

4/19/99

Overview:

Long Term

Fiscal...

HFIN

FILE

STATE OF ALASKA

TONY KNOWLES, GOVERNOR

4/19/99

DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL AND GAS

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April 7, 1999

The Honorable Randy Phillips
The Honorable John Torgerson
The Honorable Gary Wilken
Alaska State Legislature
State Capitol
Juneau, AK 99801-1182

Dear Senators Phillips, Torgerson and Wilken:

The division is responding to your request for information regarding resources estimates for the Alaska North Slope (ANS), production curves for those resources, and historical and projected rig counts. We hope that you find this information helpful.

The division conducted a literature search for assessments of oil and gas "resources" on the ANS. The division itself lacks the staff and the time to independently assess ANS resources beyond the scope of our annual "reserves" forecast. The United States Geological Survey's (USGS) most recent Arctic National Wildlife Refuge (ANWR) assessment was prepared by 40 USGS geoscientists and support staff over 3 years at a cost of \$3.8 million. A United States Department of Energy (DOE) and the USGS regional assessment of the ANS, conducted between 1991-95, cost about \$2.0 million. In preparing the attached tables and figures, the division has relied upon various federal assessments and publicly available information from the ANS producers and other sources.

The USGS and most professional oil and gas organizations distinguish "reserves" from "resources." Reserves are known oil or gas accumulations that can be recovered with reasonable certainty under current economic and operating conditions. Reserves include the remaining recoverable oil in Prudhoe Bay, but not the majority of gas there. Resources are first divided into "discovered resources" and "undiscovered resources." Discovered resources are known oil or gas accumulations that cannot be produced under current economic and operating conditions. Most of the Prudhoe Bay gas would be included in this category. Undiscovered resources are oil or gas accumulations that are believed to exist based upon geologic knowledge and theory. Undiscovered resources are further subdivided into "technically recoverable resources" and "economically recoverable resources." Technically recoverable resources are those resources which could be produced under current technology regardless of the commodity price. Economically recoverable resources are technically recoverable resources that could be recovered at a given commodity price.

"Develop, Conserve, and Enhance Natural Resources for Present and Future Alaskans."

Senator Phillips
Senator Torgerson
Senator Wilken
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Resource estimates are also expensed as unconditional or conditional. Unconditional estimates assume that at least some oil always will be found. Conditional estimates include a risk factor assuming a chance that oil may not be discovered.

Resource assessments for a given area often vary dramatically. Comparing assessments is difficult because definitions, methodologies, and areas studied are slightly different. Nevertheless, the following illustrate the dramatic variance:

1. The 1987 Energy Information Administration (EIA) ANWR assessment pegged the mean "unconditional (risked) economically recoverable oil" at 3.45 billion barrels of oil (bbo); the 1995 USGS assessment pegged the mean at 0.898 bbo, a 74% decline.
2. The 1987 Bureau of Land Management (BLM) reported the "undiscovered conditionally economically recoverable oil" in ANWR as 0.6137 bbo; just four years later the BLM reported it as 1.642 bbo, a 167% increase.
3. The 1987 USGS assessment estimated the oil in place for ANWR as 4.8 (bbo) at a 95% probability; ten years later, its assessment estimated the oil in place as 11.6 bbo, a 142% increase.

Although these assessments represent the best available information, they should be viewed skeptically when trying to forecast the future.

For a given area, the division has not determined which assessment is best. Rather, it uses the most recent assessment. The division reports the technically recoverable resources estimate from the various assessments.¹ If that estimate is not available, the division reports the conditionally risked economically recoverable resources estimate from the assessment. These estimates represent a high side scenario; that is, they could only be fully recovered at a high oil price. If available, high, medium, and low estimates are reported. Otherwise, just the best available information is reported as the medium estimate. Both discovered and undiscovered resources are reported in two subcategories: onshore and offshore. Undiscovered onshore resources are further divided into five areas: W. NPRA, NPRA, Central ANS, Foothills, and ANWR.² Undiscovered offshore resources are further divided into two areas: Beaufort and Chukchi.³ Tables 1 through 4 present this information.

¹ The ANWR estimate reported by Senator Phillips in his March 30, 1999, memorandum is the technically recoverable resource estimate from the 1998 USGS assessment.

² Because the areas of some studies overlap, the estimates contain some duplication. According to the USGS the estimates cannot be meaningfully split. The onshore numbers generally include the state offshore resources.

³ The offshore resources are in federal waters. Under current law, the state receives 27% of all lease revenues from leases between 3 and 6 miles offshore. If recent legislation proposed by Congressman Don Young passed, the state would receive the same percentage of lease revenues between 3 and 200 miles offshore. Federal offshore production could have other economic benefits to the state.

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Next the division has assembled production rate curves for the various areas and categories. As noted above, the division has assumed that all the technically recoverable resources would be produced. The production start date for each area assumed:

1. All of the areas would be leased in 2000.⁴
2. A certain number of years to discover the resources (if a discovery had not been made).
3. A certain number of years between discovery and production.

To the extent such schedules were available for particular areas from public sources, the division relied upon a mid case schedule, as opposed to an accelerated or delayed schedule. Otherwise, the division itself estimated the time period between leasing and production. Likewise, if there were actual production curves in publicly available sources, the division relied on them. Otherwise, the division generated the curves from various analogues. All of these schedules are very uncertain and dependent on such factors as: oil price, lease sales and terms, competition, infrastructure proximity, technology, costs, fiscal stability, permitting, and environment. The results are presented in Figures 1 through 6.

Finally, Figure 7 presents a historical rotary-rig count for Alaska from 1960-98. The source of the count is *A.P.I. Basic Petroleum Data Book (1998)* and exploration well counts maintained by the division.⁵

Figure 8 presents a rig count forecast.⁶ The forecast is based on the production curves generated in Figures 1 through 6. In addition, the forecast assumes continued development drilling in the producing fields. Forecasting drilling activity is subject to the same vagaries as forecasting production rate curves. Only five months ago, Alaska producers were forecasting that up to 16 drilling rigs would be active now. Instead, we are at 6 and will likely fall to 4 soon.

⁴ Obviously, this assumption is unrealistic. Nevertheless, the curve can be shifted to reflect when one believes a lease sale for a particular area would be held.

⁵ A few caveats apply to the A.P.I. rig count.

- The average number of rigs is the sum of the year's weekly rig-counts divided by 52. These numbers might better be considered as "rig/years."

- The A.P.I. rig-count does not differentiate between drilling activity onshore and offshore or on state native or federal lands (North Slope, Cook Inlet, Alaska Peninsula, OCS and NPRA all lumped together).

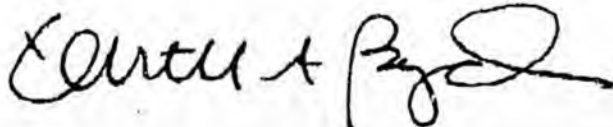
- Although a number of North Slope exploratory wells were drilled between 1944-1952 (the initial NPRA exploration program), the A.P.I. tabulation lists no rig activity in Alaska during that period. Conversely, the A.P.I. rig-count probably does include the number of drill rigs involved in the second phase of the NPRA drilling program between 1975-1982 (1-5 rigs/year).

⁶ Recent rig counts are not comparable to past rig counts. Smaller specialized rigs and coiled tubing units are replacing many of the older traditional drill rigs on the ANS. These new drilling and workover units do not get counted in the published rig counts.

Senator Phillips
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Senator Wilken
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The information presented here represents little more than a guess about what the future may hold for ANS production. Undoubtedly, it will be wrong. Given the budget and time constraints, I hope that it is helpful to you. We will provide the information Senator Torgerson requested regarding Cook Inlet resources in the next few days. If you have any questions, give me a call.

Sincerely,



Kenneth A. Boyd, Director, Division of Oil & Gas

KAB:gsr

cc: John Shively, Commissioner, Department of Natural Resources (w/enclosures)

S:\randg\Resource Estimate.doc

Table 1.
¹Discovered Onshore Resources

<u>Field</u>	<u>Oil (MMBO)</u>			<u>Gas (BCF)</u>		
	<u>High</u>	<u>Mean</u>	<u>Low</u>	<u>High</u>	<u>Mean</u>	<u>Low</u>
² Umiat	N/A	70	N/A	N/A	5	N/A
Colville Delta	N/A	N/A	N/A	N/A	N/A	N/A
Fiord	N/A	N/A	N/A	N/A	N/A	N/A
³ Prudhoe Bay	----	----	-----	⁴ 33,600	⁵ 21,800	N/A
Pt. Thomson	N/A	⁶ 200	N/A	⁷ 5,000	⁸ 3,200	N/A
⁹ Sourdough	N/A	100	N/A	N/A	N/A	N/A

¹ Technically recoverable resources - estimate of hydrocarbons that can be recovered by utilizing current technology without regards to cost.

² DOE: January, 1991: Alaska Oil & Gas - Energy Wealth or Vanishing Opportunity? p. 2-19.

³ The estimated technically recoverable gas is from Lockheed Martin, August, 1996, Economics of Alaska North Slope Gas Utilization Options, p. 2-8. The remaining recoverable oil from Prudhoe Bay as well as oil from the Prudhoe satellites discovered to date were already included in the production forecast, so these reserve estimates are not included here.

⁴ Lockheed Martin, August, 1996 Economics of Alaska North Slope Gas Utilization Options, pp. 2-8 & 2-9. This number encompasses all recoverable gas, including: 3.0 TCF of CO₂ in the recoverable gas and 8.8 TCF of gas used for lease use, local sales, and shrinkage.

⁵ Lockheed Martin, August, 1996 Economics of Alaska North Slope Gas Utilization Options, pp. 2-8 & 2-9. This number includes only net gas for sale.

⁶ Lockheed Martin, August, 1996 Economics of Alaska North Slope Gas Utilization Options, pp. 2-8 & 2-9.

⁷ Anchorage Daily News, Saturday December 13, 1997.

⁸ Lockheed Martin, August, 1996 Economics of Alaska North Slope Gas Utilization Options, pp. 2-8 & 2-9.

⁹ Anchorage Daily News, Thursday May 22, 1997.

Table 2.
¹Discovered Offshore Resources

<u>Field</u>	<u>Oil (MMBO)</u>			<u>Gas (BCF)</u>		
	<u>High</u>	<u>Mean</u>	<u>Low</u>	<u>High</u>	<u>Mean</u>	<u>Low</u>
² Gwydyr Bay	56	48	40	N/A	N/A	N/A
Sandpiper	³ 93	⁴ 47	N/A	N/A	N/A	N/A
⁵ Kuvlum	N/A	400	N/A	N/A	N/A	N/A
Flaxman Island	N/A	N/A	N/A	N/A	N/A	N/A
Hammerhead	N/A	N/A	N/A	N/A	N/A	N/A

¹ Technically recoverable resources – estimate of hydrocarbons that can be recovered by utilizing current technology without regards to cost.

² DOE: May, 1993: Alaska North Slope National Energy Initiative Analysis of 5 Undeveloped Fields.

³ DOE: May, 1993: Alaska North Slope National Energy Initiative Analysis of 5 Undeveloped Fields.

⁴ PI V45 #1, 1/6/99

⁵ Oil & Gas Reporter, 2/15/99, p.10.

Table 3.
¹Undiscovered Onshore Resources

<u>Field</u>	<u>Oil (MMBO)</u>			<u>Gas (BCF)</u>		
	<u>High</u>	<u>Mean</u>	<u>Low</u>	<u>High</u>	<u>Mean</u>	<u>Low</u>
² NPR-A	N/A	542	N/A	N/A	4,128	N/A
³ NE NPR-A Planning Area	4,732	3,070	1,832	21,674	9,852	3,190
⁴ Central North Slope	N/A	2,595	N/A	N/A	14,975	N/A
⁵ Foothills	N/A	1,564	N/A	N/A	26,609	N/A
⁶ ANWR	11,919	7,782	4,325	9,297	4,230	3,134

¹ Undiscovered technically recoverable oil, gas, and natural gas liquid reserves. Composite Reserve Numbers were calculated based on reserve estimates provided from USGS Open-File Report 95-751. The percentage of reserves calculated for each area was determined by the amount of each play type that was distributed in that particular geographic area. Numbers include both estimates of gas associated with oil fields along with stand-alone gas fields. NGL's are included in both oil and gas totals where associated with oil and gas. 1 barrel of NGL associated with oil = 0.667 barrels of crude oil. NGL's associated with gas was converted to gas by using the formula 6,000 cubic feet of gas = 1 bbl of crude oil.

² NPR-A includes the western coastal plain area of NPR-A. It does not include either the Northeast NPR-A planning area or the foothills.

³ NE NPR-A Final EIS Vol 1, 8/98, p. III-A-25.

⁴ Used USGS 1995 Assessment Open-File Report 95-751, Tables I and B-1. Summed 75% of the reserves calculated for the Central area; 85% of the reserves calculated for the Eastern area for the various plays; and included the USGS total for Province small fields from their report. The Anchorage Daily News reported on Saturday 2/14/98 that ARCO Alaska, Inc. believed that 1 BBO of producible oil exists in Prudhoe-Kuparuk undiscovered satellite accumulations. Because this undiscovered oil is adjacent to existing infrastructure, the Prudhoe-Kuparuk satellite plays are very economic and have a quick turnaround time from discovery to first production.

⁵ Combined the resource numbers for the foldbelt and the thrust belt. Included only 1/2 of the eastern thrust play numbers and 85% of the fold belt numbers because the rest of the numbers are included in the ANWR totals.

⁶ USGS, 1998 Assessment, Appendix A.

Table 4.
¹Undiscovered Offshore Resources

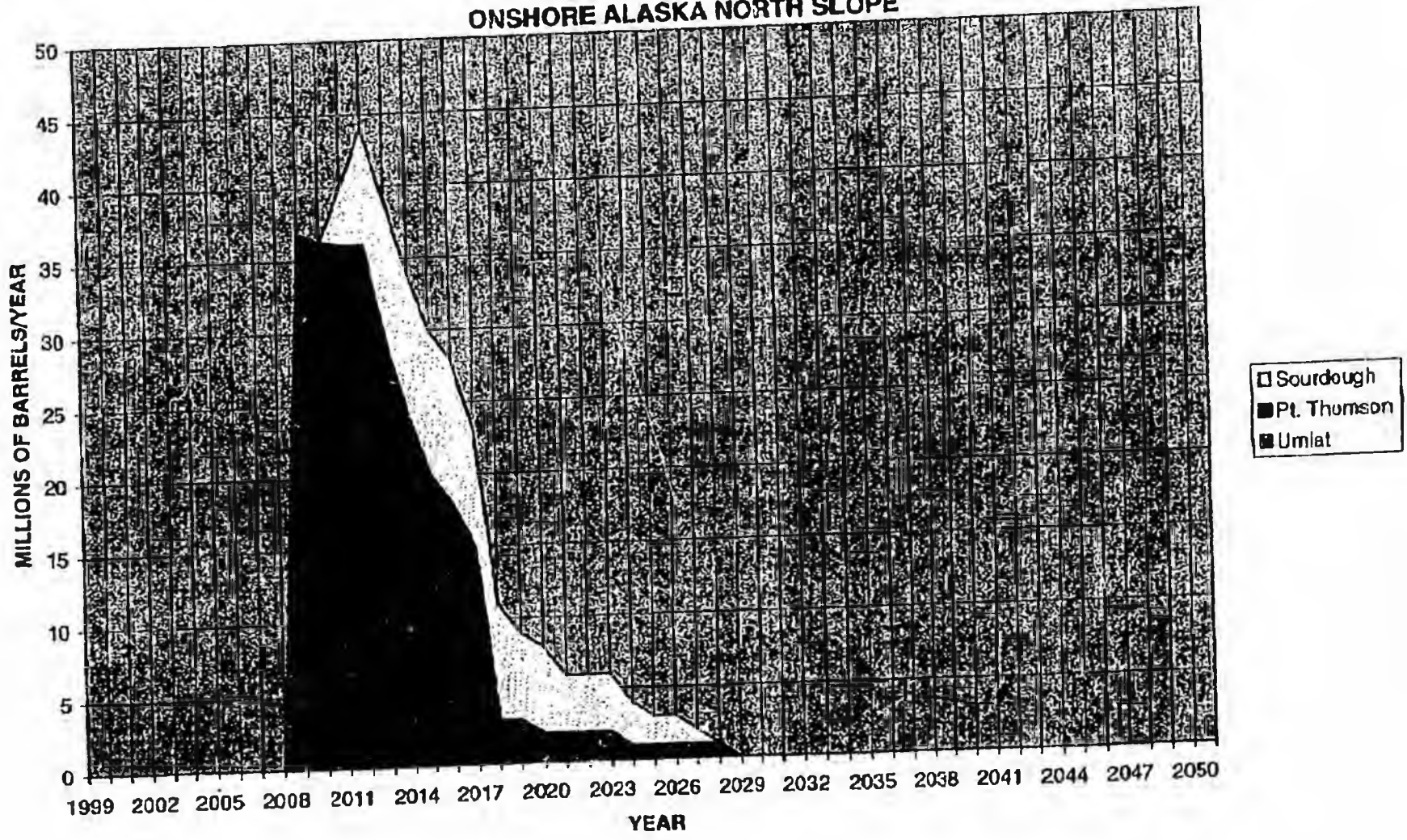
<u>Field</u>	<u>Oil (MMBO)</u>			<u>Gas (BCF)</u>		
	<u>High</u>	<u>Mean</u>	<u>Low</u>	<u>High</u>	<u>Mean</u>	<u>Low</u>
² Beaufort Sea (federal)	4,690	1,660	580	N/A	N/A	N/A
³ Chukchi Sea (federal)	13,100	5,960	1,190	N/A	N/A	N/A

¹ Estimates are conditional (assumes that one or more undiscovered commercial accumulations of hydrocarbons exist in the area) undiscovered economically recoverable oil.

² MMS, May, 1990

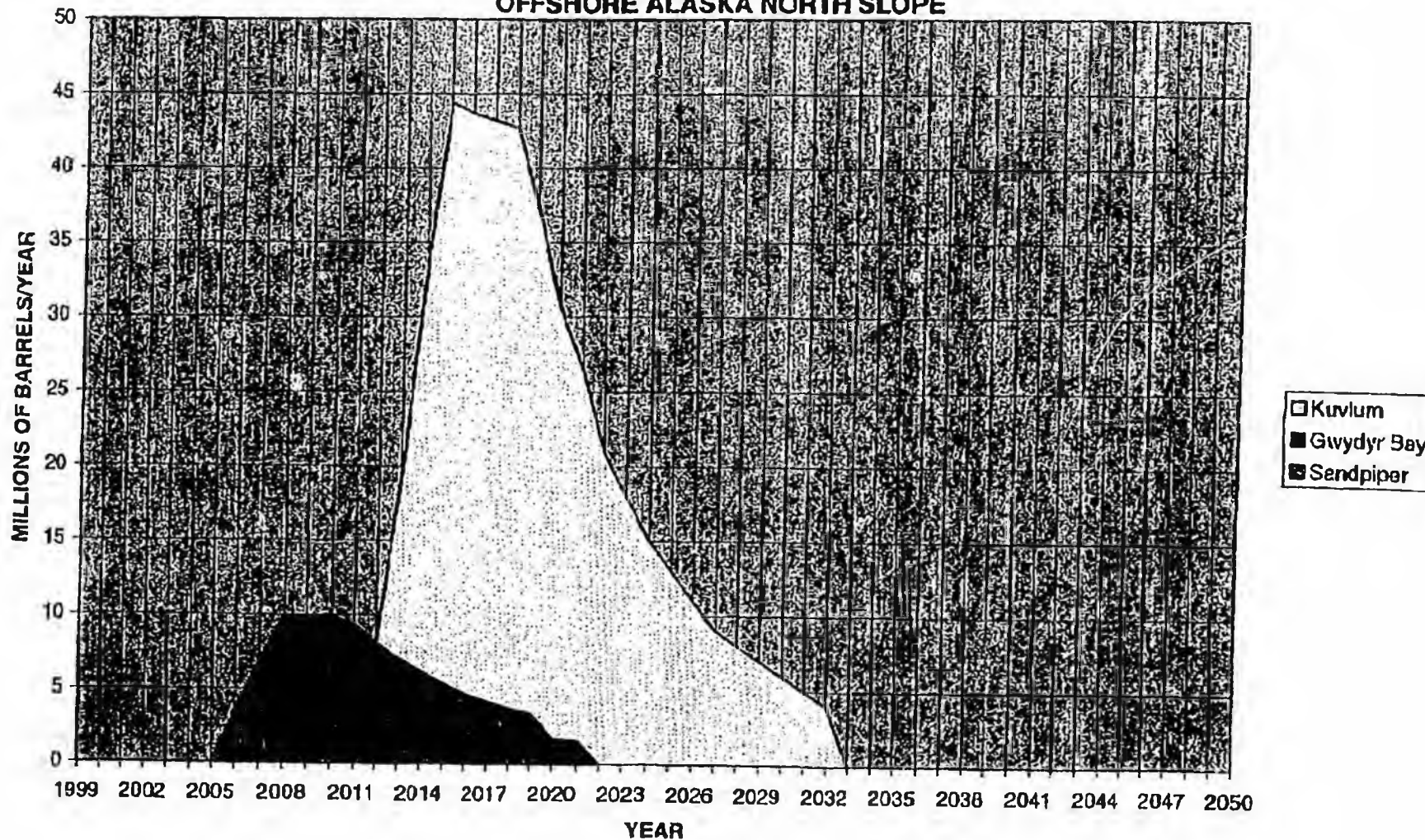
³ MMS, May, 1990

**FIGURE 1
FUTURE PRODUCTION
DISCOVERED OIL (MMBOPY)
ONSHORE ALASKA NORTH SLOPE**

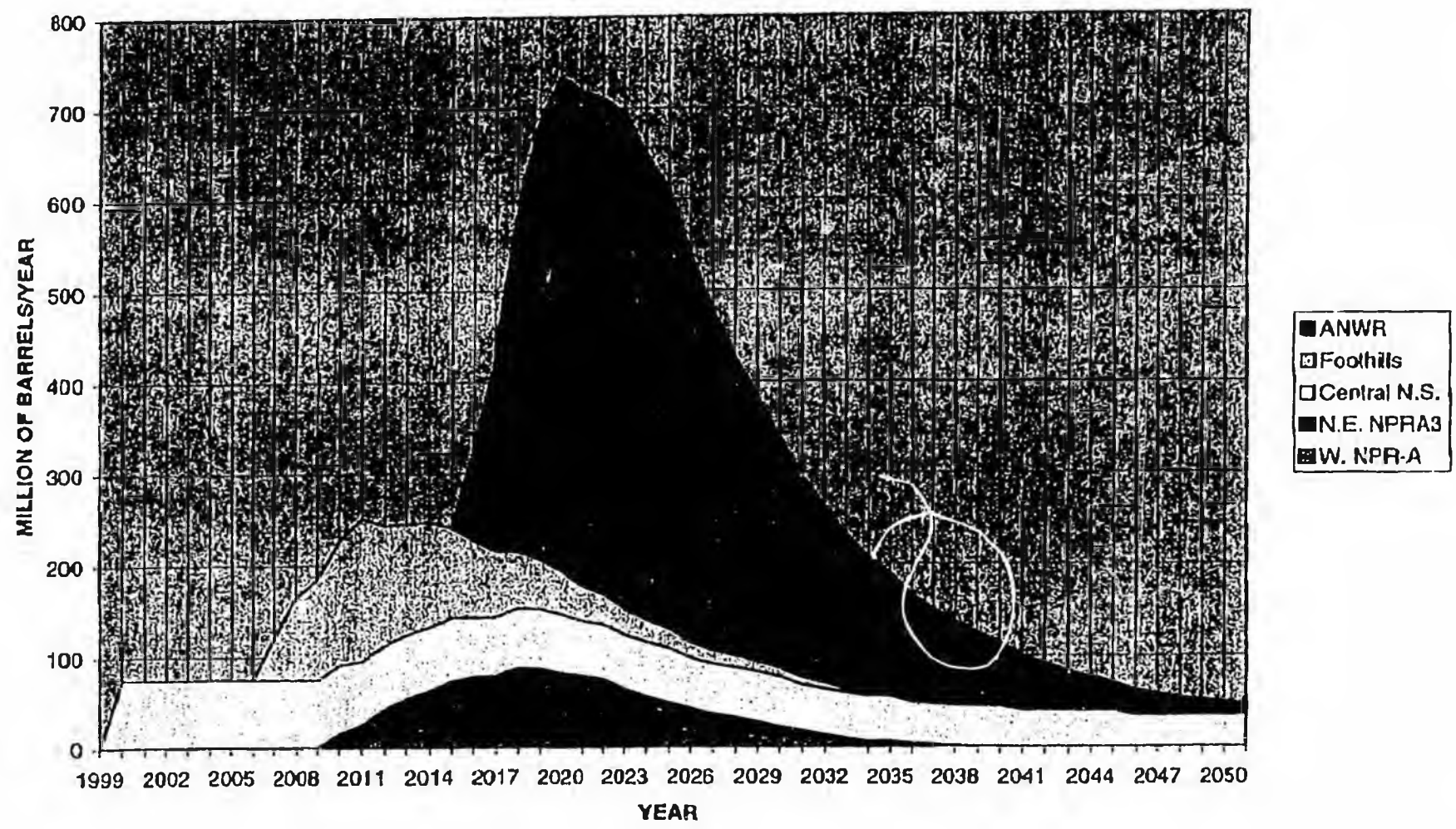


□ Sourdough
■ Pt. Thomson
▨ Umlat

**FIGURE 2
FUTURE PRODUCTION
DISCOVERED OIL (MMBOPY)
OFFSHORE ALASKA NORTH SLOPE**



**FIGURE 3
FUTURE PRODUCTION
UNDISCOVERED OIL (MMBOPY)
ONSHORE ALASKA NORTH SLOPE**



**FIGURE 4
FUTURE PRODUCTION
UNDISCOVERED OIL (MMBOPY)
OFFSHORE ALASKA NORTH SLOPE**

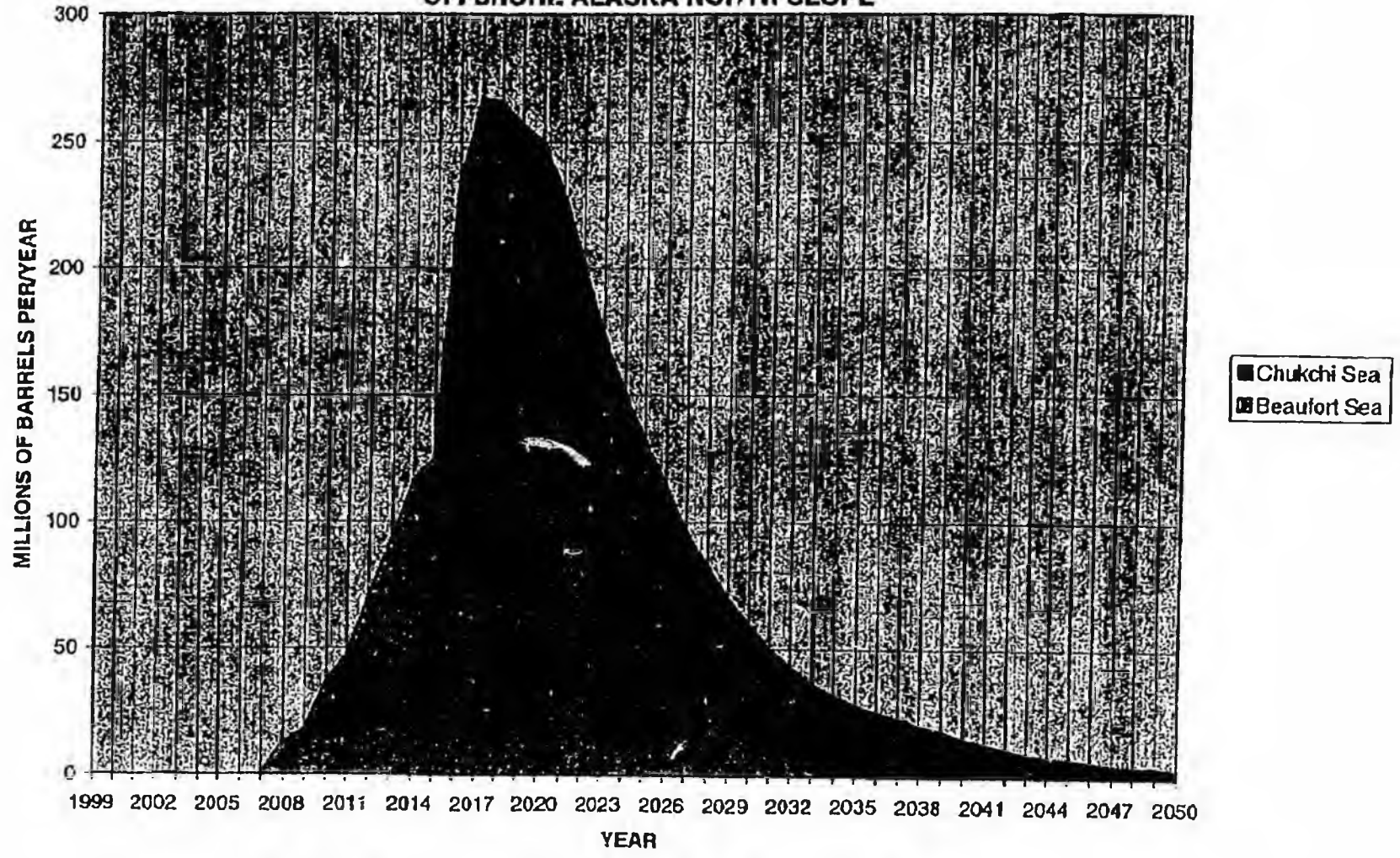


FIGURE 5
TOTAL FUTURE PRODUCTION (1999-2050) IN MMBOPD
ONSHORE & OFFSHORE, DISCOVERED & UNDISCOVERED
ALASKA NORTH SLOPE

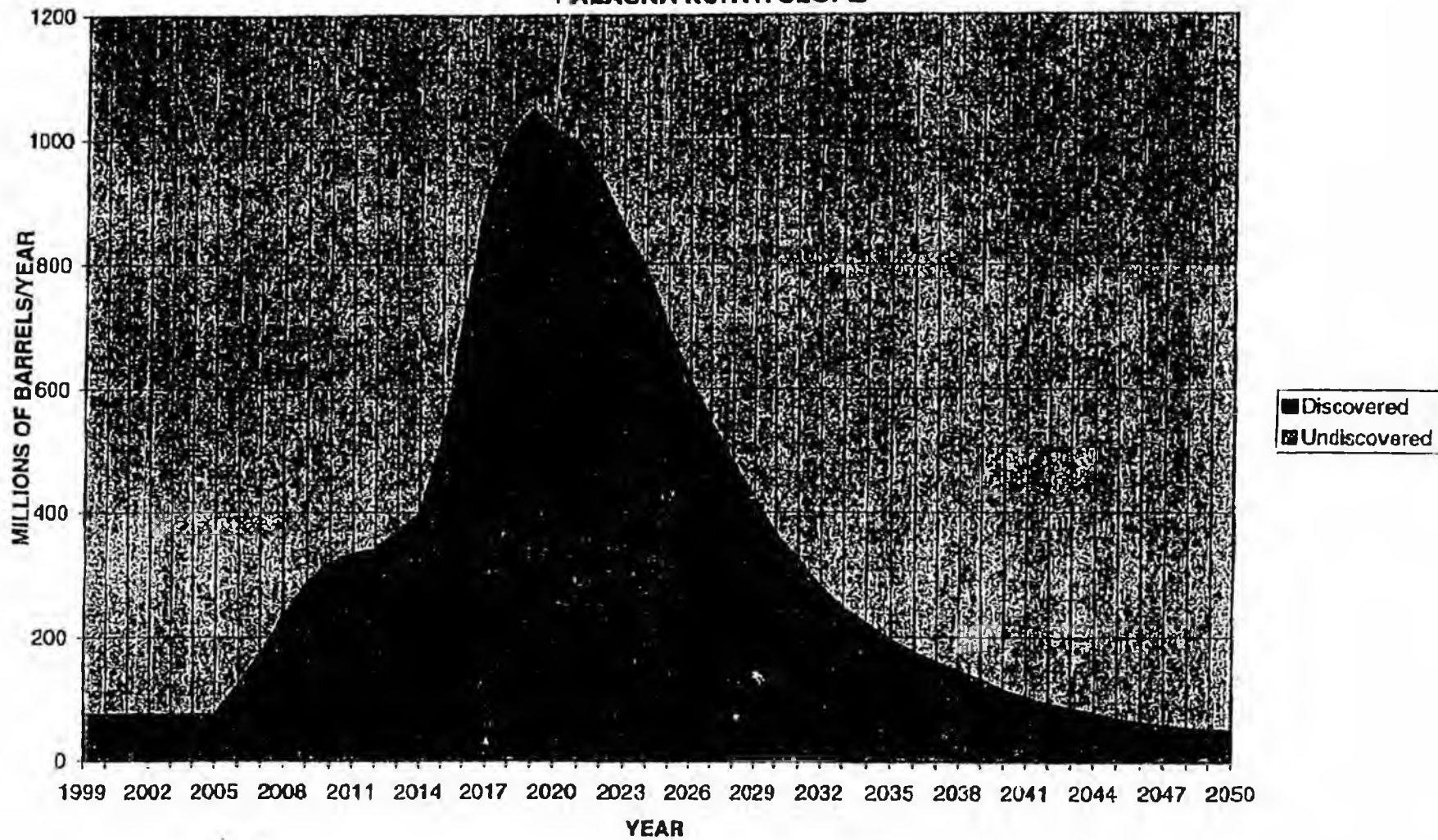
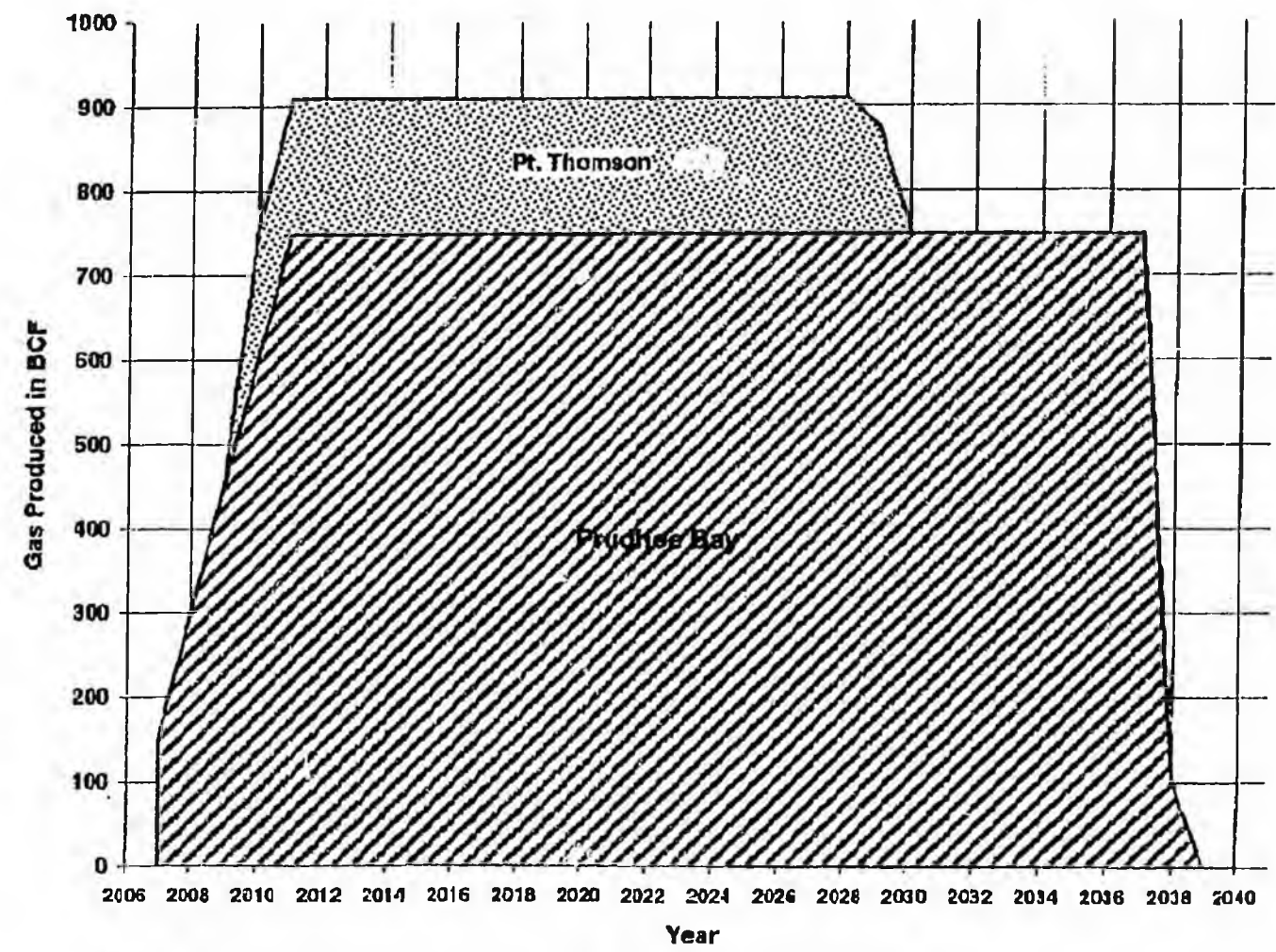


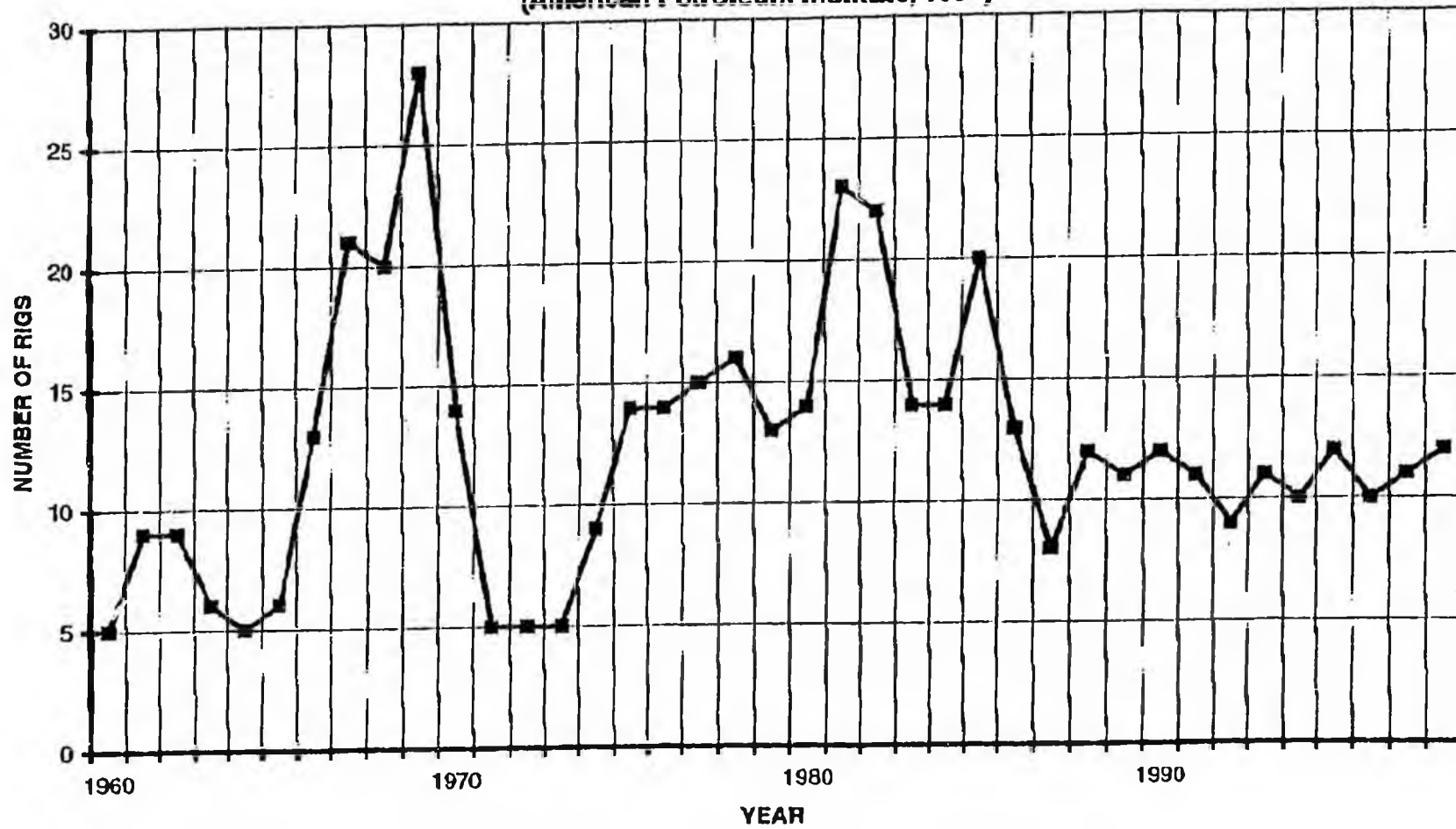
Figure 6
Gas Production Forecast for PBU & PTU



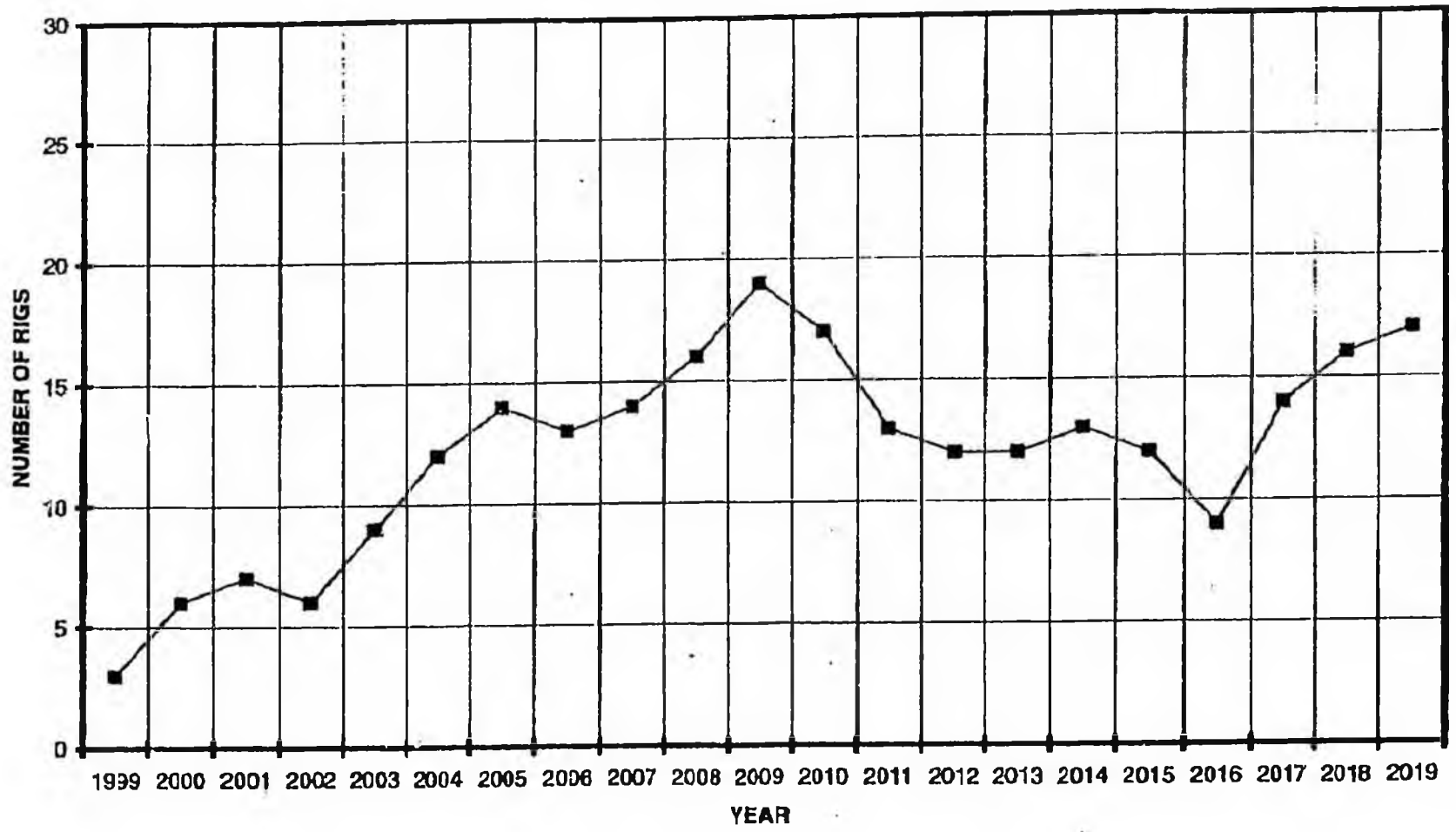
Source of Gas Production Forecast: Lockheed Martin August, 1996 Economics of Alaska North Slope Gas Utilization Options, Table B.12. The study begins production in the year 2005; we have delayed start-up until 2007.

Chart1-a

FIGURE 7
HISTORICAL ALASKA RIG COUNT
(American Petroleum Institute, 1999)



**FIGURE 8
PREDICTED RIG COUNT**



4/19/99

Presentation to House Finance

Department of Revenue
Treasury Division
04/19/99

The Model - the parts of the whole

- General Fund - unrestricted revenue and expenditures
 - Oil forecast, price & production
 - budgeted expenditures
- Constitutional Budget Reserve Fund
- Alaska Permanent Fund

*learn how the components interact
when factors or assumptions change*

Interactive Modeling

- Keep it simple
- Make the model change as assumptions change.
- Try to answer everyone's concerns
 - One size does not fit all.
 - Results in a more complex result
- Make reasonable assumptions, and keep relationships consistent.

The General Fund

- Revenue - adjust oil revenue by price and production
 - other revenue sources
 - timing for reasonable collection of new revenues
- Expenditures
 - inflation proof expenditures?
 - some expenditures grow with population growth
 - ability to change the budget with:
 - increases/decreases as a %, such as inflation
 - increase/decrease the budget by a lump sum

Constitutional Budget Reserve Fund

- Evaluate cash flow needs.
- Time horizon of the fund defines the asset allocation and rate of return of the fund.
- Timing of receipts/draws are important.

The Alaska Permanent Fund

- Original model operates as the Fund does today.
- Realized rates of return are important when describing the current dividend calculation.
 - Turnover rates affect realized return.
 - small changes in turnover can affect the amount of funds paid out.
 - the model can also build in alternative dividend calculations.
- Expected total return for the Fund is based on capital market assumptions and statutory equity limitation.

Capital Market Assumptions

- Should be consistent across all plans.
- The same outside consultant provides the capital market assumptions to the DOR and APFC every year.
- The capital market assumptions for each asset class are evaluated every year and may change annually.
- Expected return for each asset class is predicated on expected global inflation.

What have we learned?

The terms can be confusing

Total Return (also called nominal return)

- **realized return** - dividends, interest from bonds, rents from real estate and any profits or losses resulting from the sale of assets, **plus**
- **unrealized gains** - market appreciation (depreciation) over the purchase price of assets currently held by the fund which become realized income only when the asset is sold; also called capital gains.
- **Real Return** (nominal “*minus*” inflation) - if the total return changes, either the real rate or the inflation rate or both must change also.
- **Inflation rate** - in relation to global capital markets

What else have we learned?

- Small differences in assumptions in FY99 or FY00 make big differences by FY10.
- The priority of payments out of the AK Permanent Fund matter.
- Timing of receipts/disbursements matter.

Two Basic Types of Plans

**Initial lump-sum
transfer from the
Permanent Fund to
a Separate Fund**

**Annual withdrawals
of some type from
the Alaska
Permanent Fund**

All proposals fit into one of these two categories. This exercise helps compare the components of any plan by asking questions.

Options Menu

Investment Structure and Asset Allocation

- Use either the CBRF or a new fund as the Separate Fund.

CBRF
New Fund
- Invest some or all of the Separate Fund with the Permanent Fund.
- Substantial equity investments in a Separate Fund to obtain a higher long-range return.
- Increase equity investments in the Permanent Fund to obtain a higher long-range return.

Separate Fund	Annual Income Draw
<input type="checkbox"/> <input type="checkbox"/>	N/A
<input type="checkbox"/>	N/A
<input type="checkbox"/>	N/A
<input type="checkbox"/>	<input type="checkbox"/>

Options Menu

Transfer Mechanics

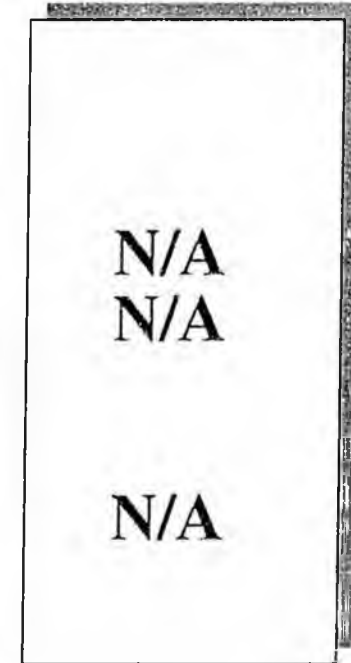
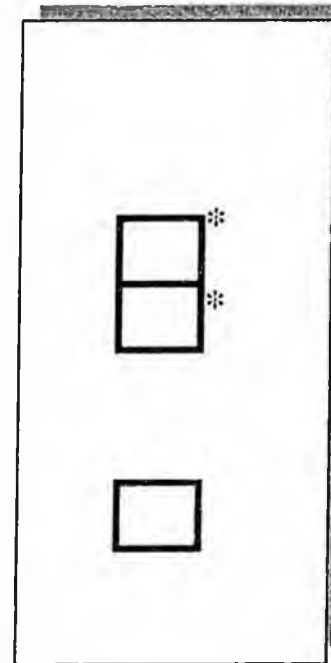
- Make transfer in cash after selling securities or transfer securities directly.

Sell and Transfer Cash
Transfer Securities

- Regular subsequent transfers from the Permanent Fund to a Separate Fund.

Separate
Fund

Annual Income
Draw



* Following retained outside counsel's opinion that the transfer could be made in-kind without realizing gains.

Options Menu

Inflation Proofing Policy

- Inflation proof the Separate Fund principal.
- Continue to inflation proof the Permanent Fund principal by direct appropriation.
- Inflation proof the Permanent Fund through distribution policy, and retain inflation-proofing amounts in the Earnings Reserve Account.

Separate
Fund

Annual Income
Draw

<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

N/A
<input type="checkbox"/>
<input type="checkbox"/>

Options Menu

Amount distributed from Separate Fund

- Distribute only income from Separate Fund to help balance the budget.
- Use both income and corpus of the Separate Fund to balance the budget whenever there is a deficit.

Amount Distributed from Permanent Fund

- Determine distributable income from the Permanent Fund using an “income-based” formula.
- Determine distributable income from the Permanent Fund using a “percent of market value” formula.

Separate
Fund

A rectangular box with a double-line border. Inside, there are two empty square checkboxes stacked vertically.

Annual Income
Draw

A rectangular box with a double-line border. Inside, there are two empty square checkboxes stacked vertically.

A rectangular box with a double-line border. Inside, there are two empty square checkboxes stacked vertically.

A rectangular box with a double-line border. Inside, there are two empty square checkboxes stacked vertically.

Options Menu

Distribution Priorities

- Prioritize Permanent Fund distribution among (1) dividends, (2) inflation proofing, and (3) public services.
 - If previous option selected, what are the priorities?

Dividend
Inflation proofing
Public services

- Set Permanent Fund distribution by proportional distribution between dividends (%), inflation proofing (%) and public services (%).
 - If previous option selected, what are the proportions?

Dividend
Inflation proofing
Public services

Separate Annual Income
Fund Draw

<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
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<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>

Options Menu

Additional Revenue

- Broad-based general tax
 - If previous option selected, what are the priorities?
- Motor fuel tax increase
- Per capita school tax
- Rental car tax
- Increase business license tax
- Other
- Miracle

Separate
Fund

Annual Income
Draw

Income tax

Sales tax

<input type="checkbox"/>
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The model we have developed does:

- allow interactive decision making.
- shows inflection points where additional action must be taken.
- linear forecasting tool, the future is not linear.

The model we have developed does not:

- Address changes in the law that may be required.
- Address the economic impact to the state's economy of different decisions.

4-16-99

Analysis of Alaska's Budget Deficit

April 16, 1999

House Finance

1



Presentation Objectives

- Identify potential goals and guidelines to be used to assess any long term financial plan

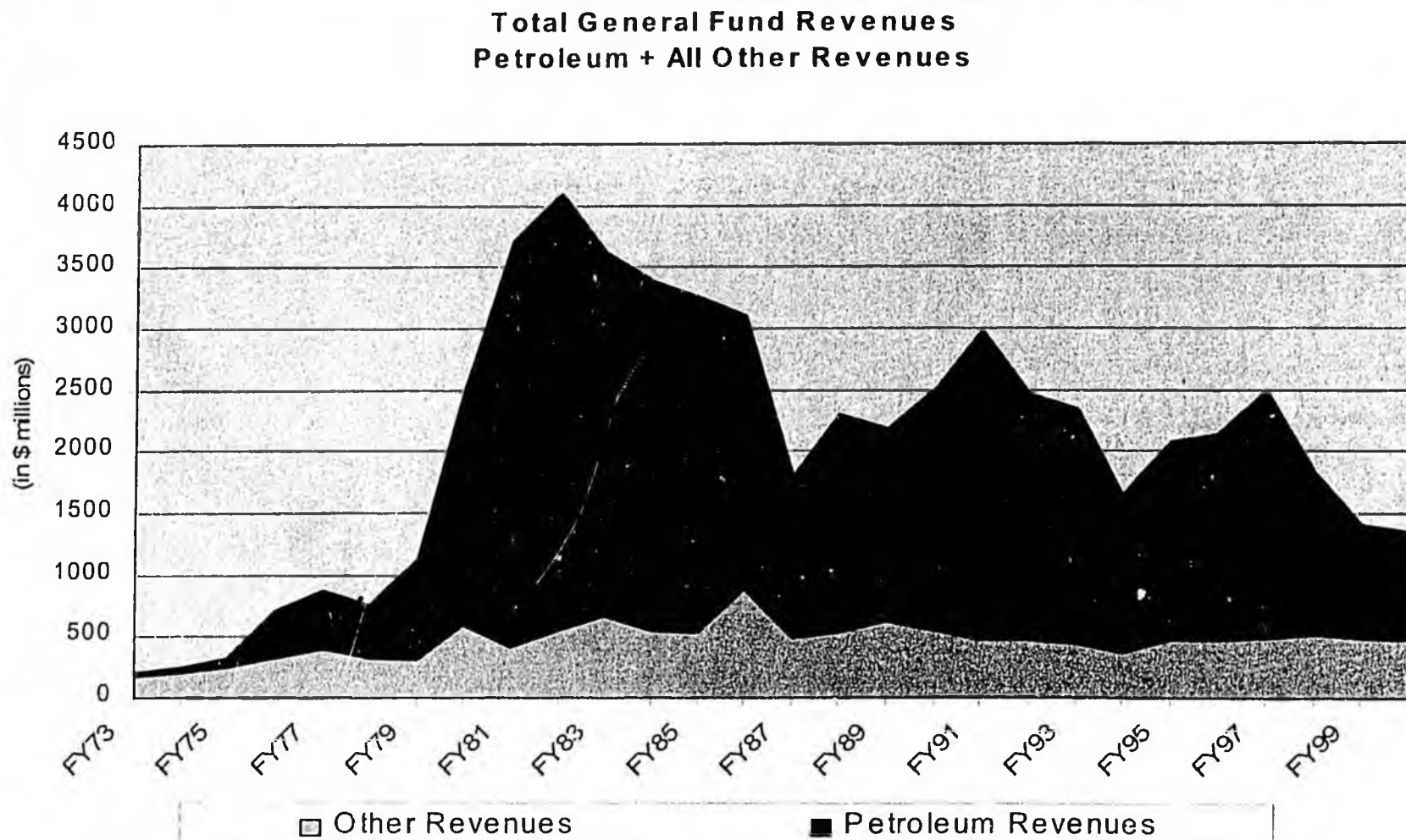
How To Begin The Analysis?

■ Current Situation

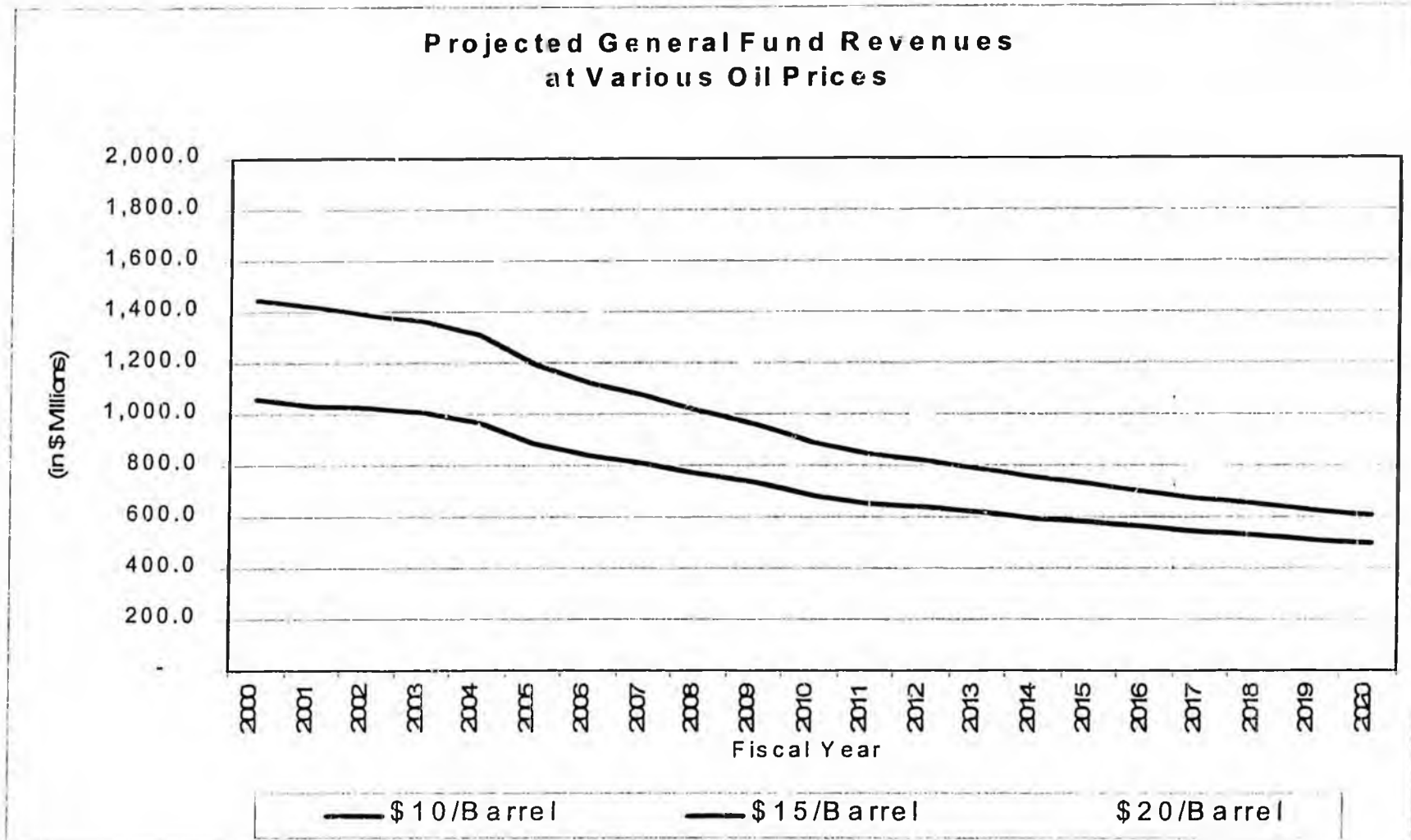
- ◆ Understand the magnitude of the problem
- ◆ Understand the model

■ Current Situation with High Oil Prices

Historical State Revenues



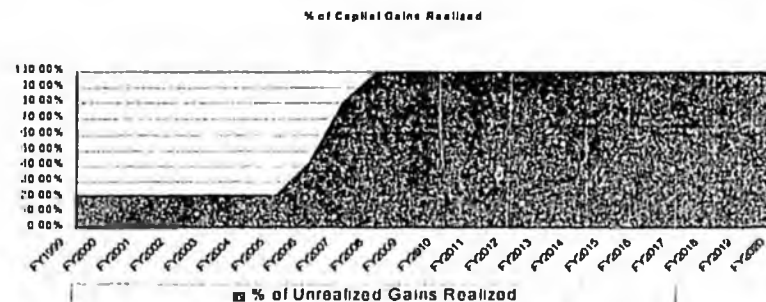
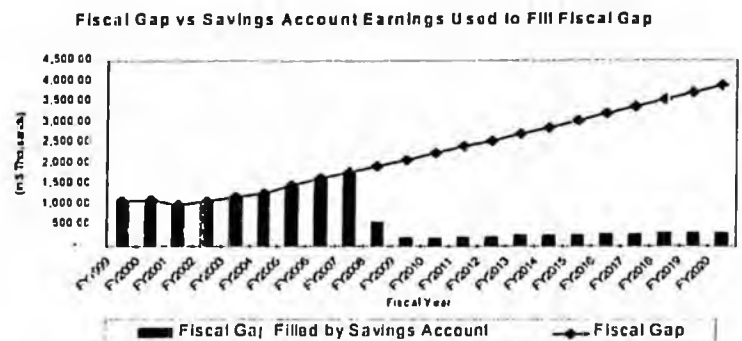
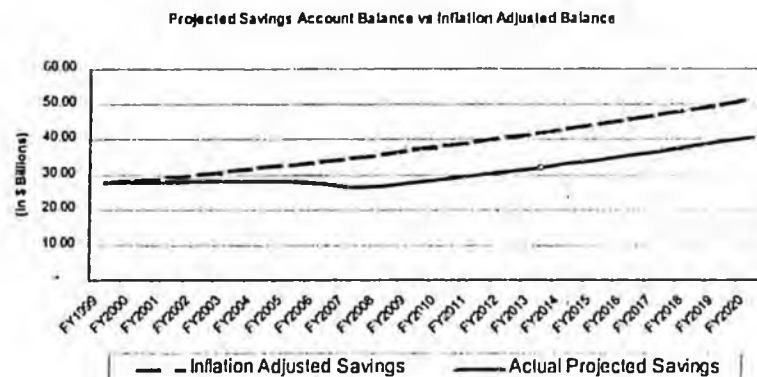
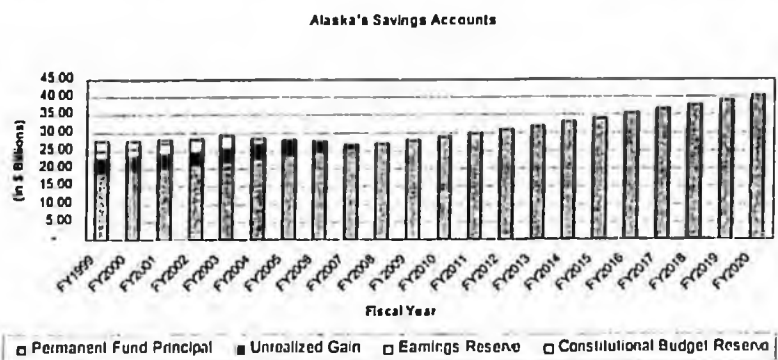
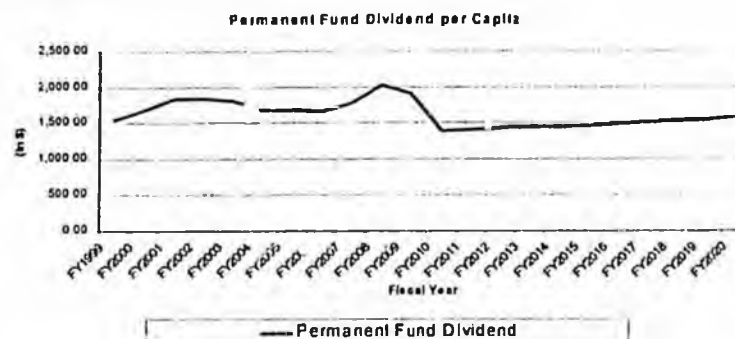
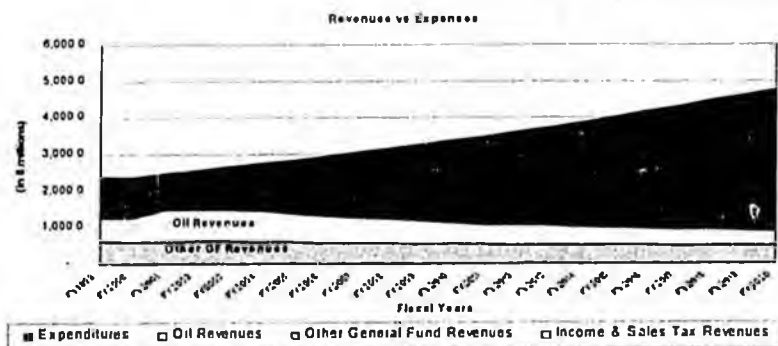
Projected Revenues



Current Situation - Assumptions

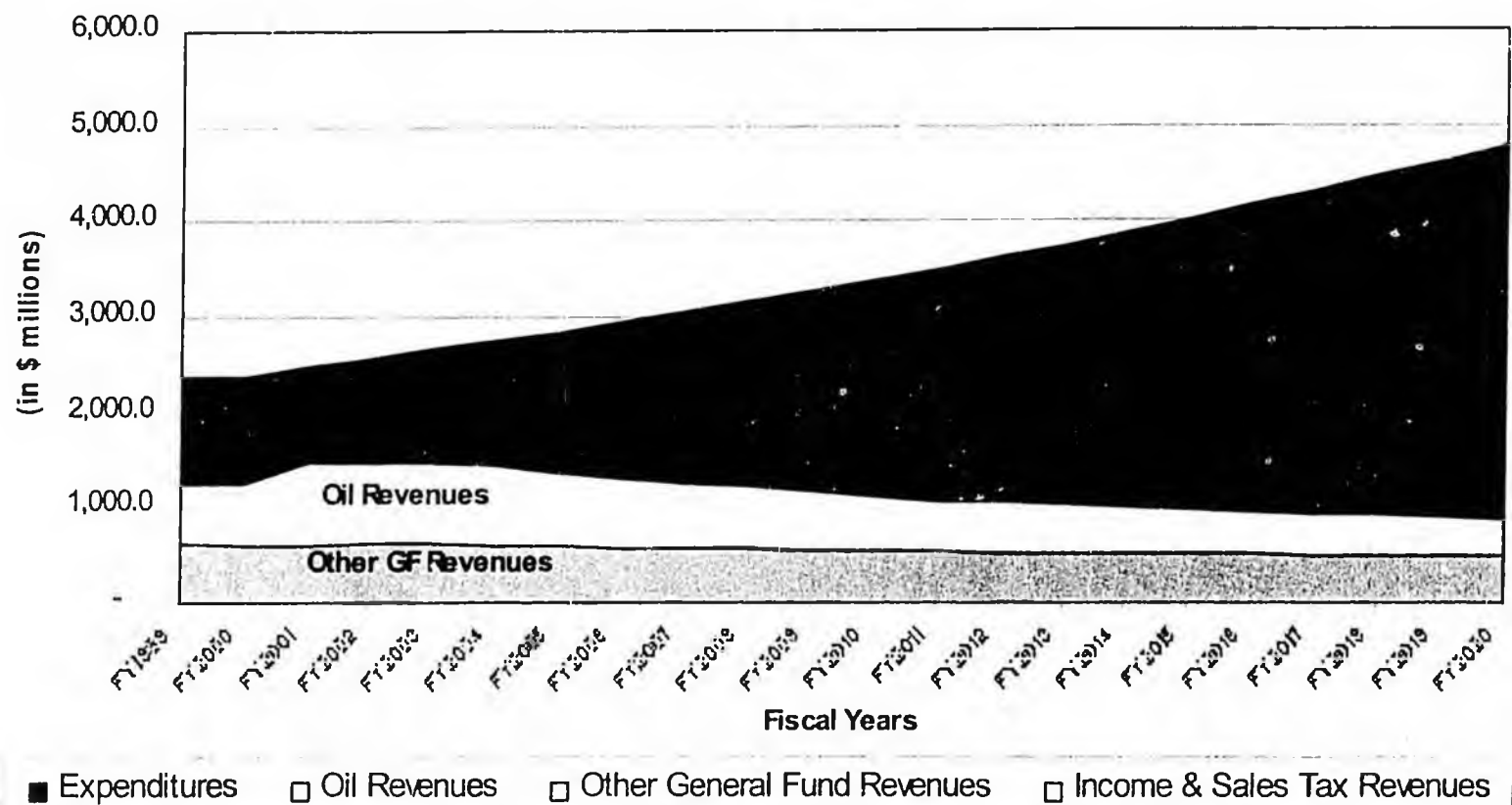
- 3.0% Inflation
- 1.5% Population Growth in K-12 Education Formula Population
- 2% Population Growth for Dividend ONLY!
- No Growth in Population for all other Formula or Agency Expenditures
- Permanent Fund Total Return of 7.75%
- CBR Total Return of 5.5% if less than \$3B and 8.1% if greater than \$3B

Current Situation



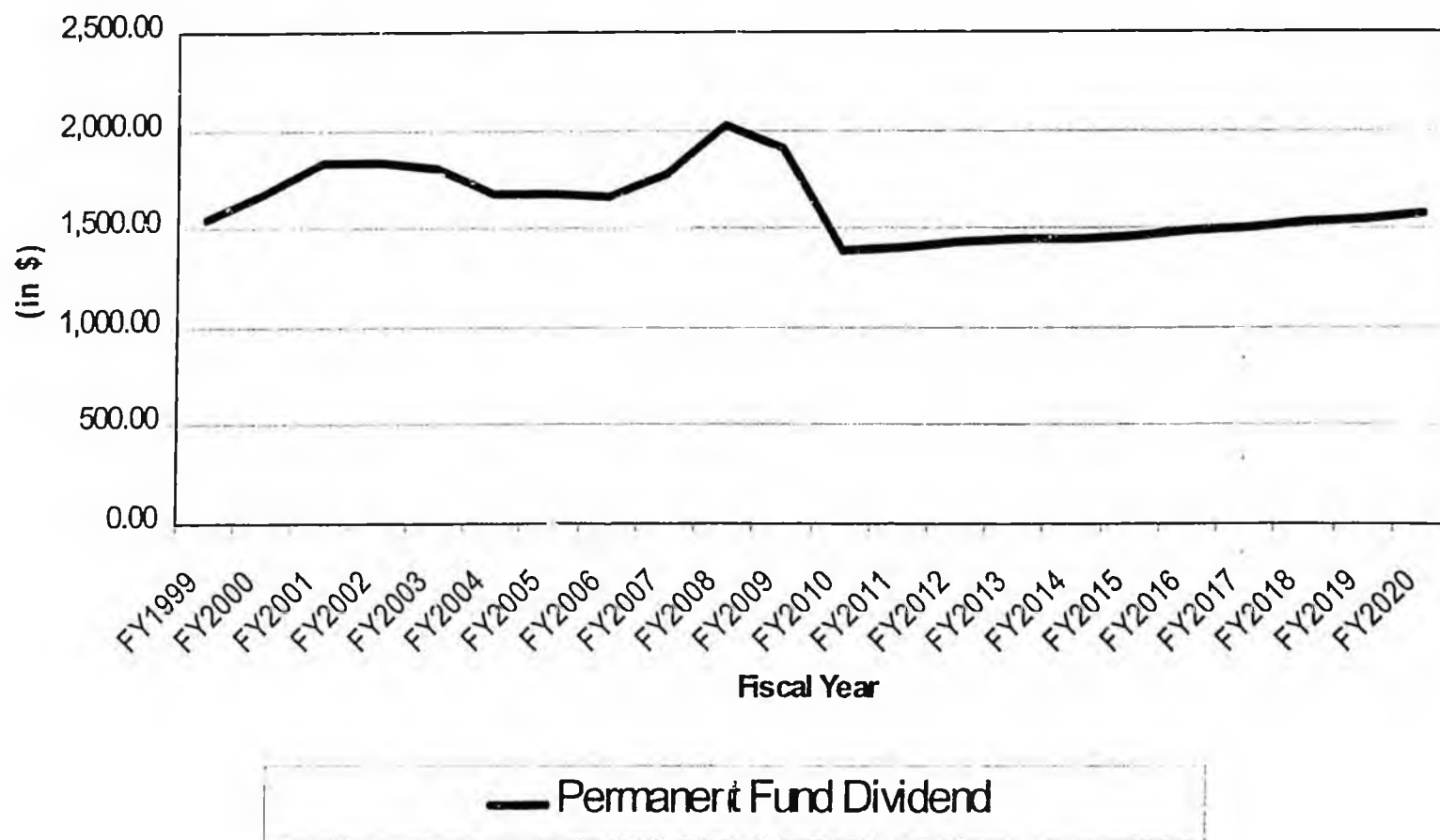
Current Situation - Revenues & Expenditures

Revenues vs Expenses



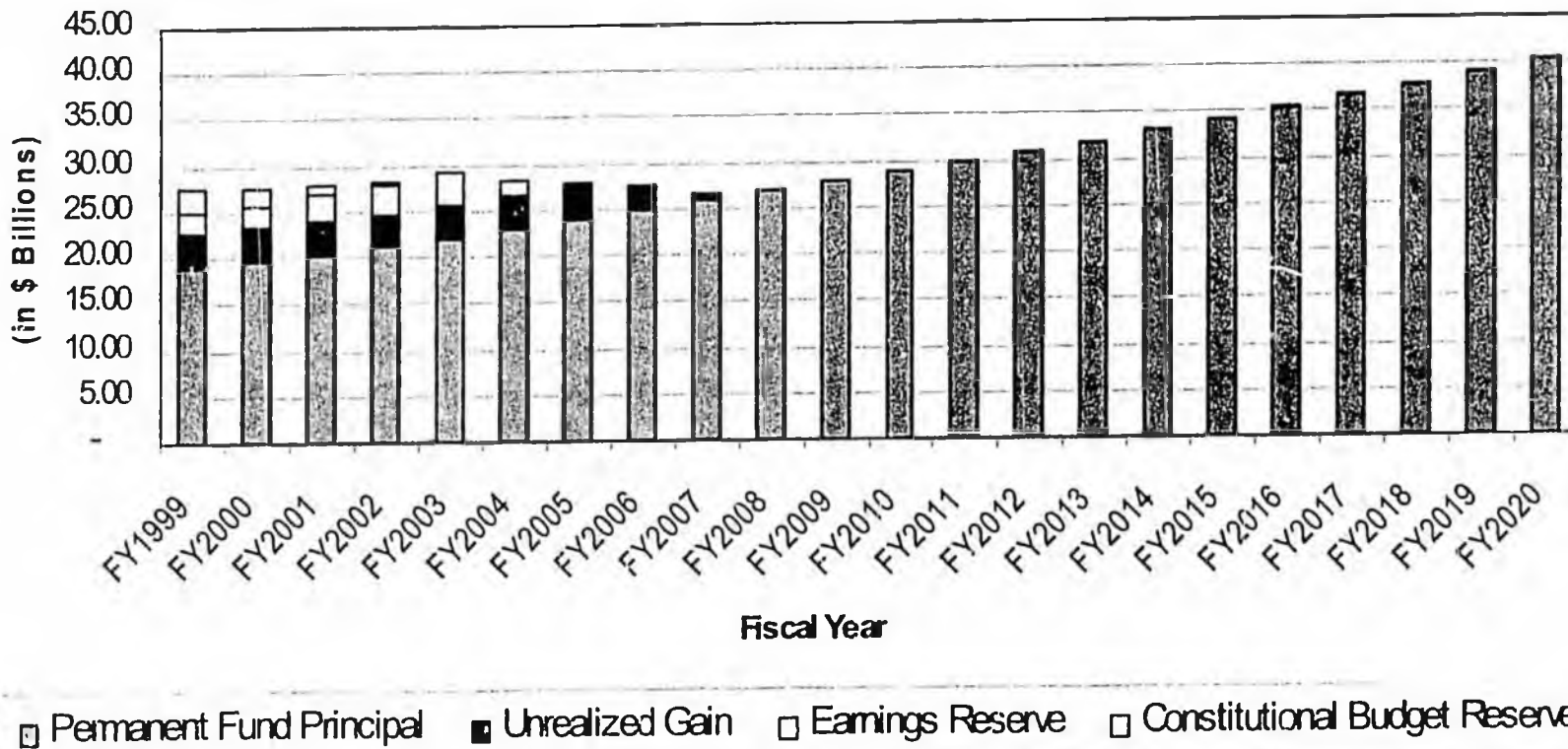
Current Situation - Permanent Fund Dividends

Permanent Fund Dividend per Capita



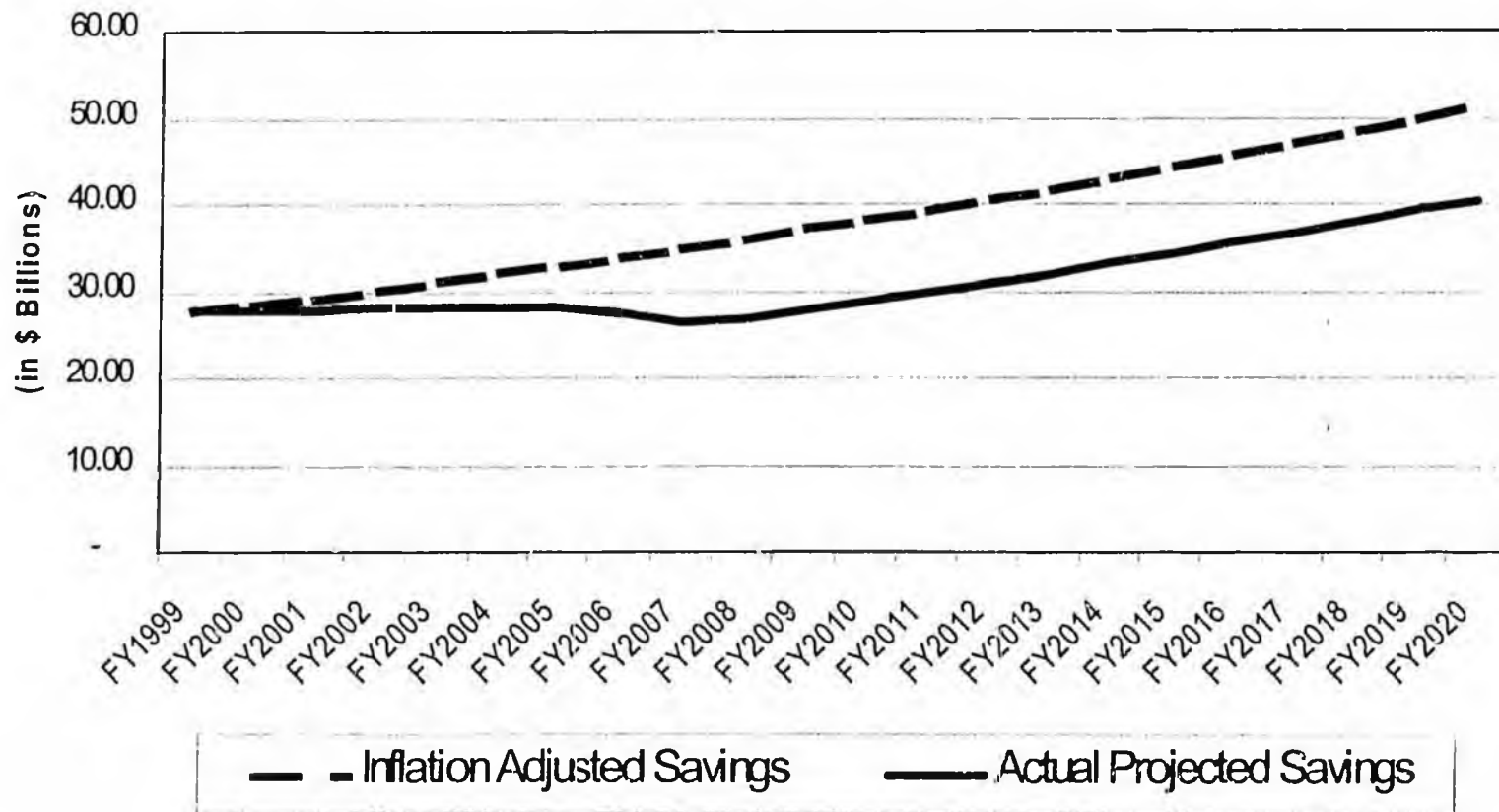
Current Situation - Alaska's Savings Accounts

Alaska's Savings Accounts



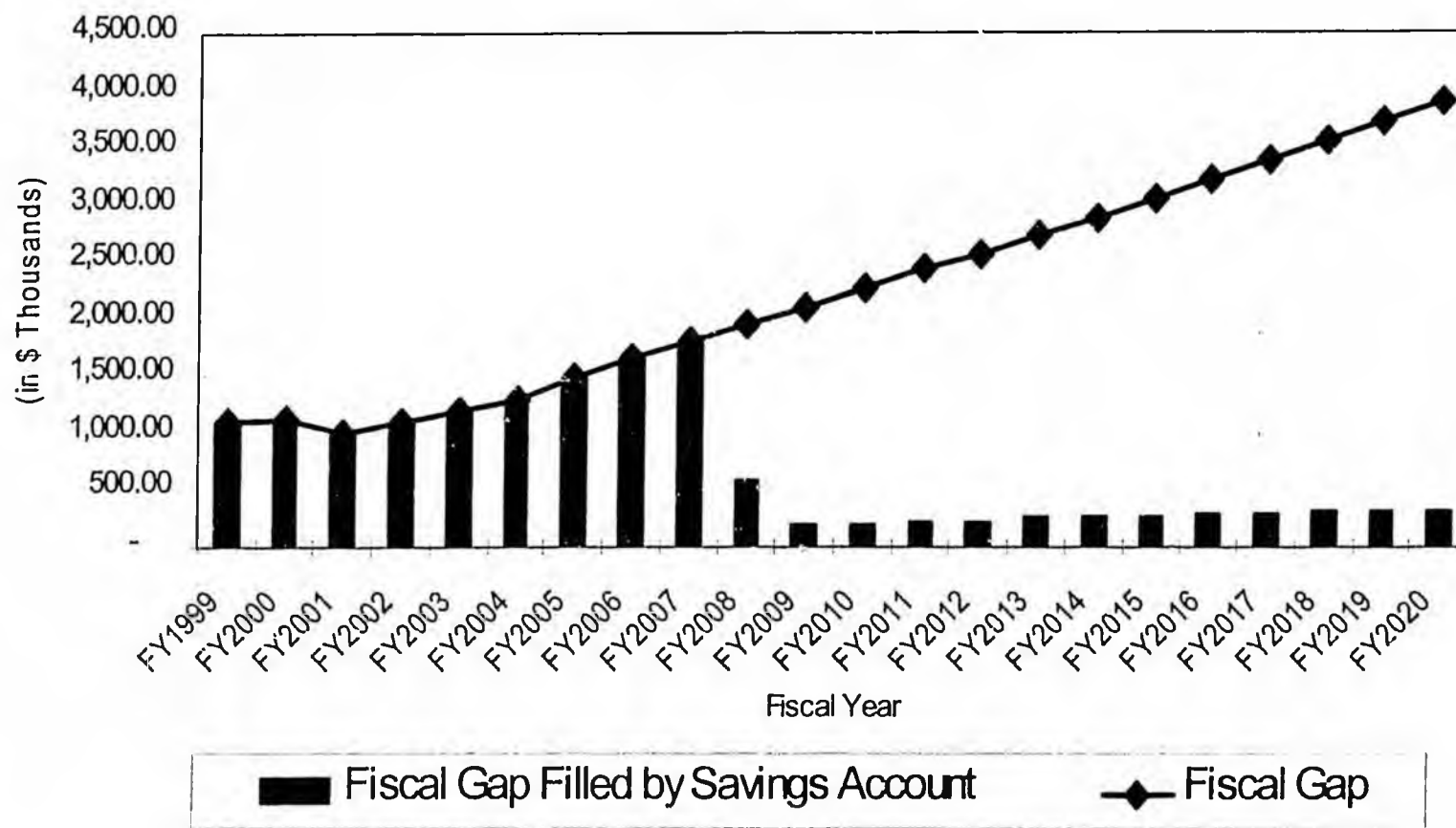
Current Situation - Savings Account Analysis

Projected Savings Account Balance vs Inflation Adjusted Balance



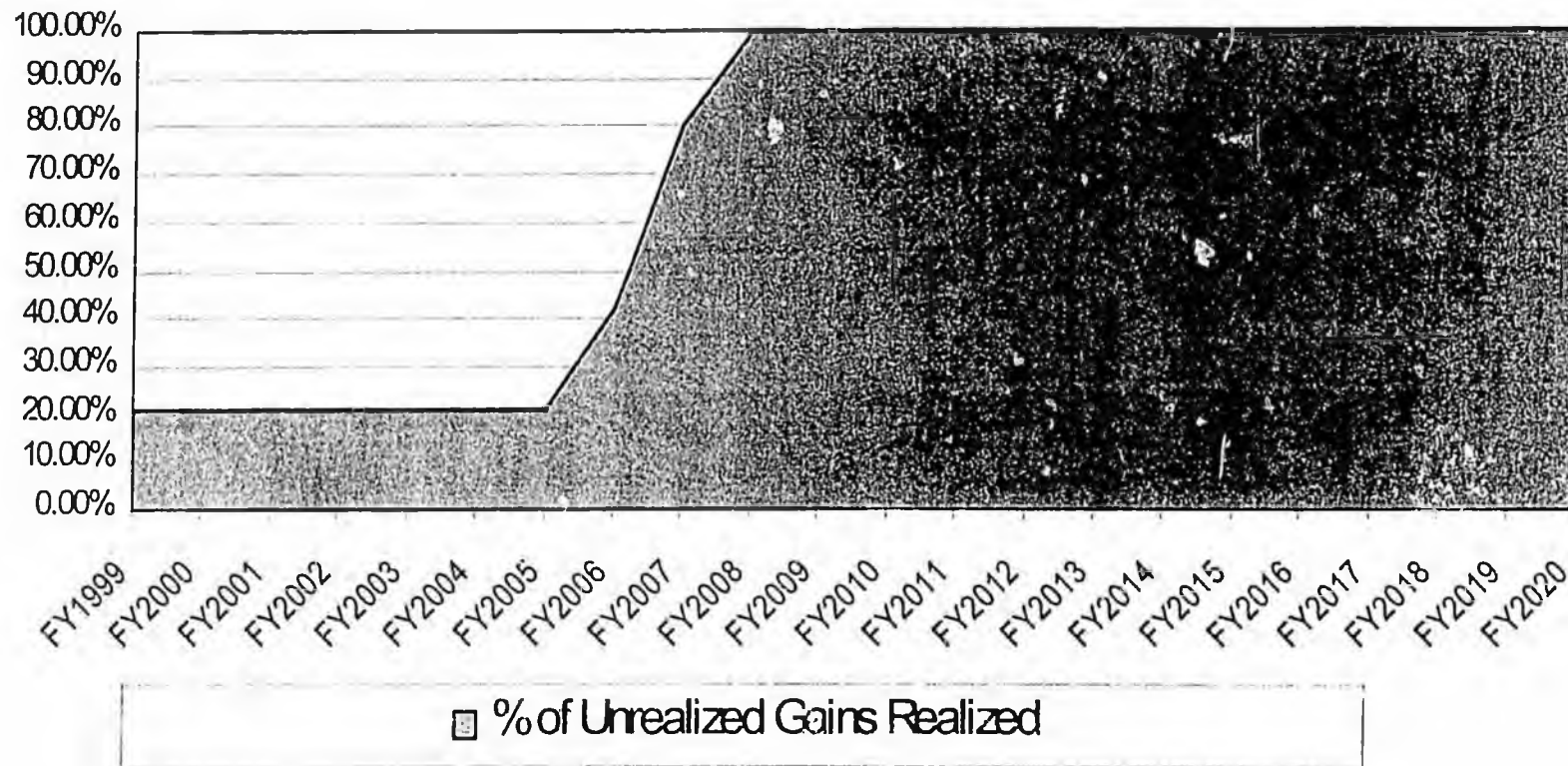
Current Situation - Budget Deficit

Fiscal Gap vs Savings Account Earnings Used to Fill Fiscal Gap



Current Situation - % of Capital Gains Realized

% of Capital Gains Realized

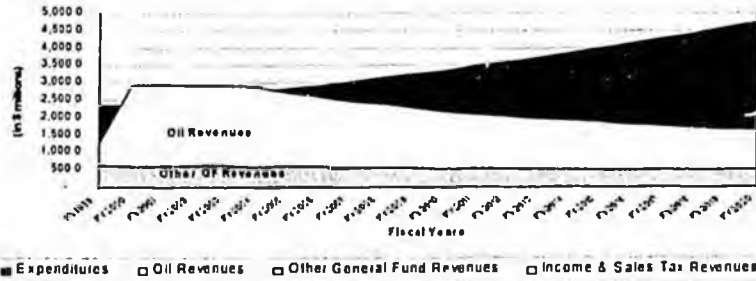


\$34/bbl Oil Assumptions

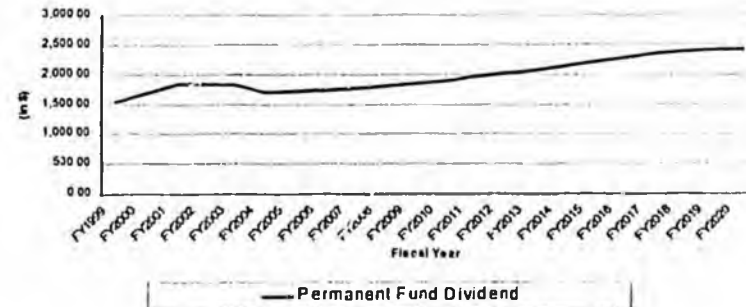
- Same as Current Scenario
- Except:
 - ◆ Oil goes to \$34/bbl in FY2000
 - ◆ Oil never goes down from \$34/bbl
 - ◆ In fact it rises every year at the inflation rate of 3% (In FY2020 Oil = \$61.41/bbl)
- Why \$34/bbl?
 - ◆ That is what it would take to create a sustainable budget until 2020 with no cuts and no taxes...But there are concerns.

Current Scenario with \$34/bbl Oil

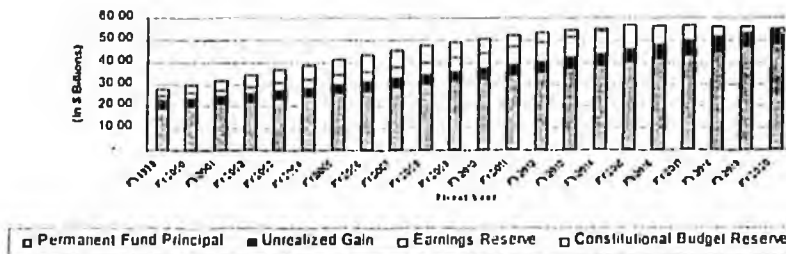
Revenues vs Expenses



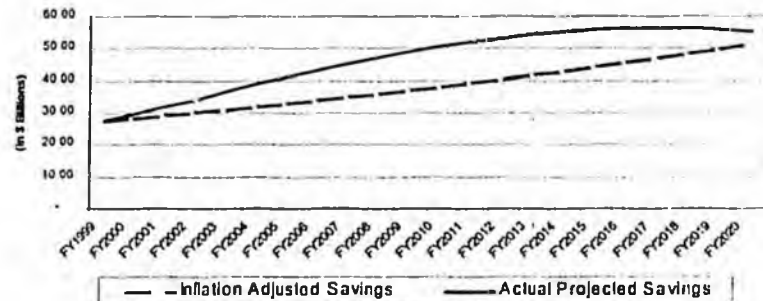
Permanent Fund Dividend per Capita



Alaska's Savings Accounts



Projected Savings Account Balance vs Inflation Adjusted Balance



Fiscal Gap vs Savings Account Earnings Used to Fill Fiscal Gap

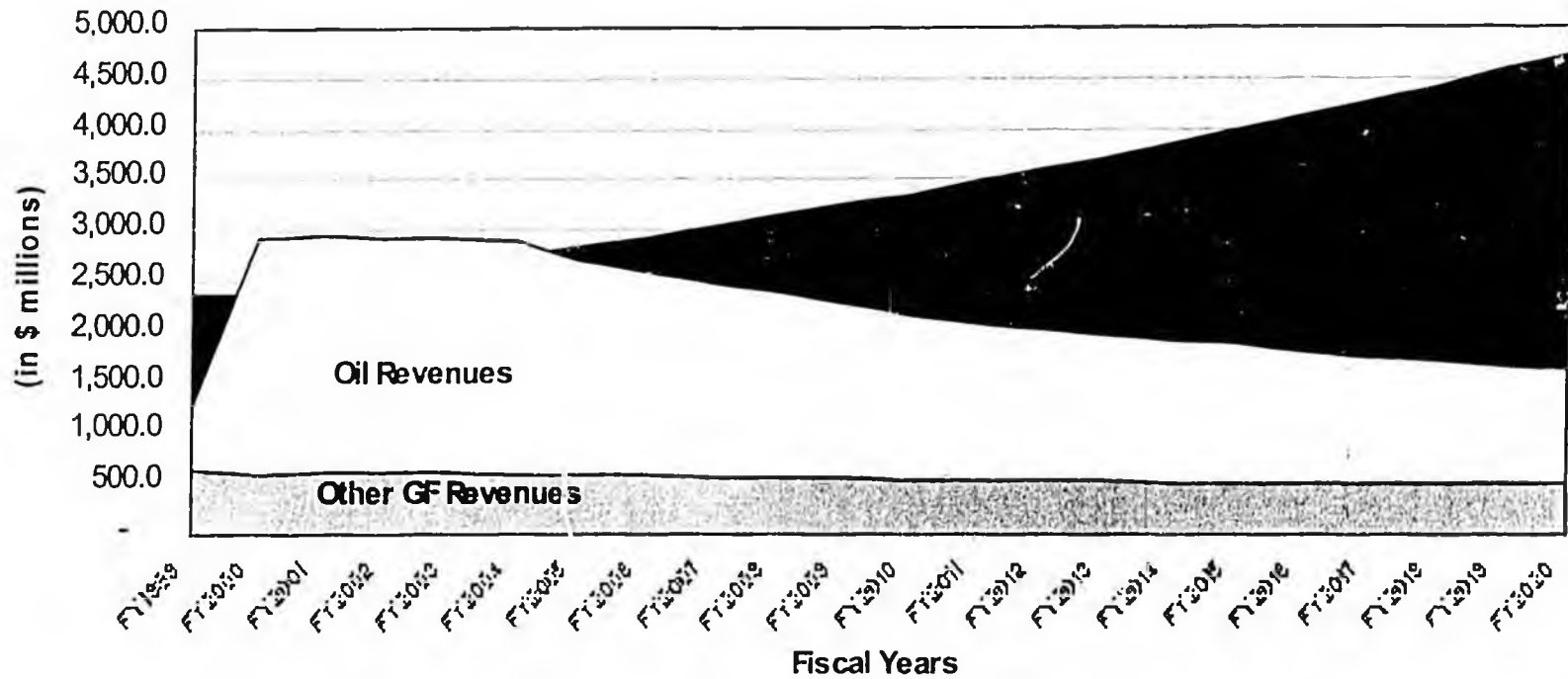


% of Capital Gains Realized



Current Scenario with \$34/bbl Oil

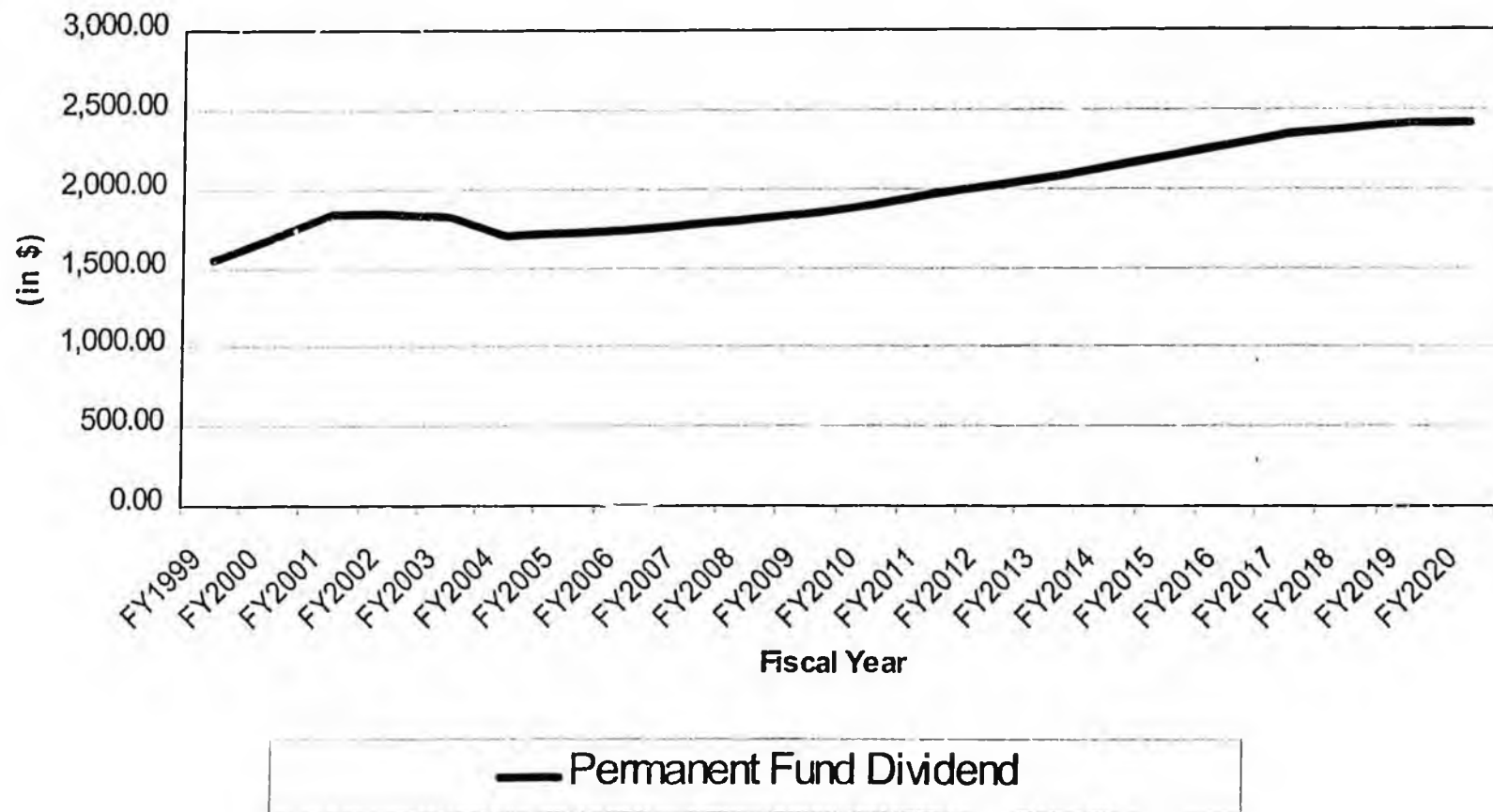
Revenues vs Expenses



■ Expenditures □ Oil Revenues □ Other General Fund Revenues □ Income & Sales Tax Revenues

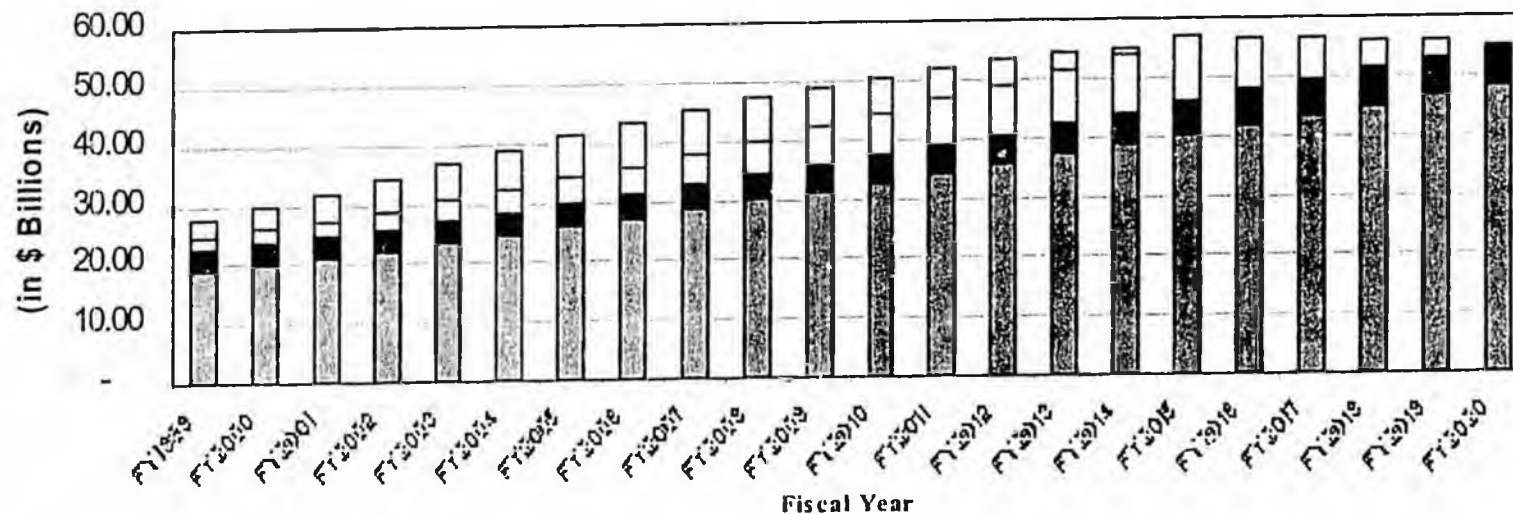
Current Scenario with \$34/bbl Oil

Permanent Fund Dividend per Capita



Current Scenario with \$34/bbl Oil

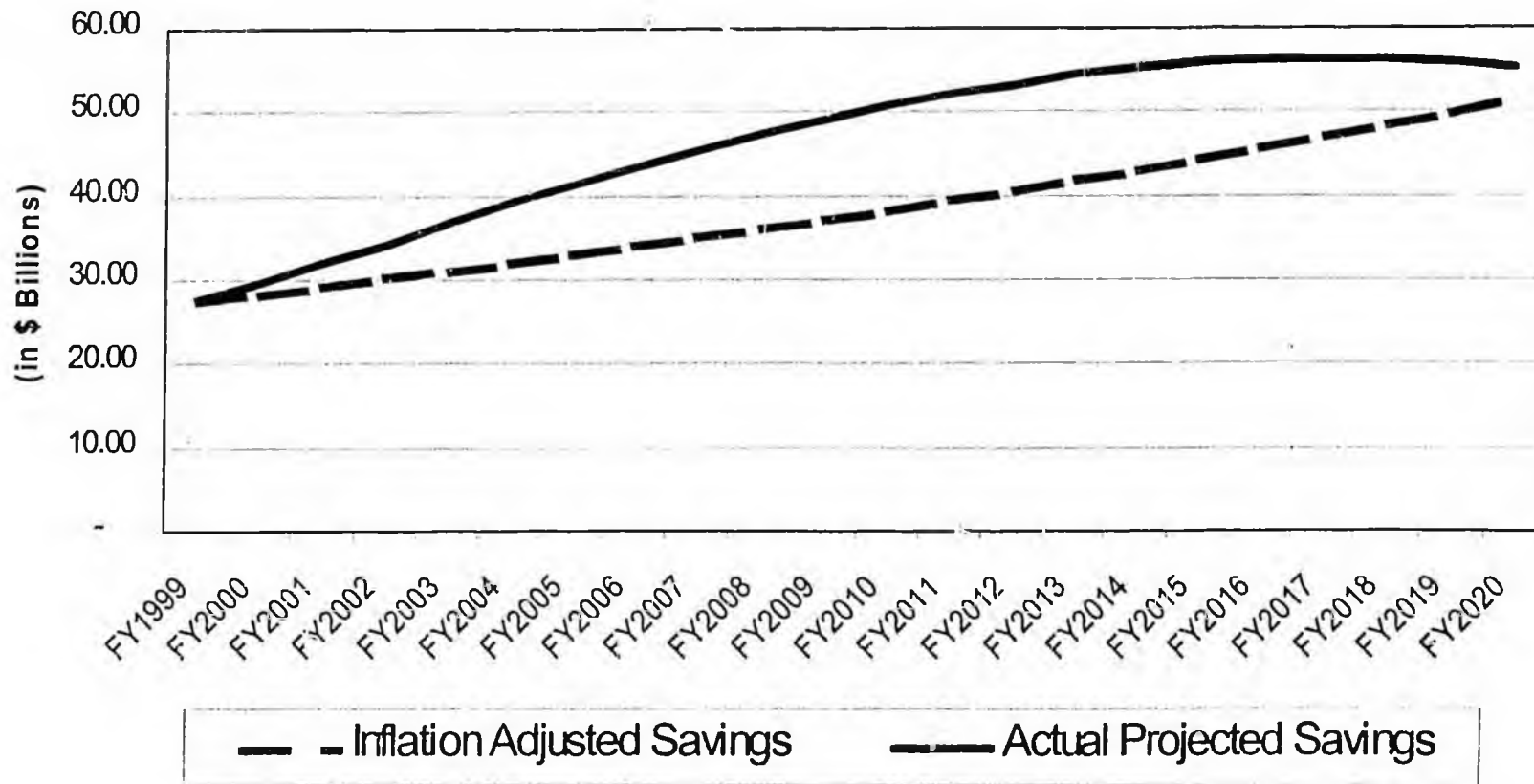
Alaska's Savings Accounts



Permanent Fund Principal
 Unrealized Gain
 Earnings Reserve
 Constitutional Budget Reserve

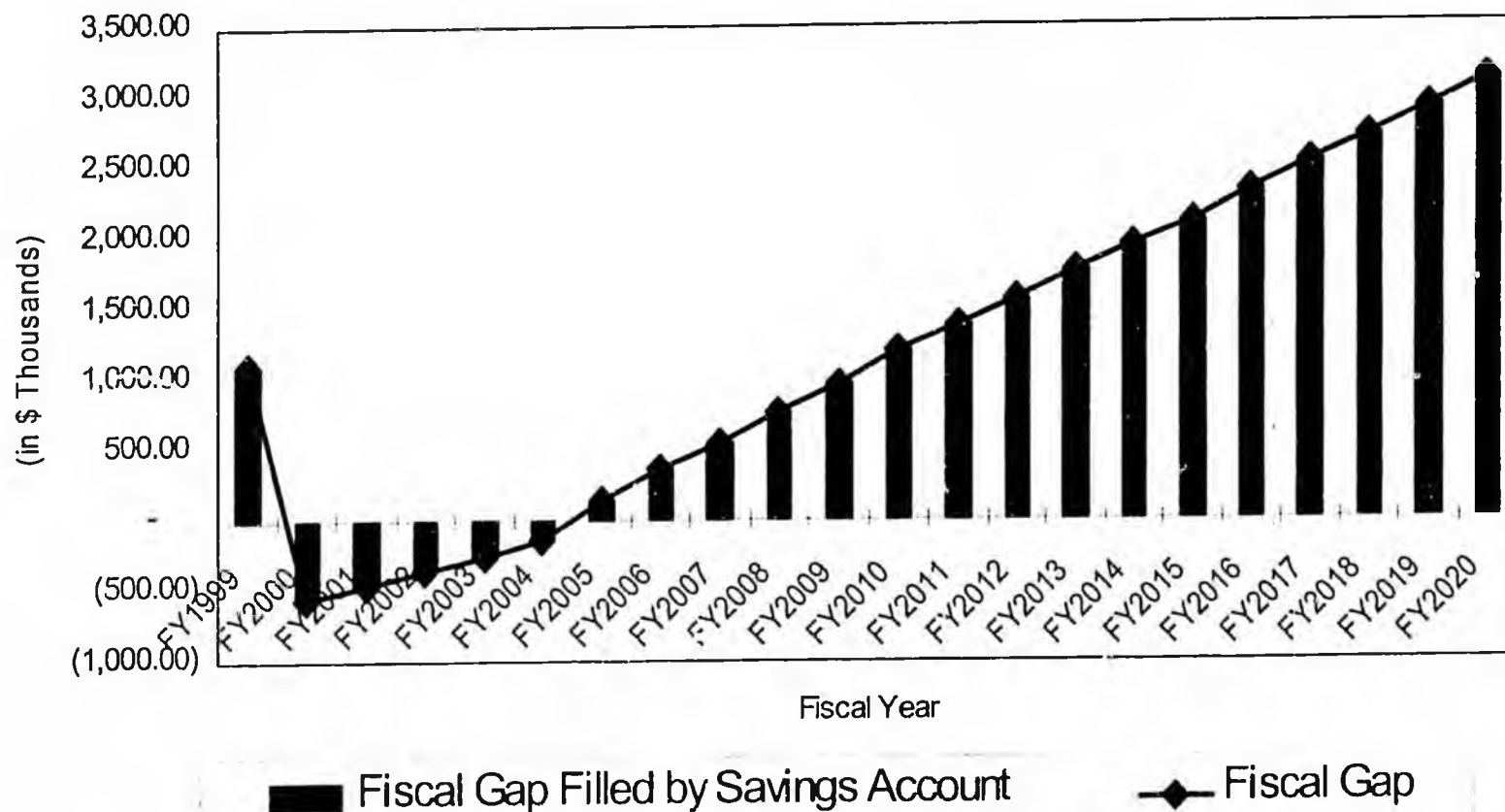
Current Scenario with \$34/bbl Oil

Projected Savings Account Balance vs Inflation Adjusted Balance



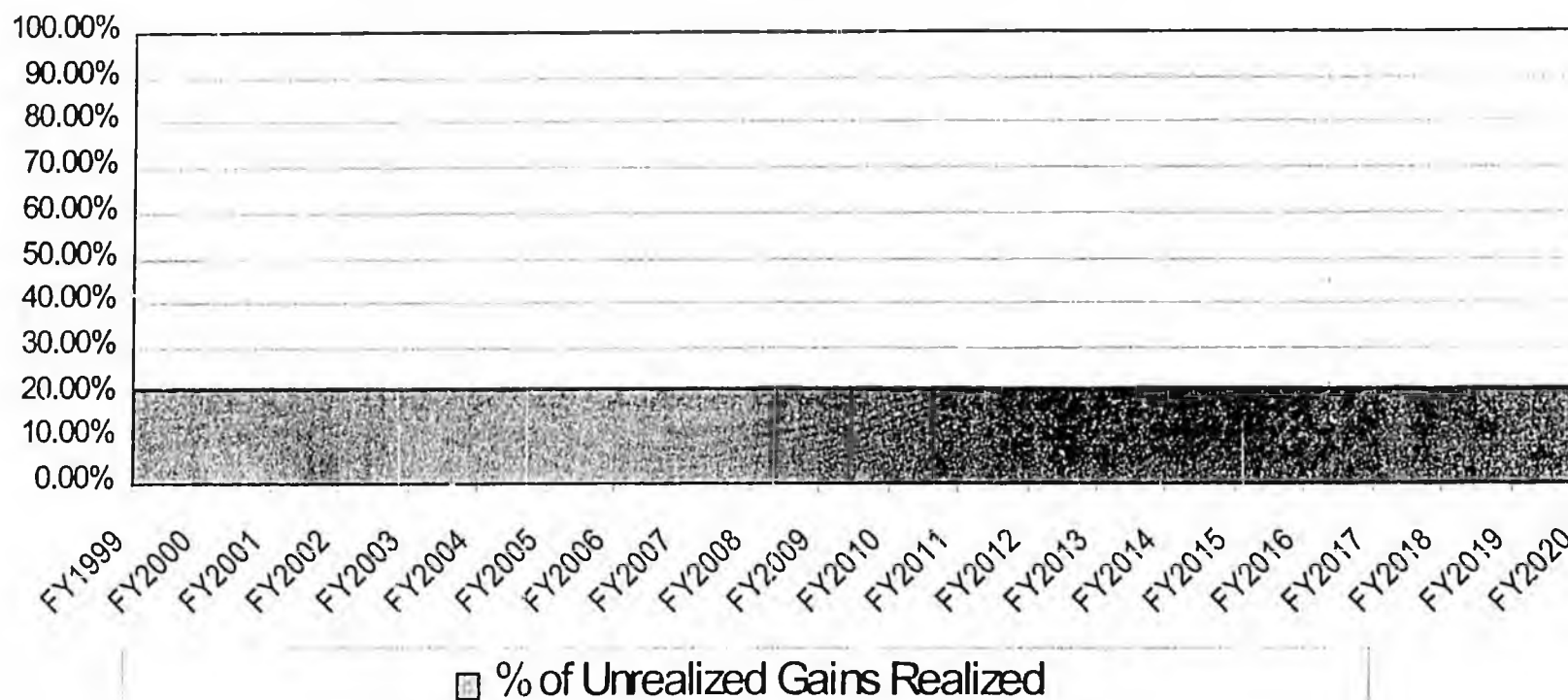
Current Scenario with \$34/bbl Oil

Fiscal Gap vs Savings Account Earnings Used to Fill Fiscal Gap



Current Scenario with \$34/bbl Oil

% of Capital Gains Realized



What Does this all mean?

- The model shows that the problem is not a cyclical problem, but rather it is a structural problem.
- Structural Problems cannot be overcome by riding it out.

Issues Facing the Legislature

- Pivotal moment in Alaska's History
- Not a short term/cyclical problem, but rather a long term/structural problem

Choices

- Cut Costs
- Raise Revenues
- Begin to systematically use the State's Savings Accounts
- A Combination of the above

Potential Measurable Goals of a Long Range Plan

- Sustainability
 - ◆ Intergenerational Equity
- Stability
- Predictability
- Ability to fund Permanent Fund Dividends
- Ability to fund the Deficit

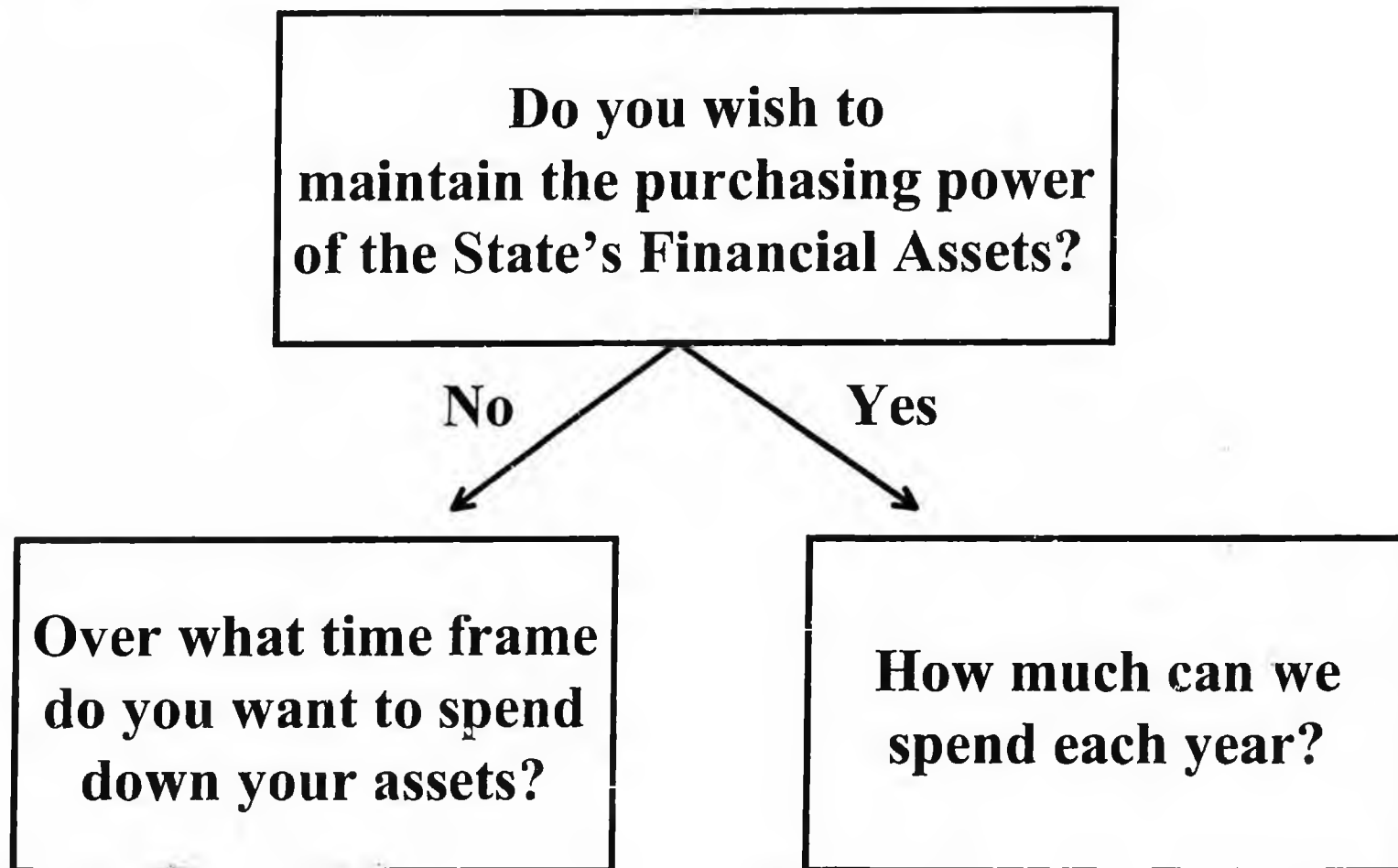
Sustainability

- Protect the Principal (Traditional)
- Inflation Proofing
- Is the goal to protect the purchasing power of the Alaska's Savings Accounts?
- What time horizon is appropriate?

Intergenerational Equity

- Closely related to Sustainability
- All generations are held equal.

Decision Tree



Decision Tree

**Over what time frame
do you want to spend
down your assets?**

- Over what time frame do you want to spend down the State's financial assets?
- What are you going to do when the assets run out?

Decision Tree

**How much can we
spend each year?**

- Approximately \$1.4 Billion in Today's \$.
- Can we live within that constraint?
- How do we handle market volatility?

Stability

- Plan's ability to weather worst case scenarios
- Plan's ability to reduce the State's revenue volatility.

Predictability

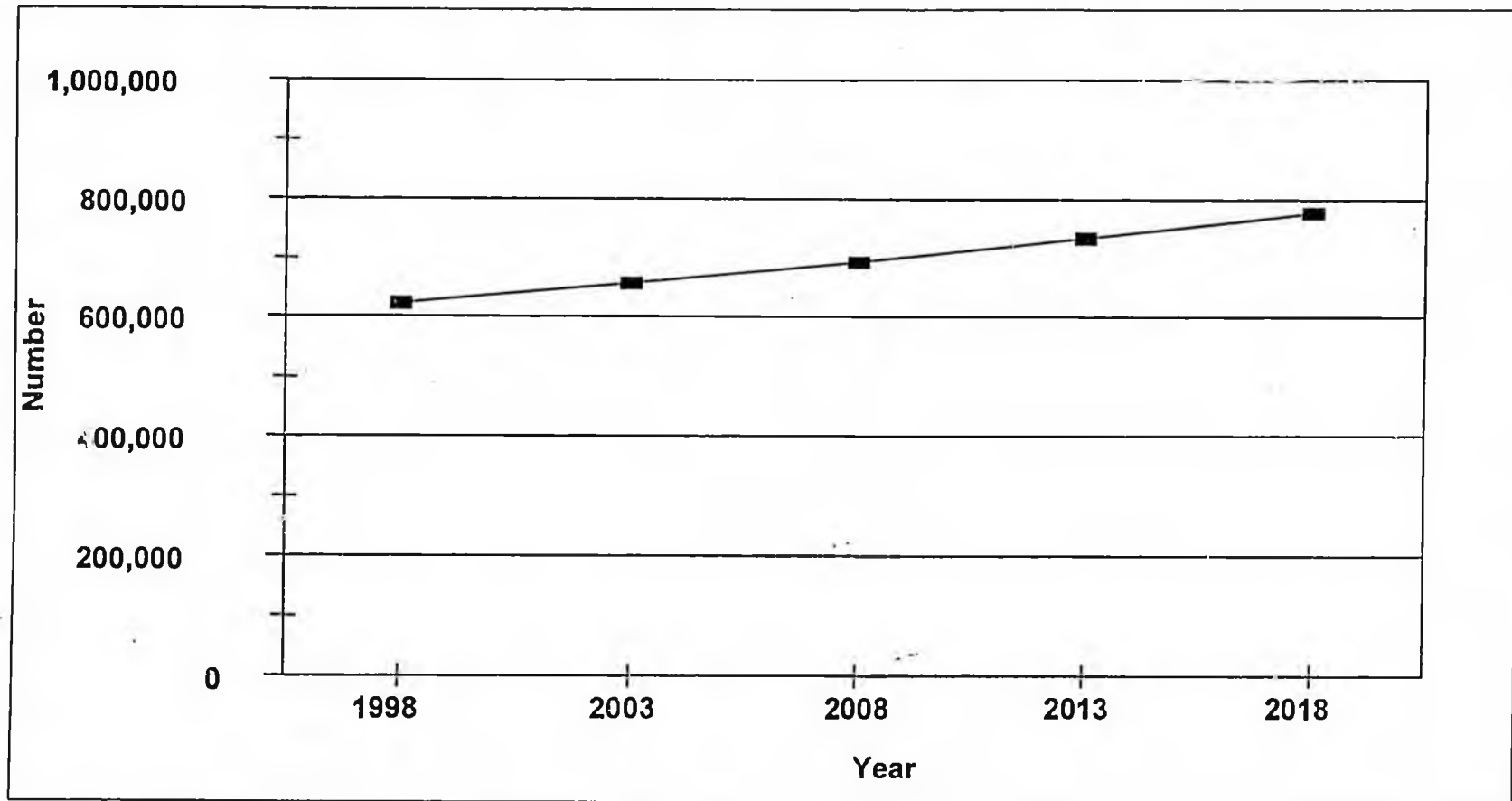
- What level of predictability do we want to assume for:
 - ◆ Revenue Assumptions
 - ◆ Expenditure Assumptions
 - ◆ Market Assumptions

- Implications for Risk & Asset Allocation

4-16-99



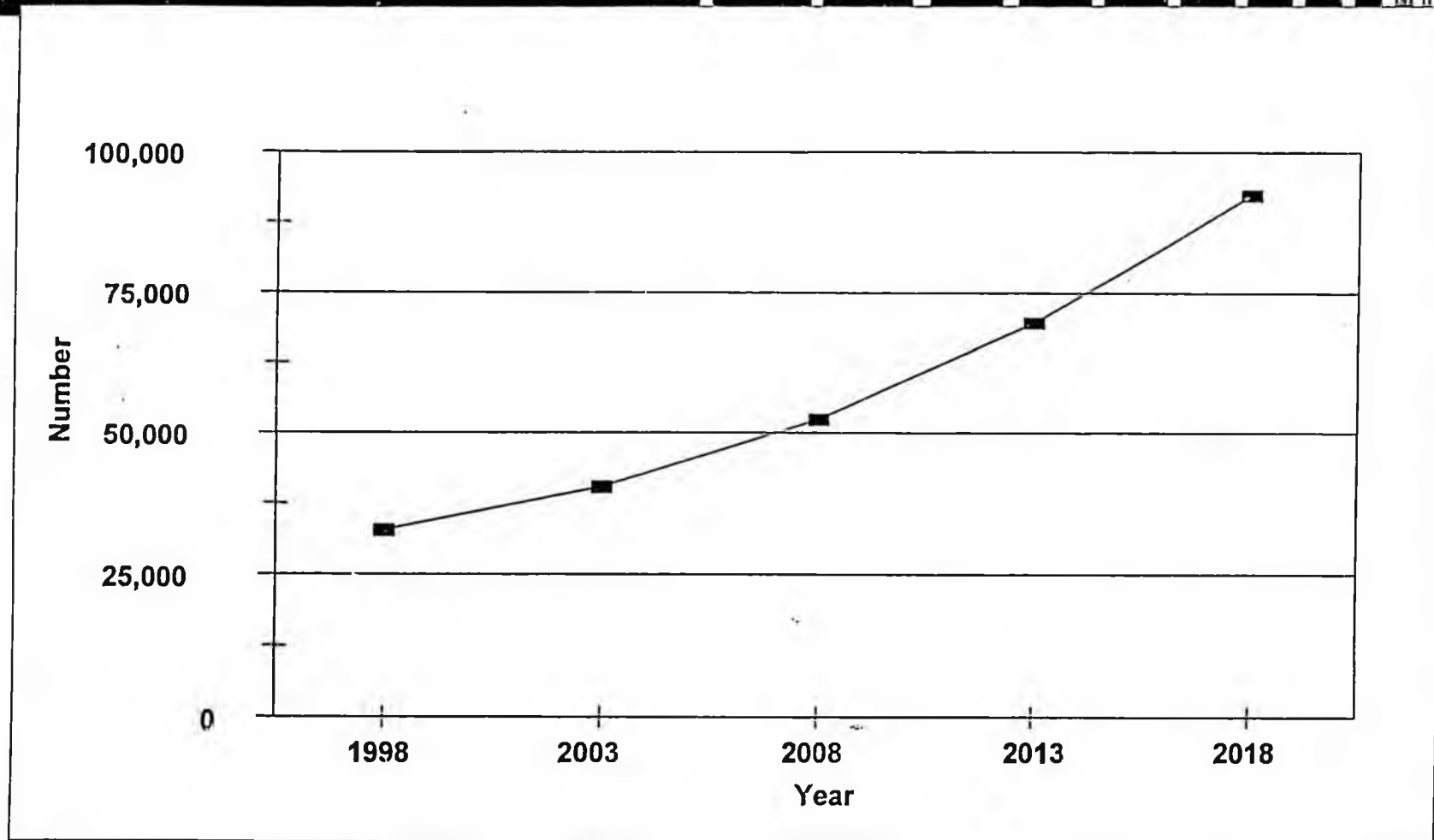
Alaska Population Projections 1998 to 2018 - Statewide



Alaska Department of Labor, Research and Analysis Section, Demographics Unit.

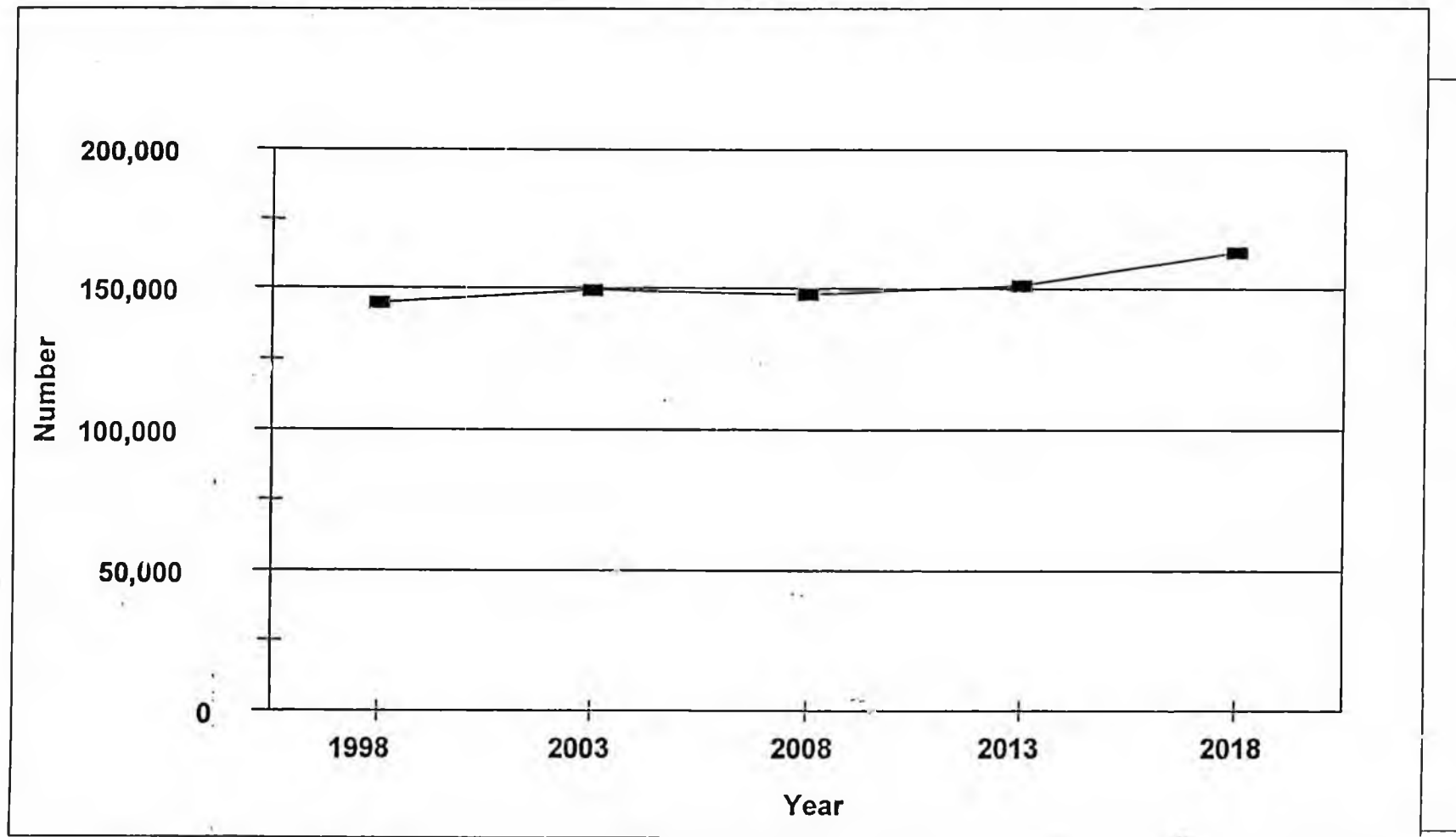


Alaska Population Projections 1998 to 2018 - 65+ Years of Age





Alaska Population Projections 1990 to 2018 - Age 5-17



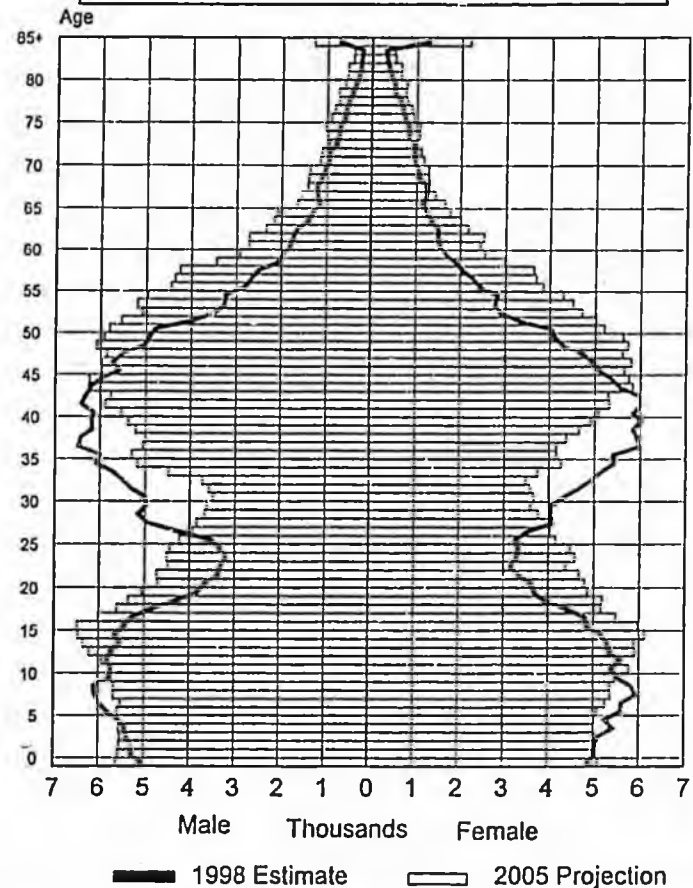
Alaska Department of Labor, Research and Analysis Section, Demographics Unit.



Alaska Middle Series Population Projection by Age and Male/Female, 2005

- Baby Boom in their most productive years of employment
- Echo Boom in High School
- Fewer Elementary age children

Alaska Middle Series Population Projection
By Age and Male/Female, 2005



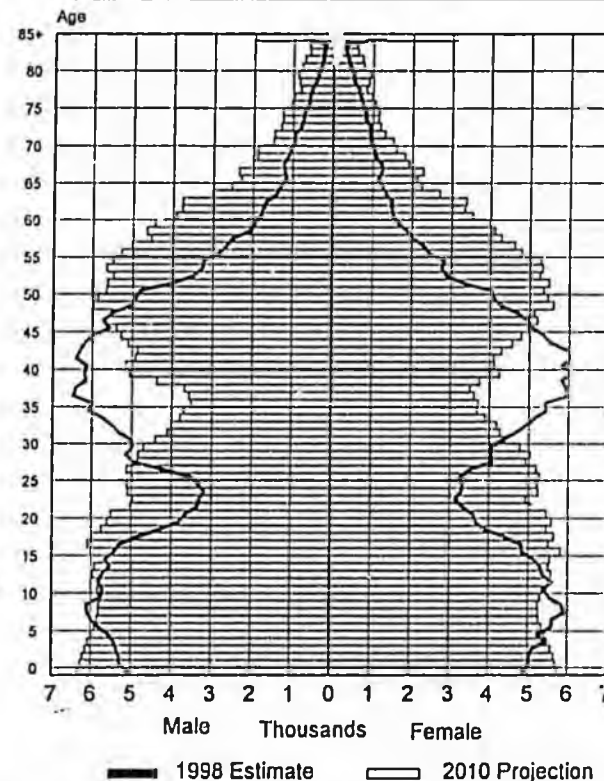
Alaska Department of Labor, Research & Analysis Section, Demographics Unit.



Alaska Middle Series Population Projection by Age and Male/Female, 2010

- Leading edge of Baby Boom begins reaching retirement age
- Echo Boom enters the labor force
- Echo Boom begins to have families

Alaska Middle Series Population Projection
By Age and Male/Female, 2010



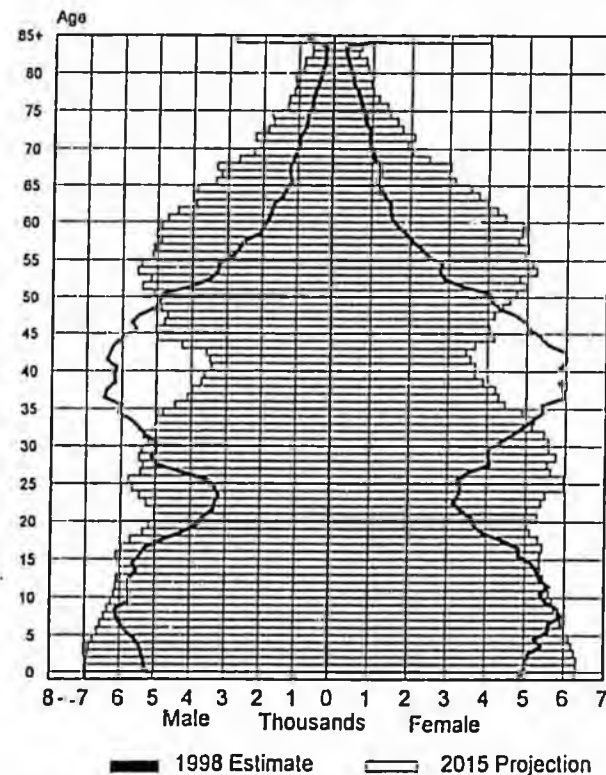
Alaska Department of Labor, Research & Analysis Section, Demographics Unit.



Alaska Middle Series Population Projection by Age and Male/Female, 2015

- Senior population begins to increase significantly
- Children of Echo Boom impacting schools

Alaska Middle Series Population Projection
By Age and Male/Female, 2015



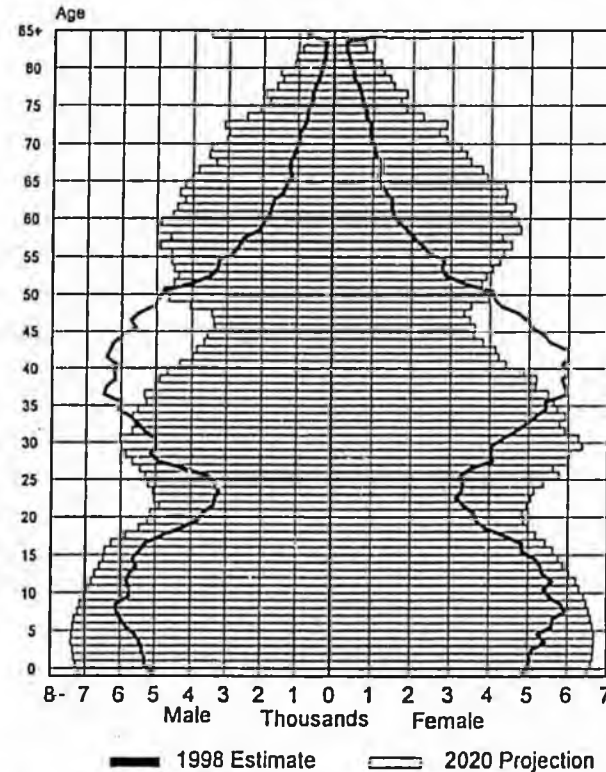
Alaska Department of Labor, Research & Analysis Section, Demographics Unit.



Alaska Middle Series Population Projection by Age and Male/Female, 2020

- Baby Boom reaches their Golden Years
- Natural increase continues to drive school age population growth

Alaska Middle Series Population Projection
By Age and Male/Female, 2020



Alaska Department of Labor, Research & Analysis Section, Demographics Unit.

**Projected Population by Labor Market Region and Borough/Census Area
Middle Case Scenario, July 1, 1998 - 2018**

Labor Market Area	July 1 1998 Estimate	July 1 2003 Middle	(%) Change 1998 - 2003	July 1 2008 Middle	(%) Change 1998 - 2008	July 1 2013 Middle	(%) Change 1998 - 2013	July 1 2018 Middle	(%) Change 1998 - 2018	(%) State Share 1998	(%) State Share 2018
ALASKA	621,400	656,150	5.6	693,018	11.5	733,852	18.1	776,480	25.0	100.0	100.0
Anchorage/Matanuska-Susitna Region	313,308	333,042	6.3	353,770	12.9	376,779	20.3	401,631	28.2	50.4	51.7
Municipality of Anchorage	258,782	269,567	4.2	279,707	8.1	289,528	11.9	298,875	15.5	41.6	38.5
Matanuska-Susitna Borough	54,526	63,475	16.4	74,063	35.8	87,251	60.0	102,756	88.5	8.8	13.2
Gulf Coast Region	73,028	76,771	5.1	80,553	10.3	84,737	16.0	88,837	21.6	11.8	11.4
Kenai Peninsula Borough	48,815	52,382	7.3	56,110	14.9	60,234	23.4	64,305	31.7	7.9	8.3
Kodiak Island Borough	13,848	14,030	1.3	14,159	2.2	14,277	3.1	14,416	4.1	2.2	1.9
Valdez-Cordova Census Area	10,365	10,359	-0.1	10,284	-0.8	10,226	-1.3	10,116	-2.4	1.7	1.3
Interior Region	98,647	102,931	4.3	106,963	8.4	110,915	12.4	114,459	16.0	15.9	14.7
Denali Borough	1,864	1,993	6.9	2,129	14.2	2,303	23.6	2,495	33.9	0.3	0.3
Fairbanks North Star Borough	83,928	88,012	4.9	91,773	9.3	95,367	13.6	98,585	17.5	13.5	12.7
Southeast Fairbanks Census Area	6,402	6,814	6.4	7,270	13.6	7,753	21.1	8,203	28.1	1.0	1.1
Yukon-Koyukuk Census Area	6,453	6,112	-5.3	5,791	-10.3	5,492	-14.9	5,176	-19.8	1.0	0.7
Northern Region	23,649	25,627	8.4	28,098	18.8	31,027	31.2	34,236	44.8	3.8	4.4
Nome Census Area	9,402	9,986	6.2	10,725	14.1	11,591	23.3	12,527	33.2	1.5	1.6
North Slope Borough	7,403	8,301	12.1	9,421	27.3	10,741	45.1	12,211	64.9	1.2	1.6
Northwest Arctic Borough	6,844	7,340	7.2	7,952	16.2	8,695	27.0	9,498	38.8	1.1	1.2
Southeast Region	74,285	76,298	2.7	78,687	5.9	81,462	9.7	83,076	13.0	12.0	10.8
Haines Borough	2,476	2,606	5.3	2,776	12.1	2,961	19.6	3,146	27.1	0.4	0.4
Juneau Borough	30,236	31,388	3.8	32,413	7.2	33,475	10.7	34,447	13.9	4.9	4.4
Ketchikan Gateway Borough	14,231	15,119	6.2	16,428	15.4	18,075	27.0	19,774	39.0	2.3	2.5
Prince Of Wales-Outer Ketchikan C.A.	6,884	7,067	2.7	7,281	5.8	7,485	8.7	7,611	10.6	1.1	1.0
Sitka Borough	8,779	8,590	-2.2	8,409	-4.2	8,226	-6.3	7,978	-9.1	1.4	1.0
Skagway-Hoonah-Angoon C. A.	3,664	3,563	-2.8	3,459	-5.6	3,328	-9.2	3,140	-14.3	0.6	0.4
Wrangell-Petersburg Census Area	7,205	7,045	-2.2	6,866	-4.7	6,706	-6.9	6,502	-9.8	1.2	0.8
Yakutat Borough	810	920	13.6	1,055	30.2	1,206	48.9	1,378	70.1	0.1	0.2
Southwest Region	38,483	41,481	7.8	44,947	16.8	48,932	27.2	53,349	38.6	6.2	6.9
Aleutians East Borough	2,177	2,040	-6.3	1,918	-11.9	1,784	-18.1	1,738	-20.2	0.4	0.2
Aleutian West Census Area	5,389	5,665	5.1	5,908	9.6	6,097	13.1	6,242	15.8	0.9	0.8
Bethel Census Area	15,997	17,438	9.0	19,092	19.3	21,043	31.5	23,192	45.0	2.6	3.0
Bristol Bay Borough	1,297	1,405	8.3	1,506	16.1	1,621	25.0	1,734	33.7	0.2	0.2
Dillingham Census Area	4,708	5,027	6.8	5,394	14.6	5,842	24.1	6,327	34.4	0.8	0.8
Lake & Peninsula Borough	1,852	1,962	5.9	2,128	14.9	2,282	23.2	2,439	31.7	0.3	0.3
Wade Hampton Census Area	7,063	7,944	12.5	9,000	27.4	10,263	45.3	11,677	65.3	1.1	1.5

Source: Alaska Department of Labor, Research and Analysis Section, Demographics Unit.

**Projected Population 65+ Years of Age by Labor Market Region and Borough/Census Area
Middle Case Scenario, July 1, 1998 - 2018**

Labor Market Area	July 1	July 1	(%)	July 1	(%)	July 1	(%)	July 1	(%)	(%)	(%)
	1998 Middle	2003 Middle-	Change 1998 - 2003	2008 Middle	Change 1998 - 2008	2013 Middle	Change 1998 - 2013	2018 Middle	Change 1998- 2018	State Share 1998	State Share 2018
ALASKA	32,729	40,379	23.4	52,298	59.8	69,555	112.5	92,356	182.2	100.0	100.0
Anchorage/Matanuska-Susitna Region	15,692	19,953	27.2	26,279	67.5	35,210	124.4	46,602	197.0	47.9	50.5
Municipality of Anchorage	12,703	16,148	27.1	21,134	66.4	28,056	120.9	36,115	184.3	38.8	39.1
Matanuska-Susitna Borough	2,989	3,807	27.4	5,145	72.1	7,154	139.3	10,487	250.9	9.1	11.4
Gulf Coast Region	4,447	5,362	20.6	6,913	55.5	9,347	110.2	12,685	185.2	13.6	13.7
Kenai Peninsula Borough	3,229	3,904	20.9	5,022	55.5	6,707	110.5	9,318	188.6	9.9	10.1
Kodiak Island Borough	609	723	18.7	913	49.9	1,215	99.5	1,615	165.2	1.9	1.7
Valdez-Cordova Census Area	609	735	20.7	978	60.6	1,335	119.2	1,752	187.7	1.9	1.9
Interior Region	4,400	5,305	20.6	6,914	57.1	9,074	106.2	12,337	180.4	13.4	13.4
Denali Borough	57	100	75.4	184	222.8	281	393.0	501	778.9	0.2	0.5
Fairbanks North Star Borough	3,520	4,224	20.0	5,472	55.5	7,195	104.4	9,766	177.4	10.8	10.6
Southeast Fairbanks Census Area	365	471	29.0	675	84.9	880	141.1	1,157	217.0	1.1	1.3
Yukon-Koyukuk Census Area	458	510	11.4	583	27.3	718	56.8	913	99.3	1.4	1.0
Northern Region	1,211	1,424	17.6	1,680	38.7	2,118	74.9	2,639	117.9	3.7	2.9
Nome Census Area	544	617	13.4	696	27.9	851	56.4	1,040	91.2	1.7	1.1
North Slope Borough	299	408	36.5	540	80.6	711	137.8	917	206.7	0.9	1.0
Northwest Arctic Borough	368	399	8.4	444	20.7	556	51.1	682	85.3	1.1	0.7
Southeast Region	5,189	6,201	19.5	7,930	52.8	10,598	104.2	13,869	167.3	15.9	15.0
Haines Borough	246	277	12.6	328	33.3	436	77.2	610	148.0	0.8	0.7
Juneau Borough	1,821	2,167	19.0	2,802	53.9	3,903	114.3	5,140	182.3	5.6	5.6
Ketchikan Gateway Borough	1,134	1,316	16.0	1,735	53.0	2,338	111.5	3,211	183.2	3.5	3.5
Prince Of Wales-Outer Ketchikan C.	354	501	41.5	715	102.0	919	159.6	1,242	250.8	1.1	1.3
Sitka Borough	700	868	24.0	1,053	50.4	1,295	85.0	1,609	129.9	2.1	1.7
Skagway-Hoonah-Angoon C. A.	238	311	30.7	404	69.7	511	114.7	629	164.3	0.7	0.7
Wrangell-Petersburg Census Area	652	703	7.8	811	24.4	1,019	56.3	1,251	91.9	2.0	1.4
Yakutat Borough	44	58	31.8	82	86.4	117	165.9	177	302.3	0.1	0.2
Southwest Region	1,790	2,134	19.2	2,582	44.2	3,208	79.2	4,224	136.0	5.5	4.6
Aleutians East Borough	92	142	54.3	180	95.7	223	142.4	345	275.0	0.3	0.4
Aleutian West Census Area	108	160	48.1	266	146.3	451	317.6	665	515.7	0.3	0.7
Bethel Census Area	835	946	13.3	1,129	35.2	1,348	61.4	1,726	106.7	2.8	1.9
Bristol Bay Borough	46	56	21.7	84	82.0	104	126.1	144	213.0	0.1	0.2
Dillingham Census Area	247	282	14.2	343	38.9	424	71.7	575	132.8	0.8	0.6
Lake & Peninsula Borough	107	116	8.4	140	30.8	157	46.7	202	88.8	0.3	0.2
Wade Hampton Census Area	357	432	21.7	440	23.9	501	41.1	567	59.7	1.1	0.6

Source: Alaska Department of Labor, Research and Analysis Section, Demographics Unit.

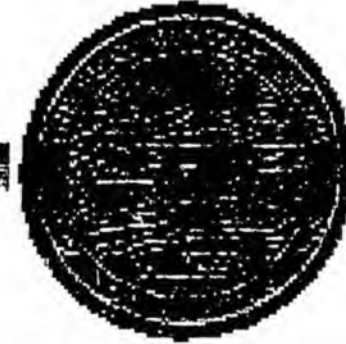
**Projected Population Ages 5-17 by Labor Market Region and Borough/Census Area
Middle Case Scenario, July 1, 1998 - 2018**

Labor Market Area	1998	July 1		July 1		July 1		July 1		State Share 1998	State Share 2018
		2003	Change 1998 - 2003 (%)	2008	Change 1998 - 2008 (%)	2013	Change 1998 - 2013 (%)	2018	Change 1998 - 2018 (%)		
ALASKA	144,767	149,307	3.1	147,811	2.1	151,044	4.3	163,411	12.9	100.0	100.0
Anchorage/Matanuska-Susitna Region	70,900	74,948	5.7	73,696	3.9	74,066	4.5	79,328	11.9	49.0	48.5
Municipality of Anchorage	56,621	60,261	6.4	57,465	1.5	54,651	-3.5	55,017	-2.8	39.1	33.7
Matanuska-Susitna Borough	14,279	14,687	2.9	16,231	13.7	19,415	36.0	24,311	70.3	9.9	14.9
Gulf Coast Region	17,322	16,786	-3.1	16,795	-3.0	17,802	2.8	19,683	13.6	12.0	12.0
Kenai Peninsula Borough	11,729	11,307	-3.6	11,691	-0.3	12,876	9.8	14,642	24.8	8.1	9.0
Kodiak Island Borough	3,264	3,376	3.4	3,261	-0.1	3,164	-3.1	3,223	-1.3	2.3	2.0
Valdez-Cordova Census Area	2,329	2,103	-9.7	1,843	-20.9	1,762	-24.3	1,818	-21.9	1.6	1.1
Interior Region	22,703	23,376	3.0	23,116	1.8	23,030	1.4	23,631	4.1	15.7	14.5
Denali Borough	393	348	-11.5	353	-10.2	357	-9.2	395	0.5	0.3	0.2
Fairbanks North Star Borough	10,840	19,822	5.2	19,676	4.4	19,630	4.2	20,031	6.3	13.0	12.3
Southeast Fairbanks Census Area	1,593	1,599	0.4	1,702	6.8	1,828	14.8	1,599	25.5	1.1	1.2
Yukon-Koyukuk Census Area	1,877	1,607	-14.4	1,385	-26.2	1,215	-35.3	1,206	-35.7	1.3	0.7
Northern Region	7,163	7,422	3.6	7,742	8.1	8,542	19.3	10,152	41.7	4.9	6.2
Nome Census Area	2,731	2,858	4.7	3,021	10.6	3,311	21.2	3,865	41.5	1.9	2.4
North Slope Borough	2,232	2,306	3.3	2,399	7.5	2,715	21.6	3,338	49.6	1.5	2.0
Northwest Arctic Borough	2,200	2,258	2.6	2,322	5.5	2,516	14.4	2,949	34.0	1.5	1.8
Southeast Region	16,022	15,051	-6.1	14,287	-10.8	14,620	-8.8	15,823	-1.2	11.1	9.7
Haines Borough	503	451	-10.3	452	-10.1	483	-4.0	518	3.0	0.3	0.3
Juneau Borough	6,313	6,040	-4.3	5,881	-6.8	6,111	-3.2	6,578	4.2	4.4	4.0
Ketchikan Gateway Borough	2,898	3,100	3.4	3,144	4.9	3,447	15.0	4,060	35.4	2.1	2.5
Prince Of Wales-Outer Ketchikan C.A.	1,637	1,495	-8.7	1,389	-15.1	1,415	-13.6	1,494	-8.7	1.1	0.9
Sitka Borough	1,853	1,639	-11.5	1,444	-22.1	1,334	-28.0	1,320	-28.8	1.3	0.8
Skagway-Hoonah-Angoon C. A.	839	659	-21.5	544	-35.2	481	-42.7	462	-44.9	0.6	0.3
Wrangell-Petersburg Census Area	1,682	1,467	-12.8	1,239	-26.3	1,156	-31.3	1,170	-30.4	1.2	0.7
Yakutat Borough	197	200	1.5	194	-1.5	193	-2.0	221	12.2	0.1	0.1
Southwest Region	10,657	11,724	10.0	12,175	14.2	12,984	21.8	14,794	38.8	7.4	9.1
Aleutians East Borough	590	429	-14.2	315	-37.0	257	-48.6	244	-51.2	0.3	0.1
Aleutian West Census Area	876	1,031	17.7	870	-0.7	663	-24.3	615	-29.8	0.6	0.4
Bethel Census Area	4,693	5,215	11.1	5,585	19.0	6,083	29.6	6,934	47.8	3.2	4.2
Bristol Bay Borough	325	360	10.8	366	12.6	386	18.8	439	35.1	0.2	0.3
Dillingham Census Area	1,302	1,404	7.8	1,396	7.2	1,442	10.8	1,629	25.1	0.9	1.0
Lake & Peninsula Borough	542	517	-4.6	537	-0.9	605	11.6	702	29.5	0.4	0.4
Wade Hampton Census Area	2,419	2,768	14.4	3,106	28.4	3,548	46.7	4,231	74.9	1.7	2.6

Source: Alaska Department of Labor, Research and Analysis Section, Demographics Unit.

spring 1999

revenue forecast



Alaska Department of Revenue

dor spring 1999 forecast

4-16-99

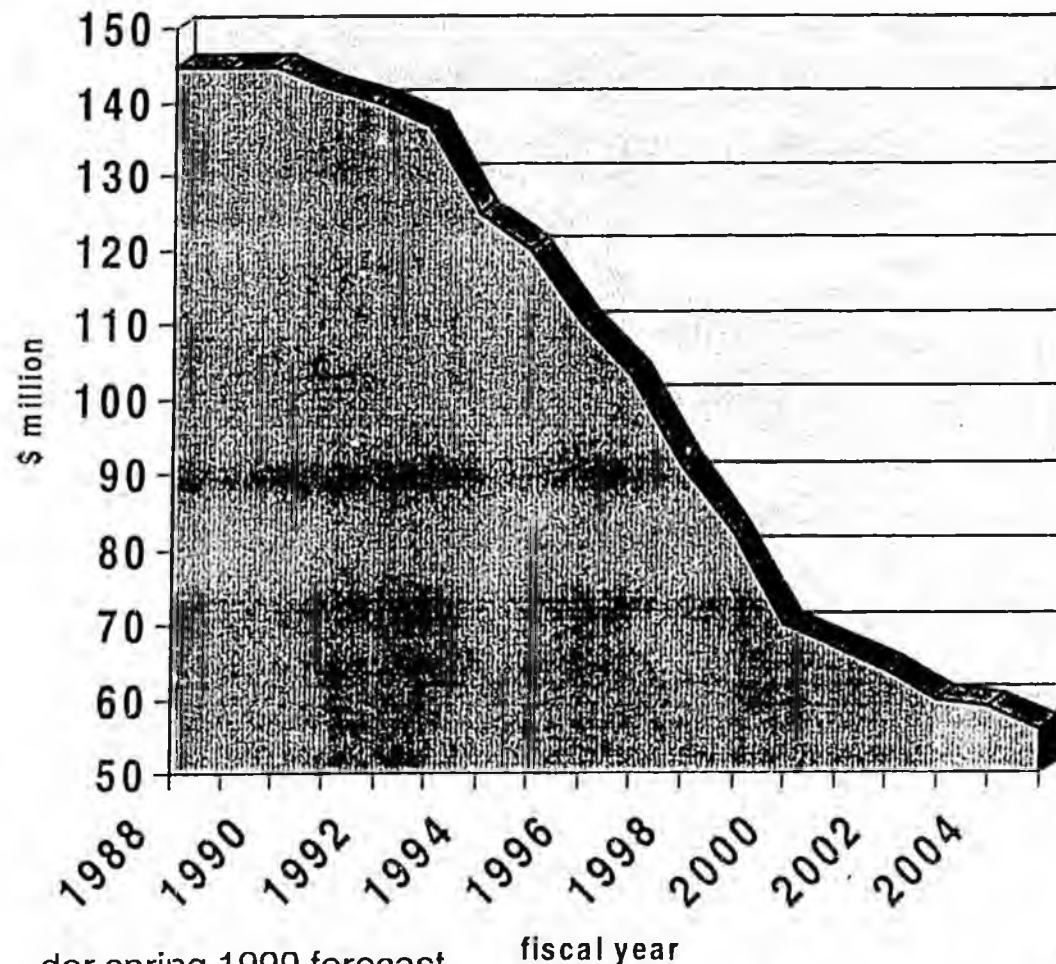
the big picture-- unrestricted revenues

Average Annual Unrestricted Revenue (\$/Year, FY 2000—FY2005)

<u>Revenue Source</u>	<u>Reference Case</u>
Oil Revenue (less Perm Fund Dedication)	\$ 900 million (\$15.40/bbl)
Investment Revenue	2000 million (7.75% ror)
Other Revenue	<u>475 million</u>
Total Unrestricted Revenue	\$3375 million

annualize \$1 per barrel impact on general fund unrestricted revenue

fy	\$ million
1988	145
1990	145
1992	140
1994	125
1997	103
1998	91
1999	82
2000	70
2001	67
2002	64
2003	60
2004	59
2005	56



fy 1999 revenues

- ANS oil prices will average their lowest since FY 1979 (\$12.11 per barrel)
- ANS production is lowest since FY 1979 (1.167 million barrels per day)
- state revenues are the lowest since FY 1979 (\$1338.1 million in GF unrestricted)

fy 2000-2005

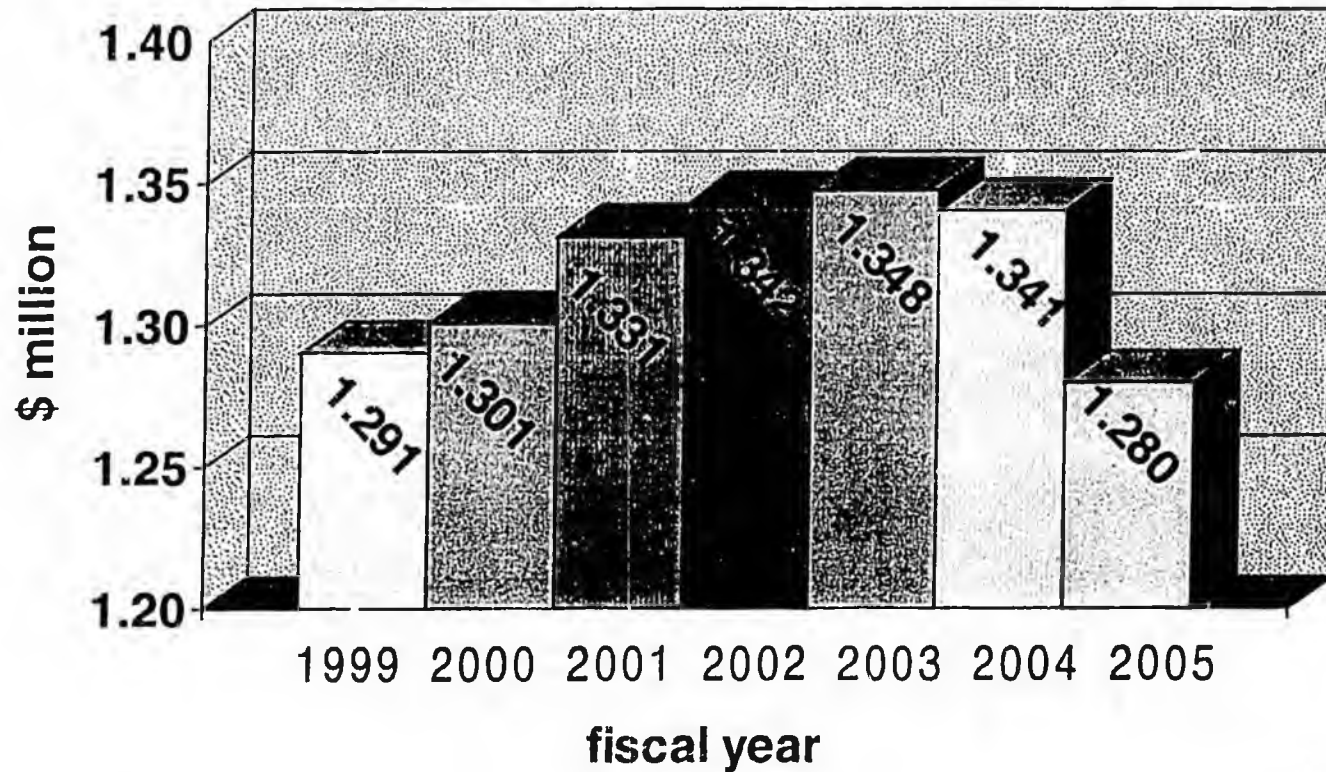
revenue highlights

■ ANS oil prices remain low but will recover to \$16 per barrel by FY 2003

■ new fields on-line in FY 2001 and 2003 keep production above 1.03 million barrels per day through FY 2005

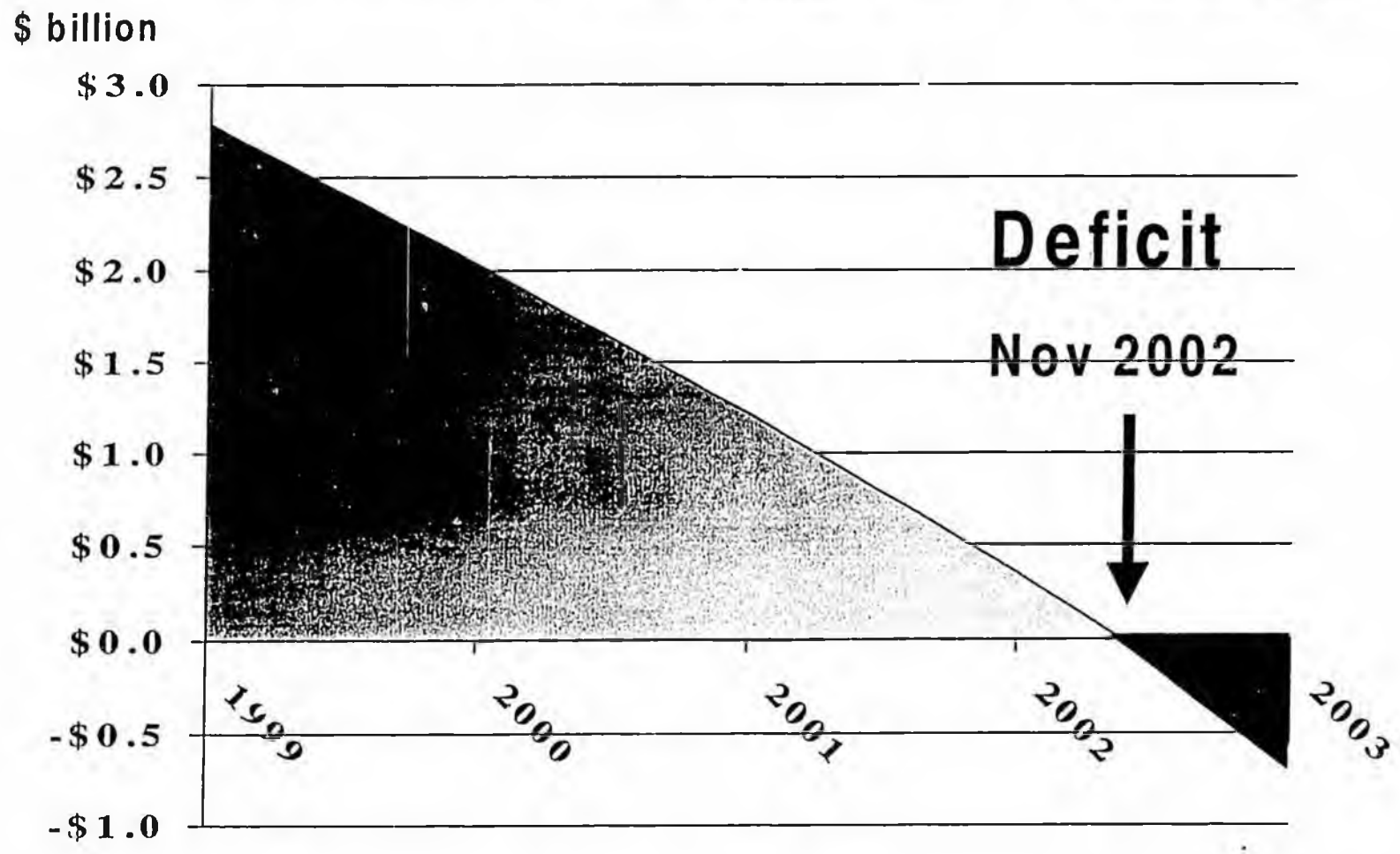
■ non-oil assets will continue to generate more state revenue than petroleum taxes or royalties

bottom line revenue forecast net disposable general fund unrestricted revenue



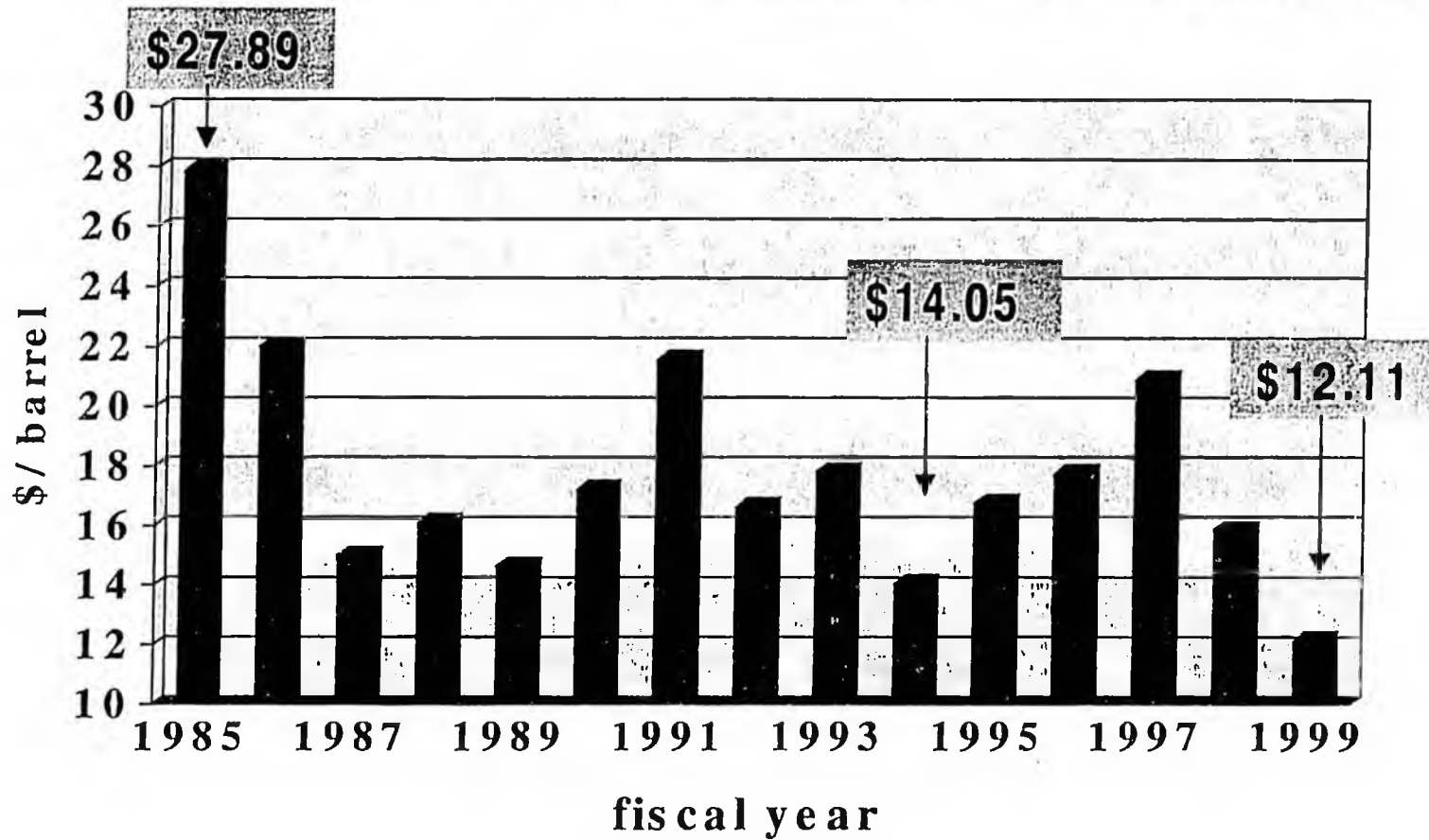
dor spring 1999 forecast

projected constitutional budget reserve fund year-end balance



dor spring 1999 forecast

historical ans prices



for spring 1999 forecast

spring 1999 forecast oil price assumptions

1 OPEC Stays the Course Making Modest Cuts



REFERENCE CASE SCENARIO

2 OPEC Production Creeps Up

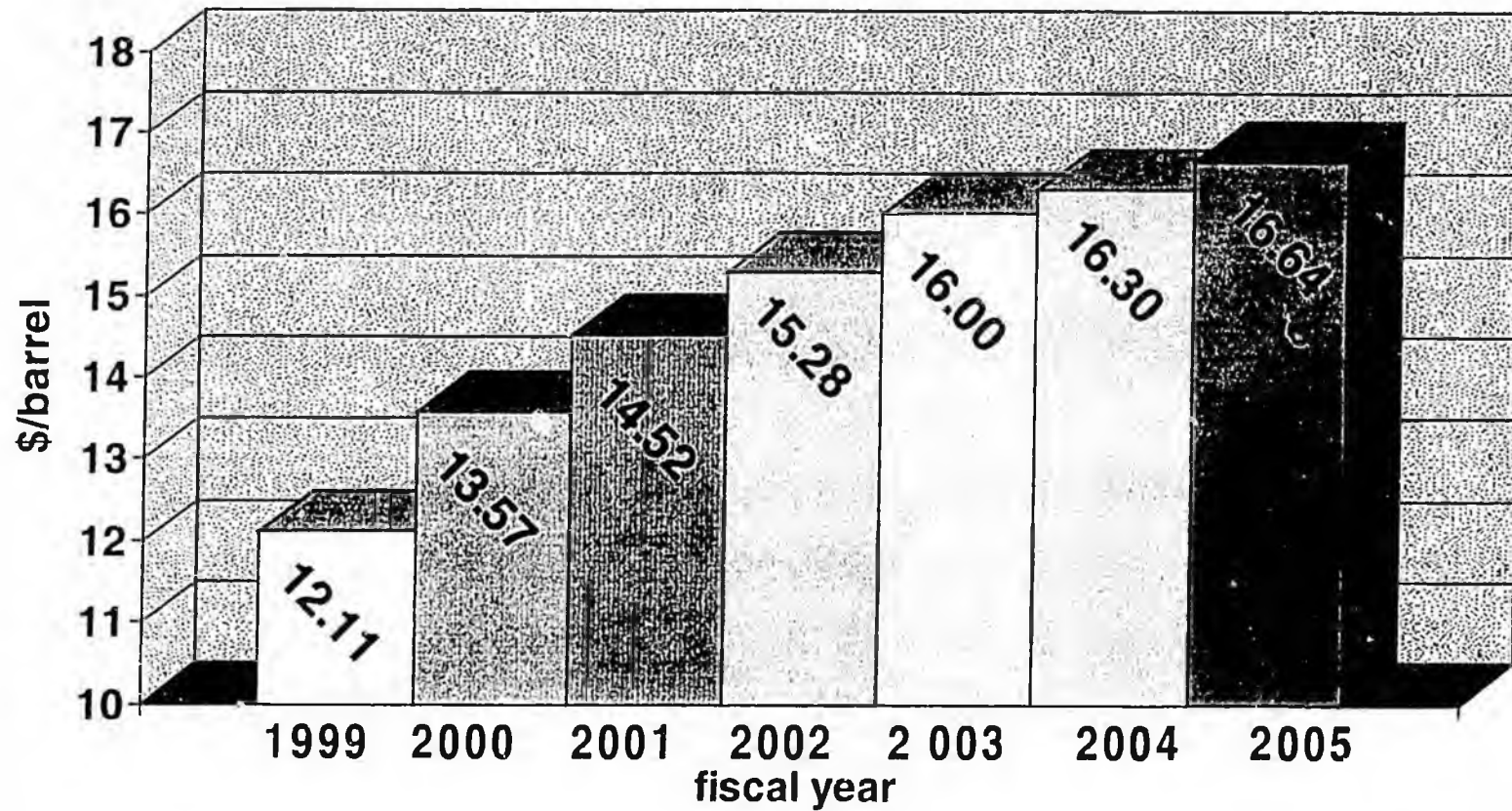


LOW-PRICE CASE SCENARIO

opec production

Country	1998 Quota	1999 Quota	February-99	agreed upon cuts
Algeria	0.788	0.731	0.810	-0.057
Indonesia	1.280	1.187	1.390	-0.093
Iran	3.623	3.359	3.650	-0.264
Kuwait	1.980	1.836	1.980	-0.144
Libya	1.323	1.227	1.350	-0.096
Nigeria	2.033	1.885	2.000	-0.148
Qatar	0.640	0.593	0.640	-0.047
Saudi Arabia	8.023	7.438	8.100	-0.585
UAE	2.157	2.000	2.190	-0.157
Venezuela	<u>2.845</u>	<u>2.720</u>	<u>2.920</u>	<u>-0.125</u>
TOTAL	24.692	22.976	25.030	-1.716

reference case oil price forecast

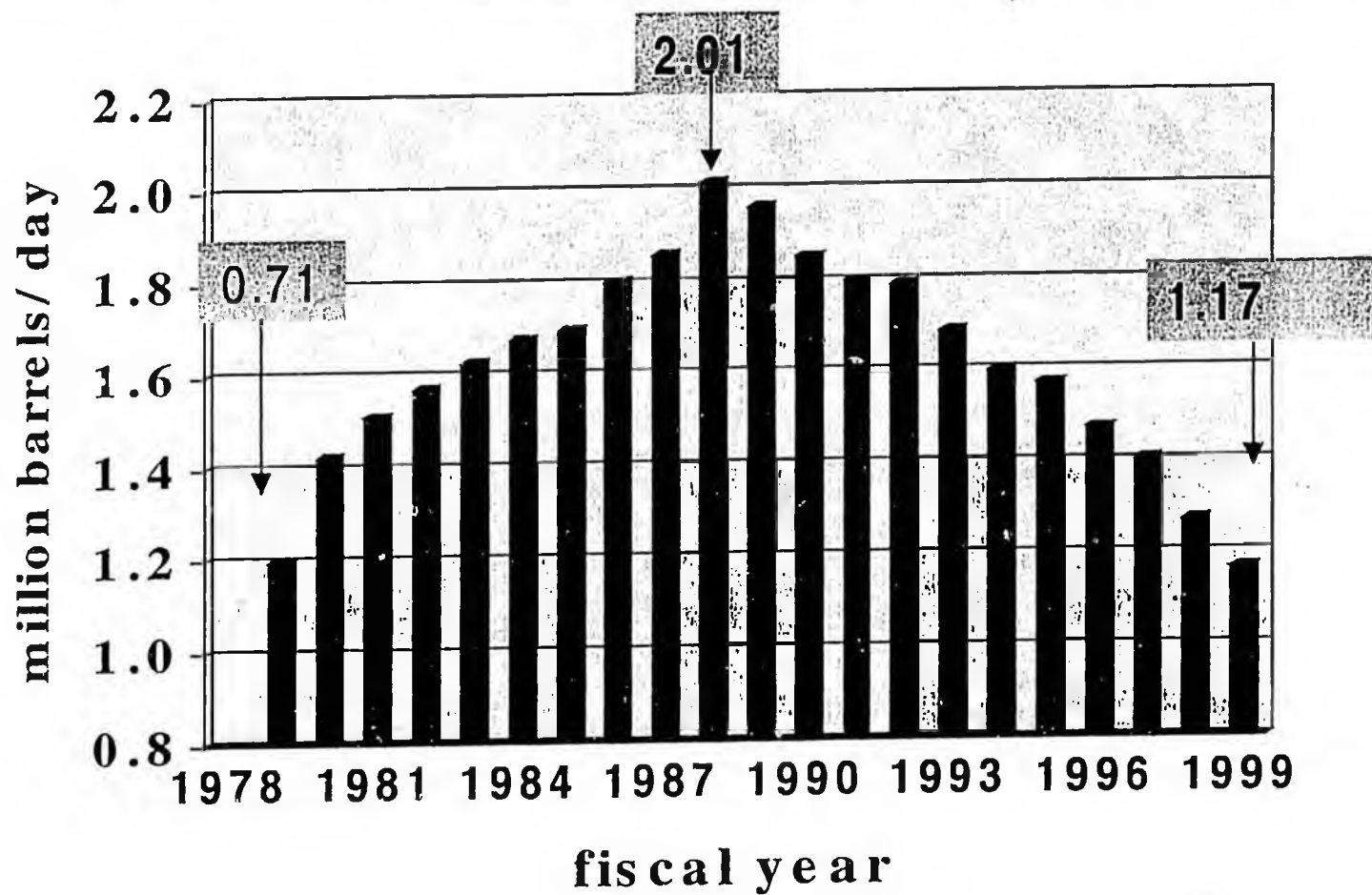


oil price forecast

reference case ans price forecast

- lowest price ever recorded for ANS crude in FY 1999 - dipping to \$8.63 per barrel last December
- prices over the long term should average close to \$16 per barrel

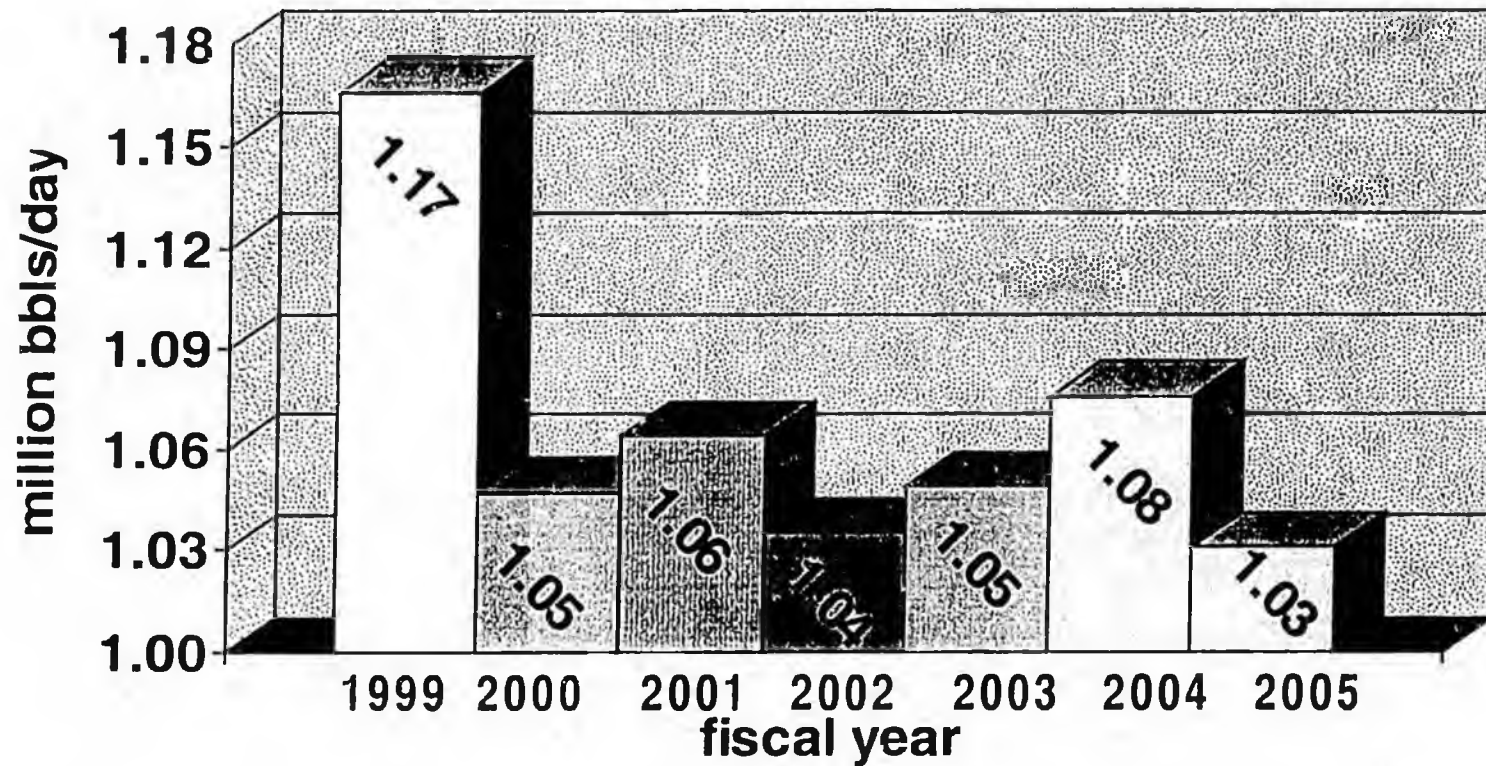
historical and production



for spring 1999 forecast

reference case

and production forecast



for spring 1999 forecast

reference case

ans production forecast

- low oil prices in FY 1999 delay company-development plans
- Alpine production starts in FY 2001
- Northstar and Liberty come on-line in FY 2003-2004

FY 2000-2005 summary

general fund unrestricted revenues

- oil revenues are projected to average about \$900 million per year
- oil prices will average \$15.40 per barrel
- non-oil revenues will average about \$475 million per year
- investment earnings will be about \$2000 million per year (7.75% rate of return)
- total unrestricted revenue will average about \$3375 million per year

HOUSE FINANCE COMMITTEE
LOG NOTES

GENERAL SUBJECT(S): LONG TERM FISCAL GAP DISCUSSION

The following overview was taken in log note format. Tapes and handouts will be on file with the House Finance Committee through the 21st Legislative Session, contact 465-2156. After the 21st Legislative Session they will be available through the Legislative Library at 465-3808.

Time Meeting Convened: 1:45 P.M.

Tape HFC 99 - 83, Side 1.
Tape HFC 99 - 83, Side 2.
Tape HFC 99 - 84, Side 1.

	PRESENT:	X	Representative G. Davis
	Co-Chair Therriault		Representative Foster
X	Co-Chair Mulder	X	Representative Grussendorf
X	Representative Austerman	X	Representative Kohring
X	Representative Bunde		Representative Moses
	Representative J. Davies		Representative Williams

ALSO PRESENT: DAVID TEAL, DIRECTOR, DIVISION OF LEGISLATIVE FINANCE; REPRESENTATIVE ETHAN BERKOWITZ; REPRESENTATIVE SHARON CISSNA; PHIL OKESON, LEGISLATIVE ANALYST, DIVISION OF LEGISLATIVE FINANCE; WILSON CONDON, (TESTIFIED VIA TELECONFERENCE), COMMISSIONER, DEPARTMENT OF REVENUE; CHARLES LOGSDON, (TESTIFIED VIA TELECONFERENCE), CHIEF PETROLEUM ECONOMIST, OIL AND GAS DIVISION, DEPARTMENT OF REVENUE; GREG WILLIAMS, DEPARTMENT OF LABOR.

LOG	SPEAKER	DISCUSSION
	TAPE CHANGE 83-1	
000	Co-Chair Mulder	Convened the HFC meeting at 1:45 p.m.
079	PHIL OKESON, LEGISLATIVE ANALYST, DIVISION OF LEGISLATIVE FINANCE	Spoke to the measurable goals of a long-term plan. The intent would be to identify the goals. He distributed a handout for the Committee. [copy on file]
149	Phil Okeson	Highlighted long term issues and the current situation and how that would affect long term budgeting in the State.
201	Phil Okeson	The second situation illuminates high oil prices. He spoke to the graph illustrating historical state revenues. He pointed out the volatility of oil prices and problems with production.
283	Phil Okeson	Future projections do not change. These lines are sloping downward. The difference between the lines continue to grow closer together.
348	Phil Okeson	Stressed that assumptions would be the key

HOUSE FINANCE COMMITTEE
LOG NOTES

		to the problem. The first assumption is a 3% inflation. That is about the same as the CPI. He questioned the growth rate in government. The second item is population growth which is projected to be 1.5%. A 2% projected population growth would be used for the dividend only.
479	Phil Okeson	Continued, another scenario would indicate a permanent fund total return of 7.75%.
539	Phil Okeson	Constitutional Budget Reserve total return of 5%. 5% if less than \$3B and 8.1% if greater than \$3B.
594	REPRESENTATIVE BERKOWITZ	He asked the difference between the PFD and revenue stream. Are restrictions placed on the PFD 3/10%.
653	Phil Okeson	Referenced the current situation revenues and expenditures (graph) . The deficit will grow significantly in the years to come.
716	Representative Grussendorf	Asked if there was a slide that indicates the earnings off the permanent dividend?
742	Phil Okeson	Stated that he looks for spikes which indicates that things are going bad for the unrealized gains. Under this assumption, there will continue to be revenues being placed into that fund.
804	Phil Okeson	Spoke to the graph, which indicates various savings accounts which the State owns. The Permanent Fund corpus continues to grow. The first thing that will go will be the Constitutional Budget Reserve. How to fund the deficit will begin with spending the Constitutional Budget Reserve. The State can not touch the Permanent fund corpus by constitutional law. He projected that by 2005, the earnings reserve will be gone. Then the State will hit a wall
907	Phil Okeson	Referenced that the graph showing the purchasing power of the current assets. To stay even with the rate of inflation, the purchasing power must stay the same. Deficit is growing each year. He asked how much could be funded through the savings account. At some point all that will be left is Permanent fund dividend corpus.
1012	Phil Okeson	In out years, the State will continue to be paying out from the dividend.
1035	Phil Okeson	Stated that the technical graph warns of coming problems. This graph indicates the

HOUSE FINANCE COMMITTEE
LOG NOTES

		unrealized gains realized. The dividend structure exasperates the problems. The realization of gains causes the dividend to rise.
1121	Co-Chair Mulder	Asked about the 21% of realized gains of the unrealized structure.
1140	Phil Okeson	Stated that it would vary according to what the market was doing. He recommended a prudent investor rule.
1163	Phil Okeson	Spoke to high oil prices. What oil price would it take to bail us out of the situation? If oil went to \$34/bbl and in fact rose to \$61/bbl, although that would not be too possible. He believed that if oil revenue did jump, the deficit would start to come back. It is difficult to reach the production curve.
1259	Phil Okeson	He outlined a graph at \$34/bbl. A savings fund would be reasonable, however the Constitutional Budget Reserve would also start to go away. There is a production problem.
1321	Phil Okeson	In order to maintain constant purchasing power, the actual projected savings begins to sloop downward.
1390	Phil Okeson	This shows that the model is a structural problem. It will haunt the state year in and year out. There needs to be a long-term plan. There no longer will be a big savings and the State must tackle how the deficit can be attacked.
1456	Phil Okeson	Cut costs; raise revenues; systematically use the State's savings accounts.
1481	Phil Okeson	Goals of long term plan would be sustainability. State must solve the problem for a long time. Must decide what is fair today and would continue to work tomorrow. There needs to be stability. We need a plan that provides more stability.
1550	Phil Okeson	Predictability of assumptions that can be used. Will the plan be able to fund the pfd's and the deficit? These are the goals to be addressed.
1580	Phil Okeson	Sustainability has been addressed in the past has been inflation proofed. A calculation has caused over inflation proofing. What the State is trying to do is to protect the purchasing power of the assets. He asked what the time would be

HOUSE FINANCE COMMITTEE
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		for sustainability. No other state in the union has assets like Alaska. There are other models that Alaska might consider.
1690	Phil Okeson	The key is establishing a system that will allow the ride during the down time. Intergenerational equity is closely related to sustainability. All generations are held equal. Many ways to provide intergenerational equity. i.e. infrastructure will leave the next generation a sense of economy. Alaska has the ability to wipe out the salmon runs. Unique about AK is taking a non-renewal resource and turn it into renewal resources.
1865	Phil Okeson	Decision tree. Does the State wish to maintain the purchasing power of the State financial assets. How much can be spent each year? What will the state do when the assets run out? To invest in infrastructure. There is the potential of messing it up. It is difficult to pick an infrastructure to do. That would be a policy call. The amount that can be spent each year is about \$1.4 billion dollars in today \$\$.
2000	Phil Okeson	It is important to remember that Alaska has lived in a great bull market. Now it is time to create a responsible portfolio realizing that it is important to save during the good years. Consider the inflation rate. It is important to inflation proof the assets.
2078	Phil Okeson	The question is what are we going to do in the future. A reasonable amount to pull out of the fund would be 5% each year. Can the state live within that constraint. At this time, the state is short. How to make it work if it is sustainable.
2128	Phil Okeson	Market volatility: There are mechanisms that will help smooth that out and bring stability. Important to make worse case scenarios. How does the plan stack up in the worse case scenario? Some plans will do better in a revenue flow.
2180	Phil Okeson	Volatility of the market. A plan would provide the ability to reduce the State's revenue.
2207	Phil Okeson	Spoke to the predictability of the market. Standard revenue assumptions.

HOUSE FINANCE COMMITTEE
LOG NOTES

2268	Phil Okeson	What is the realistic rate of growth in the expenditure assumption?
	TAPE CHANGE 83-2	
056	Co-Chair Mulder	Intent is have the Committee consider the assumptions in order to develop a common set of assumptions. Voiced appreciation on the work done regarding the modeling and key assumption development.
213	WILSON CONDON, (TESTIFIED VIA TELECONFERENCE), COMMISSIONER, DEPARTMENT OF REVENUE	Provided handouts to the Committee. He provided an overview of that handout. [copy on file]
349	Co-Chair Mulder	Assumptions in any model are production and price. Can the Legislature consider reasonable expectation of these two assumptions? He stressed the importance of these points.
417	Commissioner Condon	Spoke to pages 2 and 3 of the handout. He addressed the big picture and the State's revenue and the unrestricted revenues. The State can assume that it will have available \$3.4 billion a year. That will come from oil and money in pfd and taxes and fees. Roughly \$3.4 billion dollars will be paid for operating budget and for inflation proofing the pfd.
579	Commissioner Condon	Page 3 annualizes the \$1 per barrel impact on the general fund unrestricted revenue. He pointed out that \$1 dollar change means \$140 million dollars. In the next decade, it will mean a different amount given the situation that the State faces.
698	DR. CHUCK LOGSDON, (TESTIFIED VIA TELECONFERENCE), CHIEF PETROLEUM ECONOMIST, DEPARTMENT OF REVENUE	Provided information accessible on the web site forecast. Page 4 indicates the ANS oil prices will average their lowest since FY79. ANS production is lowest since FY79 and the State revenues are the lowest since FY79. He acknowledged that this is a bad year.
847	Dr. Logsdon	Oil prices remain low but will recover to \$16/bbl in FY2003. New fields on-line in FY2001 and 2003 keep production above 1.03 million barrels per day through FY 2005.
916	Dr. Logsdon	Projects needing to go into the Constitutional Budget Reserve with the current situation. He provided a historical perspective speaking to a chart which shows prices since 1985. The chart dramatically illustrates how far the

HOUSE FINANCE COMMITTEE
LOG NOTES

		prices have fell.
996	Dr. Logsdon	Thinks that OPEC will stay the course making modest cuts; however, OPEC production creeps up; he provided the low-price scenario. He did not address that scenario.
1058	Dr. Logsdon	Spoke to what is happening in OPEC at this time. Recent news has stressed that Iran will be prorating. Total OPEC has agreed to cut barrels per day. These announcements show prices are moving up. Alaska forecast is adjusted to the risk that they are not cut. He spoke in more detail between the arrangement between Saudi Arabia and Iran. The cuts left all countries with a 7.3%. The key non-OPEC countries have agreed to also take a cut.
1234	Dr. Logsdon	Reference case and production forecast providing the low oil prices in FY99 delay company development plans; Alpine production starts in FY 2001; Northstar and Liberty come on line in FY2003-2004.
1344	Dr. Logsdon	FY 2000-2005 summary general fund unrestricted revenues. Oil revenues are projected to average about \$900 million dollars per year. Oil prices will average \$15.40/bbl. Non oil revenues will average about \$475 million per year. Investment earnings will be about \$2000 million dollars per year. Total unrestricted revenue will average about \$375 million dollars per year.
1440	Co-Chair Mulder	Asked if the Department had focused on the production side. Any other than Northstar and Alpine?
1466	Dr. Logsdon	There is hope that by FY2004 - 05 the State will be producing out of West Sack and satellite fields will begin producing now 3,000 barrel per day and will increase to 50 thousand barrels per day by 2005. There are other sources of new oil.
1523	Co-Chair Mulder	Cook inlet?
1529	Dr. Logsdon	Absolutely. 16000 barrels per day by 2005.
1549	Co-Chair Mulder	2006 - 2010 drops in production?
1564	Dr. Logsdon	2010 - 70,000 barrels per day. Less than what is produced in 2005. No speculative discoveries at this time figured into the price.
1620	Vice-Chair Bunde	NPRA speculation?
1642	Dr. Logsdon	Not until discovered.

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1657	Co-Chair Mulder	Why?
1662	Dr. Logsdon	Habitat situation.
1674	Vice-Chair Bunde	Federal regulations.
1682	Representative G. Davis	Assessment of infrastructure for NPRA?
1694	Dr. Logsdon	Have not however, field opening in 2001
1731	Co-Chair Mulder	NPRA hold opportunity for the State. Would the State receive 50-50 share?
1752	Dr. Logsdon	50% federal revenue and the State could severance tax the revenue. Those numbers are not available at this time. Could generate 20 - 30 million barrels a year. Not a giant revenue source for the State.
1804	Co-Chair Mulder	Asked for more info on the NPRA fund.
1819	Dr. Logsdon	That fund was created as a compromised with the fed govt. to assure that local communities receive some of the monies. That is a federal statute. It would be subject to Legislative appropriation.
1858	Representative Austerman	Assume when price drops down, is there increased production. Is that calculated?
1878	Dr. Logsdon	Replied about heavy oil development. Also made strategic decisions and that are taken into consideration.
1927	Representative Austerman	Is there a slow down in the amount of oil being pumped?
1941	Dr. Logsdon	The oil companies need cash flow and they pump as much as they can. There has not been a close correlation between today's caps.
1985	Co-Chair Mulder	Forecast is conservative based on no reserves and probability of no new reserves soon.
2008	Commissioner Condon	Unlikely that the State will see more than what is proposed in the forecast.
2058	GREG WILLIAMS, DEPARTMENT OF LABOR	Provided a handout that indicates the population projections. Distinguish between economic migrations. Series reflects base line terms for mortality and fluctuations that occur over time. Indicates the mid series projection.
2161	Mr. Williams	Spoke to the handout and the Alaska middle series population projection by age and male/female, 2005. The baby boom in their most productive years of employment. The echo boom in high school; fewer elementary age children.
2236	Mr. Williams	The two key trends are that the population over 65 will be a large increase over the next 20 years. The second trend will look at flat school age growth in the next 10

HOUSE FINANCE COMMITTEE
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		years.
2314	Mr. Williams	Will continue to see the spill over effect in Anchorage which will not stop. That trend is more volatile depending on the up and downs in the year.
2372	Vice-Chair Bunde	Referenced the chart and Mat valley trend.
	TAPE CHANGE 84-1	
043	Mr. Williams	Continued addressing the impacts of the trends. Projections could be a little optimistic.
096	Representative Austerman	1% growth for the next 10 years. What were the last 10 years?
136	Mr. Williams	Approximately the same as what is projected to come.
168	Co-Chair Mulder	Referenced the graph regarding the 65 years and older will be increased by 182%. 5-7 year olds 12.9% growth. There is a decrease in the 30-45-age bracket.
274	Mr. Williams	In population overview often indicates the ages and the number of those that will need to be supported.
329	Vice-Chair Bunde	Alaska has the highest percentage of growth of those over 85. He referenced the last chart in the handout.
381	Mr. Williams	Those people are not a significant part of that trot.
415	Representative Austerman	Is the age 65 and older population growing?
	Mr. Williams	He noted that Alaska has been a young state. The state's population is aging.
535	Co-Chair Mulder	Discussed growth in the 65 and older category. He observed that there would be a continued trend of increasing Medicare expenditures.
603	Vice-Chair Bunde	Noted that the legislature has encouraged the elderly population to stay in the state.
737	Co-Chair Mulder	<u>ADJOURNMENT</u> The meeting adjourned at 3:42 p.m.