How North Slope Oil Has Transformed Alaska’s Economy

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Anchorage, Alaska
# North Slope Oil Basic Statistics

<table>
<thead>
<tr>
<th>15 Billion Barrels</th>
<th>Production (enough to supply total world demand for 6 months)</th>
</tr>
</thead>
<tbody>
<tr>
<td>$378 Billion</td>
<td>Value of production at the wellhead (purchasing power in 2007 $)</td>
</tr>
<tr>
<td>$118 Billion</td>
<td>State of Alaska cumulative revenues (purchasing power in 2007 $)</td>
</tr>
<tr>
<td>$40 Billion</td>
<td>Alaska Permanent Fund balance</td>
</tr>
</tbody>
</table>

-$3$ Million Per Hour
North Slope Oil: What Has it Done for the U.S.

- **Production**
  - Peak at 25% of domestic output

- **Revenues**
  - $40 Billion thru 1998

- **Balance of Payments**
  - $268 Billion thru 1999
  - $70 Million per day at current price and production
## Indicators of Oil’s Share of Economy

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>NR Production value since 1867</td>
<td>90%</td>
</tr>
<tr>
<td>State General Fund revenues</td>
<td>85%</td>
</tr>
<tr>
<td>Market value of resource production</td>
<td>82%</td>
</tr>
<tr>
<td>Industrial property tax base</td>
<td>80%</td>
</tr>
<tr>
<td>Private investment spending (Direct)</td>
<td>60%</td>
</tr>
<tr>
<td>Gross state product (Direct)</td>
<td>33%</td>
</tr>
<tr>
<td>Personal income (Total)</td>
<td>33%</td>
</tr>
<tr>
<td>Jobs (Total)</td>
<td>33%</td>
</tr>
<tr>
<td>Jobs in Oil Sector</td>
<td>3%</td>
</tr>
</tbody>
</table>
## Alaska Natural Resources: 2005 Market Value (Million $)

<table>
<thead>
<tr>
<th>Resource</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oil</td>
<td>$18,164</td>
</tr>
<tr>
<td>Gas</td>
<td>$ 761</td>
</tr>
<tr>
<td>Mining</td>
<td>$ 1,506</td>
</tr>
<tr>
<td>Seafood</td>
<td>$ 1,392</td>
</tr>
<tr>
<td>Tourism</td>
<td>$ 1,592</td>
</tr>
<tr>
<td>Timber</td>
<td>$ 142</td>
</tr>
</tbody>
</table>

Value determined at point of production except for mining.
### Oil Industry Jobs in 2002

<table>
<thead>
<tr>
<th>State</th>
<th>Production (Million Barrels)</th>
<th>Refining (Million Barrels)</th>
<th>Transport (Million Barrels)</th>
<th>Annual Oil Production (Million Barrels)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALASKA</td>
<td>8,761</td>
<td>732</td>
<td>1,037</td>
<td>359</td>
</tr>
<tr>
<td>Texas</td>
<td>133,802</td>
<td>20,960</td>
<td>15,455</td>
<td>412</td>
</tr>
<tr>
<td>California</td>
<td>16,441</td>
<td>13,447</td>
<td>Na</td>
<td>258</td>
</tr>
<tr>
<td>Colorado</td>
<td>7,257</td>
<td>372</td>
<td>790</td>
<td>18</td>
</tr>
<tr>
<td>Louisiana</td>
<td>69,009</td>
<td>9,536</td>
<td>2,294</td>
<td>94</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>25,031</td>
<td>2,206</td>
<td>1,625</td>
<td>67</td>
</tr>
<tr>
<td>New Mexico</td>
<td>9,765</td>
<td>611</td>
<td>1,002</td>
<td>67</td>
</tr>
<tr>
<td>Wyoming</td>
<td>9,903</td>
<td>834</td>
<td>610</td>
<td>55</td>
</tr>
</tbody>
</table>

Source: ADOL.
Alaska Economic Drivers: The Foundation of the Economy

Shares of Personal Income in 2005

- Federal Govt: 34%
- Oil and Gas: 33%
- Non Pet Resources: 33%
Oil and Gas Contribution: Three Pathways

 Shares of Personal Income in 2005

- Product
- Government
- PFD
# Oil and Gas Contribution: Production Pathway

<table>
<thead>
<tr>
<th>The Role of the Oil and Gas Industry in Alaska’s Economy</th>
</tr>
</thead>
</table>

Anchorage Chamber of Commerce  
June 30, 2008
Oil and Gas Contribution: Production Pathway

Key Findings

- 41,744 jobs in Alaska
  - 9.4 percent of all employment in the state
  - 12 percent of private sector employment

- $2.4 billion payroll in Alaska
  - 11.2 percent of all wages
  - 21 percent of private sector wages
Oil and Gas Contribution: Production Pathway

Job creation

- 41,744 jobs – direct, indirect, induced
  - 4,497 Direct – primary companies
  - 8,410 Indirect – support industry companies providing goods and services
  - 28,837 Induced – jobs created when direct and indirect employees spend their income locally
Oil and Gas Contribution: Government Pathway

Assumption: All Spent Petroleum Revenues Pay for Operations.
Oil and Gas Contribution: PFD Pathway

2008 DIVIDEND BASICS
$3,269 Dividend
611 Thousand Recipients
$2 Billion Distribution

COMPARE 2007 EARNINGS (Billion $)
- $1.4 Retail Trade
- $1.6 Federal Civilian
- $1.7 Construction
- $1.8 Oil + Mining
- $2.0 Health
- $2.2 Military
Alaska with Oil: Bigger, Richer, Healthier

- Job Opportunities
- Business Opportunities
- High Incomes
- Low Taxes
- Low Prices
- New People
- Public services
- Public Infrastructure
- Business infrastructure
- Consumer goods and services
North Slope Oil:
The Rest of the Story

OIL TRANSFORMS ALASKA
Spillovers from Oil Development

- Boost for Development of Other Industries
- Economic Maturation
- Wealth Creation
### Alaska’s Non Oil Economic Drivers: Actual Job Growth (Thousands)

<table>
<thead>
<tr>
<th></th>
<th>1967</th>
<th>2007</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tourism</td>
<td>1</td>
<td>22</td>
<td>21</td>
</tr>
<tr>
<td>Fishing</td>
<td>7</td>
<td>18</td>
<td>11</td>
</tr>
<tr>
<td>Mining</td>
<td>&lt;1</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Air Cargo</td>
<td>-</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Timber</td>
<td>2</td>
<td>1</td>
<td>-1</td>
</tr>
<tr>
<td>Military</td>
<td>36</td>
<td>27</td>
<td>-9</td>
</tr>
<tr>
<td>Federal Civilian</td>
<td>18</td>
<td>17</td>
<td>-1</td>
</tr>
</tbody>
</table>
A Boost to Mining

- Low Tax Burden
- Public Infrastructure
- Lower Wages
- Availability of Business Services

State Revenues from Mining

<table>
<thead>
<tr>
<th>Year</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$5.4</td>
<td>$5.4</td>
<td>$8.3</td>
<td>$15.6</td>
<td>$25.4</td>
<td>$155</td>
<td>$175</td>
</tr>
</tbody>
</table>
A Boost to Retirees

- Tax Free
- PFD
- Public Amenities

Retirees represent $1.5 billion in spending.
A Boost for Retailing and Services: Foregone Tax Burden on Households

34%*

$13,150 Per Capita in 2006

* Average State Income Tax Rate to Replace Oil Revenues—1970 to 2006.
Economic Maturation: Petroleum Reduces Seasonality

**Index of Seasonality**

<table>
<thead>
<tr>
<th>Year</th>
<th>Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>1968</td>
<td>32%</td>
</tr>
<tr>
<td>2006</td>
<td>12%</td>
</tr>
</tbody>
</table>

Percent job increase July over January.

Ratio of July to January Tourist Visitors is 10:1.

Oil and the Alaska Economy
Economic Maturation: Reduce Cost of Living

Anchorage COLA
% Above US Average

Oil and the Alaska Economy
Wealth Creation: Public Sector
Wealth Creation: Private Sector
Wealth Creation: Households

“Son of the Permanent Fund” Fund

$35 Billion
North Slope Oil: The Path Not Taken

WHERE WOULD WE BE TODAY?
Who Remembers Alaska Before Prudhoe Bay?

Of 670 thousand Alaskans today perhaps 14% were here in 1968.

- 35 thousand Alaska Natives
- 55 thousand non Natives

That means 580 thousand, 86% of the current population, has no memory of Alaska before big oil.
The Economy at Statehood (Thousand Jobs)

<table>
<thead>
<tr>
<th>TOTAL BASIC</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Military</td>
<td>33</td>
</tr>
<tr>
<td>Fed Civilian</td>
<td>15</td>
</tr>
<tr>
<td>Natural Resources</td>
<td>9</td>
</tr>
<tr>
<td>Fishing</td>
<td>7</td>
</tr>
<tr>
<td>Tourism</td>
<td>1</td>
</tr>
<tr>
<td>Mining / Timber / Oil</td>
<td>1</td>
</tr>
</tbody>
</table>

| SUPPORT                       | 33   |
| GRAND TOTAL                   | 90   |
The Alaska State Seal
Alaska Jobs: Actual vs. Projected (000)

- Actual
- Without Oil

1960
Growth Since 1960

Oil and the Alaska Economy
Gedankenexperiment
ANOTHER DRY HOLE AT PRUDHOE BAY
Companies Say “We Give Up”
Candidates for Comparison?

- Oklahoma
- New Mexico
- South Dakota
- Wyoming
- Montana
- Idaho
- Florida
- Nevada
- Hawaii

Oil and the Alaska Economy
Maine Is Not Like Alaska

- Physically attached to Lower 48
- Federal land ownership 1%
- Native American population 1%
- Lobsters instead of crabs
- Unusual accent
- Presidential hangout
Maine and Alaska

- Many moose
- Few humans
- Cold
- Remote
- Independent streak
Maine and Alaska

- Fish / Tourism / Timber / Mining / Agriculture
- Limits on sustainable harvests
- Challenged by globalization
- Small and declining manufacturing
- Dependence on federal $$s

- Conflicting visions about use of resources
- “Zero Sum Game” development mentality

- Strategic development planning advice from Brookings Institution

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Oil and the Alaska Economy
Maine Economic History in a Nutshell

Throughout the second half of the twentieth century, Maine has struggled to find a proper balance between resource-based industrial development and environmental protection. The state has come to rely heavily on tourism, small manufacturing enterprises and defense-related activities and installations for much of its economic base.
Maine Economic Performance: Some Evidence

- Gross State Product per capita: 43rd (Ak 7th)
- Job Growth: 66% (Ak 144%)
- Population Growth: 46th (Ak 5th)
- Median Age: 1st (Ak 49th)
- Housing Built Before 1939: 31% (Ak 2%)

- Median Paycheck: 77% as high as Alaska
- Projected Population Growth = 1/3 US average (Ak 30% above)
Alaska vs. Maine Family

Oil and the Alaska Economy
## Comparing the Average Family of 4

<table>
<thead>
<tr>
<th></th>
<th>MAINE*</th>
<th>ALASKA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wages</td>
<td>$55,641</td>
<td>$72,750</td>
</tr>
<tr>
<td>State Taxes</td>
<td>-$7,077</td>
<td>$0</td>
</tr>
<tr>
<td>Dividend</td>
<td>$0</td>
<td>$6,800</td>
</tr>
<tr>
<td>Public Spending</td>
<td>$29,995</td>
<td>$49,064</td>
</tr>
<tr>
<td>TOTAL</td>
<td>$78,560</td>
<td>$128,614</td>
</tr>
<tr>
<td>Difference</td>
<td></td>
<td>+$50,054</td>
</tr>
</tbody>
</table>

* Adjusted for lower cost of living in Maine.
Resource Curse: Some Symptoms

- Corruption
- Rent Seeking
- Entrepreneurial Decline
- Overheating Economy
- Economic Distortions
- Public Sector Overexpansion
- Mismanagement
- Underinvestment
No reason to be complacent
Daily per capita oil production

1988

TODAY

Oil and the Alaska Economy
Oil and Gas: Growth Potential

$2,500
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