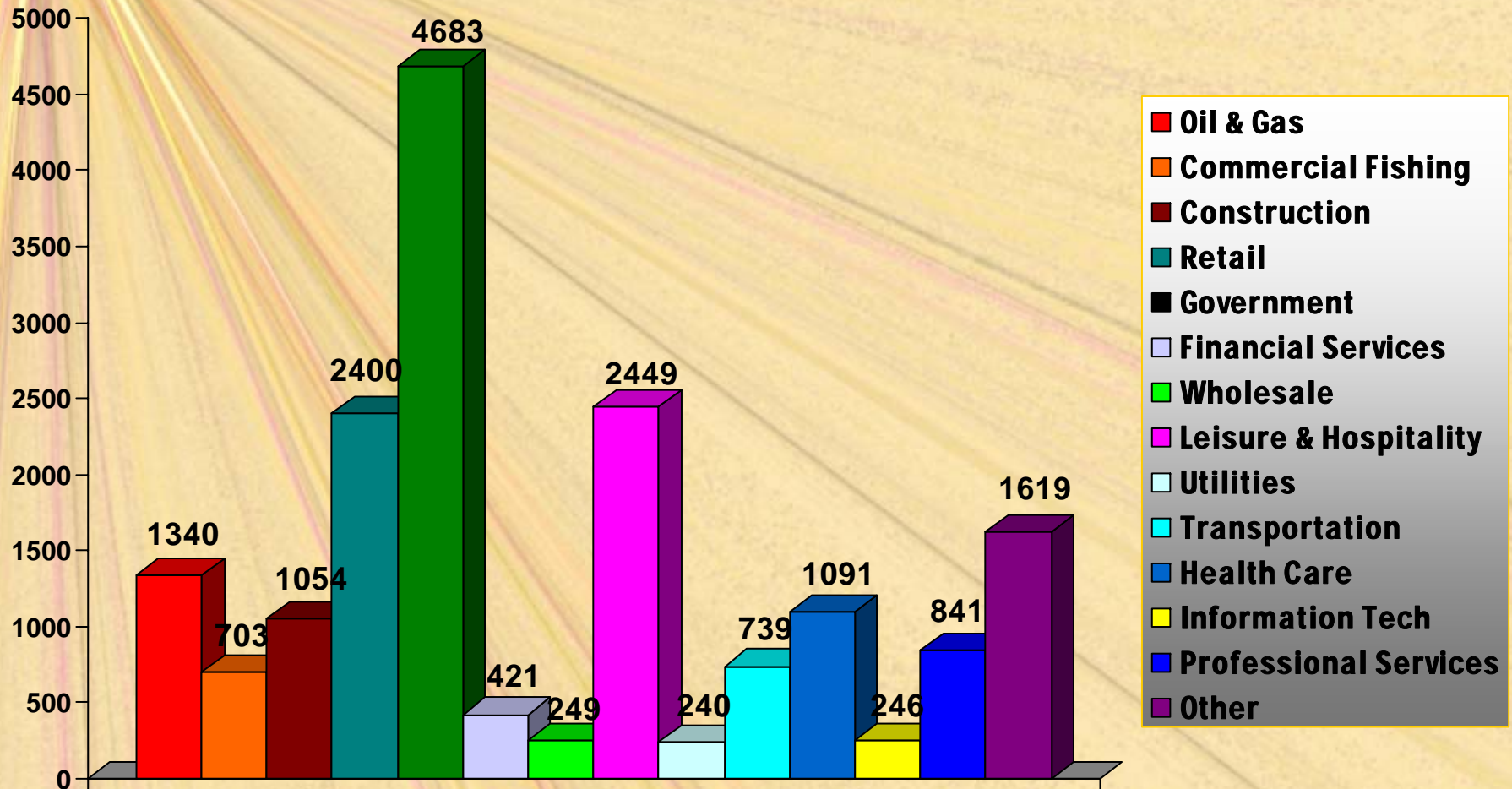




# 2005 Top 10 Taxpayers Assessed Property Valuations

• Union Oil Company of California	\$239 million
• ConocoPhillips	\$221 million
• Tesoro Alaska Company	\$144 million
• Marathon Oil Company	\$ 93 million
• Alaska Communications Company	\$ 85 million
• Agrium USA	\$ 79 million
• BP Exploration Alaska	\$ 66 million
• XTO Energy Inc.	\$ 43 million
• Kenai Kachemak Pipeline	\$ 36 million
• Forest Oil Company	\$ 23 million

# KPB 2004 Employment by Sector



• Source: KPB "2005 Situations & Prospects Annual Report"

**Total KPB  
Employment:  
18,075**



# Economic Impacts of Oil & Gas Industries on the KPB



- **KPB FY2006 Total Revenues \$85.8 million**
- **\$6.79 million (AS 43.56) Oil & Gas Property Taxes**
- **\$4.3 million in Value Added Industry Property Taxes**
- **Total KPB Property Taxes for FY2007 Estimated at \$49.7 million**
- **1,340 Oil & Gas Industry Jobs or 7.4% of KPB Employment in the Year 2005**
- **18.7% of Total KPB Reported Payrolls in the Year 2005**
- **\$88,764 Oil & Gas Average Annual Wage in the Year 2005**
- **\$35,148 KPB Average Annual Wage in the Year 2005**

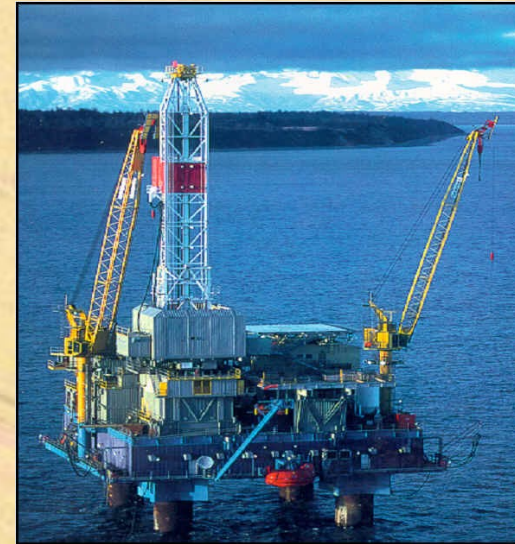


Sources: KPB FY2007 Annual Budget, Projected Revenues  
2005 State of Alaska Department of Labor Statistics  
KPB Assessing Department

# Cook Inlet Basin

## *Oil Production Statistics*

- ➔ Oil production peaked in 1972 at 90 MMBO per year
- ➔ Oil production in 2005 was 7.1 MMBO per year
- ➔ 1,318 MMB oil, produced to-date
- ➔ 94 MMB remaining proven oil reserves
- ➔ 36.8 MMB proven reserves replacement since year 2000
- ➔ Current operating oil producers:
  - Chevron, XTO Energy, Marathon Oil Co. and Forest Oil Company



**Forest Oil Osprey Platform**



**XTO Energy Platform "A"**

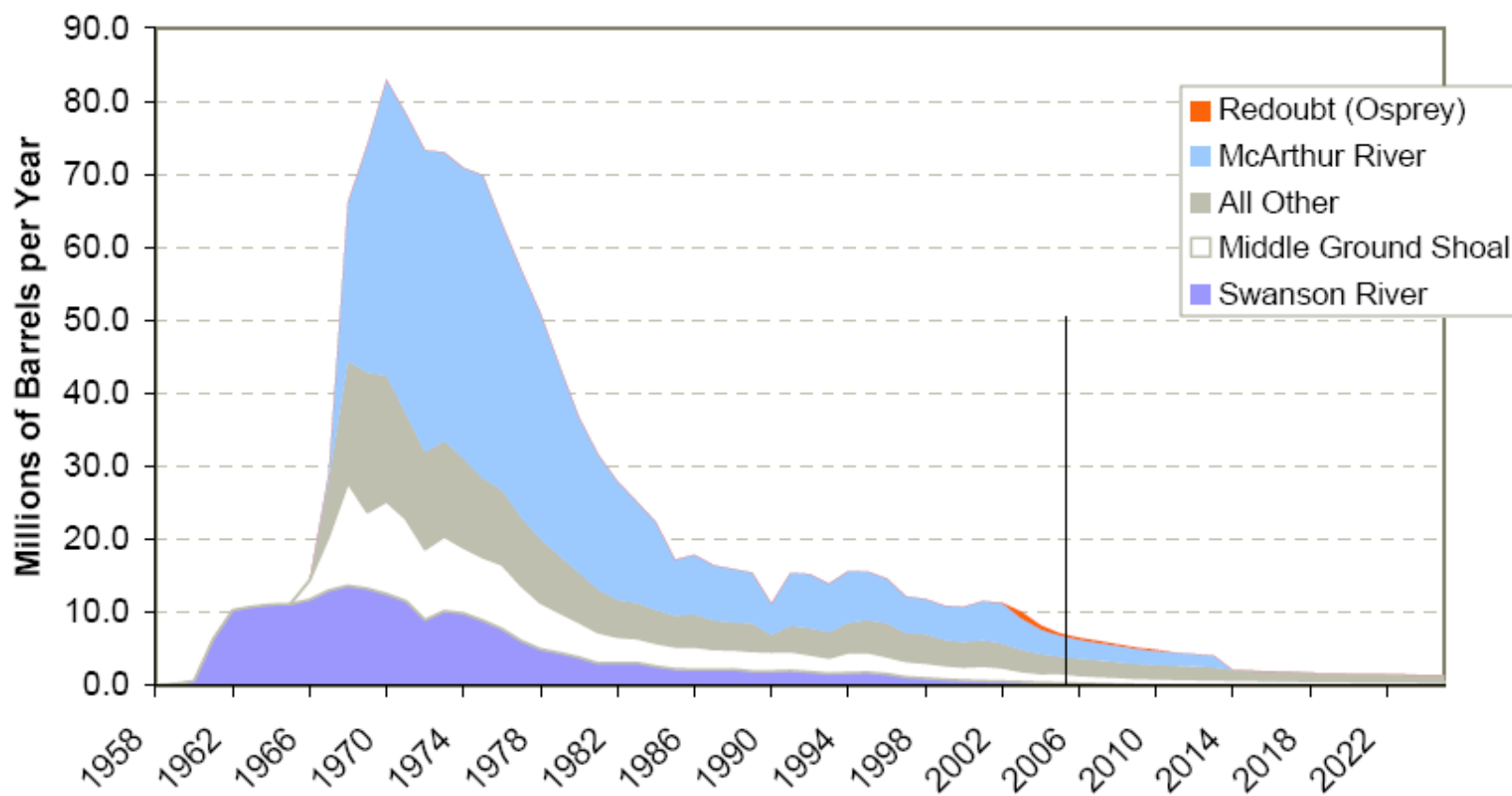


Source: Alaska DNR, Division of Oil & Gas 2006 Annual report

# Cook Inlet Historical Oil Production



Figure III.4 Cook Inlet Historic and Forecast Oil Production  
1958 - 2025<sup>1</sup>

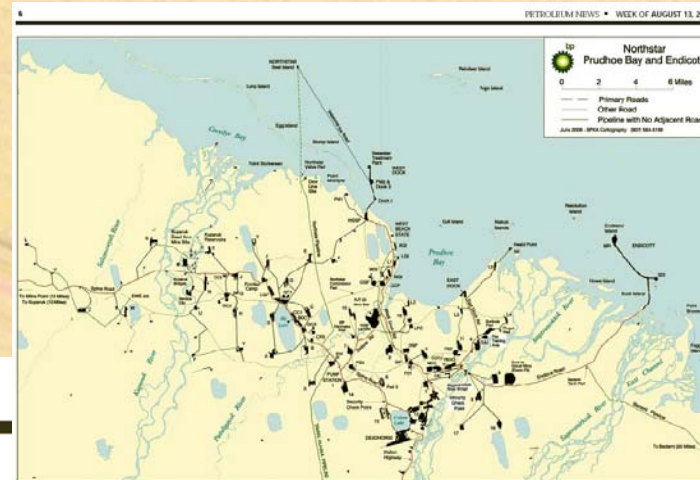


Source: AK Dept. Natural Resources, Division of Oil & Gas, "2006 Annual Report"

# Wake Up Call? Crude oil for Alaska use



PETROLEUM NEWS • WEEK OF AUGUST 13, 2006



● P I P E L I N E S & D O W N S T R E A M ● E X P L O R A T I O N & P R O D U C T I O N

## BP shuts in part of Prudhoe Bay

*Company will replace all main transit lines in field, following unsettling pigging results, 4-5 barrel spill on eastern side*

# Alaska: Uncertainty looms downstream

*BP vows to help prevent crude shortages at in-state refineries that could result from shutdown at Prudhoe Bay field*

# In-State Refined Products- Net Imports Growing For Key Fuels



Product	Tesoro Annual Production	Flint Hills Annual Production	2004 Annual In-State Demand	Difference +/-
Gasoline	4.56 million Barrels	4.44 million barrels	6.95 million barrels	+2.05 million barrels
Jet Fuel	7.92 million barrels	13.31 million barrels	31.0 million barrels	-9.77 million barrels
Distillate Fuel Products	1.11 million barrels	5.37 million barrels	14.1 million barrels	-7.62 million barrels

**Sources: Production Data: State of Alaska, Department of Natural Resource, Division of Oil & Gas- "Alaska Oil & Gas Report 2003, Chapter 6, Alaska Refining Sales & Consumption"**

**Consumption Data: U.S. Dept. of Energy, Energy Information Administration "State Energy Consumption, Price, and Expenditure Estimates," 2004 data [http://www.eia.doe.gov/emeu/states/\\_seds\\_updates.html](http://www.eia.doe.gov/emeu/states/_seds_updates.html)**

# Total In-State Crude Oil Usage-



## Net Daily Consumption Average By Source

	North Slope	Cook Inlet	Foreign Imports	Totals
Tesoro 72,000 bbl/day	25,000 bbl/day	17,000 bbl/day	23,000 bbl/day	65,000 bbl/day
Flint Hills 220,000 bbl/day	64,000 bbl/day	0	0	64,000 bbl/day
Petro Star Fbks. 15,000 bbl/day	3,750 bbl/day	0	0	3,750 bbl/day
Petro Star Valdez 46,000 bbl/day	10,000 bbl/day	0	0	10,000 bbl/day
<b>Totals</b>	<b>102,750 bbl/day</b>	<b>17,000 bbl/day</b>	<b>23,000 bbl/day</b>	<b>142,750 bbl/day</b>

Source: State of Alaska, DNR, Division of Oil & Gas, "Alaska Oil & Gas Report, December 2003"



# The Global Picture



## Tesoro Refinery Crude Supply

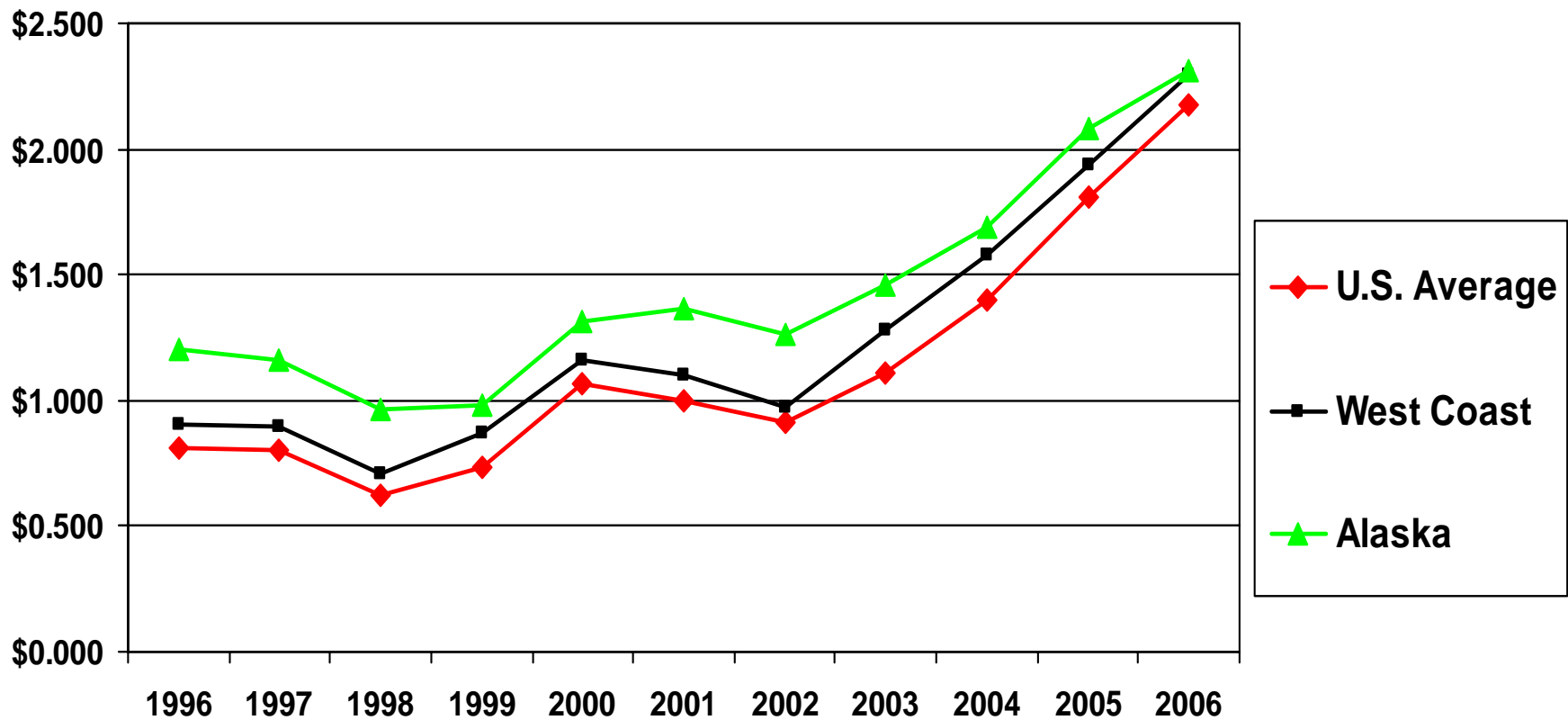
- 25,000 bbl/day from the North Slope (Kuparuk)
- 16,000 bbl/day from Cook Inlet
- 24,000 bbl/day from Indonesia & Africa

Source: Tesoro Alaska officials  
DNR, Division of Oil & Gas,  
monthly oil production report:  
[http://www.dog.dnr.state.ak.us/oil/  
programs/royalty/displaypdf.asp](http://www.dog.dnr.state.ak.us/oil/programs/royalty/displaypdf.asp)

# Alaska

## Average Gasoline Pricing

Regular Grade Prices



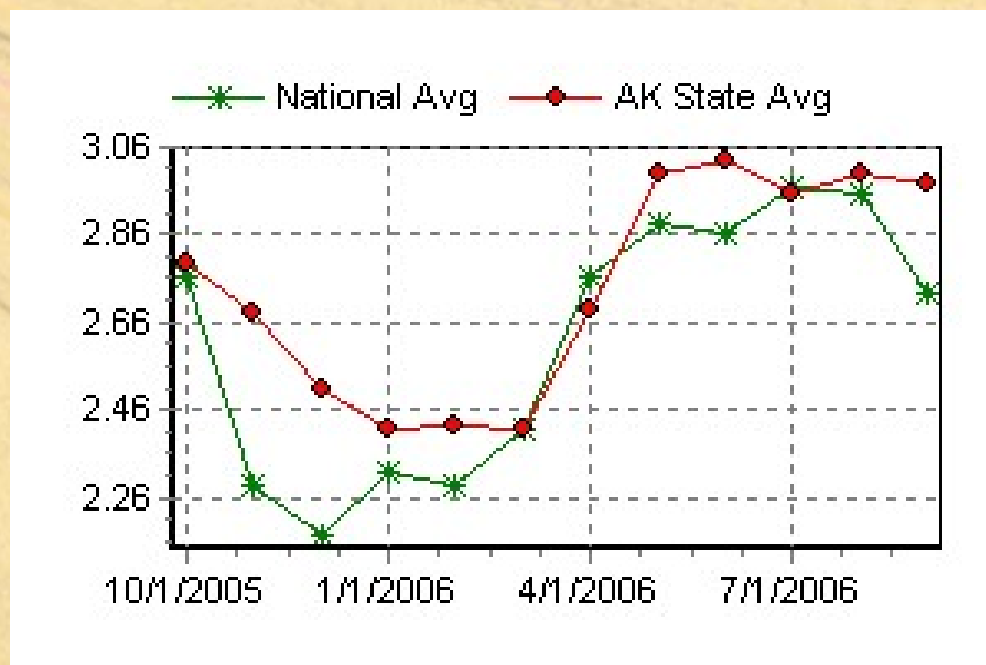
Sources: U.S. Dept. of Energy, Energy Information Administration  
<http://www.eia.doe.gov/emeu/steo/pub/fsheets/petroleumprices.xls>  
[http://tonto.eia.doe.gov/dnav/pet/pet\\_pri\\_gnd\\_dcus\\_nus\\_a.htm](http://tonto.eia.doe.gov/dnav/pet/pet_pri_gnd_dcus_nus_a.htm)





# Alaska Gasoline Pricing Trends

- Current Alaska average regular grade price: \$2.96
- One year ago: \$2.77
- Highest Alaska average regular grade price ever recorded: \$3.06  
05/29/06
- Alaska Ranks 50<sup>th</sup> in U.S States Gasoline consumption

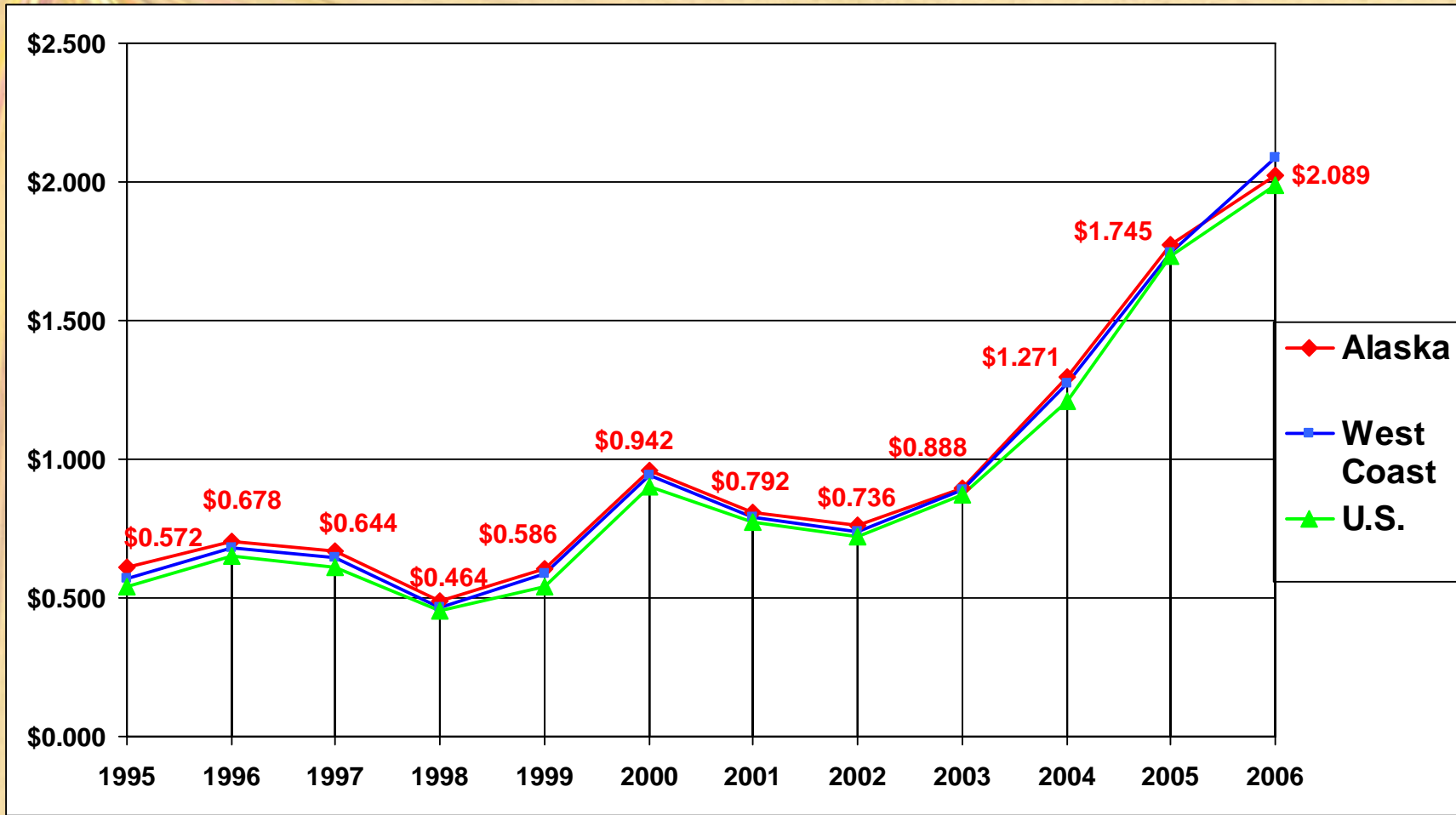


AAA Fuel Gauge Report Graph: Alaska

Source: "AAA's Fuel Gauge Report" @ <http://www.fuelgauge.com/AKavg.asp>  
U.S. Dept. of Energy, Energy Information Administration, State Energy Data, 2004

# Alaska Jet Fuel Pricing

Sales to end users excluding taxes



Source: U.S. Dept. of Energy, Energy Information Administration  
State Energy Data System, 2004, Table F2  
Petroleum Supply Annual 2004, Vol. 1, Table 17  
Petroleum Marketing Monthly, 2006 editions, Table 36

# Cook Inlet Basin

## *Gas Production Statistics*



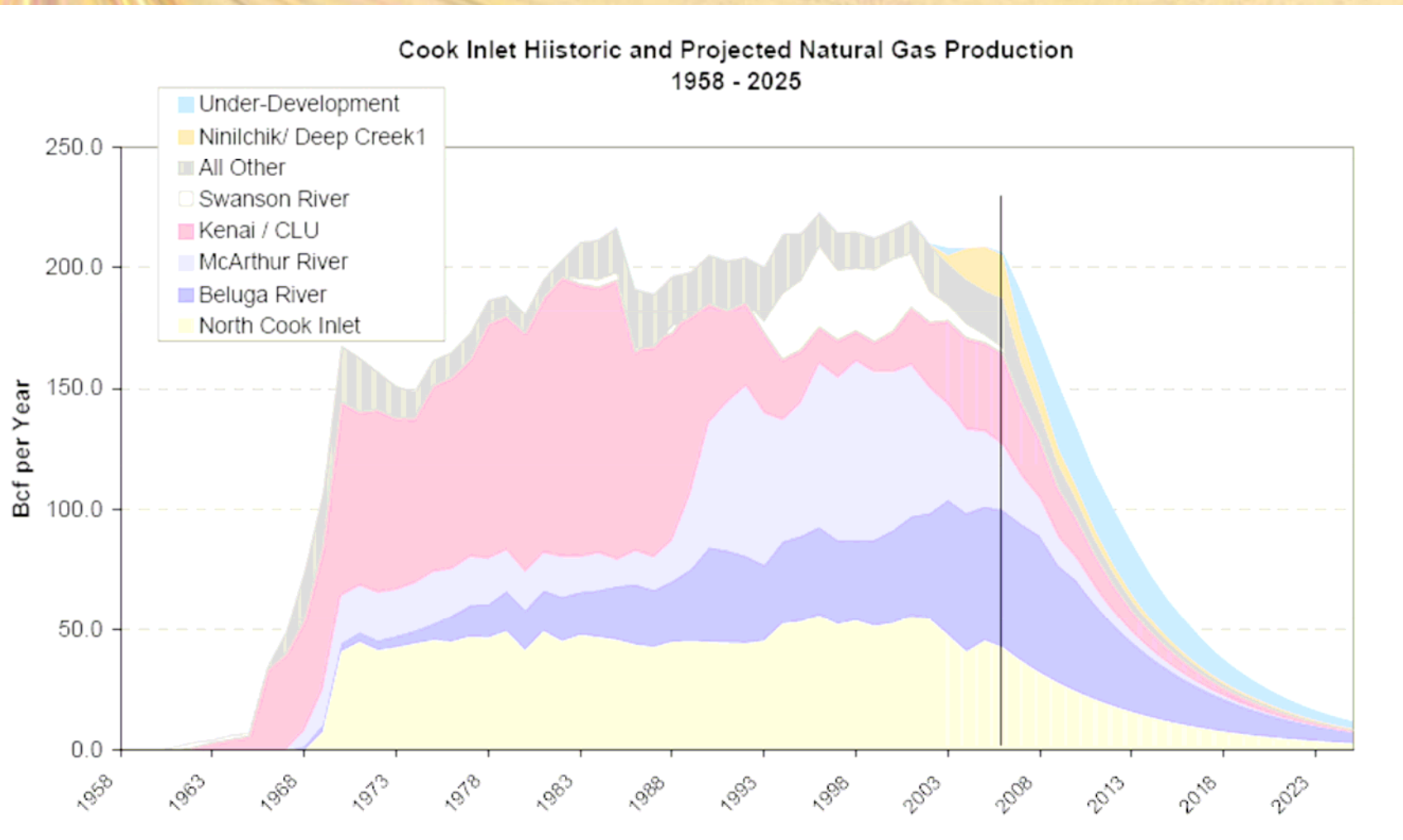
- **Gas production peaked in 1996 at 223 BCF gas**
- **Gas production in 2005 was 208 BCF gas**
- **7.105 TCF produced to-date**
- **1.648 TCF remaining proven reserves**
- **353 Bcf proven reserves replacement since 2000**
- **Current operating gas producers:**
  - **Chevron, Marathon Oil, Aurora Gas, Forest Oil, ConocoPhillips**



Steelhead Platform

Source: AK DNR, Division of Oil & Gas 2006 Annual Report

# Cook Inlet Historical Natural Gas Production

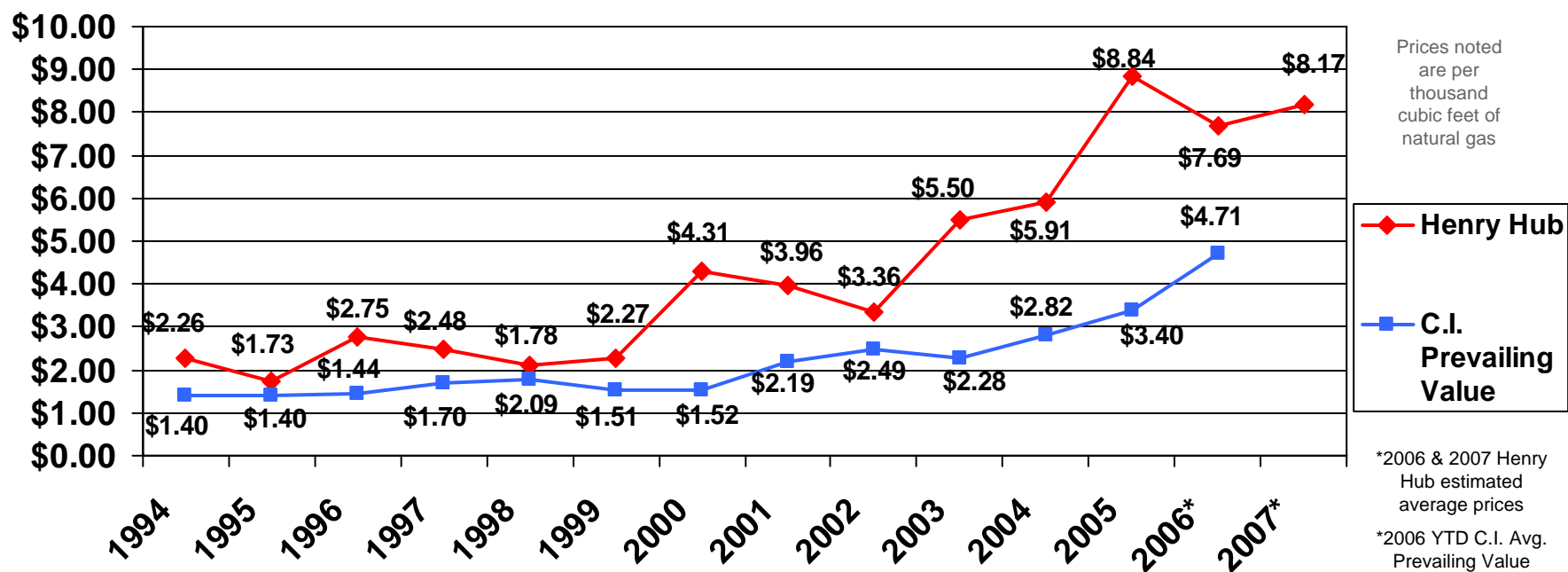


Source: AK Dept. Natural Resources, Division of Oil & Gas, "2006 Annual Report"



# Natural Gas Pricing Trends

## Cook Inlet Prevailing Natural Gas Average Annual Price Comparison to Henry Hub Natural Gas Average Annual Price



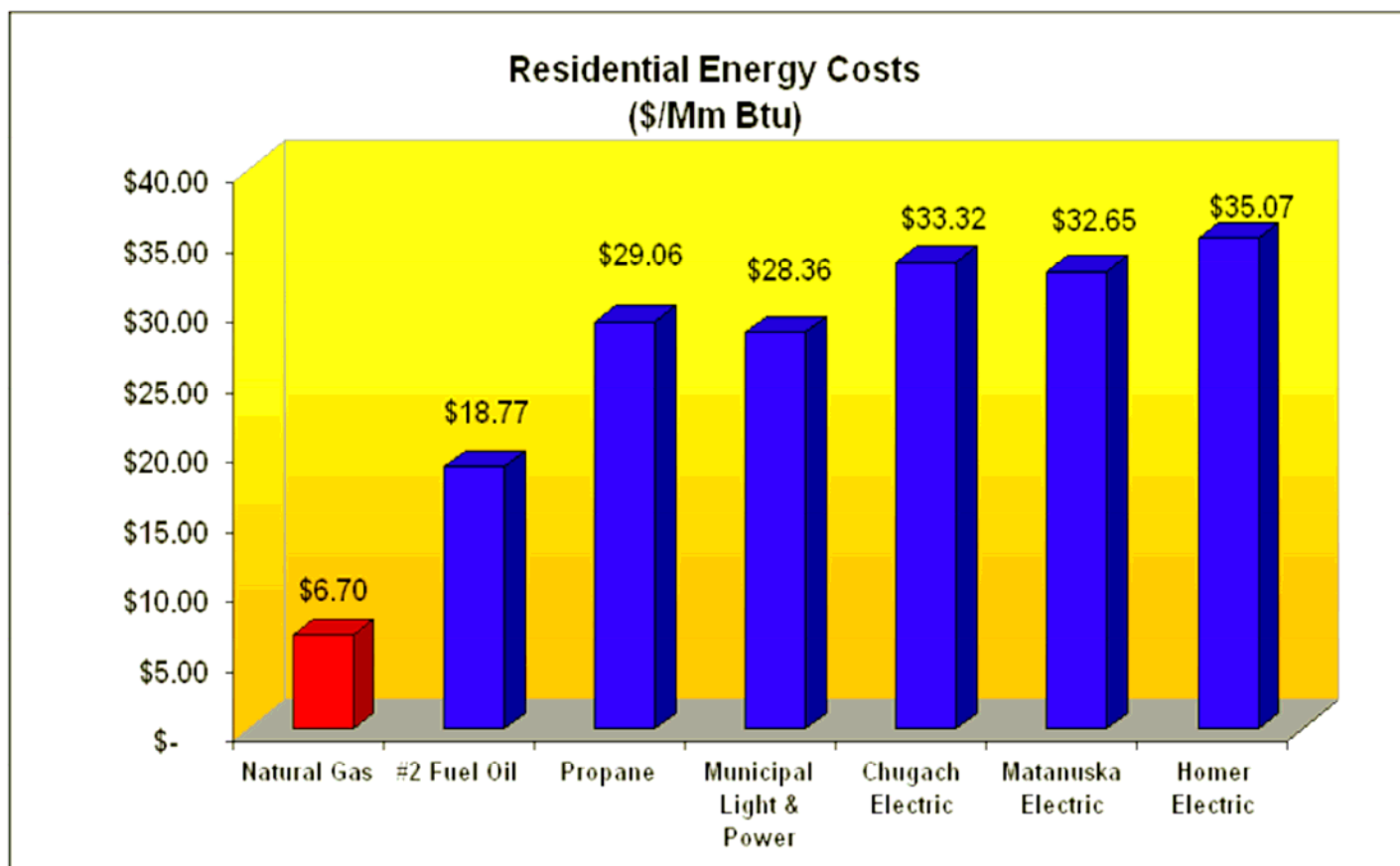
Source for Henry Hub: U.S. Federal Reserve Bank of St. Louis, Economic Research Division: Wall Street Journal/Haver Analytics

Source for Cook Inlet: State of Alaska, Dept. of Revenue, Cook Inlet Natural Gas Prevailing Value, weighted average price of significant sales of gas to publicly regulated utilities in Cook Inlet. 2006 price is average of first 3 quarters reported for the year.

Source for Henry Hub Price Projections in 2006 & 2007: U.S. Energy Information Agency, "August Short-Term Energy Outlook, 2006"



## Comparative Fuel Costs 2006 South Central Alaska

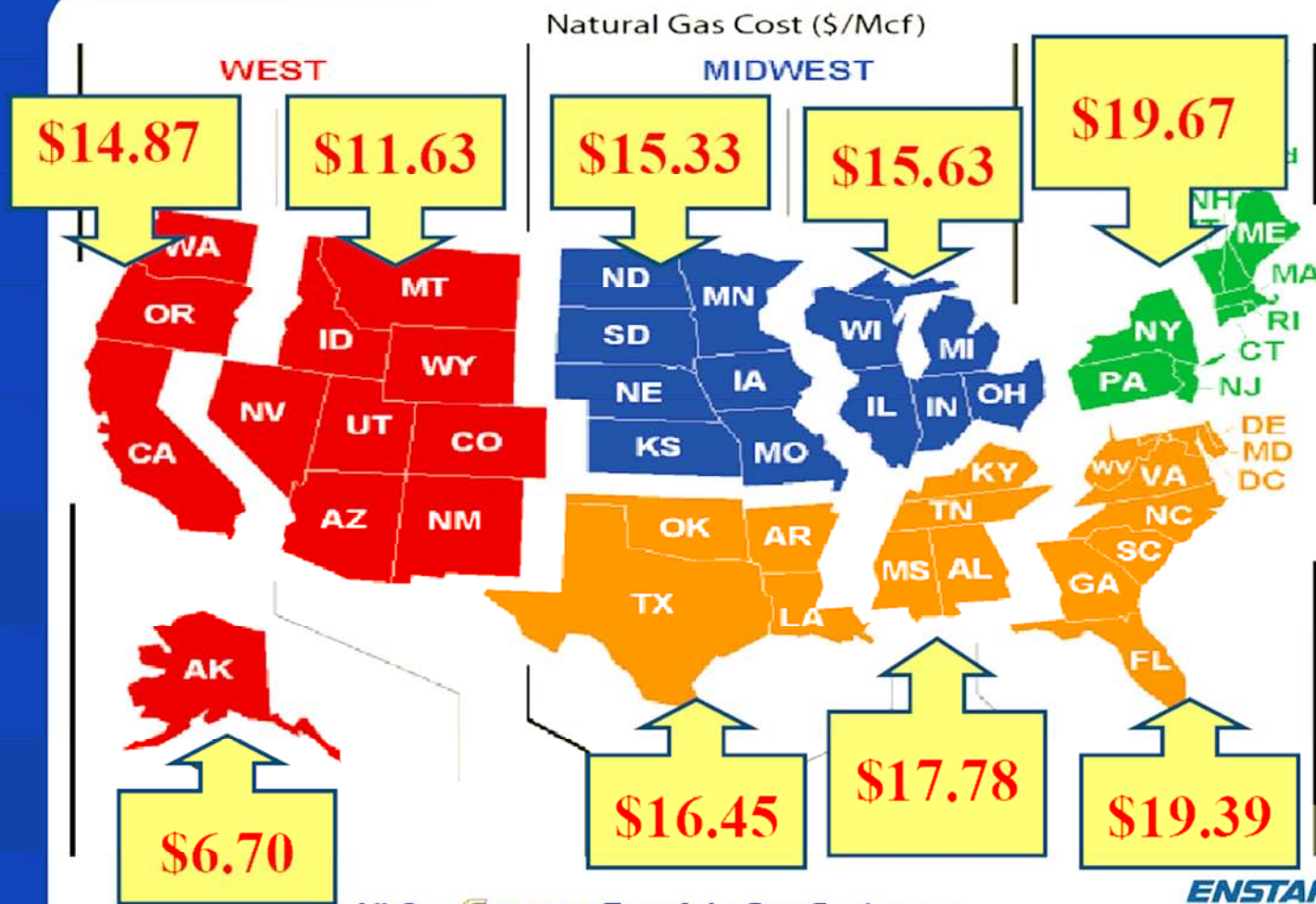


*All Our Energy Goes Into Our Customers*





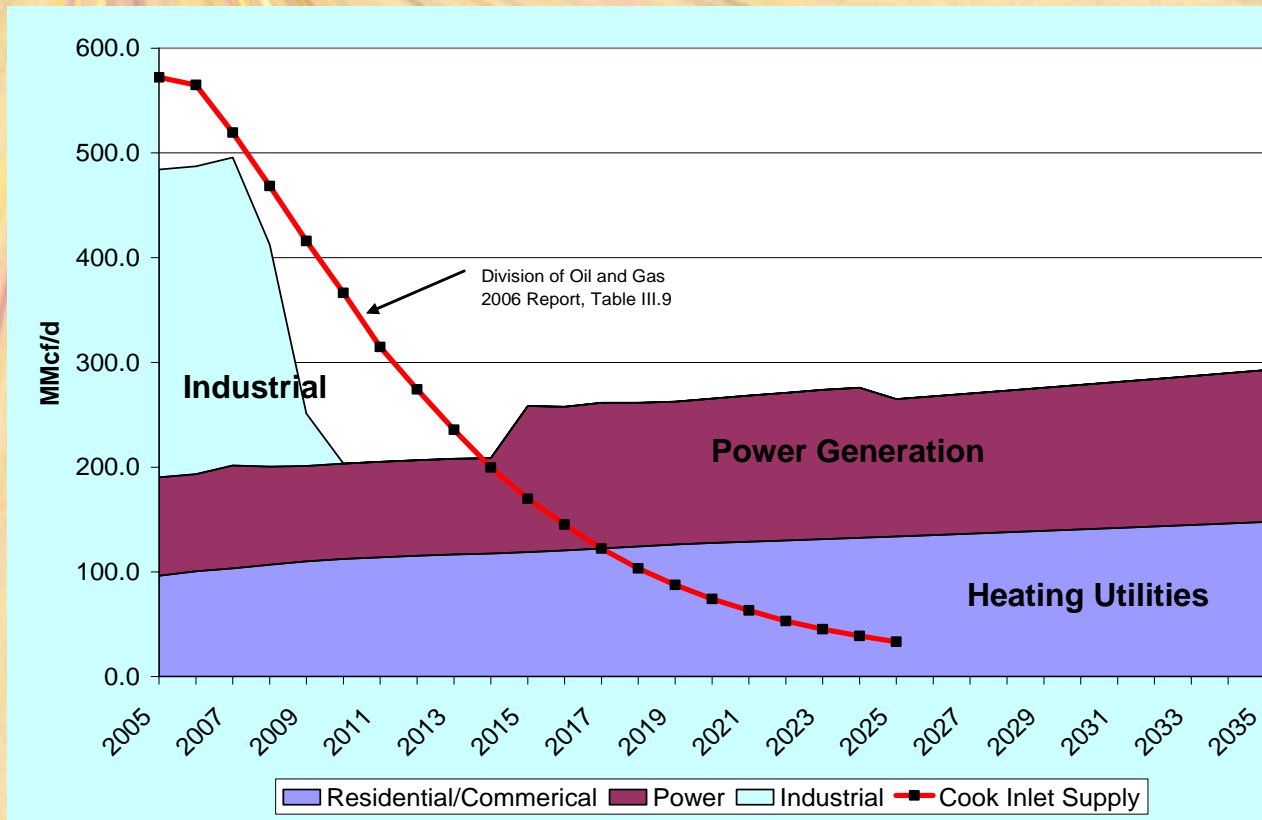
# Residential Costs-By Region



All Our *Energy* Goes Into Our Customers



# Projected Natural Gas Reserves Life



- Industrial users at risk beginning 2008
- Utilities facing supply issues 2014
- Includes Pebble Mine power demands in 2015
- Cook Inlet potential undiscovered reserves: 13 to 17 trillion cubic feet
- Cost to discover & develop 50% of potential reserves:

\$5.0+ Billion

Value: \$37.7 Billion @

\$4.71/mcf (2006\$)

**Graphic Source:** SAIC consultants preliminary draft update to 2004 projection in U.S. Dept. of Energy Study "South Central Alaska Natural Gas Study." Projection subject to further refinement.

**Data Source:** U.S. Department of Energy Study "South Central Alaska Natural Gas Study." 06/04



# Cook Inlet: The Future?



- Additional pending new investment in Cook Inlet oil & gas
- North Slope natural gas pipeline to Cook Inlet
- Cook Inlet petrochemical industry expansion
- Chuitna Coal Project
- Coal gasification
- Coal to liquids
- CO2 enhanced oil recovery (EOR)
- Offshore platform dismantlement, replacement & remediation (DR&R)
- Lower Cook Inlet OCS
- Cook Inlet NPDES permit
- Beluga Whales
- Power generation infrastructure replacement
- Pebble Mine economic impacts
- Workforce challenges & opportunities

# A Look Forward at the Future For Alaska's Workers



# “Those Out Of State People Are Gonna Take All OUR Jobs!”

(Or will they?)



**Mining NEWS**  
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October 2005

Vol. 10, No. 44 Week of October 30, 2005

## MINING NEWS: Mining workforce shortage hits Canada

Government funded report: Women, minorities, youth need to be encouraged to enter mining sector to replace high number of retirees

Web posted Sunday, May 28, 2006

### Too much of a good thing?

A flood of construction projects is pushing labor demands and allowing contractors to be selective with bids

By Melissa Campbell  
Alaska Journal of Commerce

'Tis the season of detours, road blocks and guys in hard-hats.

With a record \$6.5 billion in planned construction spending, Alaska is kicking off its busiest season since the anomalous boom days of the 1980s.

The U.S. Corps of Engineers said this month that the agency is projecting to spend \$613.4 million this year.



Iron workers move rebar on an apartment project on the corner of 16th Ave. and A St. in Anchorage May 22. With \$6.5 billion in planned construction in Alaska this season,

**Petroleum NEWS**  
Home Subscriptions Products Archives

Providing coverage of Alaska and northern Canada's oil and gas industry  
February 2006

Vol. 11, No. 9 Week of February 26, 2006

## Alberta tackles 100,000-job shortfall

Shortfall part of new 400,000 jobs expected by 2015; government plans to promote province, also skills upgrading for own workers

By Gary Park  
For Petroleum News



PRINT THIS

### Concerted effort needed to avert US oil worker shortage

Maureen Lorenzetti

Officials from oil-producing states saw a slight increase last year in the number of college graduates entering the US oil and gas business, but the pace was not enough to stem what is expected to be a growing tide of retirements within the industry, North Dakota Gov. John Hoeven (R) told the House Subcommittee on Energy and Minerals Resources last month.



PRINT THIS

### Analyst: Oil, gas industry must take steps to recruit young professionals

By OGJ editors  
**HOUSTON, Nov. 17** -- In order to fill the growing shortage of engineers and other professionals, oil and gas companies must convince college students of the industry's highly technical nature and the job opportunities it offers, said officials at Ernst & Young LLP, Houston.

**Petroleum NEWS**  
Home Subscriptions Products Archives

Providing coverage of Alaska and northern Canada's oil and gas industry  
October 2005

Vol. 10, No. 40 Week of October 02, 2005

## Energy industry faces worker shortage

Looming retirements face oil and gas industry; rigs also an issue, with equipment sought for U.S. work in China, Italy and Norway drilling

**Petroleum NEWS**  
Home Subscriptions Products Archives

Providing coverage of Alaska and northern Canada's oil and gas industry  
May 2006

Vol. 11, No. 22 Week of May 28, 2006

## Do we have a job for you....

Canadian companies offer finder's fees, bonuses, stock options to attract professional staff

Gary Park  
For Petroleum News

The hunt for skilled professionals is getting tougher than the hunt for new oil and gas reserves in Alberta.

## Neighbors negotiate landmark pact

Canada's two hottest — Alberta and British Columbia — have decided they have more to gain than lose through cooperation.

In a groundbreaking deal, the two provinces have removed barriers that restrict the cross-border movement of skilled labor, trade and investment.

# Potential Projects and Workforce Requirements: 44,000 Jobs Possible Over the Next Decade

<i>Project</i>	<i>Estimated Jobs</i>	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<i>NPRA</i>	2,500			▲									
<i>Prudhoe Region</i>	1,400		▲					▲					
<i>ANS Gas Line</i>	7,500						▲						▲
<i>ANS Gas Line Ops</i>	500											▲	
<i>C.I. Spur/Bullet Line</i>	2,000					▲					▲		
<i>Bristol Bay Oil&amp;Gas</i>	1,000					▲							
<i>Cook Inlet OCS</i>	500						▲						
<i>Nenana Basin</i>	500						▲						
<i>Copper River Basin</i>	500						▲						
<i>Aging O&amp;G Workers</i>	3,000	▲											
<i>ANWR</i>	5,000							▲					
<i>Agrium "Blue Sky"</i>	500					▲							
<i>Pebble Construction</i>	2,000									▲		▲	
<i>Pebble Operations</i>	1,000											▲	
<i>Kensington Mine</i>	300		▲										
<i>Pogo Mine</i>	300	▲											
<i>Rock Creek</i>	200		▲										
<i>Donlin Creek</i>	300						▲						
<i>Chuitna Coal</i>	350				▲								
<i>Missile Defense</i>	150	▲			▲								
<i>Power Generation</i>	500			▲								▲	
<i>General Const.</i>	14,000	▲											

All Project Estimated Jobs & timelines are based on published media accounts & company information



**For More Information  
Please Visit:**



**[www.cookinletoilandgas.org](http://www.cookinletoilandgas.org)**

**Thank You!**



**Questions?**



**King Salmon Platform, Helipad, shortly after installation in Cook Inlet**