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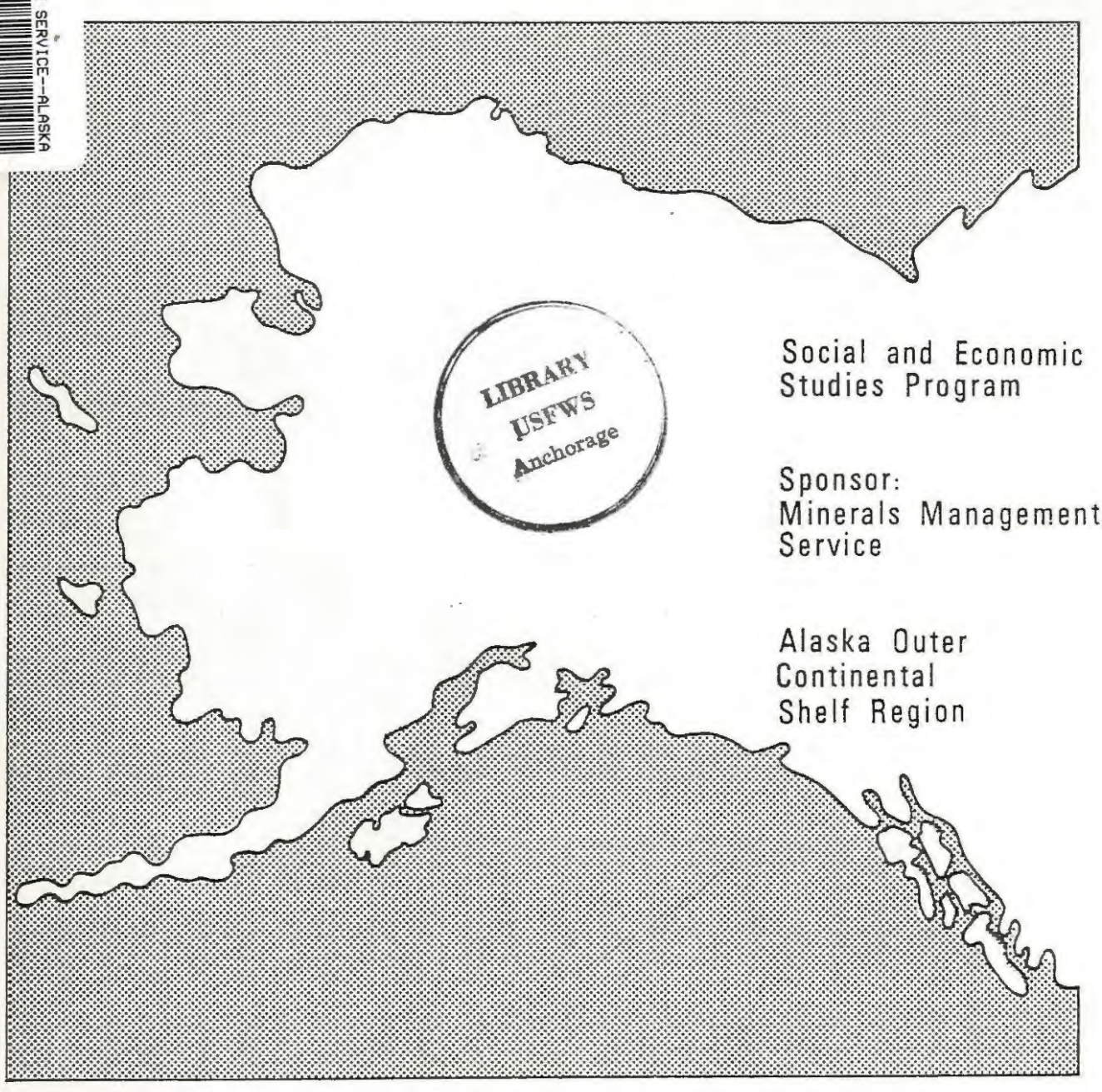

Social and Economic
Studies Program

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Minerals Management
Service

Alaska Outer
Continental
Shelf Region

DIAPIR FIELD STATEWIDE AND REGIONAL ECONOMIC AND DEMOGRAPHIC SYSTEMS IMPACTS ANALYSIS

Contract No. AA851-CT1-30

Alaska OCS Socioeconomic Studies Program

DIAPIR FIELD STATEWIDE AND REGIONAL ECONOMIC AND DEMOGRAPHIC SYSTEMS IMPACT ANALYSIS

Prepared for

Minerals Management Service
Alaska Outer Continental Shelf Office
Alaska OCS Socioeconomic Studies Program

Prepared by

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ABSTRACT

This study projects economic and demographic impacts of OCS Lease Sale 87, scheduled for June of 1984 in the Beaufort Sea. Base case and impact projections are developed for the state of Alaska and for Anchorage and Fairbanks using the MAP econometric model.

The maximum projected impact of a 3.0 BBBL oil development on Sale 87 leases is an increase of about 3 percent in total state population and employment. Similar impacts occur for Anchorage and Fairbanks. In both absolute and percentage terms, projected impacts are greater after the year 2000 than in the 1990s, when peak direct employment associated with the sale would occur. This is because most future growth in Alaska is associated with support sector expansion; the effect of Sale 87 is to cause this growth to occur earlier.

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INTRODUCTION

This study projects economic and demographic impacts of the proposed Outer Continental Shelf (OCS) Lease Sale 87, scheduled for June of 1984 for leases in the Diapir Field (Beaufort Sea) along the north coast of Alaska. Earlier Beaufort Sea lease sales took place in October of 1982 (Sale 71) and in December of 1979 (Sale BF, held jointly with the State of Alaska).

The analysis of the study is carried out both for the state of Alaska as a whole and for the Anchorage and Fairbanks census divisions. We developed our projections using the MAP (Man-in-the-Arctic Program) econometric models which have been developed over a number of years at the University of Alaska's Institute of Social and Economic Research. We discuss our projection methodology in Chapter II.

The MAP models require a variety of assumptions. We discuss these assumptions in Chapter III.

We projected impacts of the lease sale by preparing economic and demographic projections without the sale (the base case) and with the sale (the impact cases). The projected impacts are the differences between the impact case projection and the base case

projections. We discuss the base case projections in Chapter IV, and the impact projections in Chapter V.

We review the results of the study in Chapter VI. The appendixes provide a variety of supporting materials.

II. METHODOLOGY

Introduction

This study focuses on several specific impacts of OCS Sale 87. These are primarily the effects of the sale upon population, employment, and statewide revenues and wealth. Obviously, these are only a few of the many variables which we might have considered. However, it is these variables which have been most interesting and useful in projecting impacts of earlier sales. A carefully developed model is available to project them, and they provide a basis for the discussion of a variety of indirect impacts of the sale.

Our choices of regions to study--the state, Anchorage, and Fairbanks--were based partly upon the capabilities of the MAP model, and partly on the fact that the effects of the sale are of interest both at the statewide level as well as for these two regions. An obvious third region in which Sale 87 might have impacts is the North Slope Borough. However, for several reasons, we do not examine these impacts in this study. First, as has been the case for oil development to date, Sale 87 is likely to have few direct impacts upon North Slope resident population and employment. Instead, those impacts are likely to be indirect, resulting from changes in the tax base of the Borough and changes in the number of

workers who may be included as residents in calculating the legal limit of property taxes collected by the Borough for operating revenues. Second, the North Slope is atypical of Alaska census divisions in that such a large share of employment is held by nonresidents, and in the significance of the local tax revenues to the regional economy. As a result, the MAP model is ill-suited for examining the impacts of OCS development upon the North Slope Borough. We are examining impacts upon the North Slope in connection with other studies currently underway for the Minerals Management Service (Kruse et. al, "A Description of the Socioeconomics of the North Slope Borough"; Knapp, "Impact Analysis of the Barrow Arch Lease Offering" [October 1984]).

We include a historical overview of the Alaska economy as Appendix G. In this study we do not discuss the historical or current Anchorage and Fairbanks regional economies. A variety of information on the statewide economy as well as the Anchorage and Fairbanks economies is available elsewhere. "Beaufort Sea Statewide and Regional Demographic and Economic Systems Impacts" (Social and Economic Studies Program Technical Report 62), prepared by ISER in August 1981, provides a baseline description of the statewide economy and the two regional economies. "Economic and Demographic Structural Change in Alaska" (Technical Report 73) discusses economic and demographic structural changes which may accompany economic growth.

We projected impacts of the lease sale by preparing economic and demographic projections without the sale (the base case) and with the sale (the impact cases). We then measured impacts of the sale as the difference between the impact case and base case projections.

Projections using economic and demographic models are based upon a variety of assumptions. Some of these assumptions are about the way the economy works and will work in the future. These assumptions are incorporated in the structure of the model. Other assumptions are about the future values of particular varibles such as oil revenues or employment in basic industries. The accuracy of the projections depends upon the accuracy of the assumptions. Many of our base case assumptions are highly uncertain. For instance, the future economy of Alaska depends greatly upon world oil prices, which are extremely uncertain.

Fortunately, the projected impacts of an OCS Lease Sale are likely to be less sensitive to uncertain assumptions than the base case. It is easier to predict the change in population that will result from new OCS jobs than it is to predict what the total population will be. For example, the future development of the fishing and timber industries will be important in determining the future economy of the state, but will have less of an effect upon the impacts which might result from Lease Sale 87. Since the primary purpose of the study is to examine impacts of the lease sale rather

than to project the future of the Alaskan or regional economies, we can be somewhat less concerned about the accuracy of the projected base case.

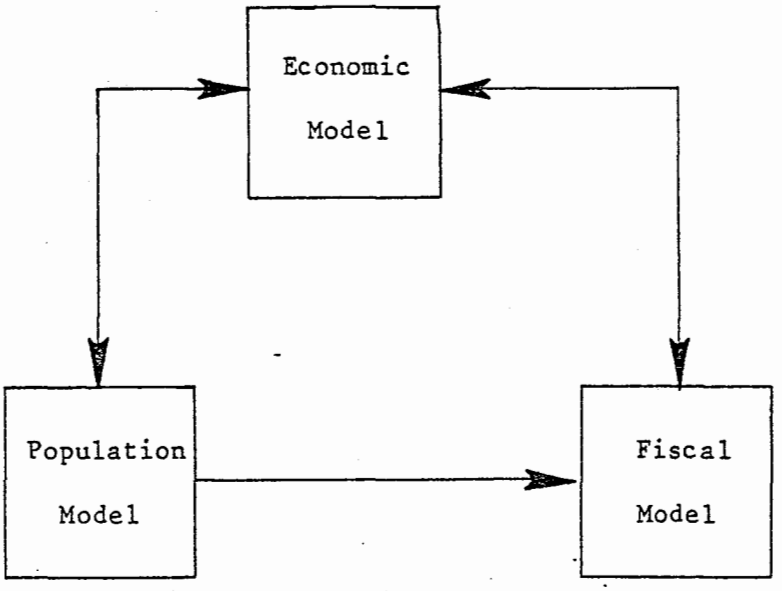
The MAP Model

In order to project statewide economic and demographic variables, we have used the Man-in-the-Arctic Program (MAP) model. This model was developed at ISER over a number of years, and has been used extensively in past OCS impact studies. A description of the model may be found in Scott Goldsmith's Man-in-the-Arctic (MAP) Economic Modeling System Technical Documentation Report (ISER), prepared for the Harza-Ebasco Susitna Joint Venture in June, 1983.

The MAP statewide model is actually a system of models composed of economic, fiscal, and population models. The three are interdependent, as shown schematically in Figure 1. The economic model receives input from the fiscal and population models, the fiscal model receives input from the economic and population models, and the population model utilizes input from the economic models, but not directly from the fiscal model. The population-economic model link is the source of population estimates; population reflects both natural population change and migration induced by changes in economic conditions. The population estimates are also used by the economic model for purposes of computing various per capita values for economic variables.

FIGURE 1.

The MAP Model



The significant link with the fiscal model relates to the role of state government expenditures as a source of major economic stimulus to the aggregate level of economic activity. In turn, state government (and local government) expenditures are dependent upon two key factors: the overall level of economic activity and the level of activity in the petroleum industry.

In the economic model economic activity is classified as either endogenous or exogenous. Exogenous activities include forestry, fisheries, agriculture and other manufacturing, as well as federal government wages and salaries. Other exogenous sector activity includes the petroleum industry and components of contract construction such as major pipelines. State and local government expenditures may also be considered as exogenous for discussion purposes, although there is some interdependence between these expenditures and total economic activity.

These exogenous variables combine with demand from the support sector and endogenous construction to generate total industrial production. Industrial production, through a series of steps, determines employment and income, and finally, real disposable personal income, which in turn is a determinant of support sector and endogenous construction economic activity. This means that aggregate production depends on both exogenously determined and endogenously determined economic activity, where endogenous activity depends on total activity. As such, the system is a simultaneous equation structure.

Certain other variables enter the model as well. In particular, wage rates are used in determining total wage and salary payments, where the wage rates are in part dependent upon U.S. wage rates, which are determined exogenously.

A wide variety of assumptions are required to run the MAP model. Chapter III discusses the assumptions which we used.

The MAP Regional Model

The MAP regional model disaggregates the MAP statewide model projections for population and employment in the basic, support, and government sectors among 20 regions, corresponding to 1970 census divisions or combinations of census divisions. The disaggregation is based on proportions determined by 1980 population, basic employment in each region, assumptions about the relationship between basic employment in each region and support sector employment in that and other regions, and assumptions about the relationship between employment in each region and population in that and other regions. Thus, changes in basic employment in any one region may affect both support sector employment and population in other regions. In addition, the model allocates government employment among regions based on population and past trends.

III. MODEL ASSUMPTIONS

In this chapter we discuss the assumptions which we used in running the MAP model. First we discuss the assumptions required to develop the base case projections. We then discuss the assumptions about OCS direct impacts which we used in developing the impact case projections.

Base Case Assumptions

Four types of assumptions are required in order to run the MAP model. These are national variable assumptions which directly or indirectly affect Alaska economic activity; assumptions about exogenous employment in special projects, basic industries, and government; an assumption as to the number of tourists who will visit Alaska; and assumptions about state government revenues and expenditures.

Inasmuch as Alaska is an open economy, developments in the state hinge at least in part on the performance of the national economy. In particular, four assumptions about the U.S. economy are required. First, a forecast of weekly earnings in the United States is needed to estimate Alaskan wage rates. Second, insofar as most goods consumed in Alaska are imported from the Lower 48, the U.S. price level is an important determinant of Alaskan prices, so that estimates of such prices require some forecast of the U.S. consumer price index. Third, insofar as the income differential between

Alaska and the Lower 48 is a major determinant of migration between Alaska and the Lower 48, a forecast is required of real per capita disposable income in the United States. Finally, an estimate is required of the unemployment rate in the United States.

In the base case, we assumed that the growth in U.S. consumer prices slows to a long-run rate of 6.5 percent by 1985, that real average weekly earnings rise at a rate of 1 percent annually, that real per capita income rises at 1.5 percent annually after 1984, and that unemployment falls to a long-run rate of 6 percent. These are the assumptions used in the MAP model projections prepared by ISER for Harza-Ebasco energy demand projections (see page K-7 in the MAP model technical documentation report).

The MAP model requires assumptions about exogenous employment in ten different categories. These are agricultural employment, mining employment, high-wage exogenous construction employment, low-wage exogenous construction employment, exogenous transportation employment, high-wage exogenous manufacturing employment, low-wage exogenous manufacturing employment, fish harvesting employment, active-duty military employment, and civilian federal employment. In order to develop these assumptions, we made assumptions about employment levels in different industries as well as in special projects. We arrived at our exogenous employment assumptions by totaling the employment assumed for the different industries and special projects.

The validity of the model statewide projections do not require that the particular special projects which we assumed actually occur, but rather that the assumed levels of employment actually occur. For example, we assumed that the U.S. Borax, Greens Creek, and Red Dog mines would be developed as part of our exogenous employment assumptions. However, if other mines were developed instead of these three, the model's statewide projections would be unchanged.

In general, we assumed a modest level of growth in most industries in developing our employment assumptions. We assumed that state subsidization results in only a gradual expansion of agriculture in the state over the forecast period; that traditional commercial fisheries and their associated processing employment maintain their current levels, while a new bottomfish industry is primarily offshore processing and provides relatively few jobs to resident Alaskans. We assumed that federal military employment stays constant at its current level throughout the forecast period, while civilian federal employment grows slowly at one-half percent per year.

With regard to specific projects, we included several major sources of employment. Oil-related development includes exploration and production in the Beaufort Sea on Sale BF and Sale 71 leases; continuing Upper Cook Inlet and Prudhoe Bay field production; the Prudhoe Bay waterflood project; tertiary oil recovery on the North

Slope using natural gas; and the TAPS pipeline. We also assumed construction of new hydroelectric projects, development of the U.S. Borax and Greens Creek mines in Southeastern Alaska, development of the Red Dog Mine in Northwestern Alaska, and construction of a major coal mining facility in the Beluga/Chuitna area of Cook Inlet.

The assumptions about state government revenues and expenditures are critical to the MAP model projections, given the significance of state government expenditures in the economy of Alaska. We based our revenue projections upon the Alaska Department of Revenue projections published in December of 1982. We assumed that state expenditures would be at the levels determined by the recently-passed spending limit until revenues fall below the levels permitted by this limit. Subsequently, we assumed that the income tax would be reinstated, subsidies and the permanent fund dividend program would be eliminated, and expenditures would be cut to equal total revenues.

Table 1 summarizes the assumptions we used in preparing the MAP model base case projections. Table 2 summarizes our exogenous employment assumptions for the ten categories of exogenous employment used by the MAP model. These employment assumptions are based on the project assumptions shown in Table 1. Table 3 summarizes our exogenous revenue assumptions.

The fluctuations in year-to-year employment in some categories result from the timing of employment assumed for particular projects. Small changes in timing for the projects could considerably change the employment assumptions for particular years. Thus, year-to-year fluctuations in assumed or projected levels of employment should not be overemphasized in interpreting our projections.

The low wage exogenous construction employment assumptions fall to zero in 1995 because we do not assume any major new projects after this year. Our inability to foresee possible new projects decades in the future may result in a downward bias in our projections, but we have no basis for assuming any particular positive level of exogenous construction employment. The high wage exogenous construction employment assumptions are zero for all years because this category exists specifically in order to simulate historical construction employment during the construction of the Trans Alaska Pipeline.

We provide a detailed discription of our employment assumptions in Appendix F.

TABLE 1. SUMMARY OF BASE CASE ASSUMPTIONS
FOR MAP MODEL, DIAPIR FIELD (SALE 87) STUDY

ASSUMPTIONS	DESCRIPTION(a)
National Variables Assumptions	
U.S. Inflation Rate	Consumer prices rise at 6.5 percent annually after 1985.
Real Average Weekly Earnings	Growth in real average weekly earnings averages 1 percent annually.
Real Per Capita Income	Growth in real per capita income averages 1.5 percent annually after 1984.
Unemployment Rate	Long-run rate of 6 percent.
Exogenous Employment Assumptions	
Trans-Alaska Pipeline	Operating employment remains constant at 1,500 through 2010 (TAP.083).
North Slope Petroleum Production	Construction employment developing Prudhoe Bay and Kuparuk fields, including Prudhoe Bay waterflood project, peaks at 2,400 in 1983 and 1986. Operating employment remains at 2,502 through 2010 for overall North Slope production (NSO.082).
Upper Cook Inlet Petroleum Production	Employment declines gradually beginning in 1983 so as to reach 50 percent of the 1979 level (778), or 383 by 2010 (UPC.082).
OCS Development	Exploration employment only for Sales CI, 55, 57, 60, 70, and 83. Development of Sale BF and Sale 71 (Beaufort Sea) lease area results in maximum employment of 1,771 in 1995, falling to long-run operating level of 1,359. Development of Sale 83 results in maximum employment of 3,391 in 1997. (OCS.BFM, OCS.55X, OCS.57X, OCS.60X, OCS.70L, OCS.71M, OCS.60X(+4), OCS.83M).

(a) Codes in parentheses indicate ISER names for MAP Model SCEN_ case files.

North Slope Gas	Tertiary oil recovery project utilizing North Slope natural gas occurs in early 1990s with a peak annual employment of 2,000 (NSO.TRC).
Beluga Chuitna Coal Production	Development of 4.4 million ton/year mine for export beginning in 1990 provides total employment of 524 (BCL.04T(-4)).
Hydroelectric Projects	Employment peaks at over 700 in 1990 for construction of several state-funded hydroelectric projects around the state (SHP.082, SHP.PJH).
U.S. Borax	The U.S. Borax mine near Ketchikan is brought into production with operating employment of 790 by 1988 (BXM.PJM).
Greens Creek Mine	Production from the Greens Creek Mine on Admiralty Island results in employment of 315 people from 1986 through 1996 (GCM.082).
Red Dog Mine	The Red Dog Mine in the Western Brooks Range reaches full production with operating employment of 448 by 1988 (RED.PJH).
Other Mining Activity	Employment increases from a 1979 level of 3,140 at 1 percent annually (OMN.EPH).
Agriculture	Moderate state support results in expansion of agriculture to employment of 508 in 2000 (AGR.PJM).
Logging and Sawmills	Employment expands to over 3,200 by 1990 before beginning to decline gradually after 2000 to about 2,800 by 2010 (FLL.082).
Pulp Mills	Employment declines at a rate of 1 percent per year after 1982 (FPU.082).
Commercial Fishing-Nonbottomfish	Employment levels in fishing and fish processing remain constant at 1979 levels of 6,323 and 6,874, respectively (TCF.001).

Commercial Fishing-Bottomfish	The total U.S. bottomfish catch expands at a constant rate to allowable catch in 2000, with Alaska resident harvesting employment rising to 733. Onshore processing capacity expands in the Aleutians and Kodiak census divisions to provide total resident employment of 971 by 2000 (BCF.183).
Federal Military Employment	Employment remains constant at 23,333 (GFM.082).
Federal Civilian Employment	Rises at 0.6 percent annual rate from 17,800 in 1983 to 21,042 by 2010 (GFC.082).
Tourism Assumptions	Number of visitors to Alaska increases by 50,000 per year from 630,000 in 1981 to over 2 million by 2010 (TRS.082).

State Revenue and Expenditure Assumptions

Revenues	State revenue projections are based upon Alaska Department of Revenue projections published in December of 1982. Oil and gas corporate income tax revenues are projected to grow at a nominal rate of 8 percent per year after 1985. Other petroleum revenues are extrapolated forward to 2010 from the last several years of projections published by the Department of Revenue (DOR.5D82).
Expenditures	State expenditures are at the levels allowed by the recently-passed spending limit, with subsidies and capital expenditures equalling one-third of total expenditures. As revenue growth slows, the income tax is reinstated, subsidies are eliminated, the Permanent Fund dividend program is phased out, and proportional cuts in the operating and capital budgets are made to keep total expenditures equal to total revenues. Also at that time, all Permanent Fund earnings are transferred to the general fund.

TABLE 2. MAP BASE CASE EXOGENOUS EMPLOYMENT ASSUMPTIONS (Thousands of Employees)

	Agri-cultural Employment	Mining Employment	High Wage Exogenous Con-struction Employment	Low Wage Exogenous Con-struction Employment	Exogenous Trans-portation Employment
1980	0.183	6.565	0.800	0.000	1.500
1981	0.188	7.788	1.433	0.000	1.500
1982	0.194	8.411	2.269	0.125	1.500
1983	0.203	9.387	3.261	0.290	1.552
1984	0.211	9.983	2.203	0.726	1.631
1985	0.219	11.279	2.627	0.863	1.949
1986	0.228	12.400	2.911	0.850	2.157
1987	0.239	13.149	3.069	0.613	2.471
1988	0.250	14.062	3.128	0.401	2.804
1989	0.263	14.526	3.244	0.875	2.440
1990	0.276	14.797	4.276	1.025	2.752
1991	0.291	15.671	1.667	1.125	2.063
1992	0.306	16.557	6.301	1.075	2.753
1993	0.325	16.068	5.164	0.563	2.348
1994	0.343	16.969	2.141	0.100	3.147
1995	0.365	17.329	1.529	0.000	3.055
1996	0.389	17.501	1.303	0.000	3.291
1997	0.414	17.390	1.303	0.000	3.351
1998	0.442	16.994	1.070	0.000	3.423
1999	0.474	16.620	1.070	0.000	3.423
2000	0.508	16.226	1.070	0.000	3.423
2001	0.527	15.957	1.070	0.000	3.423
2002	0.546	15.888	1.070	0.000	3.423
2003	0.568	16.089	1.070	0.000	3.423
2004	0.589	16.143	1.070	0.000	3.423
2005	0.611	16.197	1.070	0.000	3.423
2006	0.634	16.253	1.070	0.000	3.423
2007	0.660	16.309	1.063	0.000	3.351
2008	0.686	16.340	1.063	0.000	3.351
2009	0.712	16.223	1.056	0.000	3.279
2010	0.740	16.282	1.056	0.000	3.279

SOURCE: SCENARIOSB87.3--CREATED 4/83

TABLE 2. MAP BASE CASE EXOGENOUS EMPLOYMENT ASSUMPTIONS (continued)
(Thousands of Employees)

	High Wage Exogenous Manu-facturing Employment	Low Wage Exogenous Manu-facturing Employment	Fish Harvesting Employment	Active Duty Military Employment	Civilian Federal Employment
1980	0.000	11.483	7.139	23.323	17.820
1981	0.000	10.283	6.552	23.323	17.600
1982	0.000	8.771	5.217	23.323	17.900
1983	0.000	10.433	6.421	23.323	17.989
1984	0.000	10.571	6.444	23.323	18.079
1985	0.000	10.749	6.471	23.323	18.170
1986	0.000	10.929	6.499	23.323	18.261
1987	0.000	11.107	6.527	23.323	18.352
1988	0.000	11.196	6.544	23.323	18.444
1989	0.000	11.240	6.579	23.323	18.536
1990	0.000	11.292	6.592	23.323	18.629
1991	0.000	11.299	6.608	23.323	18.722
1992	0.000	11.315	6.629	23.323	18.815
1993	0.000	11.335	6.655	23.323	18.909
1994	0.000	11.366	6.689	23.323	19.004
1995	0.000	11.413	6.731	23.323	19.099
1996	0.000	11.478	6.784	23.323	19.194
1997	0.000	11.571	6.851	23.323	19.290
1998	0.000	11.704	6.935	23.323	19.387
1999	0.000	11.887	7.041	23.323	19.484
2000	0.000	12.122	7.096	23.323	19.581
2001	0.000	12.018	7.096	23.323	19.679
2002	0.000	11.807	7.096	23.323	19.777
2003	0.000	11.776	7.096	23.323	19.876
2004	0.000	11.747	7.096	23.323	19.976
2005	0.000	11.718	7.096	23.323	20.076
2006	0.000	11.641	7.096	23.323	20.176
2007	0.000	11.634	7.096	23.323	20.277
2008	0.000	11.626	7.096	23.323	20.378
2009	0.000	11.623	7.096	23.323	20.480
2010	0.000	11.617	7.096	23.323	20.583

SOURCE: SCENARIOSB87.3--CREATED 4/83

TABLE 3. MAP BASE CASE EXOGENOUS
REVENUE ASSUMPTIONS
(Millions of Current Dollars)

	State Production Tax Revenue	State Royalty Income	State Bonus Payment Revenue	State Property Tax Revenue	State Corporate Petroleum Tax Revenue
1980	506.500	688.200	456.500	168.900	547.500
1981	1170.200	1118.500	10.100	143.000	860.100
1982	1590.000	1530.000	6.700	142.700	668.900
1983	1480.000	1430.000	26.100	148.600	235.000
1984	1220.000	1200.000	11.066	153.200	272.000
1985	1260.000	1240.000	4.692	158.000	295.000
1986	1350.000	1350.000	1.990	163.456	315.650
1987	1430.000	1450.000	0.844	169.101	337.745
1988	1500.000	1520.000	0.358	174.940	361.387
1989	1380.000	1650.000	0.152	180.981	386.684
1990	1420.000	1710.000	0.064	187.231	413.751
1991	1230.000	1570.000	0.027	244.697	442.714
1992	1150.000	1550.000	0.012	253.385	473.704
1993	1110.000	1520.000	0.005	334.305	506.863
1994	1090.000	1500.000	0.002	360.464	542.343
1995	1000.000	1410.000	0.001	372.870	580.306
1996	910.000	1290.000	0.000	386.531	620.927
1997	930.000	1330.000	0.000	399.458	664.392
1998	910.000	1340.000	0.000	412.658	710.899
1999	860.000	1350.000	0.000	425.141	760.662
2000	843.918	1370.384	0.000	438.917	813.907
2001	828.136	1391.076	0.000	452.996	870.881
2002	812.650	1412.081	0.000	465.389	931.842
2003	797.453	1433.402	0.000	480.106	997.070
2004	782.541	1455.046	0.000	494.158	1066.865
2005	767.907	1477.016	0.000	506.558	1141.545
2006	753.547	1499.318	0.000	519.317	1221.453
2007	739.456	1521.957	0.000	530.447	1306.954
2008	725.628	1544.938	0.000	542.962	1398.440
2009	712.058	1568.266	0.000	554.874	1496.331
2010	698.743	1591.946	0.000	564.198	1601.073

SOURCE: SCENARIOSB87.3--CREATED 4/83

Impact Cases Assumptions

We examined OCS impacts for two different "cases," which we refer to as the "3.0 BBBL Case" and the "2.2 BBBL Case." These names refer to the amount of oil which we assumed to be discovered and developed. We assumed that no gas resources are developed.

Tables 4 and 5 summarize the employment which we assumed for each case. The employment assumptions were provided to us by the Minerals Management Service Alaska OCS office. We did not adjust these employment figures for Alaska residency as we have done in some previous studies because the model does so internally on the basis of the historical data used to estimate model relationships. We calculated the property tax revenue assumptions using figures provided to us by the Alaska OCS office for the value and timing of onshore investments in each case.

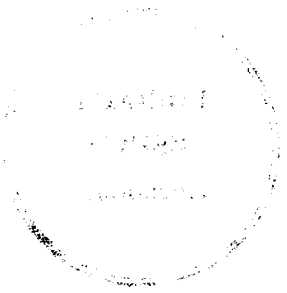


TABLE 4. EMPLOYMENT AND REVENUE ASSUMPTIONS
3.0 BBBL CASE
(Thousands of Employees, Millions of Current $)

	High Wage Exog Construction Employment	Mining Employment	Exog Transportation Employment	State Property Tax Revenue
1980	0.000	0.000	0.000	0.000
1981	0.000	0.000	0.000	0.000
1982	0.000	0.000	0.000	0.000
1983	0.000	0.000	0.000	0.000
1984	0.000	0.000	0.000	0.000
1985	0.341	0.375	0.052	0.000
1986	0.208	0.375	0.052	0.000
1987	0.416	0.535	0.104	0.000
1988	0.468	0.575	0.117	0.000
1989	1.080	0.575	0.384	0.000
1990	1.824	0.546	0.713	0.000
1991	0.340	0.568	0.230	0.000
1992	0.952	1.001	0.501	0.000
1993	0.327	0.980	0.387	160.534
1994	0.873	1.265	0.912	166.801
1995	0.261	1.203	0.651	173.134
1996	0.268	1.448	0.728	179.468
1997	0.268	1.720	0.788	185.801
1998	0.035	1.484	0.860	192.068
1999	0.035	1.350	0.860	198.068
2000	0.035	1.341	0.860	204.201
2001	0.035	1.350	0.860	210.001
2002	0.035	1.341	0.860	215.468
2003	0.035	1.490	0.860	220.601
2004	0.035	1.490	0.860	225.268
2005	0.035	1.490	0.860	229.401
2006	0.035	1.490	0.860	232.934
2007	0.035	1.490	0.860	235.668
2008	0.035	1.490	0.860	237.535
2009	0.028	1.315	0.788	238.335
2010	0.028	1.315	0.788	237.868

SOURCE: MAP MODEL CASE OCS.G20
VARIABLES: EMCNX1 EMP9 EMT9X RPPS

TABLE 5. EMPLOYMENT AND REVENUE ASSUMPTIONS
3.0 BBBL CASE
(Thousands of Employees, Millions of Current $)

	High Wage Exog Construction Employment	Mining Employment	Exog Transportation Employment	State Property Tax Revenue
1980	0.000	0.000	0.000	0.000
1981	0.000	0.000	0.000	0.000
1982	0.000	0.000	0.000	0.000
1983	0.000	0.000	0.000	0.000
1984	0.000	0.000	0.000	0.000
1985	0.237	0.295	0.026	0.000
1986	0.208	0.375	0.052	0.000
1987	0.312	0.455	0.078	0.000
1988	0.364	0.495	0.091	0.000
1989	0.924	0.455	0.345	0.000
1990	1.108	0.466	0.420	0.000
1991	0.340	0.623	0.230	0.000
1992	1.032	0.812	0.521	0.000
1993	0.247	0.603	0.332	116.001
1994	0.254	0.872	0.464	120.534
1995	0.334	0.936	0.544	125.134
1996	0.021	0.982	0.616	129.667
1997	0.021	1.150	0.616	134.267
1998	0.021	0.989	0.616	138.801
1999	0.021	1.003	0.616	143.201
2000	0.021	0.994	0.616	147.534
2001	0.021	0.994	0.616	151.734
2002	0.021	0.994	0.616	155.734
2003	0.021	0.994	0.616	159.401
2004	0.021	0.994	0.616	162.801
2005	0.021	0.994	0.616	165.801
2006	0.021	0.994	0.616	168.334
2007	0.021	0.994	0.616	170.334
2008	0.021	0.994	0.616	171.668
2009	0.021	0.994	0.516	172.201
2010	0.021	0.994	0.516	171.934

SOURCE: MAP MODEL CASE OCS.G02
VARIABLES: EMCNX1 EMP9 EMT9X RPPS

IV. BASE CASE PROJECTIONS

Statewide Base Case Projections

Table 6 summarizes the MAP model statewide base case projections. The complete set of statewide base case projections is given in Appendix A.

As shown in Table 6, total population is projected to rise from 421 thousand in 1981 to 556 thousand in 1990, 614 thousand in 2000, and 700 thousand in 2010. This is a 3.1 percent rate of growth during the 1980s, a 1.0 percent rate of growth during the 1990s, and a 1.3 percent rate of growth during the period 2000-2010. The marked decline in the rate of growth during the 1990s is due to the combined effects of a number of factors. Most important among these is a decline in state government expenditures after 1990 (see Table A-7). This decline is assumed to occur because state revenues fall below the current spending limit. Other factors include a leveling off of exogenous mining employment and a decline in high wage construction employment following major North Slope construction activity associated with onshore and offshore (Sale 71) development.

The pattern for statewide employment is similar to that for population, but shows an even more marked slowdown in the 1990s. Employment rises from 220 thousand in 1981 to 285 thousand in 1990

Table 6: MAP Model Statewide Base Case Projections

Summary

	TOTAL POPULATION (000)	TOTAL[a] EMPLOYMENT (000)	PER CAPITA GENERAL FUND[b] REVENUES (1982 $)	PER CAPITA GENERAL FUND EXPENDIT. (1982 $)	PER CAPITA COMBINED FUNDS BALANCE (1982 $)
1981	421.616	220.618	9732.110	7313.160	6950.723
1982	439.408	234.180	9988.530	9540.580	7657.105
1983	459.496	243.476	7711.156	6726.574	9079.840
1984	483.907	256.726	6335.766	7242.512	8263.500
1985	506.712	272.279	5958.191	7264.953	7148.824
1986	531.707	288.404	5722.973	7286.813	5860.363
1987	539.347	284.822	5544.461	5544.457	6381.090
1988	544.750	285.481	5452.270	5452.277	6873.355
1989	551.366	286.088	5447.961	5447.961	7330.113
1990	556.608	285.896	5741.832	5741.828	6974.461
1991	562.370	287.240	5235.328	5235.320	6904.297
1992	572.708	293.538	4950.422	4950.418	6785.211
1993	580.207	296.312	4758.109	4758.102	6684.078
1994	583.670	295.624	4745.848	4745.848	6594.902
1995	588.058	296.699	4472.391	4472.387	6458.734
1996	592.657	297.945	4210.367	4210.359	6296.332
1997	597.577	299.750	4131.109	4131.098	6131.281
1998	602.927	302.109	4011.679	4011.670	5961.156
1999	608.689	304.818	3882.674	3882.663	5788.156
2000	614.695	307.754	3785.658	3785.649	5614.820
2001	620.514	310.429	3695.475	3695.461	5445.039
2002	626.774	313.496	3608.264	3608.257	5274.090
2003	633.859	317.242	3524.806	3524.797	5100.586
2004	641.582	321.430	3446.179	3446.171	4927.098
2005	649.922	326.011	3370.911	3370.899	4754.160
2006	658.857	330.915	3298.831	3298.821	4582.484
2007	668.494	336.226	3229.019	3229.009	4411.770
2008	678.767	341.837	3161.938	3161.928	4242.930
2009	689.502	347.548	3097.284	3097.275	4077.076
2010	700.975	353.690	3033.869	3033.861	3913.189

[a]Includes military employment.

[b]Includes some restricted funds (primarily federal transfers).

(a 2.9 percent rate of growth), 307 thousand in 2000 (a 0.6 percent rate of growth), and 353 thousand in 2010 (a 1.5 percent of growth).

The final three columns of Table 6 show a dramatic decline in per capita government revenues, per capita general fund expenditures, and per capita balance on the combined general and permanent funds. These declines are due to the fact that population is rising while total revenues--primarily petroleum--are falling. The predominance of petroleum revenues and the effect of their decline on total revenues is shown in Table 7. Over the projection period, petroleum revenues fall from 89 percent of total revenues to only 43 percent. The rapid decline in petroleum revenues causes total revenues in 2010 to fall to 52 percent of their 1981 level.

Anchorage Base Case Projections

Table 8 presents the regional model base case population projections for Anchorage. Other base case projections for Anchorage are shown in Tables C.2-C.5. Total Anchorage population rises from 181 thousand in 1981 to 237 thousand in 1990 (a 3.0 percent rate of growth), 273 thousand in 2000 (a 1.4 percent rate of growth), and 322 thousand in 2010 (a 1.7 percent rate of growth). The growth rates are similar to those observed for the state as a whole except that the growth rates are higher after 1990. The slowdown in state growth is offset in part in Anchorage by continuing expansion of the support sector. Over the period 1981-2010, support sector employment grows at a rate of 2.7 percent compared to a rate of

Table 7: MAP Model Statewide Base Case Projections

State Government Revenues

(Millions of 1982 Dollars)

	PETROLEUM[a] REVENUES	FEDERAL GRANTS	INTEREST[b] EARNINGS	OTHER REVENUES	TOTAL[c] REVENUES
1981	3667.440	271.845	275.213	204.064	4103.215
1982	4152.020	196.849	241.010	207.218	4389.039
1983	3334.305	200.456	308.861	222.051	3543.250
1984	2731.156	204.704	381.772	228.408	3065.921
1985	2686.458	210.512	377.860	233.835	3019.090
1986	2745.014	216.440	348.664	243.265	3042.944
1987	2733.268	220.124	322.149	249.100	2990.393
1988	2697.272	223.080	327.902	242.028	2970.126
1989	2567.749	226.094	354.375	389.269	3003.821
1990	2384.311	218.397	359.933	503.891	3195.949
1991	2074.623	222.023	364.910	516.637	2944.194
1992	1929.205	226.703	363.833	533.812	2835.149
1993	1812.836	231.828	364.682	554.128	2760.691
1994	1801.484	236.522	361.867	559.180	2770.010
1995	1641.566	241.083	357.660	557.656	2630.026
1996	1483.053	245.742	348.580	563.438	2495.307
1997	1449.048	250.426	342.026	568.753	2468.659
1998	1387.834	255.266	335.579	574.836	2418.750
1999	1319.559	260.306	329.016	582.770	2363.341
2000	1271.383	265.482	322.285	590.950	2327.023
2001	1225.879	270.774	315.474	599.031	2293.094
2002	1182.991	276.206	308.629	607.008	2261.568
2003	1142.767	281.836	301.829	616.496	2234.232
2004	1105.061	287.681	295.095	627.516	2211.006
2005	1069.628	293.729	288.421	639.249	2190.829
2006	1036.295	299.984	281.812	651.607	2173.459
2007	1004.886	306.439	275.266	664.440	2158.579
2008	975.244	313.095	268.785	677.930	2146.220
2009	947.149	319.921	262.350	691.527	2135.585
2010	920.545	326.939	255.983	705.236	2126.667

SOURCE: MAP MODEL SIMULATION MAP87.3B--CREATED 4/19/83
VARIABLES: DF.RP9S, DF.RSFD, DF.RSIN, DF.RSEN, AND DF.RSGF

[a]Includes permanent fund contributions.
[b]Includes earnings on the general and permanent funds.
[c]Includes restricted and unrestricted general fund revenues. Does not include permanent fund contributions or retained earnings.

Table 8

MAP Model Regional Projections,
Base Case and Impact Cases

ANCHORAGE CENSUS DIVISION
TOTAL POPULATION
(000)

	BASE CASE	2.2 BBBL CASE	3.0 BBBL CASE
1981	181.514	181.514	181.514
1982	192.439	192.439	192.439
1983	200.416	200.416	200.416
1984	208.784	208.784	208.784
1985	218.558	219.030	219.213
1986	228.850	229.742	229.893
1987	233.251	234.584	234.844
1988	233.412	235.071	235.418
1989	235.429	238.017	238.503
1990	237.668	240.997	242.276
1991	241.004	243.953	244.612
1992	245.766	249.745	250.222
1993	250.899	254.555	255.397
1994	254.019	258.098	260.043
1995	256.667	261.303	262.726
1996	259.672	264.428	266.224
1997	262.902	267.979	270.162
1998	266.209	271.504	273.672
1999	269.790	275.295	277.415
2000	273.450	279.162	281.329
2001	277.002	282.916	285.161
2002	280.833	286.932	289.233
2003	284.955	291.240	293.705
2004	289.402	295.868	298.474
2005	294.154	300.799	303.516
2006	299.237	306.056	308.883
2007	304.626	311.620	314.559
2008	310.346	317.514	320.557
2009	316.292	323.563	326.573
2010	322.619	330.025	333.033

SOURCE: REGIONAL MODEL SIMULATIONS CD87.3B, CD87.LN, AND CD87.HN--CREATED 4/21/83
VARIABLE: P.02

1.9 percent for total employment (Table C.4). Support sector employment as a share of total employment increases from 46 percent to 58 percent.

Fairbanks Base Case Projections

Table 9 presents the regional model base case projections for Fairbanks. Other base case projections for Fairbanks are shown in Tables C.6-C.10. Total population increases from 57.8 thousand in 1981 to 74.0 thousand in 1990 (a rate of 2.8 percent), 81.1 thousand in 2000 (a rate of 0.9 percent), and 93.9 thousand in 2010 (a rate of 1.5 percent). This pattern of growth is more similar to that of the total statewide economy than that of Anchorage, with a sharp decline in the rate of growth during the 1990s. Fairbanks, like Anchorage, exhibits an increasing share of the support sector in total economic activity, with support employment rising from 37.3 percent of total employment in 1981 to 48.4 percent of total employment in 2010 (Table C.9). However, the share of support employment remains lower in Fairbanks than in Anchorage. Thus, Fairbanks, as a smaller community than Anchorage, is likely to import more of its support services from other areas.

Table 9

MAP Model Regional Projections,
Base Case and Impact Cases

FAIRBANKS CENSUS DIVISION
TOTAL POPULATION
(000)

	BASE CASE	2.2 BBBL CASE	3.0 BBBL CASE
1981	57.887	57.887	57.887
1982	61.256	61.256	61.256
1983	62.533	62.533	62.533
1984	65.444	65.444	65.444
1985	68.513	68.605	68.641
1986	71.773	71.988	72.034
1987	72.597	72.909	72.966
1988	72.837	73.239	73.323
1989	73.301	73.913	74.028
1990	74.003	74.807	75.089
1991	74.346	75.107	75.303
1992	74.136	75.105	75.236
1993	74.996	76.008	76.236
1994	76.559	77.617	78.063
1995	77.079	78.246	78.631
1996	77.715	78.914	79.347
1997	78.499	79.752	80.278
1998	79.272	80.583	81.120
1999	80.112	81.467	81.998
2000	81.065	82.468	83.010
2001	82.082	83.527	84.087
2002	83.105	84.589	85.160
2003	84.134	85.656	86.250
2004	85.260	86.819	87.444
2005	86.473	88.068	88.717
2006	87.793	89.422	90.095
2007	89.190	90.852	91.550
2008	90.680	92.375	93.094
2009	92.259	93.982	94.709
2010	93.923	95.669	96.392

SOURCE: REGIONAL MODEL SIMULATIONS CD87.3B, CD87.LN, AND CD87.HN--CREATED 4/21/83
VARIABLE: P.09

V. IMPACT CASE PROJECTIONS

Statewide Impact Projections

The MAP model statewide impact projections for population and employment are summarized in Tables 10 and 11 for the 3.0 BBBL case, and Tables 12 and 13 for the 2.2 BBBL case. Appendix B provides a full set of impact tables for a number of other variables.

In general, impacts for the 2.2 BBBL case are somewhat smaller than for the 3.0 BBBL case. This was to be expected since we assumed lower levels of employment and revenues for the 2.2 BBBL case. We will focus our discussion of impacts upon the 3.0 BBBL case. Impacts for the 2.2 BBBL case may be found by referring to the corresponding tables.

As shown in Table 9, the impacts of Sale 87 upon total population are projected to rise over time. With the sale, in the 3.0 BBBL case, statewide population is projected to be 9.6 thousand higher in 1990, 16.3 thousand higher in 2000, and 20.7 thousand higher in 2010 than it would have been without the sale. At first glance, this result seems somewhat surprising, since direct employment associated with the sale is highest in 1990, with subsequent smaller peaks in 1994 and 1997 (see Table 4). The reason that total impacts of the sale continue to rise after 1990, even though direct impacts fall, is that the Alaska economy is growing over time. The structure of

Table 10

MAP Model Statewide Impact Projections

OCS SALE 87 3.0 BBBL IMPACT CASE
TOTAL POPULATION
(Thousands)

	BASE CASE	IMPACT CASE	ABSOLUTE IMPACT	PERCENT IMPACT
1981	421.616	421.616	0.000	0.000
1982	439.408	439.408	0.000	0.000
1983	459.496	459.496	0.000	0.000
1984	483.907	483.907	0.000	0.000
1985	506.712	508.098	1.385	0.273
1986	531.707	533.959	2.252	0.424
1987	539.347	542.694	3.346	0.620
1988	544.750	548.986	4.236	0.778
1989	551.366	557.825	6.459	1.171
1990	556.608	566.212	9.604	1.725
1991	562.370	569.987	7.616	1.354
1992	572.708	582.138	9.429	1.646
1993	580.207	590.229	10.022	1.727
1994	583.670	596.609	12.939	2.217
1995	588.058	600.914	12.857	2.186
1996	592.657	606.481	13.823	2.332
1997	597.577	612.812	15.234	2.549
1998	602.927	618.508	15.581	2.584
1999	608.689	624.549	15.860	2.606
2000	614.695	631.043	16.349	2.660
2001	620.514	637.383	16.869	2.719
2002	626.774	644.071	17.297	2.760
2003	633.859	651.792	17.933	2.829
2004	641.582	660.073	18.491	2.882
2005	649.922	668.909	18.988	2.922
2006	658.857	678.331	19.474	2.956
2007	668.494	688.453	19.959	2.986
2008	678.767	699.189	20.422	3.009
2009	689.502	709.978	20.475	2.970
2010	700.975	721.643	20.668	2.948

SOURCE: MAP MODEL SIMULATIONS MAP87.3B AND MAP87.HN--CREATED 4/21/83
VARIABLE: POP

Table 11

MAP Model Statewide Impact Projections

OCS SALE 87 3.0 BBBL IMPACT CASE
TOTAL EMPLOYMENT
(Thousands)

	BASE CASE	IMPACT CASE	ABSOLUTE IMPACT	PERCENT IMPACT
1981	220.618	220.618	0.000	0.000
1982	234.180	234.180	0.000	0.000
1983	243.476	243.476	0.000	0.000
1984	256.726	256.726	0.000	0.000
1985	272.279	273.729	1.450	0.532
1986	288.404	289.911	1.506	0.522
1987	284.822	287.184	2.362	0.829
1988	285.481	288.310	2.829	0.991
1989	286.088	290.862	4.774	1.669
1990	285.896	293.114	7.218	2.525
1991	287.240	291.231	3.992	1.390
1992	293.538	299.709	6.171	2.102
1993	296.312	302.273	5.960	2.012
1994	295.624	304.353	8.729	2.953
1995	296.699	304.298	7.599	2.561
1996	297.945	306.255	8.310	2.789
1997	299.750	308.923	9.172	3.060
1998	302.109	310.966	8.857	2.932
1999	304.818	313.577	8.759	2.873
2000	307.754	316.587	8.833	2.870
2001	310.429	319.373	8.943	2.881
2002	313.496	322.476	8.981	2.865
2003	317.242	326.521	9.278	2.925
2004	321.430	330.892	9.461	2.944
2005	326.011	335.648	9.637	2.956
2006	330.915	340.734	9.819	2.967
2007	336.226	346.244	10.018	2.980
2008	341.837	352.047	10.209	2.987
2009	347.548	357.536	9.988	2.874
2010	353.690	363.725	10.035	2.837

SOURCE: MAP MODEL SIMULATIONS MAP87.3B AND MAP87.HN--
CREATED 4/21/83
VARIABLE: EM99

Table 12

MAP Model Statewide Impact Projections

OCS SALE 87 2.2 BBBL IMPACT CASE
TOTAL POPULATION
(Thousands)

	BASE CASE	IMPACT CASE	ABSOLUTE IMPACT	PERCENT IMPACT
1981	421.616	421.616	0.000	0.000
1982	439.408	439.408	0.000	0.000
1983	459.496	459.496	0.000	0.000
1984	483.907	483.907	0.000	0.000
1985	506.712	507.711	0.999	0.197
1986	531.707	533.632	1.925	0.362
1987	539.347	542.150	2.803	0.520
1988	544.750	548.257	3.507	0.644
1989	551.366	556.804	5.439	0.986
1990	556.608	563.573	6.966	1.251
1991	562.370	568.619	6.249	1.111
1992	572.708	581.088	8.379	1.463
1993	580.207	588.269	8.062	1.389
1994	583.670	592.486	8.815	1.510
1995	588.058	597.911	9.854	1.676
1996	592.657	602.732	10.074	1.700
1997	597.577	608.266	10.689	1.789
1998	602.927	613.984	11.057	1.834
1999	608.689	620.136	11.447	1.881
2000	614.695	626.528	11.834	1.925
2001	620.514	632.712	12.198	1.966
2002	626.774	639.303	12.528	1.999
2003	633.859	646.711	12.851	2.027
2004	641.582	654.744	13.162	2.052
2005	649.922	663.385	13.463	2.071
2006	658.857	672.611	13.754	2.088
2007	668.494	682.532	14.039	2.100
2008	678.767	693.085	14.318	2.109
2009	689.502	703.954	14.452	2.096
2010	700.975	715.633	14.657	2.091

SOURCE: MAP MODEL SIMULATIONS MAP87.3B AND MAP87.LN--CREATED 4/21/83
VARIABLE: POP

Table 12

MAP Model Statewide Impact Projections

OCS SALE 87 2.2 BBBL IMPACT CASE
TOTAL EMPLOYMENT
(Thousands)

	BASE CASE	IMPACT CASE	ABSOLUTE IMPACT	PERCENT IMPACT
1981	220.618	220.618	0.000	0.000
1982	234.180	234.180	0.000	0.000
1983	243.476	243.476	0.000	0.000
1984	256.726	256.726	0.000	0.000
1985	272.279	273.324	1.045	0.384
1986	288.404	289.808	1.404	0.487
1987	284.822	286.731	1.909	0.670
1988	285.481	287.805	2.325	0.814
1989	286.088	290.129	4.041	1.412
1990	285.896	290.807	4.911	1.718
1991	287.240	290.785	3.545	1.234
1992	293.538	299.305	5.767	1.965
1993	296.312	300.910	4.598	1.552
1994	295.624	300.957	5.333	1.804
1995	296.699	302.669	5.970	2.012
1996	297.945	303.685	5.740	1.926
1997	299.750	305.877	6.127	2.044
1998	302.109	308.224	6.115	2.024
1999	304.818	311.049	6.231	2.044
2000	307.754	314.069	6.315	2.052
2001	310.429	316.833	6.404	2.063
2002	313.496	319.965	6.469	2.064
2003	317.242	323.791	6.549	2.064
2004	321.430	328.065	6.635	2.064
2005	326.011	332.739	6.727	2.064
2006	330.915	337.741	6.827	2.063
2007	336.226	343.159	6.934	2.062
2008	341.837	348.886	7.049	2.062
2009	347.548	354.572	7.024	2.021
2010	353.690	360.801	7.111	2.010

SOURCE: MAP MODEL SIMULATIONS MAP87.3B AND MAP87.LN--CREATED 4/21/83
VARIABLE: EM99

the economy changes, with more support activity taking place within the state. During the period of highest direct impacts from OCS, this growth is accelerated. Once new support activities are established as a result of the sale, they do not disappear, even though the direct employment associated with the sale may decline. In effect, the growth of the economy which will occur in any case is shifted forward by approximately two years. Without OCS Sale 87, the population reaches 700 thousand in 2010. With OCS Sale 87, it reaches this level in 2008.

In relative terms, the percentage impact of Sale 87 upon population also increases over time, reaching a maximum of 3.0 percent in 2008.

The impacts of Sale 87 upon statewide employment are similar to those upon population. The maximum impact of 10,000 jobs occurs in 2008. In general, base case employment levels are reached about two years earlier.

Anchorage and Fairbanks Impact Projections

The MAP model projections of Sale 87 impacts upon Anchorage are very similar to the statewide projections. As shown in Tables 14 and 15, impacts upon total population rise sharply until 1990, and then continue to rise, although more gradually, in subsequent years. Tables 8 and 9 (pages 29 and 31) permit a comparison of total population between the base case and impact case levels. In the

Table 14

MAP Model Regional Absolute
Impact Projections

ANCHORAGE CENSUS DIVISION
TOTAL POPULATION
(000)

	2.2 BBBL CASE	3.0 BBBL CASE
1981	0.000	0.000
1982	0.000	0.000
1983	0.000	0.000
1984	0.000	0.000
1985	0.471	0.655
1986	0.891	1.043
1987	1.333	1.593
1988	1.658	2.005
1989	2.588	3.074
1990	3.329	4.608
1991	2.949	3.608
1992	3.980	4.456
1993	3.656	4.499
1994	4.079	6.025
1995	4.637	6.060
1996	4.756	6.552
1997	5.077	7.260
1998	5.294	7.463
1999	5.505	7.625
2000	5.712	7.878
2001	5.914	8.158
2002	6.099	8.400
2003	6.286	8.750
2004	6.466	9.071
2005	6.645	9.362
2006	6.819	9.646
2007	6.994	9.933
2008	7.167	10.210
2009	7.271	10.281
2010	7.406	10.413

SOURCE: REGIONAL MODEL SIMULATIONS CD87.3B, CD87.LN, AND CD87.HN--CREATED 4/21/83
VARIABLE: P.02

Table 15

MAP Model Regional Absolute
Impact Projections

FAIRBANKS CENSUS DIVISION
TOTAL POPULATION
(000)

	2.2 BBBL CASE	3.0 BBBL CASE
1981	0.000	0.000
1982	0.000	0.000
1983	0.000	0.000
1984	0.000	0.000
1985	0.092	0.128
1986	0.215	0.261
1987	0.313	0.370
1988	0.403	0.486
1989	0.612	0.728
1990	0.804	1.086
1991	0.761	0.957
1992	0.969	1.100
1993	1.012	1.241
1994	1.058	1.505
1995	1.167	1.551
1996	1.199	1.632
1997	1.254	1.779
1998	1.311	1.848
1999	1.355	1.886
2000	1.402	1.945
2001	1.445	2.005
2002	1.484	2.055
2003	1.523	2.116
2004	1.559	2.184
2005	1.595	2.243
2006	1.629	2.301
2007	1.662	2.359
2008	1.695	2.414
2009	1.722	2.450
2010	1.745	2.469

SOURCE: REGIONAL MODEL SIMULATIONS CD87.3B, CD87.LN, AND CD87.HN--CREATED 4/21/83
VARIABLE: P.09

3.0 BBBL case, the effect of Sale 87, in the years after 1990, is that any given level of population is reached approximately two years earlier.

Appendix C provides additional tables showing regional projections for the base case and impact cases together. Appendix D provides tables of absolute impacts, and Appendix E provides tables of percent impacts.

VI. CONCLUSIONS

Figures 3, 4, and 5 illustrate the impacts of OCS Sale 87 for the 3.0 BBBL case upon statewide population, Anchorage population, and Fairbanks population.

OCS Sale 87 would occur against a base case backdrop of continuing growth in the statewide economy and population. This growth is most rapid in the period prior to 1990 and slows considerably after 1990 due to a decline in state expenditures. However, growth continues due to support sector expansion. Anchorage and Fairbanks, as support centers for the state, mirror these statewide trends.

The effect of OCS Sale 87 would be to speed up the rate of growth in the statewide and regional economies during the years of maximum direct sale-related employment, so that the 1990 statewide base case population would be reached by 1989, and the 1995 base case population would be reached by 1993. Subsequently, the rate of growth would decline to approximately the base case level, with the economy following a path similar to that of the base case, but reaching any given level approximately two years earlier.

Figure 2. Base Case and Impact Case Projections, Statewide Population

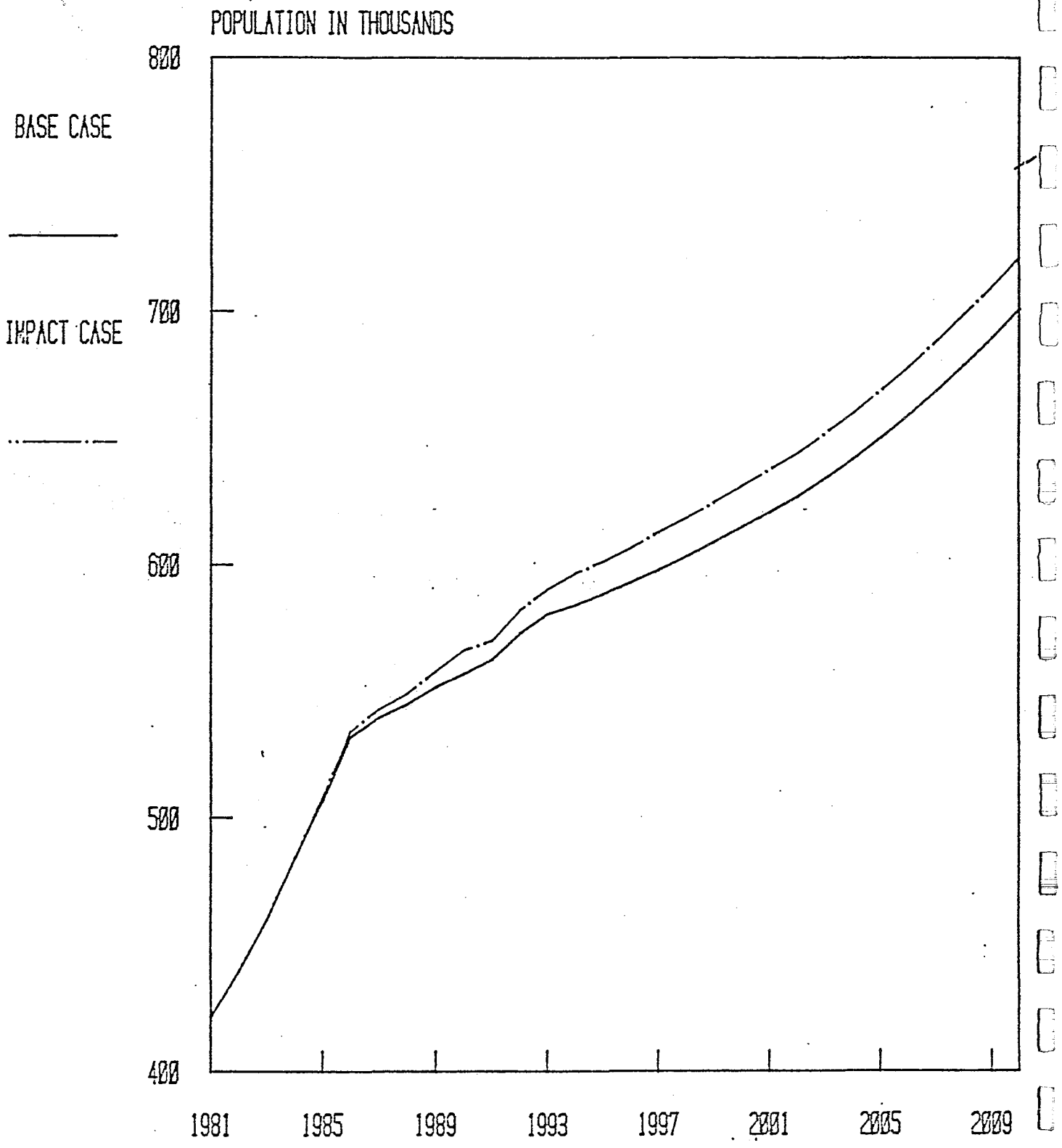


Figure 3. Base Case and Impact Case Projections, Anchorage Population

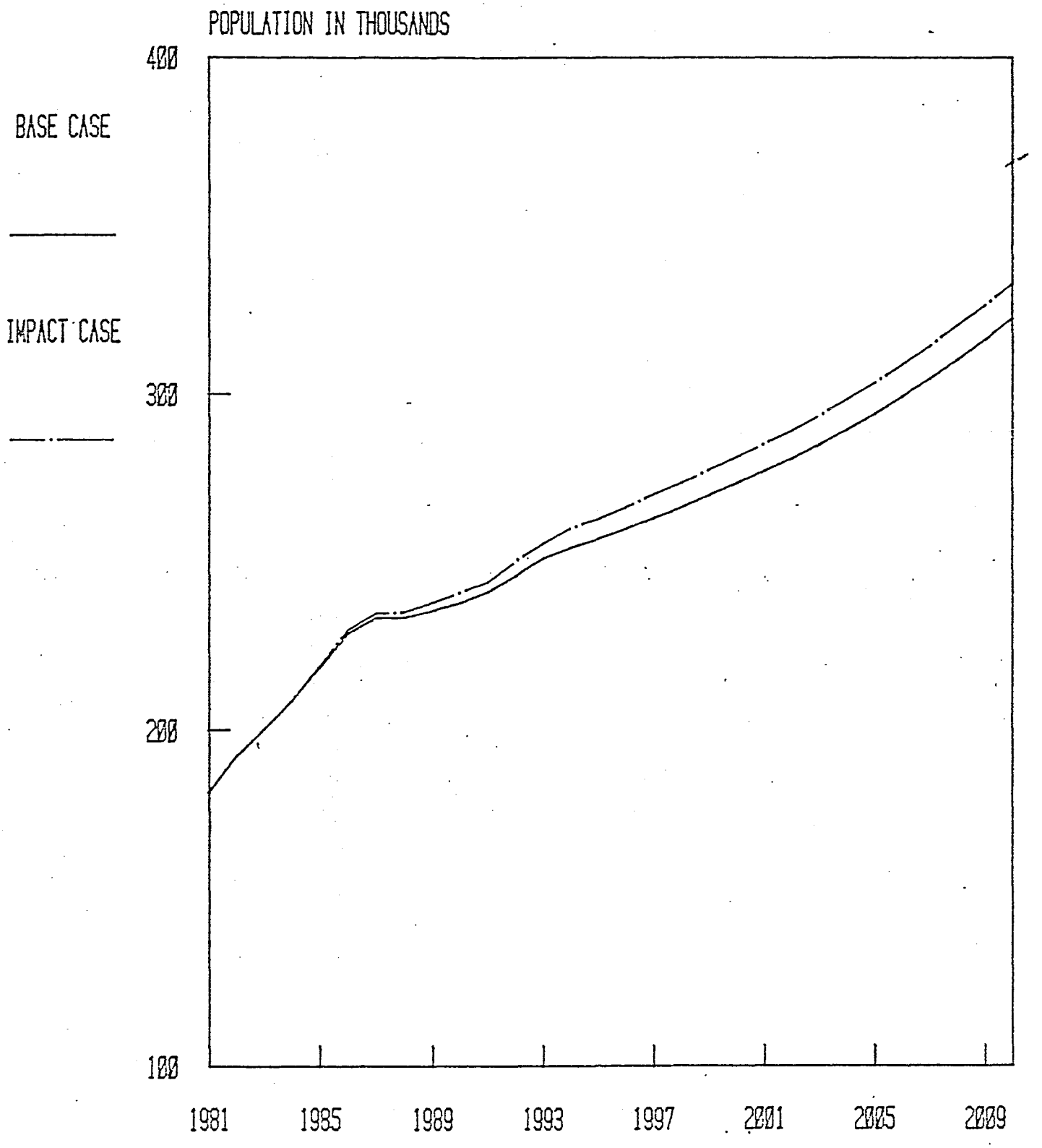
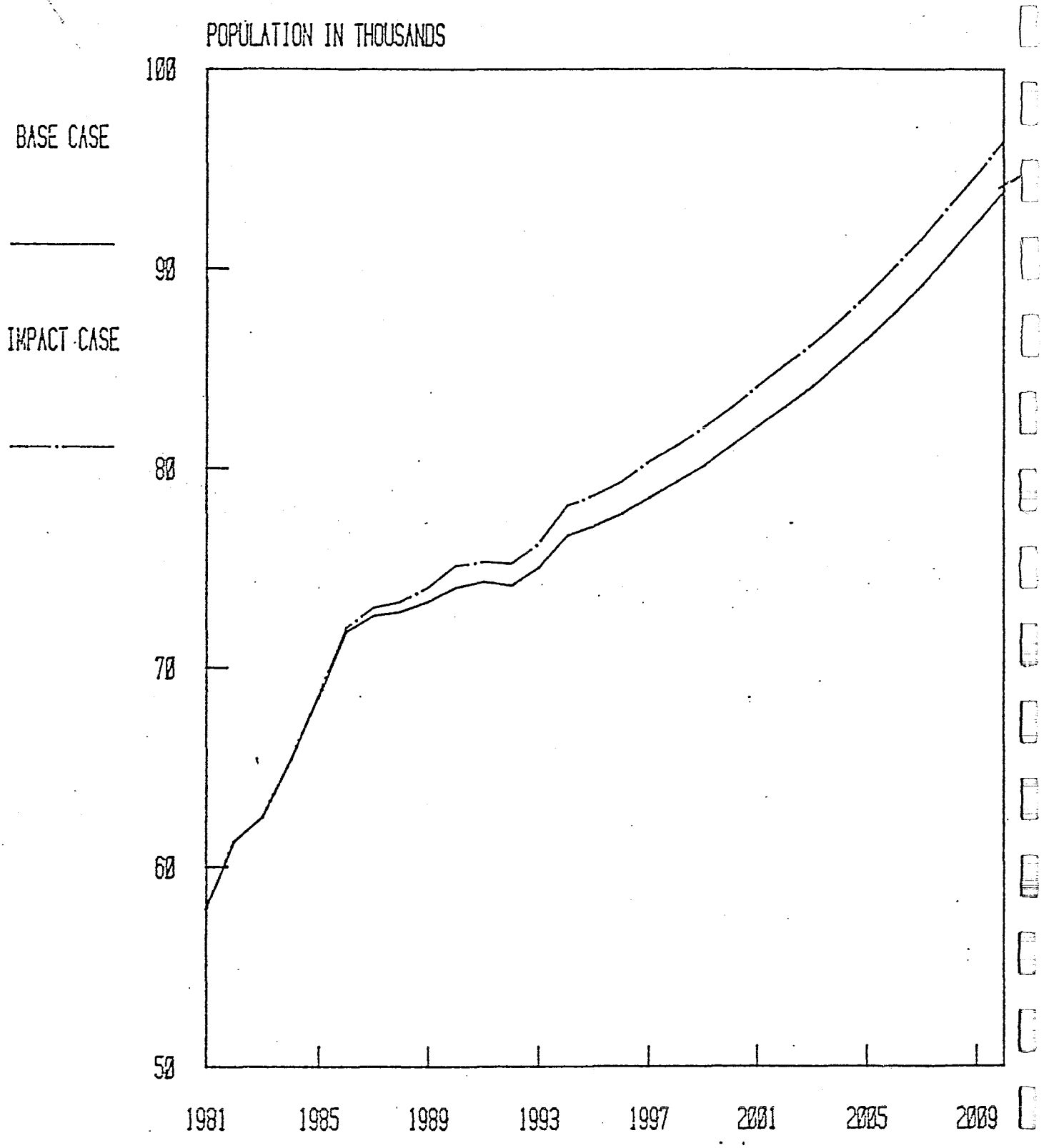


Figure 4. Base Case and Impact Case Projections, Fairbanks Population



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APPENDIX A
MAP Model Statewide Base Case Projections

TABLE A-1
SUMMARY

	TOTAL POPULATION (000)	TOTAL[a] EMPLOYMENT (000)	PER CAPITA GENERAL FUND[b] REVENUES (1982 $)	PER CAPITA GENERAL FUND EXPENDIT. (1982 $)	PER CAPITA COMBINED FUNDS BALANCE (1982 $)
1981	421.616	220.618	9732.110	7313.160	6950.723
1982	439.408	234.180	9988.530	9540.580	7657.105
1983	459.496	243.476	7711.156	6726.574	9079.840
1984	483.907	256.726	6335.766	7242.512	8263.500
1985	506.712	272.279	5958.191	7264.953	7148.824
1986	531.707	288.404	5722.973	7286.813	5860.363
1987	539.347	284.822	5544.461	5544.457	6381.090
1988	544.750	285.481	5452.270	5452.277	6873.355
1989	551.366	286.088	5447.961	5447.961	7330.113
1990	556.608	285.896	5741.832	5741.828	6974.461
1991	562.370	287.240	5235.328	5235.320	6904.297
1992	572.708	293.538	4950.422	4950.418	6785.211
1993	580.207	296.312	4758.109	4758.102	6684.078
1994	583.670	295.624	4745.848	4745.848	6594.902
1995	588.058	296.699	4472.391	4472.387	6458.734
1996	592.657	297.945	4210.367	4210.359	6296.332
1997	597.577	299.750	4131.109	4131.098	6131.281
1998	602.927	302.109	4011.679	4011.670	5961.156
1999	608.689	304.818	3882.674	3882.663	5788.156
2000	614.695	307.754	3785.658	3785.649	5614.820
2001	620.514	310.429	3695.475	3695.461	5445.039
2002	626.774	313.496	3608.264	3608.257	5274.090
2003	633.859	317.242	3524.806	3524.797	5100.586
2004	641.582	321.430	3446.179	3446.171	4927.098
2005	649.922	326.011	3370.911	3370.899	4754.160
2006	658.857	330.915	3298.831	3298.821	4582.484
2007	668.494	336.226	3229.019	3229.009	4411.770
2008	678.767	341.837	3161.938	3161.928	4242.930
2009	689.502	347.548	3097.284	3097.275	4077.076
2010	700.975	353.690	3033.869	3033.861	3913.189

[a]Includes military employment.

[b]Includes some restricted funds (primarily federal transfers).

APPENDIX A
MAP Model Statewide Base Case Projections

TABLE A-2
POPULATION AND COMPONENTS OF CHANGE
(Thousands)

	TOTAL POPULATION	CHANGE IN POPULATION	NET MIGRATION	NATURAL INCREASE
1981	421.616		11.368	6.599
1982	439.408	17.792	10.756	7.045
1983	459.496	20.089	12.715	7.389
1984	483.907	24.410	16.660	7.766
1985	506.712	22.806	14.586	8.231
1986	531.707	24.994	16.397	8.613
1987	539.347	7.641	-1.380	9.037
1988	544.750	5.403	-3.556	8.947
1989	551.366	6.615	-2.237	8.836
1990	556.608	5.242	-3.549	8.779
1991	562.370	5.763	-2.952	8.694
1992	572.708	10.338	1.677	8.643
1993	580.207	7.499	-1.246	8.732
1994	583.670	3.463	-5.283	8.738
1995	588.058	4.387	-4.283	8.644
1996	592.657	4.600	-4.024	8.597
1997	597.577	4.920	-3.672	8.565
1998	602.927	5.350	-3.227	8.551
1999	608.689	5.762	-2.821	8.556
2000	614.695	6.006	-2.597	8.577
2001	620.514	5.820	-2.815	8.608
2002	626.774	6.260	-2.402	8.636
2003	633.859	7.085	-1.621	8.680
2004	641.582	7.722	-1.051	8.748
2005	649.922	8.340	-0.515	8.832
2006	658.857	8.936	-0.020	8.932
2007	668.494	9.636	0.569	9.046
2008	678.767	10.273	1.076	9.176
2009	689.502	10.735	1.395	9.321
2010	700.975	11.473	1.980	9.474

NOTE: TOTALS MAY NOT ADD DUE TO ROUNDING

SOURCE: MAP MODEL SIMULATION MAP87.3B--CREATED 4/19/83
VARIABLES: POP, DELPOP, POPMIG, AND POPNI9

APPENDIX A
MAP Model Statewide Base Case Projections

TABLE A-3
EMPLOYMENT
(Thousands)

	BASIC SECTOR EMPLOYMENT	SERVICES SECTOR[a] EMPLOYMENT	GOVERNMENT SECTOR EMPLOYMENT	TOTAL WAGE AND SALARY EMPLOYMENT	TOTAL EMPLOYMENT
1981	51.522	86.348	82.749	204.299	220.618
1982	54.793	92.916	86.472	218.294	234.180
1983	59.610	98.148	85.718	225.946	243.476
1984	60.578	102.860	93.289	238.389	256.726
1985	64.548	108.740	98.991	252.984	272.279
1986	68.685	114.780	104.940	268.102	288.404
1987	67.374	116.162	101.285	264.713	284.822
1988	66.975	115.874	102.632	265.316	285.481
1989	68.570	115.622	101.896	265.854	286.088
1990	68.829	115.912	101.155	265.662	285.896
1991	71.356	117.123	98.761	266.909	287.240
1992	75.886	120.473	97.179	272.802	293.538
1993	75.613	124.637	96.062	275.381	296.312
1994	72.114	127.740	95.769	274.704	295.624
1995	71.792	130.405	94.503	275.675	296.699
1996	71.516	133.124	93.306	276.796	297.945
1997	71.254	135.745	92.751	278.428	299.750
1998	71.544	138.549	92.016	280.564	302.109
1999	71.872	141.621	91.326	283.009	304.818
2000	72.112	144.821	90.821	285.712	307.754
2001	71.964	148.102	90.363	288.221	310.429
2002	72.032	151.511	89.953	291.096	313.496
2003	72.480	155.163	89.599	294.608	317.242
2004	73.002	159.089	89.339	298.533	321.430
2005	73.596	163.259	89.156	302.825	326.011
2006	74.193	167.672	89.049	307.419	330.915
2007	74.922	172.314	88.989	312.393	336.226
2008	75.694	177.175	88.968	317.647	341.837
2009	76.367	182.191	88.990	322.993	347.548
2010	77.244	187.398	89.048	328.741	353.690

SOURCE: MAP MODEL SIMULATION MAP87.3B--CREATED 4/19/83
VARIABLES: EMNS, EMSP, EMG9, EM98, AND EM99

[a]Services sector employment is the sum of employment in the following industries: trade, services, finance-insurance-real estate, transportation, communications, and public utilities.

APPENDIX A
MAP Model Statewide Base Case Projections

TABLE A-4
REAL PERSONAL INCOME

	PERSONAL INCOME (MILLIONS OF 1982 $)	PER CAPITA PERSONAL INCOME (1982 $)
1981	6375.613	15121.840
1982	7418.441	16882.820
1983	7506.027	16335.330
1984	7816.973	16153.880
1985	8139.223	16062.800
1986	8433.555	15861.290
1987	8209.242	15220.690
1988	8147.664	14956.700
1989	8338.426	15123.220
1990	8425.320	15136.910
1991	8680.453	15435.470
1992	9071.880	15840.300
1993	9303.060	16034.020
1994	9418.770	16137.130
1995	9615.370	16351.070
1996	9811.350	16554.840
1997	10015.620	16760.370
1998	10247.410	16996.100
1999	10490.980	17235.380
2000	10742.130	17475.550
2001	10992.710	17715.480
2002	11269.070	17979.470
2003	11574.550	18260.430
2004	11899.810	18547.610
2005	12244.130	18839.380
2006	12605.850	19132.890
2007	12987.430	19427.900
2008	13385.860	19720.840
2009	13789.090	19998.610
2010	14221.100	20287.600

SOURCE: MAP MODEL SIMULATION MAP87.3B--CREATED 4/19/83
VARIABLES: DF.PI AND DF.PIP

APPENDIX A
MAP Model Statewide Base Case Projections

TABLE A-5
REAL WAGE RATES
(1982 Dollars)

	BASIC SECTOR	SERVICES SECTOR	GOVERNMENT SECTOR
1981	40206.340	23008.580	24186.880
1982	43423.270	22837.820	24831.790
1983	44243.500	22972.050	25169.810
1984	41641.100	22495.000	24984.790
1985	39852.760	21964.230	24485.290
1986	38510.400	21493.090	23951.950
1987	36475.460	21027.840	23056.530
1988	37218.030	21270.930	23482.340
1989	38160.230	21497.680	23853.630
1990	38861.020	21718.340	24294.870
1991	39892.080	21940.290	24565.990
1992	40941.540	22163.700	24891.960
1993	41782.380	22399.930	25228.000
1994	42714.040	22654.000	25603.990
1995	43645.560	22898.270	25913.060
1996	44548.860	23128.650	26224.370
1997	45341.660	23363.870	26592.640
1998	46230.050	23601.960	26951.170
1999	47092.240	23841.260	27310.350
2000	47899.110	24083.430	27684.130
2001	48857.580	24328.760	28062.570
2002	49971.020	24577.950	28446.140
2003	51073.940	24828.670	28836.860
2004	52202.750	25080.980	29238.770
2005	53358.160	25335.840	29649.710
2006	54559.950	25593.450	30069.800
2007	55754.020	25853.930	30496.470
2008	56974.430	26117.230	30929.760
2009	58160.500	26383.800	31371.350
2010	59437.790	26654.480	31821.120

SOURCE: MAP MODEL SIMULATION MAP87.3B--CREATED 4/19/83
VARIABLES: DF.WRNS, DF.WRSP, AND DF.WRG9

APPENDIX A
MAP Model Statewide Base Case Projections

TABLE A-6
STATE GOVERNMENT REVENUES
(Millions of 1982 Dollars)

	PETROLEUM[a] REVENUES	FEDERAL GRANTS	INTEREST[b] EARNINGS	OTHER REVENUES	TOTAL[c] REVENUES
1981	3667.440	271.845	275.213	204.064	4103.215
1982	4152.020	196.849	241.010	207.218	4389.039
1983	3334.305	200.456	308.861	222.051	3543.250
1984	2731.156	204.704	381.772	228.408	3065.921
1985	2686.458	210.512	377.860	233.835	3019.090
1986	2745.014	216.440	348.664	243.265	3042.944
1987	2733.268	220.124	322.149	249.100	2990.393
1988	2697.272	223.080	327.902	242.028	2970.126
1989	2567.749	226.094	354.375	389.269	3003.821
1990	2384.311	218.397	359.933	503.891	3195.949
1991	2074.623	222.023	364.910	516.637	2944.194
1992	1929.205	226.703	363.833	533.812	2835.149
1993	1812.836	231.828	364.682	554.128	2760.691
1994	1801.484	236.522	361.867	559.180	2770.010
1995	1641.566	241.083	357.660	557.656	2630.026
1996	1483.053	245.742	348.580	563.438	2495.307
1997	1449.048	250.426	342.026	568.753	2468.659
1998	1387.834	255.266	335.579	574.836	2418.750
1999	1319.559	260.306	329.016	582.770	2363.341
2000	1271.383	265.482	322.285	590.950	2327.023
2001	1225.879	270.774	315.474	599.031	2293.094
2002	1182.991	276.206	308.629	607.008	2261.568
2003	1142.767	281.836	301.829	616.496	2234.232
2004	1105.061	287.681	295.095	627.516	2211.006
2005	1069.628	293.729	288.421	639.249	2190.829
2006	1036.295	299.984	281.812	651.607	2173.459
2007	1004.886	306.439	275.266	664.440	2158.579
2008	975.244	313.095	268.785	677.930	2146.220
2009	947.149	319.921	262.350	691.527	2135.585
2010	920.545	326.939	255.983	705.236	2126.667

SOURCE: MAP MODEL SIMULATION MAP87.3B--CREATED 4/19/83
VARIABLES: DF.RP9S, DF.RSFD, DF.RSIN, DF.RSEN, AND DF.RSGF

[a]Includes permanent fund contributions.
[b]Includes earnings on the general and permanent funds.
[c]Includes restricted and unrestricted general fund revenues. Does not include permanent fund contributions or retained earnings.

APPENDIX A
MAP Model Statewide Base Case Projections

TABLE A-7
STATE GENERAL FUND EXPENDITURES

	TOTAL (MILLIONS OF 1982 $)	PER CAPITA (1982 $)
1981	3083.349	7313.160
1982	4192.207	9540.580
1983	3090.839	6726.574
1984	3504.701	7242.512
1985	3681.244	7264.953
1986	3874.449	7286.813
1987	2990.391	5544.457
1988	2970.130	5452.277
1989	3003.821	5447.961
1990	3195.947	5741.828
1991	2944.191	5235.320
1992	2835.148	4950.418
1993	2760.687	4758.102
1994	2770.011	4745.848
1995	2630.022	4472.387
1996	2495.301	4210.359
1997	2468.653	4131.098
1998	2418.744	4011.670
1999	2363.334	3882.663
2000	2327.018	3785.649
2001	2293.087	3695.461
2002	2261.563	3608.257
2003	2234.226	3524.797
2004	2211.000	3446.171
2005	2190.821	3370.899
2006	2173.454	3298.821
2007	2158.572	3229.009
2008	2146.213	3161.928
2009	2135.580	3097.275
2010	2126.661	3033.861

SOURCE: MAP MODEL SIMULATION MAP87.3B--CREATED 4/19/83
VARIABLES: DF.EXGF AND DF.EXGFP

APPENDIX A
MAP Model Statewide Base Case Projections

TABLE A-8
COMBINED FUNDS BALANCE

	TOTAL (MILLIONS OF 1982 $)	PER CAPITA (1982 $)
1981	2930.538	6950.723
1982	3364.593	7657.105
1983	4172.152	9079.840
1984	3998.765	8263.500
1985	3622.399	7148.824
1986	3115.998	5860.363
1987	3441.626	6381.090
1988	3744.264	6873.355
1989	4041.575	7330.113
1990	3882.039	6974.461
1991	3882.775	6904.297
1992	3885.951	6785.211
1993	3878.152	6684.078
1994	3849.249	6594.902
1995	3798.108	6458.734
1996	3731.571	6296.332
1997	3663.917	6131.281
1998	3594.144	5961.156
1999	3523.189	5788.156
2000	3451.400	5614.820
2001	3378.727	5445.039
2002	3305.667	5274.090
2003	3233.055	5100.586
2004	3161.136	4927.098
2005	3089.836	4754.160
2006	3019.205	4582.484
2007	2949.241	4411.770
2008	2879.963	4242.930
2009	2811.155	4077.076
2010	2743.049	3913.189

SOURCE: MAP MODEL SIMULATION MAP87.3B--CREATED 4/19/83
VARIABLES: DF.BAL99 AND DF.BAL9P

APPENDIX B
MAP Model Statewide Impact Projections

TABLE B.1
OCS SALE 87 3.0 BBBL IMPACT CASE
TOTAL POPULATION
(Thousands)

	BASE CASE	IMPACT CASE	ABSOLUTE IMPACT	PERCENT IMPACT
1981	421.616	421.616	0.000	0.000
1982	439.408	439.408	0.000	0.000
1983	459.496	459.496	0.000	0.000
1984	483.907	483.907	0.000	0.000
1985	506.712	508.098	1.385	0.273
1986	531.707	533.959	2.252	0.424
1987	539.347	542.694	3.346	0.620
1988	544.750	548.986	4.236	0.778
1989	551.366	557.825	6.459	1.171
1990	556.608	566.212	9.604	1.725
1991	562.370	569.987	7.616	1.354
1992	572.708	582.138	9.429	1.646
1993	580.207	590.229	10.022	1.727
1994	583.670	596.609	12.939	2.217
1995	588.058	600.914	12.857	2.186
1996	592.657	606.481	13.823	2.332
1997	597.577	612.812	15.234	2.549
1998	602.927	618.508	15.581	2.584
1999	608.689	624.549	15.860	2.606
2000	614.695	631.043	16.349	2.660
2001	620.514	637.383	16.869	2.719
2002	626.774	644.071	17.297	2.760
2003	633.859	651.792	17.933	2.829
2004	641.582	660.073	18.491	2.882
2005	649.922	668.909	18.988	2.922
2006	658.857	678.331	19.474	2.956
2007	668.494	688.453	19.959	2.986
2008	678.767	699.189	20.422	3.009
2009	689.502	709.978	20.475	2.970
2010	700.975	721.643	20.668	2.948

SOURCE: MAP MODEL SIMULATIONS MAP87.3B AND MAP87.HN--CREATED 4/21/83
VARIABLE: POP

APPENDIX B
MAP Model Statewide Impact Projections

TABLE B.2.
OCS SALE 87 3.0 BBBL IMPACT CASE
BASIC SECTOR EMPLOYMENT[a]
(Thousands)

	BASE CASE	IMPACT CASE	ABSOLUTE IMPACT	PERCENT IMPACT
1981	51.522	51.522	0.000	0.000
1982	54.793	54.793	0.000	0.000
1983	59.610	59.610	0.000	0.000
1984	60.578	60.578	0.000	0.000
1985	64.548	65.493	0.945	1.464
1986	68.685	69.525	0.840	1.223
1987	67.374	68.683	1.309	1.943
1988	66.975	68.445	1.470	2.194
1989	68.570	70.972	2.402	3.503
1990	68.829	72.408	3.579	5.200
1991	71.356	72.966	1.611	2.257
1992	75.886	78.735	2.849	3.755
1993	75.613	77.838	2.225	2.942
1994	72.114	75.598	3.483	4.830
1995	71.792	74.424	2.632	3.666
1996	71.516	74.411	2.896	4.049
1997	71.254	74.515	3.261	4.577
1998	71.544	74.252	2.708	3.786
1999	71.872	74.402	2.531	3.521
2000	72.112	74.638	2.526	3.503
2001	71.964	74.510	2.546	3.538
2002	72.032	74.572	2.540	3.527
2003	72.480	75.207	2.727	3.762
2004	73.002	75.751	2.749	3.765
2005	73.596	76.366	2.771	3.765
2006	74.193	76.987	2.794	3.766
2007	74.922	77.742	2.820	3.763
2008	75.694	78.538	2.845	3.758
2009	76.367	79.000	2.633	3.447
2010	77.244	79.885	2.641	3.419

SOURCE: MAP MODEL SIMULATIONS MAP87.3B AND MAP87.HN--CREATED 4/21/83
VARIABLE: EMNS

[a]Basic sector employment includes some endogenous construction employment. As a result, basic employment impacts are greater than direct OCS Sale 87 employment.

APPENDIX B
MAP Model Statewide Impact Projections

TABLE B.3
OCS SALE 87 3.0 BBBL IMPACT CASE
SERVICES SECTOR EMPLOYMENT
(Thousands)

	BASE CASE	IMPACT CASE	ABSOLUTE IMPACT	PERCENT IMPACT
1981	86.348	86.348	0.000	0.000
1982	92.916	92.916	0.000	0.000
1983	98.148	98.148	0.000	0.000
1984	102.860	102.860	0.000	0.000
1985	108.740	109.158	0.417	0.384
1986	114.780	115.305	0.526	0.458
1987	116.162	117.066	0.904	0.778
1988	115.874	117.003	1.129	0.975
1989	115.622	117.617	1.995	1.725
1990	115.912	119.020	3.108	2.682
1991	117.123	119.058	1.935	1.652
1992	120.473	123.237	2.764	2.294
1993	124.637	127.200	2.563	2.056
1994	127.740	131.702	3.962	3.101
1995	130.405	134.099	3.694	2.833
1996	133.124	137.212	4.088	3.071
1997	135.745	140.264	4.519	3.329
1998	138.549	143.284	4.734	3.417
1999	141.621	146.436	4.815	3.400
2000	144.821	149.723	4.902	3.385
2001	148.102	153.111	5.009	3.382
2002	151.511	156.596	5.086	3.357
2003	155.163	160.388	5.225	3.368
2004	159.089	164.492	5.404	3.397
2005	163.259	168.828	5.569	3.411
2006	167.672	173.407	5.735	3.420
2007	172.314	178.227	5.913	3.432
2008	177.175	183.261	6.086	3.435
2009	182.191	188.286	6.095	3.345
2010	187.398	193.548	6.150	3.282

SOURCE: MAP MODEL SIMULATIONS MAP87.3B AND MAP87.HN--CREATED 4/21/83
VARIABLE: EMSP

APPENDIX B
MAP Model Statewide Impact Projections

TABLE B.4
OCS SALE 87 3.0 BBBL IMPACT CASE
GOVERNMENT EMPLOYMENT
(Thousands)

	BASE CASE	IMPACT CASE	ABSOLUTE IMPACT	PERCENT IMPACT
1981	82.749	82.749	0.000	0.000
1982	86.472	86.472	0.000	0.000
1983	85.718	85.718	0.000	0.000
1984	93.289	93.289	0.000	0.000
1985	98.991	99.078	0.087	0.088
1986	104.940	105.081	0.141	0.134
1987	101.285	101.434	0.149	0.147
1988	102.632	102.862	0.230	0.225
1989	101.896	102.273	0.377	0.370
1990	101.155	101.685	0.531	0.525
1991	98.761	99.207	0.446	0.451
1992	97.179	97.737	0.558	0.574
1993	96.062	97.235	1.173	1.221
1994	95.769	97.053	1.283	1.340
1995	94.503	95.776	1.273	1.347
1996	93.306	94.632	1.326	1.421
1997	92.751	94.143	1.392	1.501
1998	92.016	93.430	1.414	1.537
1999	91.326	92.738	1.413	1.547
2000	90.821	92.226	1.405	1.547
2001	90.363	91.752	1.389	1.537
2002	89.953	91.308	1.355	1.506
2003	89.599	90.925	1.326	1.480
2004	89.339	90.649	1.309	1.465
2005	89.156	90.454	1.297	1.455
2006	89.049	90.340	1.290	1.449
2007	88.989	90.275	1.286	1.445
2008	88.968	90.247	1.279	1.438
2009	88.990	90.250	1.261	1.417
2010	89.048	90.291	1.243	1.396

SOURCE: MAP MODEL SIMULATIONS MAP87.3B AND MAP87.HN--CREATED 4/21/83
VARIABLE: EMG9

APPENDIX B
MAP Model Statewide Impact Projections

TABLE B.5
OCS SALE 87 3.0 BBBL IMPACT CASE
TOTAL EMPLOYMENT
(Thousands)

	BASE CASE	IMPACT CASE	ABSOLUTE IMPACT	PERCENT IMPACT
1981	220.618	220.618	0.000	0.000
1982	234.180	234.180	0.000	0.000
1983	243.476	243.476	0.000	0.000
1984	256.726	256.726	0.000	0.000
1985	272.279	273.729	1.450	0.532
1986	288.404	289.911	1.506	0.522
1987	284.822	287.184	2.362	0.829
1988	285.481	288.310	2.829	0.991
1989	286.088	290.862	4.774	1.669
1990	285.896	293.114	7.218	2.525
1991	287.240	291.231	3.992	1.390
1992	293.538	299.709	6.171	2.102
1993	296.312	302.273	5.960	2.012
1994	295.624	304.353	8.729	2.953
1995	296.699	304.298	7.599	2.561
1996	297.945	306.255	8.310	2.789
1997	299.750	308.923	9.172	3.060
1998	302.109	310.966	8.857	2.932
1999	304.818	313.577	8.759	2.873
2000	307.754	316.587	8.833	2.870
2001	310.429	319.373	8.943	2.881
2002	313.496	322.476	8.981	2.865
2003	317.242	326.521	9.278	2.925
2004	321.430	330.892	9.461	2.944
2005	326.011	335.648	9.637	2.956
2006	330.915	340.734	9.819	2.967
2007	336.226	346.244	10.018	2.980
2008	341.837	352.047	10.209	2.987
2009	347.548	357.536	9.988	2.874
2010	353.690	363.725	10.035	2.837

SOURCE: MAP MODEL SIMULATIONS MAP87.3B AND MAP87.HN--
CREATED 4/21/83
VARIABLE: EM99

APPENDIX B
MAP Model Statewide Impact Projections

TABLE B.6
OCS SALE 87 3.0 BBBL IMPACT CASE
REAL PERSONAL INCOME
Millions of 1982 $

	BASE CASE	IMPACT CASE	ABSOLUTE IMPACT	PERCENT IMPACT
1981	6375.613	6375.613	0.000	0.000
1982	7418.441	7418.441	0.000	0.000
1983	7506.027	7506.027	0.000	0.000
1984	7816.973	7816.973	0.000	0.000
1985	8139.223	8180.598	41.375	0.508
1986	8433.555	8477.949	44.395	0.526
1987	8209.242	8271.004	61.762	0.752
1988	8147.664	8223.324	75.660	0.929
1989	8338.426	8456.051	117.625	1.411
1990	8425.320	8598.613	173.293	2.057
1991	8680.453	8803.715	123.262	1.420
1992	9071.880	9252.550	180.668	1.992
1993	9303.060	9497.880	194.820	2.094
1994	9418.770	9696.310	277.547	2.947
1995	9615.370	9875.910	260.543	2.710
1996	9811.350	10103.830	292.477	2.981
1997	10015.620	10348.400	332.785	3.323
1998	10247.410	10575.200	327.789	3.199
1999	10490.980	10817.750	326.770	3.115
2000	10742.130	11078.350	336.223	3.130
2001	10992.710	11339.930	347.219	3.159
2002	11269.070	11624.470	355.398	3.154
2003	11574.550	11952.740	378.191	3.267
2004	11899.810	12292.250	392.445	3.298
2005	12244.130	12651.160	407.027	3.324
2006	12605.850	13028.040	422.188	3.349
2007	12987.430	13425.790	438.355	3.375
2008	13385.860	13840.400	454.543	3.396
2009	13789.090	14236.860	447.766	3.247
2010	14221.100	14680.640	459.543	3.231

SOURCE: MAP MODEL SIMULATIONS MAP87.3B AND MAP87.HN--
CREATED 4/21/83
VARIABLE: DF.PI

APPENDIX B
MAP Model Statewide Impact Projections

TABLE B.7
OCS SALE 87 3.0 BBBL IMPACT CASE
REAL PER CAPITA PERSONAL INCOME
1982 $

	BASE CASE	IMPACT CASE	ABSOLUTE IMPACT	PERCENT IMPACT
1981	15121.84	15121.84	0.00	0.00
1982	16882.82	16882.82	0.00	0.00
1983	16335.33	16335.33	0.00	0.00
1984	16153.88	16153.88	0.00	0.00
1985	16062.80	16100.44	37.64	0.23
1986	15861.29	15877.53	16.24	0.10
1987	15220.69	15240.64	19.95	0.13
1988	14956.70	14979.10	22.41	0.15
1989	15123.22	15158.96	35.75	0.24
1990	15136.91	15186.21	49.30	0.33
1991	15435.47	15445.47	10.00	0.06
1992	15840.30	15894.08	53.77	0.34
1993	16034.02	16091.85	57.83	0.36
1994	16137.13	16252.36	115.23	0.71
1995	16351.07	16434.81	83.75	0.51
1996	16554.84	16659.77	104.93	0.63
1997	16760.37	16886.75	126.39	0.75
1998	16996.10	17097.93	101.83	0.60
1999	17235.38	17320.89	85.52	0.50
2000	17475.55	17555.61	80.05	0.46
2001	17715.48	17791.39	75.90	0.43
2002	17979.47	18048.42	68.95	0.38
2003	18260.43	18338.27	77.84	0.43
2004	18547.61	18622.58	74.96	0.40
2005	18839.38	18913.11	73.72	0.39
2006	19132.89	19206.01	73.12	0.38
2007	19427.90	19501.38	73.48	0.38
2008	19720.84	19794.94	74.10	0.38
2009	19998.61	20052.55	53.93	0.27
2010	20287.60	20343.36	55.76	0.27

SOURCE: MAP MODEL SIMULATIONS MAP87.3B AND MAP87.HN--CREATED 4/21/83
VARIABLE: DF.PIP

APPENDIX B
MAP Model Statewide Impact Projections

TABLE B.8
OCS SALE 87 3.0 BBBL IMPACT CASE
BASIC SECTOR REAL WAGE RATE
1982 $

	BASE CASE	IMPACT CASE	ABSOLUTE IMPACT	PERCENT IMPACT
1981	40206.34	40206.34	0.00	0.00
1982	43423.27	43423.27	0.00	0.00
1983	44243.50	44243.50	0.00	0.00
1984	41641.10	41641.10	0.00	0.00
1985	39852.76	40162.32	309.56	0.78
1986	38510.40	38699.58	189.18	0.49
1987	36475.46	36801.46	326.00	0.89
1988	37218.03	37593.57	375.54	1.01
1989	38160.23	38860.62	700.39	1.84
1990	38861.02	39966.78	1105.76	2.85
1991	39892.08	40194.11	302.02	0.76
1992	40941.54	41598.10	656.55	1.60
1993	41782.38	42148.13	365.75	0.88
1994	42714.04	43466.28	752.24	1.76
1995	43645.56	44076.83	431.27	0.99
1996	44548.86	45061.89	513.03	1.15
1997	45341.66	45955.29	613.63	1.35
1998	46230.05	46668.93	438.88	0.95
1999	47092.24	47515.84	423.60	0.90
2000	47899.11	48346.31	447.20	0.93
2001	48857.58	49332.81	475.23	0.97
2002	49971.02	50462.47	491.45	0.98
2003	51073.94	51637.35	563.41	1.10
2004	52202.75	52785.96	583.20	1.12
2005	53358.16	53961.10	602.94	1.13
2006	54559.95	55182.48	622.54	1.14
2007	55754.02	56396.75	642.73	1.15
2008	56974.43	57637.55	663.12	1.16
2009	58160.50	58764.52	604.02	1.04
2010	59437.79	60060.17	622.38	1.05

SOURCE: MAP MODEL SIMULATIONS MAP87.3B AND MAP87.HN--
CREATED 4/21/83
VARIABLE: DF.WRNS

APPENDIX B
MAP Model Statewide Impact Projections

TABLE B.9
OCS SALE 87 3.0 BBBL IMPACT CASE
SERVICES SECTOR REAL WAGE RATE
1982 $

	BASE CASE	IMPACT CASE	ABSOLUTE IMPACT	PERCENT IMPACT
1981	23008.58	23008.58	0.00	0.00
1982	22837.82	22837.82	0.00	0.00
1983	22972.05	22972.05	0.00	0.00
1984	22495.00	22495.00	0.00	0.00
1985	21964.23	21970.36	6.13	0.03
1986	21493.09	21495.47	2.38	0.01
1987	21027.84	21034.79	6.96	0.03
1988	21270.93	21278.20	7.27	0.03
1989	21497.68	21529.45	31.77	0.15
1990	21718.34	21780.67	62.33	0.29
1991	21940.29	21953.68	13.38	0.06
1992	22163.70	22202.50	38.80	0.18
1993	22399.93	22421.45	21.51	0.10
1994	22654.00	22718.02	64.02	0.28
1995	22898.27	22932.45	34.18	0.15
1996	23128.65	23169.01	40.36	0.17
1997	23363.87	23406.90	43.03	0.18
1998	23601.96	23647.45	45.49	0.19
1999	23841.26	23887.21	45.95	0.19
2000	24083.43	24130.39	46.96	0.19
2001	24328.76	24375.93	47.17	0.19
2002	24577.95	24625.23	47.29	0.19
2003	24828.67	24876.22	47.55	0.19
2004	25080.98	25127.59	46.61	0.19
2005	25335.84	25382.32	46.48	0.18
2006	25593.45	25639.64	46.20	0.18
2007	25853.93	25899.82	45.90	0.18
2008	26117.23	26162.75	45.52	0.17
2009	26383.80	26422.59	38.79	0.15
2010	26654.48	26694.54	40.06	0.15

SOURCE: MAP MODEL SIMULATIONS MAP87.3B AND MAP87.HN--CREATED 4/21/83
VARIABLE: DF.WRSP

APPENDIX B
MAP Model Statewide Impact Projections

TABLE B.10
OCS SALE 87 3.0 BBBL IMPACT CASE
GOVERNMENT SECTOR REAL WAGE RATE
1982 $

	BASE CASE	IMPACT CASE	ABSOLUTE IMPACT	PERCENT IMPACT
1981	24186.88	24186.88	0.00	0.00
1982	24831.79	24831.79	0.00	0.00
1983	25169.81	25169.81	0.00	0.00
1984	24984.79	24984.79	0.00	0.00
1985	24485.29	24489.11	3.82	0.02
1986	23951.95	23956.85	4.89	0.02
1987	23056.53	23058.14	1.61	0.01
1988	23482.34	23484.71	2.37	0.01
1989	23853.63	23859.05	5.42	0.02
1990	24294.87	24305.21	10.35	0.04
1991	24565.99	24575.13	9.14	0.04
1992	24891.96	24901.33	9.38	0.04
1993	25228.00	25275.95	47.95	0.19
1994	25603.99	25656.13	52.13	0.20
1995	25913.06	25968.45	55.39	0.21
1996	26224.37	26281.70	57.33	0.22
1997	26592.64	26653.55	60.91	0.23
1998	26951.17	27014.91	63.73	0.24
1999	27310.35	27375.38	65.04	0.24
2000	27684.13	27750.87	66.74	0.24
2001	28062.57	28131.19	68.62	0.24
2002	28446.14	28516.35	70.21	0.25
2003	28836.86	28908.76	71.90	0.25
2004	29238.77	29312.73	73.95	0.25
2005	29649.71	29725.32	75.61	0.25
2006	30069.80	30147.03	77.23	0.26
2007	30496.47	30575.32	78.85	0.26
2008	30929.76	31010.08	80.32	0.26
2009	31371.35	31452.24	80.89	0.26
2010	31821.12	31902.12	81.00	0.25

SOURCE:MAP MODEL SIMULATIONS MAP87.3B AND MAP87.HN--
CREATED 4/21/83
VARIABLE: DF.WRG9

APPENDIX B
MAP Model Statewide Impact Projections

TABLE B-11
OCS SALE 87 3.0 BBBL IMPACT CASE
TOTAL REAL STATE GOVERNMENT REVENUES
Millions of 1982 $

	BASE CASE	IMPACT CASE	ABSOLUTE IMPACT	PERCENT IMPACT
1981	4103.215	4103.215	0.000	0.000
1982	4389.039	4389.039	0.000	0.000
1983	3543.250	3543.250	0.000	0.000
1984	3065.921	3065.921	0.000	0.000
1985	3019.090	3022.207	3.117	0.103
1986	3042.944	3048.298	5.354	0.176
1987	2990.393	2997.349	6.957	0.233
1988	2970.126	2979.696	9.570	0.322
1989	3003.821	3022.571	18.750	0.624
1990	3195.949	3228.653	32.705	1.023
1991	2944.194	2970.003	25.809	0.877
1992	2835.149	2860.212	25.063	0.884
1993	2760.691	2872.350	111.658	4.045
1994	2770.010	2887.691	117.681	4.248
1995	2630.026	2747.206	117.180	4.455
1996	2495.307	2608.868	113.561	4.551
1997	2468.659	2583.806	115.147	4.664
1998	2418.750	2533.148	114.397	4.730
1999	2363.341	2473.765	110.424	4.672
2000	2327.023	2434.883	107.859	4.635
2001	2293.094	2398.945	105.850	4.616
2002	2261.568	2365.193	103.625	4.582
2003	2234.232	2336.030	101.798	4.556
2004	2211.006	2311.510	100.504	4.546
2005	2190.829	2289.369	98.540	4.498
2006	2173.459	2269.984	96.524	4.441
2007	2158.579	2253.043	94.465	4.376
2008	2146.220	2238.535	92.315	4.301
2009	2135.585	2224.696	89.110	4.173
2010	2126.667	2211.965	85.298	4.011

SOURCE: MAP MODEL SIMULATIONS MAP87.3B AND MAP87.HN--CREATED 4/21/83
VARIABLE: DF.RSGF

APPENDIX B
MAP Model Statewide Impact Projections

TABLE B-12
OCS SALE 87 3.0 BBBL IMPACT CASE
REAL STATE GOVERNMENT GENERAL FUND EXPENDITURES
Millions of 1982 $

	BASE CASE	IMPACT CASE	ABSOLUTE IMPACT	PERCENT IMPACT
1981	3083.349	3083.349	0.000	0.000
1982	4192.207	4192.207	0.000	0.000
1983	3090.839	3090.839	0.000	0.000
1984	3504.701	3504.701	0.000	0.000
1985	3681.244	3690.259	9.015	0.245
1986	3874.449	3889.007	14.558	0.376
1987	2990.391	2997.349	6.958	0.233
1988	2970.130	2979.700	9.570	0.322
1989	3003.821	3022.569	18.748	0.624
1990	3195.947	3228.653	32.706	1.023
1991	2944.191	2970.001	25.810	0.877
1992	2835.148	2860.209	25.062	0.884
1993	2760.687	2872.346	111.658	4.045
1994	2770.011	2887.682	117.671	4.248
1995	2630.022	2747.198	117.176	4.455
1996	2495.301	2608.861	113.560	4.551
1997	2468.653	2583.799	115.147	4.664
1998	2418.744	2533.142	114.397	4.730
1999	2363.334	2473.757	110.423	4.672
2000	2327.018	2434.878	107.860	4.635
2001	2293.087	2398.938	105.852	4.616
2002	2261.563	2365.186	103.622	4.582
2003	2234.226	2336.021	101.795	4.556
2004	2211.000	2311.503	100.502	4.546
2005	2190.821	2289.361	98.540	4.498
2006	2173.454	2269.978	96.524	4.441
2007	2158.572	2253.037	94.465	4.376
2008	2146.213	2238.529	92.316	4.301
2009	2135.580	2224.689	89.110	4.173
2010	2126.661	2211.959	85.298	4.011

SOURCE: MAP MODEL SIMULATIONS MAP87.3B AND MAP87.HN--CREATED 4/21/83
VARIABLE: DF.EXGF

APPENDIX B
MAP Model Statewide Impact Projections

TABLE B-13.
OCS SALE 87 3.0 BBBL IMPACT CASE
REAL PER CAPITA STATE GOVERNMENT
GENERAL FUND EXPENDITURES
1982 $

	BASE CASE	IMPACT CASE	ABSOLUTE IMPACT	PERCENT. IMPACT
1981	7313.16	7313.16	0.00	0.00
1982	9540.58	9540.58	0.00	0.00
1983	6726.57	6726.57	0.00	0.00
1984	7242.51	7242.51	0.00	0.00
1985	7264.95	7262.89	-2.06	-0.03
1986	7286.81	7283.34	-3.47	-0.05
1987	5544.46	5523.09	-21.36	-0.39
1988	5452.28	5427.64	-24.64	-0.45
1989	5447.96	5418.49	-29.47	-0.54
1990	5741.83	5702.20	-39.63	-0.69
1991	5235.32	5210.64	-24.68	-0.47
1992	4950.42	4913.28	-37.14	-0.75
1993	4758.10	4866.49	108.39	2.28
1994	4745.85	4840.15	94.30	1.99
1995	4472.39	4571.70	99.31	2.22
1996	4210.36	4301.64	91.28	2.17
1997	4131.10	4216.30	85.20	2.06
1998	4011.67	4095.57	83.90	2.09
1999	3882.66	3960.87	78.20	2.01
2000	3785.65	3858.49	72.85	1.92
2001	3695.46	3763.73	68.27	1.85
2002	3608.26	3672.24	63.98	1.77
2003	3524.80	3584.00	59.20	1.68
2004	3446.17	3501.89	55.72	1.62
2005	3370.90	3422.53	51.63	1.53
2006	3298.82	3346.41	47.59	1.44
2007	3229.01	3272.61	43.60	1.35
2008	3161.93	3201.61	39.68	1.25
2009	3097.28	3133.46	36.19	1.17
2010	3033.86	3065.17	31.31	1.03

SOURCE: MAP MODEL SIMULATIONS MAP87.3B AND MAP87.HN--CREATED 4/21/83
VARIABLE: DF.EXGFP

APPENDIX B
MAP Model Statewide Impact Projections

TABLE B-14.
OCS SALE 87 3.0 BBBL IMPACT CASE
REAL COMBINED FUNDS BALANCE
Millions of 1982 $

	BASE CASE	IMPACT CASE	ABSOLUTE IMPACT	PERCENT IMPACT
1981	2930.538	2930.538	0.000	0.000
1982	3364.593	3364.593	0.000	0.000
1983	4172.152	4172.152	0.000	0.000
1984	3998.765	3998.765	0.000	0.000
1985	3622.399	3620.804	-1.595	-0.044
1986	3115.998	3106.620	-9.378	-0.301
1987	3441.626	3436.336	-5.291	-0.154
1988	3744.264	3742.192	-2.072	-0.055
1989	4041.575	4048.528	6.953	0.172
1990	3882.039	3897.456	15.417	0.397
1991	3882.775	3889.330	6.555	0.169
1992	3885.951	3899.276	13.325	0.343
1993	3878.152	3889.788	11.636	0.300
1994	3849.249	3871.375	22.127	0.575
1995	3798.108	3817.909	19.801	0.521
1996	3731.571	3753.658	22.087	0.592
1997	3663.917	3688.364	24.446	0.667
1998	3594.144	3619.313	25.170	0.700
1999	3523.189	3548.103	24.914	0.707
2000	3451.400	3476.048	24.648	0.714
2001	3378.727	3403.183	24.457	0.724
2002	3305.667	3329.726	24.058	0.728
2003	3233.055	3257.018	23.963	0.741
2004	3161.136	3185.141	24.004	0.759
2005	3089.836	3113.746	23.910	0.774
2006	3019.205	3042.965	23.760	0.787
2007	2949.241	2972.860	23.619	0.801
2008	2879.963	2903.366	23.403	0.813
2009	2811.155	2833.620	22.465	0.799
2010	2743.049	2764.786	21.738	0.792

SOURCE: MAP MODEL SIMULATIONS MAP87.3B AND MAP87.HN--CREATED 4/21/83
VARIABLE: DF.BAL99

APPENDIX B
MAP Model Statewide Impact Projections

TABLE B-15.
OCS SALE 87 3.0 BBBL IMPACT CASE
REAL PER CAPITA COMBINED FUNDS BALANCE
1982 $

	BASE CASE	IMPACT CASE	ABSOLUTE IMPACT	PERCENT IMPACT
1981	6950.72	6950.72	0.00	0.00
1982	7657.11	7657.11	0.00	0.00
1983	9079.84	9079.84	0.00	0.00
1984	8263.50	8263.50	0.00	0.00
1985	7148.82	7126.20	-22.63	-0.32
1986	5860.36	5818.09	-42.28	-0.72
1987	6381.09	6331.99	-49.10	-0.77
1988	6873.36	6816.54	-56.81	-0.83
1989	7330.11	7257.70	-72.41	-0.99
1990	6974.46	6883.39	-91.07	-1.31
1991	6904.30	6823.54	-80.75	-1.17
1992	6785.21	6698.20	-87.01	-1.28
1993	6684.08	6590.30	-93.78	-1.40
1994	6594.90	6488.96	-105.94	-1.61
1995	6458.73	6353.50	-105.24	-1.63
1996	6296.33	6189.24	-107.09	-1.70
1997	6131.28	6018.75	-112.53	-1.84
1998	5961.16	5851.68	-109.47	-1.84
1999	5788.16	5681.06	-107.10	-1.85
2000	5614.82	5508.41	-106.41	-1.90
2001	5445.04	5339.30	-105.73	-1.94
2002	5274.09	5169.80	-104.29	-1.98
2003	5100.59	4997.02	-103.57	-2.03
2004	4927.10	4825.44	-101.66	-2.06
2005	4754.16	4654.96	-99.20	-2.09
2006	4582.48	4485.96	-96.53	-2.11
2007	4411.77	4318.17	-93.60	-2.12
2008	4242.93	4152.48	-90.45	-2.13
2009	4077.08	3991.14	-85.94	-2.11
2010	3913.19	3831.24	-81.95	-2.09

SOURCE: MAP MODEL SIMULATIONS MAP87.3B AND MAP87.HN--CREATED 4/21/83
VARIABLE: DF.BAL9P

APPENDIX B
MAP Model Statewide Impact Projections

TABLE B-16.
OCS SALE 87 2.2 BBBL IMPACT CASE
TOTAL POPULATION
(Thousands)

	BASE CASE	IMPACT CASE	ABSOLUTE IMPACT	PERCENT IMPACT
1981	421.616	421.616	0.000	0.000
1982	439.408	439.408	0.000	0.000
1983	459.496	459.496	0.000	0.000
1984	483.907	483.907	0.000	0.000
1985	506.712	507.711	0.999	0.197
1986	531.707	533.632	1.925	0.362
1987	539.347	542.150	2.803	0.520
1988	544.750	548.257	3.507	0.644
1989	551.366	556.804	5.439	0.986
1990	556.608	563.573	6.966	1.251
1991	562.370	568.619	6.249	1.111
1992	572.708	581.088	8.379	1.463
1993	580.207	588.269	8.062	1.389
1994	583.670	592.486	8.815	1.510
1995	588.058	597.911	9.854	1.676
1996	592.657	602.732	10.074	1.700
1997	597.577	608.266	10.689	1.789
1998	602.927	613.984	11.057	1.834
1999	608.689	620.136	11.447	1.881
2000	614.695	626.528	11.834	1.925
2001	620.514	632.712	12.198	1.966
2002	626.774	639.303	12.528	1.999
2003	633.859	646.711	12.851	2.027
2004	641.582	654.744	13.162	2.052
2005	649.922	663.385	13.463	2.071
2006	658.857	672.611	13.754	2.088
2007	668.494	682.532	14.039	2.100
2008	678.767	693.085	14.318	2.109
2009	689.502	703.954	14.452	2.096
2010	700.975	715.633	14.657	2.091

SOURCE: MAP MODEL SIMULATIONS MAP87.3B AND MAP87.LN--CREATED 4/21/83
VARIABLE: POP

APPENDIX B
MAP Model Statewide Impact Projections

TABLE B-17.
OCS SALE 87 2.2 BBBL IMPACT CASE
BASIC SECTOR EMPLOYMENT
(Thousands)

	BASE CASE	IMPACT CASE	ABSOLUTE IMPACT	PERCENT IMPACT
1981	51.522	51.522	0.000	0.000
1982	54.793	54.793	0.000	0.000
1983	59.610	59.610	0.000	0.000
1984	60.578	60.578	0.000	0.000
1985	64.548	65.244	0.696	1.078
1986	68.685	69.499	0.814	1.185
1987	67.374	68.432	1.057	1.569
1988	66.975	68.179	1.204	1.797
1989	68.570	70.579	2.009	2.930
1990	68.829	71.224	2.395	3.479
1991	71.356	72.894	1.538	2.156
1992	75.886	78.591	2.705	3.564
1993	75.613	77.198	1.585	2.097
1994	72.114	74.040	1.925	2.670
1995	71.792	73.941	2.150	2.994
1996	71.516	73.323	1.808	2,528
1997	71.254	73.236	1.982	2.781
1998	71.544	73.357	1.814	2.535
1999	71.872	73.711	1.839	2.559
2000	72.112	73.950	1.837	2.548
2001	71.964	73.811	1.847	2.566
2002	72.032	73.885	1.853	2.573
2003	72.480	74.343	1.863	2.570
2004	73.002	74.875	1.873	2.566
2005	73.596	75.480	1.885	2.561
2006	74.193	76.091	1.898	2.558
2007	74.922	76.834	1.912	2.551
2008	75.694	77.620	1.927	2.546
2009	76.367	78.293	1.926	2.522
2010	77.244	79.183	1.939	2.510

SOURCE: MAP MODEL SIMULATIONS MAP87.3B AND MAP87.LN--CREATED 4/21/83
VARIABLE: EMNS

APPENDIX B
MAP Model Statewide Impact Projections

TABLE B-18.
OCS SALE 87 2.2 BBBL IMPACT CASE
SERVICES SECTOR EMPLOYMENT
(Thousands)

	BASE CASE	IMPACT CASE	ABSOLUTE IMPACT	PERCENT IMPACT
1981	86.348	86.348	0.000	0.000
1982	92.916	92.916	0.000	0.000
1983	98.148	98.148	0.000	0.000
1984	102.860	102.860	0.000	0.000
1985	108.740	109.028	0.287	0.264
1986	114.780	115.248	0.468	0.408
1987	116.162	116.894	0.732	0.630
1988	115.874	116.803	0.930	0.802
1989	115.622	117.330	1.708	1.477
1990	115.912	118.035	2.123	1.831
1991	117.123	118.763	1.639	1.400
1992	120.473	123.051	2.579	2.140
1993	124.637	126.749	2.112	1.694
1994	127.740	130.221	2.481	1.942
1995	130.405	133.261	2.857	2.191
1996	133.124	136.087	2.963	2.226
1997	135.745	138.903	3.158	2.326
1998	138.549	141.852	3.303	2.384
1999	141.621	145.013	3.392	2.395
2000	144.821	148.305	3.484	2.406
2001	148.102	151.677	3.575	2.414
2002	151.511	155.161	3.650	2.409
2003	155.163	158.900	3.737	2.408
2004	159.089	162.914	3.826	2.405
2005	163.259	167.179	3.919	2.401
2006	167.672	171.690	4.018	2.396
2007	172.314	176.435	4.121	2.391
2008	177.175	181.405	4.230	2.388
2009	182.191	186.411	4.220	2.316
2010	187.398	191.701	4.303	2.296

SOURCE: MAP MODEL SIMULATIONS MAP87.3B AND MAP87.LN--CREATED 4/21/83
VARIABLE: EMSP

APPENDIX B
MAP Model Statewide Impact Projections

TABLE B-19.
OCS SALE 87 2.2 BBBL IMPACT CASE
GOVERNMENT EMPLOYMENT
(Thousands)

	BASE CASE	IMPACT CASE	ABSOLUTE IMPACT	PERCENT IMPACT
1981	82.749	82.749	0.000	0.000
1982	86.472	86.472	0.000	0.000
1983	85.718	85.718	0.000	0.000
1984	93.289	93.289	0.000	0.000
1985	98.991	99.053	0.062	0.063
1986	104.940	105.062	0.122	0.116
1987	101.285	101.405	0.120	0.118
1988	102.632	102.823	0.191	0.187
1989	101.896	102.219	0.323	0.317
1990	101.155	101.548	0.394	0.389
1991	98.761	99.129	0.368	0.372
1992	97.179	97.663	0.483	0.497
1993	96.062	96.963	0.900	0.937
1994	95.769	96.696	0.926	0.967
1995	94.503	95.466	0.963	1.019
1996	93.306	94.275	0.969	1.038
1997	92.751	93.738	0.987	1.064
1998	92.016	93.014	0.999	1.085
1999	91.326	92.325	1.000	1.095
2000	90.821	91.815	0.994	1.095
2001	90.363	91.345	0.982	1.087
2002	89.953	90.919	0.966	1.074
2003	89.599	90.548	0.949	1.059
2004	89.339	90.275	0.936	1.048
2005	89.156	90.080	0.923	1.035
2006	89.049	89.961	0.912	1.024
2007	88.989	89.891	0.901	1.013
2008	88.968	89.860	0.892	1.003
2009	88.990	89.867	0.877	0.986
2010	89.048	89.916	0.868	0.975

SOURCE: MAP MODEL SIMULATIONS MAP87.3B AND MAP87.LN--CREATED 4/21/83
VARIABLE: EMG9

APPENDIX B
MAP Model Statewide Impact Projections

TABLE B-20.
OCS SALE 87 2.2 BBBL IMPACT CASE
TOTAL EMPLOYMENT
(Thousands)

	BASE CASE	IMPACT CASE	ABSOLUTE IMPACT	PERCENT IMPACT
1981	220.618	220.618	0.000	0.000
1982	234.180	234.180	0.000	0.000
1983	243.476	243.476	0.000	0.000
1984	256.726	256.726	0.000	0.000
1985	272.279	273.324	1.045	0.384
1986	288.404	289.808	1.404	0.487
1987	284.822	286.731	1.909	0.670
1988	285.481	287.805	2.325	0.814
1989	286.088	290.129	4.041	1.412
1990	285.896	290.807	4.911	1.718
1991	287.240	290.785	3.545	1.234
1992	293.538	299.305	5.767	1.965
1993	296.312	300.910	4.598	1.552
1994	295.624	300.957	5.333	1.804
1995	296.699	302.669	5.970	2.012
1996	297.945	303.685	5.740	1.926
1997	299.750	305.877	6.127	2.044
1998	302.109	308.224	6.115	2.024
1999	304.818	311.049	6.231	2.044
2000	307.754	314.069	6.315	2.052
2001	310.429	316.833	6.404	2.063
2002	313.496	319.965	6.469	2.064
2003	317.242	323.791	6.549	2.064
2004	321.430	328.065	6.635	2.064
2005	326.011	332.739	6.727	2.064
2006	330.915	337.741	6.827	2.063
2007	336.226	343.159	6.934	2.062
2008	341.837	348.886	7.049	2.062
2009	347.548	354.572	7.024	2.021
2010	353.690	360.801	7.111	2.010

SOURCE: MAP MODEL SIMULATIONS MAP87.3B AND MAP87.LN--CREATED 4/21/83
VARIABLE: EM99

APPENDIX B
MAP Model Statewide Impact Projections

TABLE B-21.
OCS SALE 87 2.2 BBBL IMPACT CASE
REAL PERSONAL INCOME
Millions of 1982 $

	BASE CASE	IMPACT CASE	ABSOLUTE IMPACT	PERCENT IMPACT
1981	6375.613	6375.613	0.000	0.000
1982	7418.441	7418.441	0.000	0.000
1983	7506.027	7506.027	0.000	0.000
1984	7816.973	7816.973	0.000	0.000
1985	8139.223	8169.648	30.426	0.374
1986	8433.555	8474.781	41.227	0.489
1987	8209.242	8260.230	50.988	0.621
1988	8147.664	8210.574	62.910	0.772
1989	8338.426	8437.227	98.801	1.185
1990	8425.320	8548.508	123.188	1.462
1991	8680.453	8789.797	109.344	1.260
1992	9071.880	9235.050	163.176	1.799
1993	9303.060	9451.270	148.207	1.593
1994	9418.770	9596.630	177.859	1.888
1995	9615.370	9816.320	200.945	2.090
1996	9811.350	10017.600	206.246	2.102
1997	10015.620	10240.990	225.371	2.250
1998	10247.410	10472.780	225.367	2.199
1999	10490.980	10725.420	234.438	2.235
2000	10742.130	10983.930	241.805	2.251
2001	10992.710	11242.610	249.902	2.273
2002	11269.070	11526.520	257.445	2.285
2003	11574.550	11840.300	265.750	2.296
2004	11899.810	12174.250	274.441	2.306
2005	12244.130	12527.750	283.617	2.316
2006	12605.850	12899.080	293.230	2.326
2007	12987.430	13290.770	303.344	2.336
2008	13385.860	13699.850	313.992	2.346
2009	13789.090	14108.010	318.914	2.313
2010	14221.100	14550.230	329.133	2.314

SOURCE: MAP MODEL SIMULATIONS MAP87.3B AND MAP87.LN--CREATED 4/21/83
VARIABLE: DF.PI

APPENDIX B
MAP Model Statewide Impact Projections

TABLE B-22.
OCS SALE 87 2.2 BBBL IMPACT CASE
REAL PER CAPITA PERSONAL INCOME
1982 $

	BASE CASE	IMPACT CASE	ABSOLUTE IMPACT	PERCENT IMPACT
1981	15121.84	15121.84	0.00	0.00
1982	16882.82	16882.82	0.00	0.00
1983	16335.33	16335.33	0.00	0.00
1984	16153.88	16153.88	0.00	0.00
1985	16062.80	16091.13	28.33	0.18
1986	15861.29	15881.33	20.05	0.13
1987	15220.69	15236.05	15.36	0.10
1988	14956.70	14975.77	19.07	0.13
1989	15123.22	15152.94	29.72	0.20
1990	15136.91	15168.39	31.49	0.21
1991	15435.47	15458.13	22.66	0.15
1992	15840.30	15892.70	52.40	0.33
1993	16034.02	16066.23	32.21	0.20
1994	16137.13	16197.23	60.09	0.37
1995	16351.07	16417.68	66.62	0.41
1996	16554.84	16620.32	65.48	0.40
1997	16760.37	16836.35	75.98	0.45
1998	16996.10	17057.09	60.98	0.36
1999	17235.38	17295.27	59.89	0.35
2000	17475.55	17531.42	55.87	0.32
2001	17715.48	17768.92	53.44	0.30
2002	17979.47	18029.83	50.36	0.28
2003	18260.43	18308.49	48.06	0.26
2004	18547.61	18593.92	46.30	0.25
2005	18839.38	18884.57	45.19	0.24
2006	19132.89	19177.61	44.72	0.23
2007	19427.90	19472.73	44.83	0.23
2008	19720.84	19766.47	45.64	0.23
2009	19998.61	20041.09	42.47	0.21
2010	20287.60	20331.99	44.39	0.22

SOURCE: MAP MODEL SIMULATIONS MAP87.3B AND MAP87.LN--CREATED 4/21/83
VARIABLE: DF.PIP

APPENDIX B
MAP Model Statewide Impact Projections

TABLE B-23.
OCS SALE 87 2.2 BBBL IMPACT CASE
BASIC SECTOR REAL WAGE RATE
1982 $

	BASE CASE	IMPACT CASE	ABSOLUTE IMPACT	PERCENT IMPACT
1981	40206.34	40206.34	0.00	0.00
1982	43423.27	43423.27	0.00	0.00
1983	44243.50	44243.50	0.00	0.00
1984	41641.10	41641.10	0.00	0.00
1985	39852.76	40076.35	223.59	0.56
1986	38510.40	38698.96	188.56	0.49
1987	36475.46	36730.70	255.24	0.70
1988	37218.03	37520.37	302.34	0.81
1989	38160.23	38756.56	596.33	1.56
1990	38861.02	39573.94	712.92	1.83
1991	39892.08	40202.54	310.45	0.78
1992	40941.54	41604.45	662.91	1.62
1993	41782.38	42034.38	252.00	0.60
1994	42714.04	43052.12	338.08	0.79
1995	43645.56	44056.52	410.95	0.94
1996	44548.86	44808.79	259.93	0.58
1997	45341.66	45664.63	322.98	0.71
1998	46230.05	46524.45	294.39	0.64
1999	47092.24	47407.41	315.16	0.67
2000	47899.11	48231.17	332.06	0.69
2001	48857.58	49208.33	350.75	0.72
2002	49971.02	50336.13	365.11	0.73
2003	51073.94	51452.45	378.51	0.74
2004	52202.75	52594.57	391.81	0.75
2005	53358.16	53763.21	405.05	0.76
2006	54559.95	54978.21	418.27	0.77
2007	55754.02	56185.92	431.90	0.77
2008	56974.43	57420.04	445.60	0.78
2009	58160.50	58623.54	463.04	0.80
2010	59437.79	59914.74	476.95	0.80

SOURCE: MAP MODEL SIMULATIONS MAP87.3B AND MAP87.LN--CREATED 4/21/83
VARIABLE: DF.WRNS

APPENDIX B
MAP Model Statewide Impact Projections

TABLE B-24
OCS SALE 87 2.2 BBBL IMPACT CASE
SERVICES SECTOR REAL WAGE RATE
1982 $

	BASE CASE	IMPACT CASE	ABSOLUTE IMPACT	PERCENT IMPACT
1981	23008.58	23008.58	0.00	0.00
1982	22837.82	22837.82	0.00	0.00
1983	22972.05	22972.05	0.00	0.00
1984	22495.00	22495.00	0.00	0.00
1985	21964.23	21967.60	3.37	0.02
1986	21493.09	21496.11	3.02	0.01
1987	21027.84	21032.46	4.63	0.02
1988	21270.93	21276.29	5.36	0.03
1989	21497.68	21526.34	28.66	0.13
1990	21718.34	21754.00	35.66	0.16
1991	21940.29	21955.23	14.93	0.07
1992	22163.70	22205.79	42.09	0.19
1993	22399.93	22418.79	18.86	0.08
1994	22654.00	22681.66	27.66	0.12
1995	22898.27	22930.36	32.09	0.14
1996	23128.65	23164.10	35.45	0.15
1997	23363.87	23397.89	34.02	0.15
1998	23601.96	23635.04	33.08	0.14
1999	23841.26	23875.21	33.95	0.14
2000	24083.43	24117.29	33.86	0.14
2001	24328.76	24362.77	34.02	0.14
2002	24577.95	24612.02	34.07	0.14
2003	24828.67	24862.84	34.16	0.14
2004	25080.98	25115.15	34.17	0.14
2005	25335.84	25369.97	34.13	0.13
2006	25593.45	25627.46	34.02	0.13
2007	25853.93	25887.84	33.91	0.13
2008	26117.23	26150.95	33.71	0.13
2009	26383.80	26408.32	24.52	0.09
2010	26654.48	26679.20	24.72	0.09

SOURCE: MAP MODEL SIMULATIONS MAP87.3B AND MAP87.LN--CREATED 4/21/83
VARIABLE: DF.WRSP

APPENDIX B
MAP Model Statewide Impact Projections

TABLE B-25.
OCS SALE 87 2.2 BBBL IMPACT CASE
GOVERNMENT SECTOR REAL WAGE RATE
1982 $

	BASE CASE	IMPACT CASE	ABSOLUTE IMPACT	PERCENT IMPACT
1981	24186.88	24186.88	0.00	0.00
1982	24831.79	24831.79	0.00	0.00
1983	25169.81	25169.81	0.00	0.00
1984	24984.79	24984.79	0.00	0.00
1985	24485.29	24488.04	2.75	0.01
1986	23951.95	23956.13	4.17	0.02
1987	23056.53	23057.98	1.45	0.01
1988	23482.34	23484.28	1.93	0.01
1989	23853.63	23858.22	4.59	0.02
1990	24294.87	24302.25	7.39	0.03
1991	24565.99	24572.91	6.92	0.03
1992	24891.96	24900.90	8.95	0.04
1993	25228.00	25264.32	36.32	0.14
1994	25603.99	25640.47	36.48	0.14
1995	25913.06	25952.75	39.69	0.15
1996	26224.37	26266.17	41.80	0.16
1997	26592.64	26635.85	43.21	0.16
1998	26951.17	26996.29	45.12	0.17
1999	27310.35	27356.88	46.53	0.17
2000	27684.13	27732.16	48.04	0.17
2001	28062.57	28111.97	49.40	0.18
2002	28446.14	28496.81	50.67	0.18
2003	28836.86	28888.68	51.83	0.18
2004	29238.77	29291.71	52.94	0.18
2005	29649.71	29703.68	53.97	0.18
2006	30069.80	30124.74	54.94	0.18
2007	30496.47	30552.36	55.88	0.18
2008	30929.76	30986.49	56.73	0.18
2009	31371.35	31428.50	57.14	0.18
2010	31821.12	31878.75	57.63	0.18

SOURCE:MAP MODEL SIMULATIONS MAP87.3B AND MAP87.LN--CREATED 4/21/83
VARIABLE: DF.WRG9

APPENDIX B
MAP Model Statewide Impact Projections

TABLE B-26.
OCS SALE 87 2.2 BBBL IMPACT CASE
TOTAL REAL STATE GOVERNMENT REVENUES
Millions of 1982 $

	BASE CASE	IMPACT CASE	ABSOLUTE IMPACT	PERCENT IMPACT
1981	4103.215	4103.215	0.000	0.000
1982	4389.039	4389.039	0.000	0.000
1983	3543.250	3543.250	0.000	0.000
1984	3065.921	3065.921	0.000	0.000
1985	3019.090	3021.239	2.149	0.071
1986	3042.944	3047.449	4.505	0.148
1987	2990.393	2996.328	5.935	0.198
1988	2970.126	2977.976	7.850	0.264
1989	3003.821	3019.757	15.936	0.531
1990	3195.949	3219.450	23.501	0.735
1991	2944.194	2964.000	19.806	0.673
1992	2835.149	2858.742	23.593	0.832
1993	2760.691	2845.085	84.394	3.057
1994	2770.010	2852.084	82.074	2.963
1995	2630.026	2713.651	83.625	3.180
1996	2495.307	2577.813	82.506	3.306
1997	2468.659	2549.982	81.323	3.294
1998	2418.750	2499.395	80.645	3.334
1999	2363.341	2442.095	78.754	3.332
2000	2327.023	2404.529	77.505	3.331
2001	2293.094	2369.216	76.121	3.320
2002	2261.568	2336.206	74.638	3.300
2003	2234.232	2307.357	73.125	3.273
2004	2211.006	2282.632	71.626	3.240
2005	2190.829	2260.924	70.095	3.199
2006	2173.459	2241.991	68.532	3.153
2007	2158.579	2225.520	66.941	3.101
2008	2146.220	2211.533	65.313	3.043
2009	2135.585	2198.756	63.171	2.958
2010	2126.667	2187.706	61.039	2.870

SOURCE: MAP MODEL SIMULATIONS MAP87.3B AND MAP87.LN--CREATED 4/21/83
VARIABLE: DF.RSGF

APPENDIX B
MAP Model Statewide Impact Projections

TABLE B-27.
OCS SALE 87 2.2 BBBL IMPACT CASE
REAL STATE GOVERNMENT GENERAL FUND EXPENDITURES
Millions of 1982 $

	BASE CASE	IMPACT CASE	ABSOLUTE IMPACT	PERCENT IMPACT
1981	3083.349	3083.349	0.000	0.000
1982	4192.207	4192.207	0.000	0.000
1983	3090.839	3090.839	0.000	0.000
1984	3504.701	3504.701	0.000	0.000
1985	3681.244	3687.723	6.479	0.176
1986	3874.449	3886.909	12.460	0.322
1987	2990.391	2996.328	5.937	0.199
1988	2970.130	2977.980	7.850	0.264
1989	3003.821	3019.755	15.934	0.530
1990	3195.947	3219.445	23.498	0.735
1991	2944.191	2963.997	19.806	0.673
1992	2835.148	2858.737	23.590	0.832
1993	2760.687	2845.082	84.395	3.057
1994	2770.011	2852.075	82.063	2.963
1995	2630.022	2713.643	83.621	3.179
1996	2495.301	2577.807	82.506	3.306
1997	2468.653	2549.977	81.325	3.294
1998	2418.744	2499.389	80.645	3.334
1999	2363.334	2442.089	78.755	3.332
2000	2327.018	2404.525	77.507	3.331
2001	2293.087	2369.210	76.123	3.320
2002	2261.563	2336.199	74.636	3.300
2003	2234.226	2307.350	73.124	3.273
2004	2211.000	2282.625	71.625	3.239
2005	2190.821	2260.918	70.097	3.200
2006	2173.454	2241.986	68.532	3.153
2007	2158.572	2225.514	66.942	3.101
2008	2146.213	2211.527	65.314	3.043
2009	2135.580	2198.751	63.171	2.958
2010	2126.661	2187.700	61.038	2.870

SOURCE: MAP MODEL SIMULATIONS MAP87.3B AND MAP87.LN--CREATED 4/21/83
VARIABLE: DF.EXGF

APPENDIX B
MAP Model Statewide Impact Projections

TABLE B-28.
OCS SALE 87 2.2 BBBL IMPACT CASE
REAL PER CAPITA STATE GOVERNMENT
GENERAL FUND EXPENDITURES
1982 $

	BASE CASE	IMPACT CASE	ABSOLUTE IMPACT	PERCENT IMPACT
1981	7313.16	7313.16	0.00	0.00
1982	9540.58	9540.58	0.00	0.00
1983	6726.57	6726.57	0.00	0.00
1984	7242.51	7242.51	0.00	0.00
1985	7264.95	7263.42	-1.53	-0.02
1986	7286.81	7283.88	-2.93	-0.04
1987	5544.46	5526.74	-17.71	-0.32
1988	5452.28	5431.72	-20.56	-0.38
1989	5447.96	5423.36	-24.60	-0.45
1990	5741.83	5712.55	-29.27	-0.51
1991	5235.32	5212.62	-22.70	-0.43
1992	4950.42	4919.63	-30.79	-0.62
1993	4758.10	4836.36	78.26	1.64
1994	4745.85	4813.74	67.89	1.43
1995	4472.39	4538.54	66.15	1.48
1996	4210.36	4276.87	66.51	1.58
1997	4131.10	4192.20	61.11	1.48
1998	4011.67	4070.77	59.10	1.47
1999	3882.66	3937.99	55.33	1.42
2000	3785.65	3837.85	52.20	1.38
2001	3695.46	3744.53	49.07	1.33
2002	3608.26	3654.29	46.04	1.28
2003	3524.80	3567.82	43.03	1.22
2004	3446.17	3486.29	40.12	1.16
2005	3370.90	3408.15	37.25	1.11
2006	3298.82	3333.25	34.43	1.04
2007	3229.01	3260.67	31.66	0.98
2008	3161.93	3190.84	28.92	0.91
2009	3097.28	3123.43	26.15	0.84
2010	3033.86	3057.01	23.15	0.76

SOURCE: MAP MODEL SIMULATIONS MAP87.3B AND MAP87.LN--CREATED 4/21/83
VARIABLE: DF.EXGFP

APPENDIX B
MAP Model Statewide Impact Projections

TABLE B-29.
OCS SALE 87 2.2 BBBL IMPACT CASE
REAL COMBINED FUNDS BALANCE
Millions of 1982 $

	BASE CASE	IMPACT CASE	ABSOLUTE IMPACT	PERCENT IMPACT
1981	2930.538	2930.538	0.000	0.000
1982	3364.593	3364.593	0.000	0.000
1983	4172.152	4172.152	0.000	0.000
1984	3998.765	3998.765	0.000	0.000
1985	3622.399	3621.029	-1.371	-0.038
1986	3115.998	3108.637	-7.361	-0.236
1987	3441.626	3437.290	-4.337	-0.126
1988	3744.264	3742.663	-1.602	-0.043
1989	4041.575	4047.991	6.417	0.159
1990	3882.039	3891.373	9.334	0.240
1991	3882.775	3888.612	5.837	0.150
1992	3885.951	3899.406	13.456	0.346
1993	3878.152	3887.813	9.662	0.249
1994	3849.249	3861.681	12.433	0.323
1995	3798.108	3813.098	14.990	0.395
1996	3731.571	3746.956	15.385	0.412
1997	3663.917	3680.258	16.340	0.446
1998	3594.144	3610.999	16.855	0.469
1999	3523.189	3540.109	16.920	0.480
2000	3451.400	3468.351	16.951	0.491
2001	3378.727	3395.660	16.934	0.501
2002	3305.667	3322.460	16.792	0.508
2003	3233.055	3249.731	16.676	0.516
2004	3161.136	3177.666	16.529	0.523
2005	3089.836	3106.205	16.369	0.530
2006	3019.205	3035.403	16.198	0.536
2007	2949.241	2965.264	16.023	0.543
2008	2879.963	2895.810	15.847	0.550
2009	2811.155	2826.299	15.144	0.539
2010	2743.049	2757.891	14.842	0.541

SOURCE: MAP MODEL SIMULATIONS MAP87.3B AND MAP87.LN--CREATED 4/21/83
VARIABLE: DF.BAL99

APPENDIX B
MAP Model Statewide Impact Projections

TABLE B-30.
OCS SALE 87 2.2 BBBL IMPACT CASE
REAL PER CAPITA COMBINED FUNDS BALANCE
1982 $

	BASE CASE	IMPACT CASE	ABSOLUTE IMPACT	PERCENT IMPACT
1981	6950.72	6950.72	0.00	0.00
1982	7657.11	7657.11	0.00	0.00
1983	9079.84	9079.84	0.00	0.00
1984	8263.50	8263.50	0.00	0.00
1985	7148.82	7132.06	-16.76	-0.23
1986	5860.36	5825.43	-34.93	-0.60
1987	6381.09	6340.10	-40.99	-0.64
1988	6873.36	6826.47	-46.89	-0.68
1989	7330.11	7270.04	-60.07	-0.82
1990	6974.46	6904.82	-69.64	-1.00
1991	6904.30	6838.69	-65.61	-0.95
1992	6785.21	6710.53	-74.68	-1.10
1993	6684.08	6608.90	-75.18	-1.12
1994	6594.90	6517.76	-77.14	-1.17
1995	6458.73	6377.36	-81.37	-1.26
1996	6296.33	6216.62	-79.71	-1.27
1997	6131.28	6050.40	-80.88	-1.32
1998	5961.16	5881.26	-79.90	-1.34
1999	5788.16	5708.60	-79.56	-1.37
2000	5614.82	5535.82	-79.00	-1.41
2001	5445.04	5366.83	-78.21	-1.44
2002	5274.09	5197.00	-77.09	-1.46
2003	5100.59	5025.01	-75.57	-1.48
2004	4927.10	4853.29	-73.80	-1.50
2005	4754.16	4682.35	-71.81	-1.51
2006	4582.48	4512.86	-69.63	-1.52
2007	4411.77	4344.50	-67.27	-1.52
2008	4242.93	4178.14	-64.79	-1.53
2009	4077.08	4014.89	-62.19	-1.53
2010	3913.19	3853.78	-59.41	-1.52

SOURCE: MAP MODEL SIMULATIONS MAP87.3B AND MAP87.LN--CREATED 4/21/83
VARIABLE: DF.BAL9P

APPENDIX C
MAP Model Regional Projections,
Base Case and Impact Cases
OCS Sale 87

TABLE C.1.
ANCHORAGE CENSUS DIVISION
TOTAL POPULATION
(000)

	BASE CASE	2.2 BBBL CASE	3.0 BBBL CASE
1981	181.514	181.514	181.514
1982	192.439	192.439	192.439
1983	200.416	200.416	200.416
1984	208.784	208.784	208.784
1985	218.558	219.030	219.213
1986	228.850	229.742	229.893
1987	233.251	234.584	234.844
1988	233.412	235.071	235.418
1989	235.429	238.017	238.503
1990	237.668	240.997	242.276
1991	241.004	243.953	244.612
1992	245.766	249.745	250.222
1993	250.899	254.555	255.397
1994	254.019	258.098	260.043
1995	256.667	261.303	262.726
1996	259.672	264.428	266.224
1997	262.902	267.979	270.162
1998	266.209	271.504	273.672
1999	269.790	275.295	277.415
2000	273.450	279.162	281.329
2001	277.002	282.916	285.161
2002	280.833	286.932	289.233
2003	284.955	291.240	293.705
2004	289.402	295.868	298.474
2005	294.154	300.799	303.516
2006	299.237	306.056	308.883
2007	304.626	311.620	314.559
2008	310.346	317.514	320.557
2009	316.292	323.563	326.573
2010	322.619	330.025	333.033

SOURCE: REGIONAL MODEL SIMULATIONS CD87.3B, CD87.LN, AND CD87.HN--CREATED 4/21/83
VARIABLE: P.02

APPENDIX C
MAP Model Regional Projections,
Base Case and Impact Cases
OCS Sale 87

TABLE C.2.
ANCHORAGE CENSUS DIVISION
TOTAL EMPLOYMENT
(000)

	BASE CASE	2.2 BBBL CASE	3.0 BBBL CASE
1981	100.002	100.002	100.002
1982	108.092	108.092	108.092
1983	111.531	111.531	111.531
1984	116.916	116.916	116.916
1985	124.194	124.524	124.654
1986	131.094	131.579	131.633
1987	129.963	130.651	130.809
1988	129.226	130.084	130.269
1989	128.889	130.345	130.610
1990	128.773	130.592	131.388
1991	129.237	130.648	130.915
1992	131.501	133.629	133.804
1993	133.753	135.630	136.104
1994	134.825	136.980	138.195
1995	135.898	138.346	139.089
1996	137.071	139.491	140.536
1997	138.563	141.145	142.385
1998	140.186	142.848	144.020
1999	142.019	144.756	145.875
2000	143.972	146.772	147.887
2001	145.851	148.714	149.843
2002	147.945	150.860	151.985
2003	150.267	153.243	154.438
2004	152.825	155.866	157.123
2005	155.590	158.699	160.010
2006	158.558	161.739	163.102
2007	161.708	164.965	166.387
2008	165.029	168.369	169.839
2009	168.449	171.832	173.257
2010	172.062	175.510	176.916

SOURCE: REGIONAL MODEL SIMULATIONS CD87.3B, CD87.LN, AND CD87.HN--CREATED 4/21/83
VARIABLE: M.02

APPENDIX C
MAP Model Regional Projections,
Base Case and Impact Cases
OCS Sale 87

TABLE C.3.
ANCHORAGE CENSUS DIVISION
BASIC SECTOR EMPLOYMENT
(000)

	BASE CASE	2.2 BBBL CASE	3.0 BBBL CASE
1981	18.782	18.782	18.782
1982	21.551	21.551	21.551
1983	22.447	22.447	22.447
1984	23.284	23.284	23.284
1985	25.535	25.621	25.655
1986	27.463	27.585	27.599
1987	26.833	26.985	27.020
1988	26.389	26.569	26.612
1989	26.668	26.999	27.060
1990	26.866	27.300	27.505
1991	27.251	27.560	27.630
1992	27.548	28.006	28.025
1993	27.782	28.180	28.276
1994	27.915	28.379	28.678
1995	28.110	28.638	28.807
1996	28.218	28.714	28.929
1997	28.437	28.942	29.205
1998	28.779	29.288	29.511
1999	29.151	29.670	29.864
2000	29.537	30.059	30.252
2001	29.838	30.364	30.557
2002	30.202	30.731	30.923
2003	30.611	31.145	31.351
2004	31.057	31.596	31.808
2005	31.535	32.079	32.296
2006	32.039	32.590	32.812
2007	32.572	33.130	33.357
2008	33.126	33.691	33.923
2009	33.688	34.253	34.470
2010	34.286	34.857	35.072

SOURCE: REGIONAL MODEL SIMULATIONS CD87.3B, CD87.LN, AND CD87.HN--CREATED 4/21/83
VARIABLE: B.02

APPENDIX C
MAP Model Regional Projections,
Base Case and Impact Cases
OCS Sale 87

TABLE C.4.
ANCHORAGE CENSUS DIVISION
SUPPORT SECTOR EMPLOYMENT
(000)

	BASE CASE	2.2 BBBL CASE	3.0 BBBL CASE
1981	45.599	45.599	45.599
1982	49.535	49.535	49.535
1983	52.316	52.316	52.316
1984	54.280	54.280	54.280
1985	57.358	57.581	57.668
1986	60.296	60.619	60.652
1987	61.014	61.509	61.622
1988	60.245	60.858	60.987
1989	59.859	60.876	61.061
1990	59.777	61.029	61.573
1991	60.646	61.625	61.795
1992	63.130	64.636	64.767
1993	65.506	66.681	66.965
1994	66.524	67.902	68.697
1995	67.811	69.405	69.874
1996	69.262	70.858	71.567
1997	70.703	72.446	73.285
1998	72.212	74.028	74.836
1999	73.886	75.765	76.551
2000	75.604	77.545	78.329
2001	77.316	79.321	80.118
2002	79.164	81.223	82.025
2003	81.176	83.298	84.159
2004	83.355	85.540	86.460
2005	85.684	87.935	88.903
2006	88.162	90.484	91.497
2007	90.779	93.174	94.237
2008	93.532	96.005	97.112
2009	96.361	98.882	99.961
2010	99.335	101.918	102.982

SOURCE: REGIONAL MODEL SIMULATIONS CD87.3B, CD87.LN, AND CD87.HN--CREATED 4/21/83
VARIABLE: S.02

APPENDIX C
MAP Model Regional Projections,
Base Case and Impact Cases
OCS Sale 87

TABLE C.5.
ANCHORAGE CENSUS DIVISION
GOVERNMENT SECTOR EMPLOYMENT
(000)

	BASE CASE	2.2 BBBL CASE	3.0 BBBL CASE
1981	35.621	35.621	35.621
1982	37.005	37.005	37.005
1983	36.769	36.769	36.769
1984	39.351	39.351	39.351
1985	41.301	41.322	41.331
1986	43.334	43.376	43.382
1987	42.116	42.157	42.167
1988	42.591	42.656	42.669
1989	42.362	42.471	42.489
1990	42.130	42.263	42.310
1991	41.339	41.464	41.490
1992	40.823	40.987	41.012
1993	40.465	40.770	40.862
1994	40.385	40.699	40.820
1995	39.976	40.303	40.407
1996	39.591	39.919	40.040
1997	39.424	39.758	39.895
1998	39.195	39.533	39.674
1999	38.982	39.320	39.460
2000	38.831	39.168	39.307
2001	38.697	39.029	39.167
2002	38.578	38.905	39.037
2003	38.479	38.801	38.928
2004	38.412	38.729	38.856
2005	38.371	38.684	38.810
2006	38.356	38.665	38.793
2007	38.357	38.662	38.792
2008	38.371	38.673	38.804
2009	38.400	38.697	38.827
2010	38.441	38.735	38.862

SOURCE: REGIONAL MODEL SIMULATIONS CD87.3B, CD87.LN, AND CD87.HN--CREATED 4/21/83
VARIABLE: G.02

APPENDIX C
MAP Model Regional Projections,
Base Case and Impact Cases
OCS Sale 87

TABLE C.6
FAIRBANKS CENSUS DIVISION
TOTAL POPULATION
(000)

	BASE CASE	2.2 BBBL CASE	3.0 BBBL CASE
1981	57.887	57.887	57.887
1982	61.256	61.256	61.256
1983	62.533	62.533	62.533
1984	65.444	65.444	65.444
1985	68.513	68.605	68.641
1986	71.773	71.988	72.034
1987	72.597	72.909	72.966
1988	72.837	73.239	73.323
1989	73.301	73.913	74.028
1990	74.003	74.807	75.089
1991	74.346	75.107	75.303
1992	74.136	75.105	75.236
1993	74.996	76.008	76.236
1994	76.559	77.617	78.063
1995	77.079	78.246	78.631
1996	77.715	78.914	79.347
1997	78.499	79.752	80.278
1998	79.272	80.583	81.120
1999	80.112	81.467	81.998
2000	81.065	82.468	83.010
2001	82.082	83.527	84.087
2002	83.105	84.589	85.160
2003	84.134	85.656	86.250
2004	85.260	86.819	87.444
2005	86.473	88.068	88.717
2006	87.793	89.422	90.095
2007	89.190	90.852	91.550
2008	90.680	92.375	93.094
2009	92.259	93.982	94.709
2010	93.923	95.669	96.392

SOURCE: REGIONAL MODEL SIMULATIONS CD87.3B, CD87.LN, AND CD87.HN--CREATED 4/21/83
VARIABLE: P.09

APPENDIX C
MAP Model Regional Projections,
Base Case and Impact Cases
OCS Sale 87

TABLE C.7
FAIRBANKS CENSUS DIVISION
TOTAL EMPLOYMENT
(000)

	BASE CASE	2.2 BBBL CASE	3.0 BBBL CASE
1981	29.341	29.341	29.341
1982	31.539	31.539	31.539
1983	31.870	31.870	31.870
1984	33.615	33.615	33.615
1985	35.727	35.753	35.764
1986	37.701	37.761	37.776
1987	37.109	37.191	37.209
1988	37.005	37.123	37.148
1989	36.794	36.986	37.021
1990	36.739	36.997	37.085
1991	36.421	36.659	36.735
1992	36.317	36.609	36.645
1993	36.684	37.069	37.148
1994	37.257	37.650	37.804
1995	37.461	37.889	38.051
1996	37.673	38.106	38.278
1997	38.015	38.459	38.660
1998	38.354	38.830	39.038
1999	38.740	39.226	39.436
2000	39.202	39.698	39.906
2001	39.691	40.195	40.403
2002	40.204	40.715	40.919
2003	40.744	41.262	41.461
2004	41.348	41.875	42.085
2005	42.007	42.543	42.763
2006	42.724	43.271	43.500
2007	43.485	44.043	44.283
2008	44.290	44.860	45.109
2009	45.142	45.731	45.990
2010	46.022	46.619	46.871

SOURCE: REGIONAL MODEL SIMULATIONS CD87.3B, CD87.LN, AND CD87.HN--CREATED 4/21/83
VARIABLE: M.09

APPENDIX C
MAP Model Regional Projections,
Base Case and Impact Cases
OCS Sale 87

TABLE C.8
FAIRBANKS CENSUS DIVISION
BASIC SECTOR EMPLOYMENT
(000)

	BASE CASE	2.2 BBBL CASE	3.0 BBBL CASE
1981	4.928	4.928	4.928
1982	5.654	5.654	5.654
1983	5.780	5.780	5.780
1984	5.919	5.919	5.919
1985	6.498	6.522	6.531
1986	6.999	7.034	7.038
1987	6.831	6.873	6.883
1988	6.713	6.763	6.775
1989	6.802	6.894	6.911
1990	6.873	6.994	7.050
1991	6.972	7.056	7.076
1992	7.074	7.199	7.204
1993	7.162	7.271	7.297
1994	7.222	7.339	7.419
1995	7.298	7.426	7.469
1996	7.356	7.473	7.528
1997	7.445	7.563	7.630
1998	7.563	7.679	7.735
1999	7.685	7.802	7.850
2000	7.820	7.939	7.986
2001	7.938	8.058	8.106
2002	8.068	8.189	8.236
2003	8.210	8.333	8.384
2004	8.364	8.488	8.541
2005	8.528	8.654	8.708
2006	8.700	8.828	8.884
2007	8.882	9.012	9.069
2008	9.071	9.203	9.262
2009	9.264	9.396	9.451
2010	9.467	9.601	9.655

SOURCE: REGIONAL MODEL SIMULATIONS CD87.3B, CD87.LN, AND CD87.HN--CREATED 4/21/83
VARIABLE: B.09

APPENDIX C
MAP Model Regional Projections,
Base Case and Impact Cases
OCS Sale 87

TABLE C.9
FAIRBANKS CENSUS DIVISION
SUPPORT SECTOR EMPLOYMENT
(000)

	BASE CASE	2.2 BBBL CASE	3.0 BBBL CASE
1981	10.955	10.955	10.955
1982	11.930	11.930	11.930
1983	12.237	12.237	12.237
1984	12.829	12.829	12.829
1985	13.598	13.591	13.590
1986	14.274	14.284	14.292
1987	14.341	14.364	14.368
1988	14.175	14.217	14.225
1989	13.974	14.030	14.041
1990	13.947	14.032	14.045
1991	13.852	13.956	14.001
1992	13.858	13.960	13.981
1993	14.287	14.443	14.459
1994	14.840	14.992	15.018
1995	15.138	15.309	15.386
1996	15.452	15.639	15.709
1997	15.780	15.975	16.053
1998	16.101	16.327	16.424
1999	16.458	16.692	16.799
2000	16.852	17.097	17.202
2001	17.285	17.538	17.643
2002	17.724	17.984	18.089
2003	18.169	18.438	18.535
2004	18.655	18.932	19.039
2005	19.174	19.461	19.577
2006	19.735	20.032	20.155
2007	20.322	20.630	20.761
2008	20.941	21.260	21.399
2009	21.598	21.937	22.090
2010	22.268	22.615	22.762

SOURCE: REGIONAL MODEL SIMULATIONS CD87.3B, CD87.LN, AND CD87.HN--CREATED 4/21/83
VARIABLE: S.09

APPENDIX C
MAP Model Regional Projections,
Base Case and Impact Cases
OCS Sale 87

TABLE C.10
FAIRBANKS CENSUS DIVISION
GOVERNMENT SECTOR EMPLOYMENT
(000)

	BASE CASE	2.2 BBBL CASE	3.0 BBBL CASE
1981	13.459	13.459	13.459
1982	13.955	13.955	13.955
1983	13.853	13.853	13.853
1984	14.867	14.867	14.867
1985	15.631	15.639	15.643
1986	16.428	16.444	16.447
1987	15.938	15.954	15.958
1988	16.118	16.143	16.148
1989	16.019	16.062	16.069
1990	15.919	15.972	15.990
1991	15.598	15.647	15.657
1992	15.385	15.450	15.460
1993	15.235	15.356	15.392
1994	15.195	15.319	15.367
1995	15.025	15.154	15.196
1996	14.864	14.994	15.042
1997	14.790	14.922	14.976
1998	14.691	14.824	14.880
1999	14.598	14.732	14.787
2000	14.529	14.663	14.718
2001	14.468	14.599	14.654
2002	14.412	14.542	14.594
2003	14.364	14.492	14.542
2004	14.329	14.454	14.505
2005	14.304	14.428	14.478
2006	14.289	14.411	14.462
2007	14.281	14.401	14.453
2008	14.277	14.397	14.449
2009	14.280	14.397	14.449
2010	14.287	14.403	14.454

SOURCE: REGIONAL MODEL SIMULATIONS - CD87.3B, CD87.LN, AND CD87.HN--CREATED 4/21/83
VARIABLE: G.09

APPENDIX D
MAP Model Regional Absolute
Impact Projections
OCS Sale 87

TABLE D.1.
ANCHORAGE CENSUS DIVISION
TOTAL POPULATION
(000)

	2.2 BBBL CASE	3.0 BBBL CASE
1981	0.000	0.000
1982	0.000	0.000
1983	0.000	0.000
1984	0.000	0.000
1985	0.471	0.655
1986	0.891	1.043
1987	1.333	1.593
1988	1.658	2.005
1989	2.588	3.074
1990	3.329	4.608
1991	2.949	3.608
1992	3.980	4.456
1993	3.656	4.499
1994	4.079	6.025
1995	4.637	6.060
1996	4.756	6.552
1997	5.077	7.260
1998	5.294	7.463
1999	5.505	7.625
2000	5.712	7.878
2001	5.914	8.158
2002	6.099	8.400
2003	6.286	8.750
2004	6.466	9.071
2005	6.645	9.362
2006	6.819	9.646
2007	6.994	9.933
2008	7.167	10.210
2009	7.271	10.281
2010	7.406	10.413

SOURCE: REGIONAL MODEL SIMULATIONS CD87.3B, CD87.LN, AND CD87.HN--CREATED 4/21/83
VARIABLE: P.02

APPENDIX D
MAP Model Regional Absolute
Impact Projections
OCS Sale 87

TABLE D.2.
ANCHORAGE CENSUS DIVISION
TOTAL EMPLOYMENT
(000)

	2.2 BBBL CASE	3.0 BBBL CASE
1981	0.000	0.000
1982	0.000	0.000
1983	0.000	0.000
1984	0.000	0.000
1985	0.330	0.460
1986	0.485	0.539
1987	0.688	0.846
1988	0.858	1.043
1989	1.456	1.721
1990	1.819	2.615
1991	1.411	1.678
1992	2.128	2.303
1993	1.878	2.351
1994	2.155	3.370
1995	2.449	3.192
1996	2.420	3.466
1997	2.582	3.822
1998	2.662	3.834
1999	2.736	3.856
2000	2.800	3.915
2001	2.864	3.992
2002	2.916	4.041
2003	2.977	4.171
2004	3.041	4.298
2005	3.109	4.420
2006	3.181	4.544
2007	3.258	4.679
2008	3.340	4.810
2009	3.383	4.808
2010	3.448	4.854

SOURCE: REGIONAL MODEL SIMULATIONS CD87.3B, CD87.LN, AND CD87.HN--CREATED 4/21/83
VARIABLE: M.02

APPENDIX D
MAP Model Regional Absolute
Impact Projections
OCS Sale 87

TABLE D.3.
ANCHORAGE CENSUS DIVISION
BASIC SECTOR EMPLOYMENT
(000)

	2.2 BBBL CASE	3.0 BBBL CASE
1981	0.000	0.000
1982	0.000	0.000
1983	0.000	0.000
1984	0.000	0.000
1985	0.086	0.120
1986	0.122	0.136
1987	0.152	0.187
1988	0.180	0.223
1989	0.331	0.392
1990	0.434	0.639
1991	0.308	0.379
1992	0.458	0.477
1993	0.398	0.495
1994	0.464	0.763
1995	0.528	0.697
1996	0.496	0.711
1997	0.505	0.769
1998	0.508	0.732
1999	0.519	0.713
2000	0.522	0.715
2001	0.526	0.720
2002	0.530	0.721
2003	0.534	0.740
2004	0.539	0.751
2005	0.544	0.761
2006	0.551	0.772
2007	0.558	0.785
2008	0.565	0.797
2009	0.565	0.782
2010	0.571	0.786

SOURCE: REGIONAL MODEL SIMULATIONS CD87.3B, CD87.LN, AND CD87.HN--CREATED 4/21/83
VARIABLE: B.02

APPENDIX D
MAP Model Regional Absolute
Impact Projections
OCS Sale 87

TABLE D.4.
ANCHORAGE CENSUS DIVISION
SUPPORT SECTOR EMPLOYMENT
(000)

	2.2 BBBL CASE	3.0 BBBL CASE
1981	0.000	0.000
1982	0.000	0.000
1983	0.000	0.000
1984	0.000	0.000
1985	0.223	0.310
1986	0.322	0.356
1987	0.495	0.608
1988	0.613	0.742
1989	1.016	1.201
1990	1.252	1.797
1991	0.978	1.148
1992	1.506	1.637
1993	1.175	1.459
1994	1.378	2.173
1995	1.595	2.063
1996	1.596	2.306
1997	1.743	2.582
1998	1.816	2.624
1999	1.879	2.664
2000	1.941	2.725
2001	2.005	2.802
2002	2.059	2.861
2003	2.121	2.982
2004	2.185	3.104
2005	2.252	3.219
2006	2.322	3.335
2007	2.395	3.459
2008	2.473	3.580
2009	2.521	3.600
2010	2.583	3.647

SOURCE: REGIONAL MODEL SIMULATIONS CD87.3B, CD87.LN, AND CD87.HN--CREATED 4/21/83
VARIABLE: S.02

APPENDIX D
MAP Model Regional Absolute
Impact Projections
OCS Sale 87

TABLE D.5.
ANCHORAGE CENSUS DIVISION
GOVERNMENT SECTOR EMPLOYMENT
(000)

	2.2 BBBL CASE	3.0 BBBL CASE
1981	0.000	0.000
1982	0.000	0.000
1983	0.000	0.000
1984	0.000	0.000
1985	0.021	0.030
1986	0.041	0.048
1987	0.041	0.051
1988	0.065	0.078
1989	0.109	0.128
1990	0.133	0.180
1991	0.125	0.151
1992	0.164	0.189
1993	0.305	0.397
1994	0.314	0.434
1995	0.326	0.431
1996	0.328	0.449
1997	0.334	0.471
1998	0.338	0.479
1999	0.338	0.478
2000	0.337	0.476
2001	0.333	0.470
2002	0.327	0.459
2003	0.321	0.449
2004	0.317	0.443
2005	0.313	0.439
2006	0.309	0.437
2007	0.305	0.435
2008	0.302	0.433
2009	0.297	0.427
2010	0.294	0.421

SOURCE: REGIONAL MODEL SIMULATIONS CD87.3B, CD87.LN, AND CD87.HN--CREATED 4/21/83
VARIABLE: G.02

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MAP Model Regional Absolute
Impact Projections
OCS Sale 87

TABLE D. 6
FAIRBANKS CENSUS DIVISION
TOTAL POPULATION
(000)

	2.2 BBBL CASE	3.0 BBBL CASE
1981	0.000	0.000
1982	0.000	0.000
1983	0.000	0.000
1984	0.000	0.000
1985	0.092	0.128
1986	0.215	0.261
1987	0.313	0.370
1988	0.403	0.486
1989	0.612	0.728
1990	0.804	1.086
1991	0.761	0.957
1992	0.969	1.100
1993	1.012	1.241
1994	1.058	1.505
1995	1.167	1.551
1996	1.199	1.632
1997	1.254	1.779
1998	1.311	1.848
1999	1.355	1.886
2000	1.402	1.945
2001	1.445	2.005
2002	1.484	2.055
2003	1.523	2.116
2004	1.559	2.184
2005	1.595	2.243
2006	1.629	2.301
2007	1.662	2.359
2008	1.695	2.414
2009	1.722	2.450
2010	1.745	2.469

SOURCE: REGIONAL MODEL SIMULATIONS CD87.3B, CD87.LN, AND CD87.HN--CREATED 4/21/83
VARIABLE: P.09

APPENDIX D
MAP Model Regional Absolute
Impact Projections
OCS Sale 87

TABLE D.7
FAIRBANKS CENSUS DIVISION
TOTAL EMPLOYMENT
(000)

	2.2 BBBL CASE	3.0 BBBL CASE
1981	0.000	0.000
1982	0.000	0.000
1983	0.000	0.000
1984	0.000	0.000
1985	0.025	0.037
1986	0.060	0.075
1987	0.082	0.099
1988	0.118	0.143
1989	0.192	0.227
1990	0.258	0.346
1991	0.238	0.314
1992	0.292	0.327
1993	0.385	0.464
1994	0.393	0.547
1995	0.428	0.589
1996	0.434	0.606
1997	0.445	0.645
1998	0.476	0.684
1999	0.485	0.696
2000	0.496	0.704
2001	0.505	0.712
2002	0.511	0.715
2003	0.518	0.717
2004	0.527	0.737
2005	0.536	0.756
2006	0.547	0.776
2007	0.558	0.798
2008	0.570	0.820
2009	0.588	0.847
2010	0.597	0.849

SOURCE: REGIONAL MODEL SIMULATIONS CD87.3B, CD87.LN, AND CD87.HN--CREATED 4/21/83
VARIABLE: M.09

APPENDIX D
MAP Model Regional Absolute
Impact Projections
OCS Sale 87

TABLE D. 8
FAIRBANKS CENSUS DIVISION
BASIC SECTOR EMPLOYMENT
(000)

	2.2 BBBL CASE	3.0 BBBL CASE
1981	0.000	0.000
1982	0.000	0.000
1983	0.000	0.000
1984	0.000	0.000
1985	0.024	0.034
1986	0.034	0.038
1987	0.042	0.052
1988	0.050	0.062
1989	0.092	0.109
1990	0.121	0.178
1991	0.085	0.104
1992	0.125	0.130
1993	0.108	0.134
1994	0.117	0.197
1995	0.128	0.171
1996	0.117	0.172
1997	0.117	0.185
1998	0.116	0.172
1999	0.118	0.165
2000	0.119	0.166
2001	0.120	0.168
2002	0.121	0.168
2003	0.123	0.174
2004	0.124	0.177
2005	0.126	0.180
2006	0.128	0.184
2007	0.130	0.187
2008	0.132	0.191
2009	0.132	0.187
2010	0.134	0.188

SOURCE: REGIONAL MODEL SIMULATIONS CD87.3B, CD87.LN, AND CD87.HN--CREATED 4/21/83
VARIABLE: B.09

APPENDIX D
MAP Model Regional Absolute
Impact Projections
OCS Sale 87

TABLE D.9
FAIRBANKS CENSUS DIVISION
SUPPORT SECTOR EMPLOYMENT
(000)

	2.2 BBBL CASE	3.0 BBBL CASE
1981	0.000	0.000
1982	0.000	0.000
1983	0.000	0.000
1984	0.000	0.000
1985	-0.007	-0.009
1986	0.010	0.018
1987	-0.024	0.027
1988	0.042	0.050
1989	0.057	0.067
1990	0.084	0.097
1991	0.104	0.149
1992	0.102	0.123
1993	0.156	0.172
1994	0.152	0.178
1995	0.170	0.247
1996	0.187	0.257
1997	0.195	0.274
1998	0.226	0.323
1999	0.234	0.341
2000	0.244	0.350
2001	0.253	0.359
2002	0.260	0.366
2003	0.269	0.365
2004	0.278	0.385
2005	0.287	0.402
2006	0.297	0.420
2007	0.307	0.439
2008	0.319	0.457
2009	0.339	0.492
2010	0.347	0.495

SOURCE: REGIONAL MODEL SIMULATIONS CD87.3B, CD87.LN, AND CD87.HN--CREATED 4/21/83
VARIABLE: S.09

APPENDIX D
MAP Model Regional Absolute
Impact Projections
OCS Sale 87

TABLE D.10
FAIRBANKS CENSUS DIVISION
GOVERNMENT SECTOR EMPLOYMENT
(000)

	2.2 BBBL CASE	3.0 BBBL CASE
1981	0.000	0.000
1982	0.000	0.000
1983	0.000	0.000
1984	0.000	0.000
1985	0.008	0.012
1986	0.016	0.019
1987	0.016	0.020
1988	0.026	0.031
1989	0.043	0.051
1990	0.053	0.071
1991	0.049	0.060
1992	0.065	0.075
1993	0.121	0.157
1994	0.124	0.172
1995	0.129	0.171
1996	0.130	0.178
1997	0.132	0.187
1998	0.134	0.190
1999	0.134	0.189
2000	0.133	0.188
2001	0.132	0.186
2002	0.129	0.182
2003	0.127	0.178
2004	0.125	0.175
2005	0.124	0.174
2006	0.122	0.173
2007	0.121	0.172
2008	0.120	0.171
2009	0.118	0.169
2010	0.116	0.167

SOURCE: REGIONAL MODEL SIMULATIONS CD87.3B, CD87.LN, AND CD87.HN--CREATED 4/21/83
VARIABLE: G.09

APPENDIX E
MAP Model Regional Percent
Impact Projections
OCS Sale 87

TABLE E.1.
ANCHORAGE CENSUS DIVISION
TOTAL POPULATION
(000)

	2.2 BBBL CASE	3.0 BBBL CASE
1981	0.000	0.000
1982	0.000	0.000
1983	0.000	0.000
1984	0.000	0.000
1985	0.216	0.300
1986	0.389	0.456
1987	0.571	0.683
1988	0.710	0.859
1989	1.099	1.306
1990	1.401	1.939
1991	1.224	1.497
1992	1.619	1.813
1993	1.457	1.793
1994	1.606	2.372
1995	1.807	2.361
1996	1.832	2.523
1997	1.931	2.761
1998	1.989	2.803
1999	2.041	2.826
2000	2.089	2.881
2001	2.135	2.945
2002	2.172	2.991
2003	2.206	3.071
2004	2.234	3.134
2005	2.259	3.183
2006	2.279	3.223
2007	2.296	3.261
2008	2.309	3.290
2009	2.299	3.251
2010	2.296	3.228

SOURCE: REGIONAL MODEL SIMULATIONS CD87.3B, CD87.LN, AND CD87.HN--CREATED 4/21/83
VARIABLE: P.02

APPENDIX E
MAP Model Regional Percent
Impact Projections
OCS Sale 87

TABLE E.2.
ANCHORAGE CENSUS DIVISION
TOTAL EMPLOYMENT
(000)

	2.2 BBBL CASE	3.0 BBBL CASE
1981	0.000	0.000
1982	0.000	0.000
1983	0.000	0.000
1984	0.000	0.000
1985	0.266	0.371
1986	0.370	0.411
1987	0.529	0.651
1988	0.664	0.807
1989	1.130	1.335
1990	1.413	2.031
1991	1.092	1.299
1992	1.618	1.751
1993	1.404	1.758
1994	1.599	2.500
1995	1.802	2.348
1996	1.766	2.528
1997	1.864	2.759
1998	1.899	2.735
1999	1.927	2.715
2000	1.945	2.719
2001	1.963	2.737
2002	1.971	2.731
2003	1.981	2.776
2004	1.990	2.813
2005	1.998	2.841
2006	2.006	2.866
2007	2.015	2.894
2008	2.024	2.915
2009	2.008	2.854
2010	2.004	2.821

SOURCE: REGIONAL MODEL SIMULATIONS CD87.3B, CD87.LN, AND CD87.HN--CREATED 4/21/83
VARIABLE: M.02

APPENDIX E
MAP Model Regional Percent
Impact Projections
OCS Sale 87

TABLE E.3.
ANCHORAGE CENSUS DIVISION
BASIC SECTOR EMPLOYMENT
(000)

	2.2 BBBL CASE	3.0 BBBL CASE
1981	0.000	0.000
1982	0.000	0.000
1983	0.000	0.000
1984	0.000	0.000
1985	0.336	0.471
1986	0.443	0.495
1987	0.566	0.698
1988	0.682	0.846
1989	1.241	1.471
1990	1.614	2.377
1991	1.132	1.391
1992	1.664	1.733
1993	1.432	1.780
1994	1.661	2.732
1995	1.877	2.480
1996	1.758	2.519
1997	1.777	2.703
1998	1.767	2.542
1999	1.779	2.446
2000	1.767	2.420
2001	1.764	2.412
2002	1.753	2.388
2003	1.744	2.417
2004	1.735	2.417
2005	1.726	2.414
2006	1.719	2.411
2007	1.712	2.410
2008	1.706	2.407
2009	1.676	2.321
2010	1.665	2.291

SOURCE: REGIONAL MODEL SIMULATIONS CD87.3B, CD87.LN, AND CD87.HN--CREATED 4/21/83
VARIABLE: B.02

APPENDIX E
MAP Model Regional Percent
Impact Projections
OCS Sale 87

TABLE E.4.
ANCHORAGE CENSUS DIVISION
SUPPORT SECTOR EMPLOYMENT
(000)

	2.2 BBBL CASE	3.0 BBBL CASE
1981	0.000	0.000
1982	0.000	0.000
1983	0.000	0.000
1984	0.000	0.000
1985	0.389	0.541
1986	0.534	0.590
1987	0.812	0.997
1988	1.018	1.231
1989	1.697	2.007
1990	2.095	3.006
1991	1.613	1.894
1992	2.385	2.593
1993	1.794	2.228
1994	2.072	3.267
1995	2.352	3.043
1996	2.305	3.329
1997	2.465	3.653
1998	2.515	3.634
1999	2.543	3.606
2000	2.567	3.604
2001	2.593	3.624
2002	2.601	3.614
2003	2.613	3.674
2004	2.621	3.724
2005	2.628	3.757
2006	2.633	3.783
2007	2.638	3.810
2008	2.644	3.827
2009	2.617	3.735
2010	2.600	3.672

SOURCE: REGIONAL MODEL SIMULATIONS CD87.3B, CD87.LN, AND CD87.HN--CREATED 4/21/83
VARIABLE: S.02

APPENDIX E
MAP Model Regional Percent
Impact Projections
OCS Sale 87

TABLE E.5.
ANCHORAGE CENSUS DIVISION
GOVERNMENT SECTOR EMPLOYMENT
(000)

	2.2 BBBL CASE	3.0 BBBL CASE
1981	0.000	0.000
1982	0.000	0.000
1983	0.000	0.000
1984	0.000	0.000
1985	0.051	0.072
1986	0.095	0.110
1987	0.096	0.120
1988	0.152	0.183
1989	0.258	0.301
1990	0.316	0.427
1991	0.301	0.365
1992	0.401	0.463
1993	0.753	0.981
1994	0.777	1.076
1995	0.816	1.078
1996	0.828	1.134
1997	0.848	1.195
1998	0.863	1.222
1999	0.868	1.227
2000	0.867	1.225
2001	0.859	1.215
2002	0.848	1.189
2003	0.835	1.167
2004	0.825	1.154
2005	0.815	1.145
2006	0.805	1.139
2007	0.796	1.135
2008	0.787	1.129
2009	0.774	1.112
2010	0.765	1.095

SOURCE: REGIONAL MODEL SIMULATIONS CD87.3B, CD87.LN, AND CD87.HN--CREATED 4/21/83
VARIABLE: G.02

APPENDIX E
MAP Model Regional Percent
Impact Projections
OCS Sale 87

TABLE E.6
FAIRBANKS CENSUS DIVISION
TOTAL POPULATION
(000)

	2.2 BBBL CASE	3.0 BBBL CASE
1981	0.000	0.000
1982	0.000	0.000
1983	0.000	0.000
1984	0.000	0.000
1985	0.134	0.187
1986	0.300	0.363
1987	0.431	0.509
1988	0.553	0.667
1989	0.835	0.993
1990	1.087	1.467
1991	1.024	1.287
1992	1.307	1.483
1993	1.350	1.654
1994	1.382	1.965
1995	1.514	2.013
1996	1.543	2.100
1997	1.597	2.266
1998	1.654	2.331
1999	1.692	2.354
2000	1.730	2.399
2001	1.761	2.442
2002	1.786	2.473
2003	1.810	2.515
2004	1.829	2.561
2005	1.844	2.594
2006	1.855	2.621
2007	1.864	2.645
2008	1.869	2.662
2009	1.867	2.655
2010	1.858	2.629

SOURCE: REGIONAL MODEL SIMULATIONS CD87.3B, CD87.LN, AND CD87.HN--CREATED 4/21/83
VARIABLE: P.09

APPENDIX E
MAP Model Regional Percent
Impact Projections
OCS Sale 87

TABLE E.7
FAIRBANKS CENSUS DIVISION
TOTAL EMPLOYMENT
(000)

	2.2 BBBL CASE	3.0 BBBL CASE
1981	0.000	0.000
1982	0.000	0.000
1983	0.000	0.000
1984	0.000	0.000
1985	0.071	0.103
1986	0.159	0.198
1987	0.221	0.268
1988	0.318	0.386
1989	0.522	0.616
1990	0.701	0.942
1991	0.653	0.861
1992	0.804	0.901
1993	1.050	1.265
1994	1.054	1.467
1995	1.142	1.573
1996	1.152	1.608
1997	1.169	1.697
1998	1.240	1.785
1999	1.253	1.796
2000	1.265	1.795
2001	1.272	1.795
2002	1.270	1.779
2003	1.272	1.759
2004	1.275	1.782
2005	1.277	1.800
2006	1.279	1.817
2007	1.283	1.836
2008	1.288	1.850
2009	1.303	1.877
2010	1.298	1.845

SOURCE: REGIONAL MODEL SIMULATIONS CD87.3B, CD87.LN, AND CD87.HN--CREATED 4/21/83
VARIABLE: M.09

APPENDIX E
MAP Model Regional Percent
Impact Projections
OCS Sale 87

TABLE E.8
FAIRBANKS CENSUS DIVISION
BASIC SECTOR EMPLOYMENT
(000)

	2.2 BBBL CASE	3.0 BBBL CASE
1981	0.000	0.000
1982	0.000	0.000
1983	0.000	0.000
1984	0.000	0.000
1985	0.370	0.518
1986	0.487	0.544
1987	0.620	0.764
1988	0.747	0.927
1989	1.352	1.603
1990	1.757	2.584
1991	1.215	1.497
1992	1.770	1.838
1993	1.511	1.878
1994	1.618	2.728
1995	1.760	2.349
1996	1.592	2.333
1997	1.574	2.485
1998	1.535	2.277
1999	1.532	2.151
2000	1.519	2.123
2001	1.513	2.111
2002	1.501	2.084
2003	1.492	2.116
2004	1.483	2.115
2005	1.475	2.112
2006	1.467	2.109
2007	1.461	2.108
2008	1.455	2.105
2009	1.425	2.013
2010	1.415	1.984

SOURCE: REGIONAL MODEL SIMULATIONS CD87.3B, CD87.LN, AND CD87.HN--CREATED 4/21/83
VARIABLE: B.09

APPENDIX E
MAP Model Regional Percent
Impact Projections
OCS Sale 87

TABLE E.9
FAIRBANKS CENSUS DIVISION
SUPPORT SECTOR EMPLOYMENT
(000)

	2.2 BBBL CASE	3.0 BBBL CASE
1981	0.000	0.000
1982	0.000	0.000
1983	0.000	0.000
1984	0.000	0.000
1985	-0.051	-0.064
1986	0.067	0.124
1987	0.165	0.189
1988	0.296	0.351
1989	0.406	0.480
1990	0.603	0.699
1991	0.749	1.079
1992	0.736	0.885
1993	1.094	1.207
1994	1.023	1.198
1995	1.124	1.634
1996	1.211	1.661
1997	1.236	1.735
1998	1.403	2.004
1999	1.420	2.072
2000	1.448	2.074
2001	1.465	2.076
2002	1.468	2.063
2003	1.479	2.011
2004	1.488	2.062
2005	1.497	2.097
2006	1.504	2.127
2007	1.512	2.160
2008	1.522	2.184
2009	1.568	2.277
2010	1.558	2.222

SOURCE: REGIONAL MODEL SIMULATIONS CD87.3B, CD87.LN, AND CD87.HN--CREATED 4/21/83
VARIABLE: S.09

APPENDIX E
MAP Model Regional Percent
Impact Projections
OCS Sale 87

TABLE E.10
FAIRBANKS CENSUS DIVISION
GOVERNMENT SECTOR EMPLOYMENT
(000)

	2.2 BBBL CASE	3.0 BBBL CASE
1981	0.000	0.000
1982	0.000	0.000
1983	0.000	0.000
1984	0.000	0.000
1985	0.053	0.075
1986	0.099	0.115
1987	0.101	0.126
1988	0.159	0.192
1989	0.271	0.315
1990	0.331	0.447
1991	0.316	0.383
1992	0.421	0.486
1993	0.792	1.032
1994	0.817	1.132
1995	0.859	1.135
1996	0.873	1.195
1997	0.895	1.261
1998	0.911	1.290
1999	0.918	1.297
2000	0.917	1.296
2001	0.910	1.286
2002	0.898	1.260
2003	0.886	1.237
2004	0.875	1.224
2005	0.865	1.215
2006	0.855	1.210
2007	0.846	1.206
2008	0.837	1.201
2009	0.823	1.183
2010	0.814	1.166

SOURCE: REGIONAL MODEL SIMULATIONS CD87.3B, CD87.LN, AND CD87.HN--CREATED 4/21/83
VARIABLE: G.09

APPENDIX F: MAP MODEL BASE CASE EMPLOYMENT ASSUMPTIONS

In this appendix, we discuss the exogenous employment assumptions which we used for the MAP model base case. Below, we briefly review the employment assumptions for different projects and industries. The tables which follow show the specific employment assumptions for the entire projection period.

Trans-Alaska Pipeline (Table F-1)

Additional construction employment of 90 is assumed in connection with construction of new pump stations. Constant operating employment of 1,500 is assumed.

North Slope Petroleum Production (Table F-2)

Oil-related construction employment on the North Slope peaks at 2,400 in 1983 and 1986, falling to a steady level of 1,000 by 1991. Operating employment grows to 2,502 by 1983 and remains at this level until 2010.

Upper Cook Inlet Petroleum Production (Table F-3)

Employment begins to gradually decline in 1983, falling to half of the current level by 2010.

OCS Development (Tables F-4 - F-10)

Prior to the scheduled date of OCS Sale 83, eight other OCS sales will have occurred, as follows:

Sale	Location	Date
46	Gulf of Alaska	1976
CI	Lower Cook Inlet	1977
BF	Beaufort Sea	1979
55	Gulf of Alaska	1980
60	Lower Cook Inlet	1981
71	Beaufort Sea	1982
57	Bering-Norton	1983
70	St. George	1983
83	Navarin Basin	1984

The first Gulf of Alaska sale (Sale 46) resulted in the drilling of ten dry holes, and exploration has ended in these tracts. Disappointing results of exploration on tracts leased in Lower Cook Inlet (Sale CI) in 1977 also resulted, at least temporarily, in a halt to exploration there.

In the base case, no future employment is assumed to result from Sale 46. In addition, it is assumed that no recoverable resources are discovered on tracts leased in Sales CI, 55, 57, 60 and 70; that is, such sales are assumed to generate only exploration employment. We assumed development of oil resources for the remaining three sales as shown below:

Sale	Location	Oil (Billions Of Barrels)	Gas (Trillion Cubic Ft.)
BF	Beaufort Sea	.75	1.625
71	Beaufort Sea	2.38	1.78
83	Navarin Basin	1.20	0

The assumption of gas development for sales BF and 71 is inconsistent with the assumption that no gas pipeline is developed, with North Slope gas being used instead for tertiary oil recovery. However, the resulting overestimate of employment assumed for OCS development would have a very small effect upon our base case projections, and even less of an effect upon the projected impacts.

Exploration in 1982 on Sale CI is assumed to provide 38 jobs in mining and 9 jobs in transportation. No subsequent employment is provided by Sale CI. The levels of employment assumed for the remaining six OCS sales are shown in Tables F-4 through F-10.

North Slope Gas (Table F-11)

A tertiary oil recovery project utilizing North Slope natural gas occurs in the early 1990s, with employment peaking at 2,000 in 1991 and 1992.

Beluga Coal (Table F-12)

A coal export program from the Beluga fields is implemented beginning in 1985. Construction employment peaks at 400 in 1987. Long-run operations employment is 524.

Hydroelectric Projects (Tables F-13 and F-14)

Employment in the Tyee and Terror Lake hydroelectric projects peaks at 520 in 1983. Employment on other hydroelectric projects peaks at 725 in 1989-1992.

U.S. Borax Mine (Table F-15)

Construction employment at the U.S. Borax Mine reaches a maximum of 500 in 1985. Long-run operating employment is 790.

Greens Creek Mine (Table F-16)

Employment is 315 for the period 1986-1996.

Red Dog Mine (Table F-17)

Construction employment at the Red Dog Mine near Kotzebue reaches a maximum of 200 in 1986. Long-run mining employment is 448.

Other Mining (Table F-18)

Other mining employment is assumed to grow at a constant rate of one percent per year, from 3,171 in 1980 to 4,274 in 2010.

Agriculture (Table F-19)

Agriculture grows at a moderate rate, with total employment expanding from 183 in 1980 to 308 in 2000.

Logging and Sawmills (Table F-20)

Employment peaks at 3,222 in 1999 and then gradually declines to 2,776 by 2000.

Pulp Mills (Table F-21)

Employment declines gradually, at a rate of 1 percent per year, from 981 in 1981 to 747 in 2010.

Commercial Fishing - Other than Bottomfish (Table F-22)

Fishing employment remains constant at 7,123. Fish harvesting employment remains constant at 6,363.

Commercial Fishing - Bottomfish (Table F-23)

The total U.S. bottomfish catch rises at a constant rate, rising to the allowable catch by 2000. Most bottomfish processing takes place offshore. Harvesting employment for Alaskans rises to only 733 by 2000, while processing employment rises to 971.

Federal Civilian and Military Employment (Tables F-24, F-25)

Federal military employment remains constant at 23,323. Federal civilian employment grows at .6 percent per year, from 17,800 in 1980 to 21,042 in 2000.

TABLE F-1.

TRANS ALASKA PIPELINE

THOUSANDS OF EMPLOYEES

	HIGH WAGE EXOG CONSTRUCTION EMPLOYMENT	EXOG TRANSPORTATION EMPLOYMENT
1980	0.090	1.500
1981	0.090	1.500
1982	0.090	1.500
1983	0.000	1.500
1984	0.000	1.500
1985	0.000	1.500
1986	0.000	1.500
1987	0.000	1.500
1988	0.000	1.500
1989	0.000	1.500
1990	0.000	1.500
1991	0.000	1.500
1992	0.000	1.500
1993	0.000	1.500
1994	0.000	1.500
1995	0.000	1.500
1996	0.000	1.500
1997	0.000	1.500
1998	0.000	1.500
1999	0.000	1.500
2000	0.000	1.500
2001	0.000	1.500
2002	0.000	1.500
2003	0.000	1.500
2004	0.000	1.500
2005	0.000	1.500
2006	0.000	1.500
2007	0.000	1.500
2008	0.000	1.500
2009	0.000	1.500
2010	0.000	1.500

SOURCE: MAP MODEL CASE TAP.083

TABLE F-2.

NORTH SLOPE PETROLEUM

THOUSANDS OF EMPLOYEES

****
****

	HIGH WAGE EXOG CONSTRUCTION EMPLOYMENT	MINING EMPLOYMENT
1980	0.700	1.900
1981	1.300	2.100
1982	2.000	2.300
1983	2.400	2.502
1984	1.800	2.502
1985	2.000	2.502
1986	2.400	2.502
1987	1.800	2.502
1988	1.500	2.502
1989	1.500	2.502
1990	1.500	2.502
1991	1.000	2.502
1992	1.000	2.502
1993	1.000	2.502
1994	1.000	2.502
1995	1.000	2.502
1996	1.000	2.502
1997	1.000	2.502
1998	1.000	2.502
1999	1.000	2.502
2000	1.000	2.502
2001	1.000	2.502
2002	1.000	2.502
2003	1.000	2.502
2004	1.000	2.502
2005	1.000	2.502
2006	1.000	2.502
2007	1.000	2.502
2008	1.000	2.502
2009	1.000	2.502
2010	1.000	2.502

SOURCE: MAP MODEL CASE NO. 093
VARIABLES: EMONXI, EMPS

TABLE F-3.

UPPER COOK INLET PETROLEUM

THOUSANDS OF EMPLOYEES

****
****

	MINING EMPLOYMENT
1980	0.778
1981	0.778
1982	0.778
1983	0.759
1984	0.740
1985	0.721
1986	0.703
1987	0.685
1988	0.668
1989	0.652
1990	0.635
1991	0.619
1992	0.604
1993	0.589
1994	0.574
1995	0.560
1996	0.546
1997	0.532
1998	0.519
1999	0.506
2000	0.493
2001	0.481
2002	0.469
2003	0.457
2004	0.446
2005	0.435
2006	0.424
2007	0.413
2008	0.403
2009	0.393
2010	0.383

SOURCE: MAP MODEL CASE UPC.082
VARIABLE: EMPS

TABLE F-4.

OCS FEDERAL/STATE LEASE SALE (BEAUFORT SEA)

EMPLOYMENT ASSUMPTIONS

THOUSANDS OF EMPLOYEES

	MINING EMPLOYMENT	HIGH WAGE EXOG CONSTRUCTION EMPLOYMENT
1980	0.000	0.000
1981	0.066	0.062
1982	0.197	0.188
1983	0.197	0.135.
1984	0.230	0.211
1985	0.066	0.150
1986	0.112	0.305
1987	0.276	0.383
1988	0.479	0.466
1989	0.616	0.466
1990	0.595	0.155
1991	0.524	0.155
1992	0.503	0.077
1993	0.432	0.155
1994	0.435	0.155
1995	0.438	0.077
1996	0.440	0.022
1997	0.417	0.000
1998	0.393	0.000
1999	0.393	0.000
2000	0.394	0.000
2001	0.318	0.000
2002	0.287	0.000
2003	0.253	0.000
2004	0.224	0.000
2005	0.201	0.000
2006	0.178	0.000
2007	0.157	0.000
2008	0.138	0.000
2009	0.000	0.000
2010	0.000	0.000

OCS.BFM

TABLE F-5.

OCS SALE 55 (GULF OF ALASKA)

EMPLOYMENT ASSUMPTIONS

THOUSANDS OF EMPLOYEES

	MINING EMPLOYMENT	EXOG TRANS-PORTATION EMPLOYMENT
1980	0.000	0.000
1981	0.030	0.013
1982	0.030	0.028
1983	0.030	0.028
1984	0.030	0.020
1985	0.000	0.007
1986	0.000	0.000
1987	0.000	0.000
1988	0.000	0.000
1989	0.000	0.000
1990	0.000	0.000
1991	0.000	0.000
1992	0.000	0.000
1993	0.000	0.000
1994	0.000	0.000
1995	0.000	0.000
1996	0.000	0.000
1997	0.000	0.000
1998	0.000	0.000
1999	0.000	0.000
2000	0.000	0.000
2001	0.000	0.000
2002	0.000	0.000
2003	0.000	0.000
2004	0.000	0.000
2005	0.000	0.000
2006	0.000	0.000
2007	0.000	0.000
2008	0.000	0.000
2009	0.000	0.000
2010	0.000	0.000

OCS.55X

TABLE F-6.

OCS SALE 57 (BERING/NORTON)

EMPLOYMENT ASSUMPTIONS

THOUSANDS OF EMPLOYEES

	MINING EMPLOYMENT	LOW WAGE EXOG CONSTRUCTION EMPLOYMENT	EXOG TRANSPORTATION EMPLOYMENT
1980	0.000	0.000	0.000
1981	0.000	0.000	0.000
1982	0.000	0.000	0.000
1983	0.026	0.000	0.015
1984	0.056	0.005	0.031
1985	0.030	0.005	0.016
1986	0.000	0.000	0.000
1987	0.000	0.000	0.000
1988	0.000	0.000	0.000
1989	0.000	0.000	0.000
1990	0.000	0.000	0.000
1991	0.000	0.000	0.000
1992	0.000	0.000	0.000
1993	0.000	0.000	0.000
1994	0.000	0.000	0.000
1995	0.000	0.000	0.000
1996	0.000	0.000	0.000
1997	0.000	0.000	0.000
1998	0.000	0.000	0.000
1999	0.000	0.000	0.000
2000	0.000	0.000	0.000
2001	0.000	0.000	0.000
2002	0.000	0.000	0.000
2003	0.000	0.000	0.000
2004	0.000	0.000	0.000
2005	0.000	0.000	0.000
2006	0.000	0.000	0.000
2007	0.000	0.000	0.000
2008	0.000	0.000	0.000
2009	0.000	0.000	0.000
2010	0.000	0.000	0.000

OCS.57X

TABLE F-7.

OCS SALE 60 (LOWER COOK INLET)

EMPLOYMENT ASSUMPTIONS

THOUSANDS OF EMPLOYEES

	MINING EMPLOYMENT	LOW WAGE EXOG CONSTRUCTION EMPLOYMENT	EXOG TRANSPORTATION EMPLOYMENT
1980	0.000	0.000	0.000
1981	0.000	0.000	0.000
1982	0.038	0.028	0.009
1983	0.083	0.000	0.026
1984	0.090	0.000	0.033
1985	0.075	0.000	0.017
1986	0.038	0.000	0.009
1987	0.000	0.000	0.000
1988	0.000	0.000	0.000
1989	0.000	0.000	0.000
1990	0.000	0.000	0.000
1991	0.000	0.000	0.000
1992	0.000	0.000	0.000
1993	0.000	0.000	0.000
1994	0.000	0.000	0.000
1995	0.000	0.000	0.000
1996	0.000	0.000	0.000
1997	0.000	0.000	0.000
1998	0.000	0.000	0.000
1999	0.000	0.000	0.000
2000	0.000	0.000	0.000
2001	0.000	0.000	0.000
2002	0.000	0.000	0.000
2003	0.000	0.000	0.000
2004	0.000	0.000	0.000
2005	0.000	0.000	0.000
2006	0.000	0.000	0.000
2007	0.000	0.000	0.000
2008	0.000	0.000	0.000
2009	0.000	0.000	0.000
2010	0.000	0.000	0.000

OCS.60X

TABLE F-8.

OCS SALE 70 (ST.GEORGE)

EMPLOYMENT ASSUMPTIONS

THOUSANDS OF EMPLOYEES

	MINING EMPLOYMENT	EXOG TRANS-PORTATION EMPLOYMENT
1980	0.000	0.000
1981	0.000	0.000
1982	0.000	0.000
1983	0.050	0.023
1984	0.064	0.037
1985	0.072	0.046
1986	0.065	0.039
1987	0.044	0.008
1988	0.000	0.000
1989	0.000	0.000
1990	0.000	0.000
1991	0.000	0.000
1992	0.000	0.000
1993	0.000	0.000
1994	0.000	0.000
1995	0.000	0.000
1996	0.000	0.000
1997	0.000	0.000
1998	0.000	0.000
1999	0.000	0.000
2000	0.000	0.000
2001	0.000	0.000
2002	0.000	0.000
2003	0.000	0.000
2004	0.000	0.000
2005	0.000	0.000
2006	0.000	0.000
2007	0.000	0.000
2008	0.000	0.000
2009	0.000	0.000
2010	0.000	0.000

OCS.70L

TABLE F-9.

OCS SALE 71 (BEAUFORT SEA)

EMPLOYMENT ASSUMPTIONS

THOUSANDS OF EMPLOYEES

	MINING EMPLOYMENT	LOW WAGE EXOG CON-STRUCTION EMPLOYMENT	EXOG TRANS-PORTATION EMPLOYMENT
1980	0.000	0.000	0.000
1981	0.000	0.000	0.000
1982	0.000	0.000	0.000
1983	0.000	0.000	0.000
1984	0.000	0.037	0.000
1985	0.032	0.000	0.007
1986	0.052	0.000	0.017
1987	0.053	0.000	0.018
1988	0.052	0.000	0.017
1989	0.000	0.000	0.000
1990	0.000	0.076	0.000
1991	1.205	0.077	0.000
1992	1.353	0.035	0.090
1993	1.393	0.000	0.247
1994	1.393	0.000	0.363
1995	1.408	0.000	0.363
1996	1.178	0.000	0.363
1997	0.970	0.000	0.363
1998	0.970	0.000	0.363
1999	0.985	0.000	0.363
2000	0.996	0.000	0.363
2001	0.996	0.000	0.363
2002	0.996	0.000	0.363
2003	0.996	0.000	0.363
2004	0.996	0.000	0.363
2005	0.996	0.000	0.363
2006	0.996	0.000	0.363
2007	0.996	0.000	0.363
2008	0.996	0.000	0.363
2009	0.996	0.000	0.363
2010	0.996	0.000	0.363

OCS.71M

Table F-10

OCS Sale 83 (Navarin Basin)
Employment and Revenue Assumptions
(Thousands of Employees, Millions of Current $)

	LOW WAGE EXOG CON-STRUCTION EMPLOYMENT	MINING EMPLOYMENT	EXOG TRANS-PORTATION EMPLOYMENT	STATE PROPERTY TAX REVENUE
1980	0.000	0.000	0.000	0.000
1981	0.000	0.000	0.000	0.000
1982	0.000	0.000	0.000	0.000
1983	0.000	0.000	0.000	0.000
1984	0.000	0.000	0.000	0.000
1985	0.210	0.000	0.000	0.000
1986	0.000	0.120	0.293	0.287
1987	0.000	0.320	0.380	0.309
1988	0.000	0.360	0.398	0.332
1989	0.263	0.360	0.398	0.357
1990	0.131	0.240	0.345	0.383
1991	0.593	0.330	0.393	0.412
1992	4.371	0.789	0.509	0.443
1993	4.668	1.506	0.752	0.476
1994	0.890	2.534	0.933	173.610
1995	0.297	3.114	0.983	178.877
1996	0.000	3.367	0.983	183.958
1997	0.000	3.391	0.983	188.795
1998	0.000	3.196	0.983	193.323
1999	0.000	2.906	0.983	197.468
2000	0.000	2.480	0.983	201.147
2001	0.000	2.152	0.983	204.267
2002	0.000	2.040	0.983	206.724
2003	0.000	2.040	0.983	208.401
2004	0.000	2.040	0.983	209.166
2005	0.000	2.040	0.983	208.873
2006	0.000	2.040	0.983	207.360
2007	0.000	2.040	0.983	204.446
2008	0.000	2.040	0.983	199.927
2009	0.000	2.040	0.983	193.581
2010	0.000	2.040	0.983	185.158

SOURCE: MAP MODEL CASE OCS.83M
VARIABLES: EMCNX2 EMP9 EMT9X RPPS

TABLE F-11.

NORTH SLOPE GAS

THOUSANDS OF EMPLOYEES

	MINING EMPLOYMENT
1980	0.000
1981	0.000
1982	0.000
1983	0.000
1984	0.000
1985	0.000
1986	0.000
1987	0.000
1988	0.000
1989	0.500
1990	1.000
1991	2.000
1992	2.000
1993	1.000
1994	0.500
1995	0.000
1996	0.000
1997	0.000
1998	0.000
1999	0.000
2000	0.000
2001	0.000
2002	0.000
2003	0.000
2004	0.000
2005	0.000
2006	0.000
2007	0.000
2008	0.000
2009	0.000
2010	0.000

SOURCE: MAP MODEL CASE NSO.TRC

TABLE F-12.

BELUGA COAL DEVELOPMENT

EMPLOYMENT ASSUMPTIONS

THOUSANDS OF EMPLOYEES

	MINING EMPLOYMENT	LOW WAGE EXOG CONSTRUCTION EMPLOYMENT	EXOG TRANSPORTATION EMPLOYMENT
1980	0.000	0.000	0.000
1981	0.000	0.000	0.000
1982	0.000	0.000	0.000
1983	0.000	0.000	0.000
1984	0.000	0.000	0.000
1985	0.000	0.150	0.000
1986	0.000	0.300	0.000
1987	0.000	0.400	0.000
1988	0.000	0.350	0.000
1989	0.000	0.200	0.000
1990	0.210	0.100	0.053
1991	0.419	0.000	0.105
1992	0.419	0.000	0.105
1993	0.419	0.000	0.105
1994	0.419	0.000	0.105
1995	0.419	0.000	0.105
1996	0.419	0.000	0.105
1997	0.419	0.000	0.105
1998	0.419	0.000	0.105
1999	0.419	0.000	0.105
2000	0.419	0.000	0.105
2001	0.419	0.000	0.105
2002	0.419	0.000	0.105
2003	0.419	0.000	0.105
2004	0.419	0.000	0.105
2005	0.419	0.000	0.105
2006	0.419	0.000	0.105
2007	0.419	0.000	0.105
2008	0.419	0.000	0.105
2009	0.419	0.000	0.105
2010	0.419	0.000	0.105

CCL.04T

TABLE F-13.

SMALL HYDRO PROJECTS

THOUSANDS OF EMPLOYEES

	LOW WAGE EXOG CONSTRUCTION EMPLOYMENT
1980	0.000
1981	0.000
1982	0.125
1983	0.250
1984	0.276
1985	0.213
1986	0.250
1987	0.163
1988	0.401
1989	0.725
1990	0.725
1991	0.725
1992	0.725
1993	0.363
1994	0.000
1995	0.000
1996	0.000
1997	0.000
1998	0.000
1999	0.000
2000	0.000
2001	0.000
2002	0.000
2003	0.000
2004	0.000
2005	0.000
2006	0.000
2007	0.000
2008	0.000
2009	0.000
2010	0.000

SOURCE: MAP MODEL CASE SHP.082

TABLE F-14.

TYEE AND TERROR LAKE HYDRO. PROJECTS

THOUSANDS OF EMPLOYEES

	HIGH WAGE EXOG CONSTRUCTION EMPLOYMENT
1980	0.010
1981	0.043
1982	0.179
1983	0.520
1984	0.195
1985	0.000
1986	0.000
1987	0.000
1988	0.000
1989	0.000
1990	0.000
1991	0.000
1992	0.000
1993	0.000
1994	0.000
1995	0.000
1996	0.000
1997	0.000
1998	0.000
1999	0.000
2000	0.000
2001	0.000
2002	0.000
2003	0.000
2004	0.000
2005	0.000
2006	0.000
2007	0.000
2008	0.000
2009	0.000
2010	0.000

MAP MODEL CASE

EMPMAN

TABLE F-15.

U.S. BORAX

EMPLOYMENT ASSUMPTIONS

THOUSANDS OF EMPLOYEES

	MINING EMPLOYMENT	LOW WAGE EXOG CONSTRUCTION EMPLOYMENT
1980	0.012	0.000
1981	0.030	0.000
1982	0.041	0.000
1983	0.041	0.040
1984	0.058	0.350
1985	0.058	0.500
1986	0.058	0.400
1987	0.428	0.300
1988	0.790	0.000
1989	0.790	0.000
1990	0.790	0.000
1991	0.790	0.000
1992	0.790	0.000
1993	0.790	0.000
1994	0.790	0.000
1995	0.790	0.000
1996	0.790	0.000
1997	0.790	0.000
1998	0.790	0.000
1999	0.790	0.000
2000	0.790	0.000
2001	0.790	0.000
2002	0.790	0.000
2003	0.790	0.000
2004	0.790	0.000
2005	0.790	0.000
2006	0.790	0.000
2007	0.790	0.000
2008	0.790	0.000
2009	0.790	0.000
2010	0.790	0.000

6XM.PJM

TABLE F-16.

GREENS CREEK MINE.

THOUSANDS OF EMPLOYEES

	MINING EMPLOYMENT
1980	0.000
1981	0.000
1982	0.000
1983	0.000
1984	0.000
1985	0.000
1986	0.315
1987	0.315
1988	0.315
1989	0.315
1990	0.315
1991	0.315
1992	0.315
1993	0.315
1994	0.315
1995	0.315
1996	0.315
1997	0.000
1998	0.000
1999	0.000
2000	0.000
2001	0.000
2002	0.000
2003	0.000
2004	0.000
2005	0.000
2006	0.000
2007	0.000
2008	0.000
2009	0.000
2010	0.000

OURCE: MAP MODEL CASE GCM 000

TABLE F-17.

RED DOG MINE

EMPLOYMENT ASSUMPTIONS

THOUSANDS OF EMPLOYEES

	MINING EMPLOYMENT	LOW WAGE EXOG CONSTRUCTION EMPLOYMENT
1980	0.025	0.000
1981	0.025	0.000
1982	0.025	0.000
1983	0.025	0.000
1984	0.035	0.100
1985	0.021	0.150
1986	0.026	0.200
1987	0.021	0.150
1988	0.448	0.000
1989	0.448	0.000
1990	0.448	0.000
1991	0.448	0.000
1992	0.448	0.000
1993	0.448	0.000
1994	0.448	0.000
1995	0.448	0.000
1996	0.448	0.000
1997	0.448	0.000
1998	0.448	0.000
1999	0.448	0.000
2000	0.448	0.000
2001	0.448	0.000
2002	0.448	0.000
2003	0.448	0.000
2004	0.448	0.000
2005	0.448	0.000
2006	0.448	0.000
2007	0.448	0.000
2008	0.448	0.000
2009	0.448	0.000
2010	0.448	0.000

RED.PJH

TABLE F-18.

OTHER MINING

EMPLOYMENT ASSUMPTIONS

THOUSANDS OF EMPLOYEES

	MINING EMPLOYMENT
1980	3.171
1981	3.203
1982	3.235
1983	3.267
1984	3.300
1985	3.333
1986	3.367
1987	3.400
1988	3.434
1989	3.469
1990	3.503
1991	3.538
1992	3.574
1993	3.609
1994	3.645
1995	3.682
1996	3.719
1997	3.756
1998	3.793
1999	3.831
2000	3.869
2001	3.908
2002	3.947
2003	3.986
2004	4.026
2005	4.066
2006	4.107
2007	4.148
2008	4.190
2009	4.231
2010	4.274

OMN.EPH

TABLE F-19.

AGRICULTURAL
EMPLOYMENT ASSUMPTIONS
THOUSANDS OF EMPLOYEES

	AGRI-CULTURE EMPLOYMENT
1980	0.183
1981	0.188
1982	0.194
1983	0.203
1984	0.211
1985	0.219
1986	0.228
1987	0.239
1988	0.250
1989	0.263
1990	0.276
1991	0.291
1992	0.306
1993	0.325
1994	0.343
1995	0.365
1996	0.389
1997	0.414
1998	0.442
1999	0.474
2000	0.508
2001	0.527
2002	0.546
2003	0.568
2004	0.589
2005	0.611
2006	0.634
2007	0.660
2008	0.686
2009	0.772
2010	0.740

AGR.PJM

TABLE F-20.

LOGGING AND SAWMILLS

THOUSANDS OF EMPLOYEES

	LOW WAGE EXOG MANU-FACTURING EMPLOYMENT
1980	2.069
1981	1.654
1982	2.037
1983	2.325
1984	2.472
1985	2.657
1986	2.843
1987	3.027
1988	3.119
1989	3.167
1990	3.214
1991	3.214
1992	3.218
1993	3.218
1994	3.218
1995	3.219
1996	3.219
1997	3.219
1998	3.221
1999	3.222
2000	3.202
2001	3.106
2002	2.903
2003	2.880
2004	2.859
2005	2.838
2006	2.769
2007	2.770
2008	2.770
2009	2.774
2010	2.776

SOURCE: MAP MODEL [illegible]

TABLE F-21.

PULP MILLS

THOUSANDS OF EMPLOYEES

	LOW WAGE EXOG MANU-FACTURING EMPLOYMENT
1980	0.982
1981	0.931
1982	0.930
1983	0.980
1984	0.970
1985	0.960
1986	0.951
1987	0.941
1988	0.932
1989	0.923
1990	0.913
1991	0.904
1992	0.895
1993	0.886
1994	0.877
1995	0.869
1996	0.860
1997	0.851
1998	0.843
1999	0.834
2000	0.826
2001	0.818
2002	0.810
2003	0.802
2004	0.794
2005	0.786
2006	0.778
2007	0.770
2008	0.762
2009	0.755
2010	0.747

SOURCE: MAP MODEL CASE FPU.082

TABLE F-22.

COMMERCIAL FISHING (NON-BOTTOMFISH)

EMPLOYMENT ASSUMPTIONS

THOUSANDS OF EMPLOYEES

	LOW WAGE EXOG MANU-FACTURING EMPLOYMENT	FISH HARVESTING EMPLOYMENT
1980	7.123	6.363
1981	7.123	6.363
1982	7.123	6.363
1983	7.123	6.363
1984	7.123	6.363
1985	7.123	6.363
1986	7.123	6.363
1987	7.123	6.363
1988	7.123	6.363
1989	7.123	6.363
1990	7.123	6.363
1991	7.123	6.363
1992	7.123	6.363
1993	7.123	6.363
1994	7.123	6.363
1995	7.123	6.363
1996	7.123	6.363
1997	7.123	6.363
1998	7.123	6.363
1999	7.123	6.363
2000	7.123	6.363
2001	7.123	6.363
2002	7.123	6.363
2003	7.123	6.363
2004	7.123	6.363
2005	7.123	6.363
2006	7.123	6.363
2007	7.123	6.363
2008	7.123	6.363
2009	7.123	6.363
2010	7.123	6.363

TCF.WK1

TABLE F-23.

EMPLOYMENT
THOUSANDS OF EMPLOYEES

	FISH HARVESTING EMPLOYMENT	LOW WAGE EXOG MANU-FACTURING EMPLOYMENT
1980	0.000	0.000
1981	0.030	0.002
1982	0.038	0.004
1983	0.058	0.005
1984	0.081	0.006
1985	0.108	0.009
1986	0.136	0.012
1987	0.164	0.016
1988	0.181	0.022
1989	0.216	0.027
1990	0.229	0.042
1991	0.245	0.058
1992	0.266	0.079
1993	0.292	0.108
1994	0.326	0.148
1995	0.368	0.202
1996	0.421	0.276
1997	0.488	0.378
1998	0.572	0.517
1999	0.678	0.708
2000	0.733	0.971
2001	0.733	0.971
2002	0.733	0.971
2003	0.733	0.971
2004	0.733	0.971
2005	0.733	0.971
2006	0.733	0.971
2007	0.733	0.971
2008	0.733	0.971
2009	0.733	0.971
2010	0.733	0.971

FILE: MAP MODEL CASE BCF.183

TABLE F-24.

FEDERAL MILITARY

THOUSANDS OF EMPLOYEES

	ACTIVE DUTY MILITARY EMPLOYMENT
1980	23.323
1981	23.323
1982	23.323
1983	23.323
1984	23.323
1985	23.323
1986	23.323
1987	23.323
1988	23.323
1989	23.323
1990	23.323
1991	23.323
1992	23.323
1993	23.323
1994	23.323
1995	23.323
1996	23.323
1997	23.323
1998	23.323
1999	23.323
2000	23.323
2001	23.323
2002	23.323
2003	23.323
2004	23.323
2005	23.323
2006	23.323
2007	23.323
2008	23.323
2009	23.323
2010	23.323

SOURCE: MAP MODEL BASE GEN.MAP

TABLE F-25

FEDERAL CIVILIAN
THOUSANDS OF EMPLOYEES

	CIVILIAN FEDERAL EMPLOYMENT
	17.800
	17.700
	18.300
	18.391
	18.483
	18.576
	18.669
	18.762
	18.856
1989	18.950
1990	19.045
1991	19.140
1992	19.236
1993	19.332
1994	19.429
1995	19.526
1996	19.623
1997	19.721
1998	19.820
1999	19.919
2000	20.019
2001	20.119
2002	20.219
2003	20.321
2004	20.422
2005	20.524
2006	20.627
2007	20.730
2008	20.834
2009	20.938
2010	21.042

SOURCE: MAP MODEL CASE GFC.032
EMAC

APPENDIX G
HISTORICAL OVERVIEW OF ALASKA ECONOMY
By Scott Goldsmith

The pattern of economic growth of Alaska is shown in Figure G.1, and is measured by four categories of employment. The growth since statehood in 1959 has been dramatic, particularly in the 1970s. The average annual growth rate measured between 1961 and 1980 has been 4.3 percent, more than double the national average over the same period.[1]

Of particular interest in understanding the possible future direction of the Alaska economy is the information about past sources of growth which can be obtained from an examination of the past behavior of the different categories of employment. Conventional wisdom is that the economic growth of a region is dependent upon the growth of its basic sector industries--those industries for which the region has a comparative advantage in producing goods and services for export outside the region, such as manufactured goods. Around these industries cluster support industries both for the basic sector and for the labor force employed in those industries. Basic sector employment (defined to include mining, petroleum, fish harvesting, timber harvesting, manufacturing for export, tourism, agriculture, pipeline construction construction, operations, and federal government--civilian and

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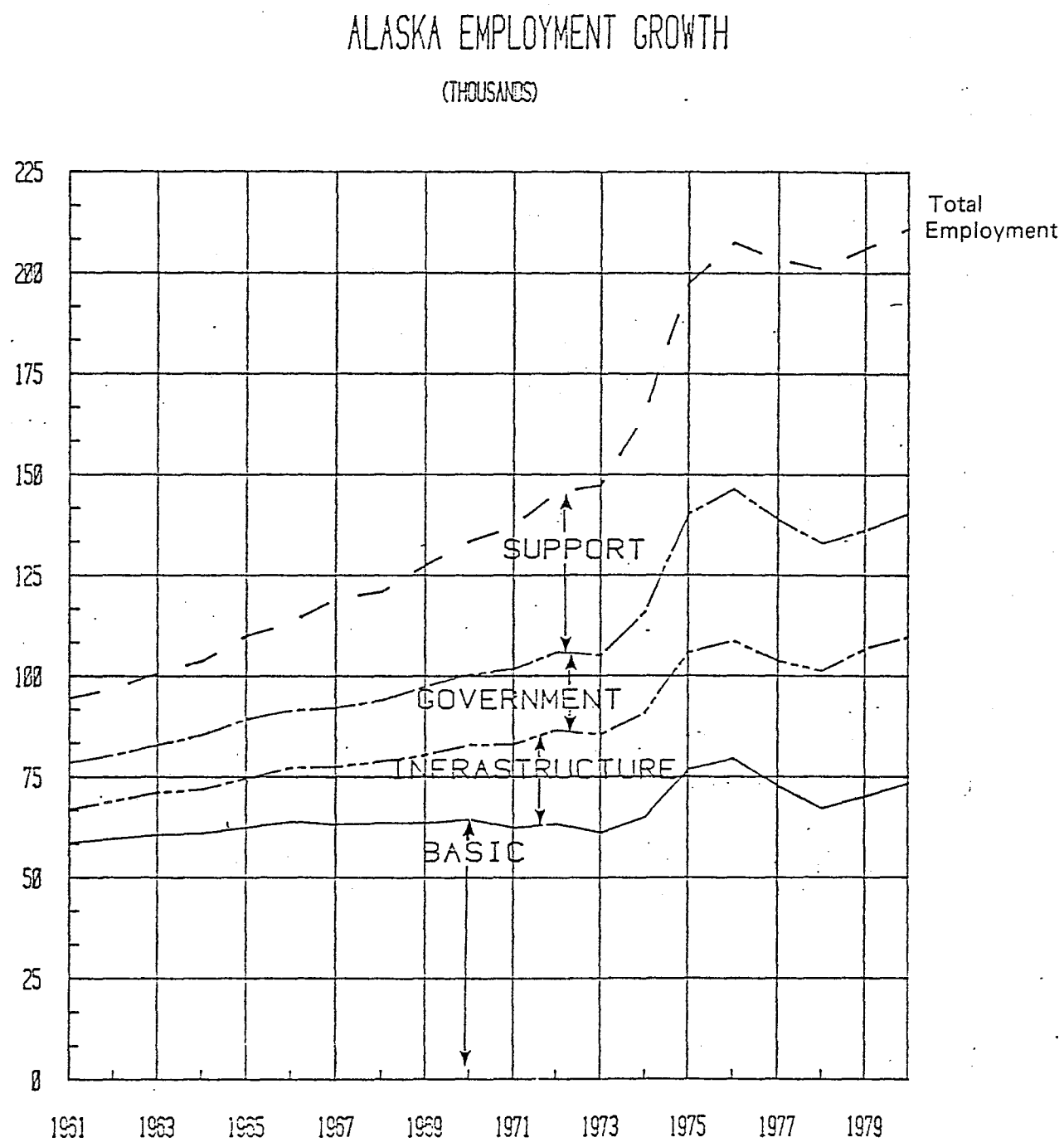
[1]The annualized growth in total civilian employment between 1959 and 1980 was 2.0 percent. Valerie Personick, "Industry Output and Employment: BLS Projections to 1990," Monthly Labor Review, April 1979, p. 10.

Figure G.1


ALASKA EMPLOYMENT GROWTH
(THOUSANDS)
225
200
175
150
125
100
75
50
25
0
1951
1953
1955
1957
1959
1971
1973
1975
1977
1979
Total Employment
SUPPORT
GOVERNMENT
INFRASTRUCTURE
BASIC

military) has grown since statehood, but only by an annualized rate of 1.2 percent per year, and displayed practically no growth during the decade of the 1960s. Basic sector employment growth has contributed to growth in the overall economy both directly and indirectly through the multiplier process, but clearly by itself it has not been a significant factor in the rapid economic growth of the past.

Two important characteristics of basic sector employment in Alaska are not indicated by the relatively stable level of this sector during the last twenty years. The first is that the stability is largely the result of the federal government, which is the largest employer in the state and which dominates, in numbers, basic sector employment. In fact, federal employment in Anchorage is surpassed only by Washington, D.C. (among the BEA Economics Areas) as a proportion of total employment.[2] This component of basic employment forms a large and stable anchor for the whole sector.

This is particularly important because of the inherent instability of the remainder of the basic sector in Alaska. BecauseAlaska's remote location and harsh climate result in high production costs, basic sector activity has historically been confined to the extraction of rich deposits (low average cost of

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[2]Arlon Tussing, Lee Huskey, and Tom Singer, "The Place of Support Sector Growth, Import Substitution, and Structural Change in Alaska's Economic Development," ISER, February 1983, p. III.3.

production) of natural resources. The past pattern has been one of exploitation of one resource after another--furs, gold, timber, copper, fish--by nonresident labor and outside capital in a rush to deplete each resource as rapidly as possible. The result has been an economy dominated by a succession of booms and busts as new resources were discovered, extracted, and depleted. Since the basic sector held a more dominant position in the total economy in past times (for example, 63 percent of the total in 1961 versus 36 percent in 1980) than currently, the cyclical nature of basic activity meant that the whole economy was subject to instability.

Even in the best situations, the production of primary commodities is highly cyclical. Although the smaller proportional contribution of basic to total employment today tends to disguise the cyclical influence of natural resource extraction, it is important to keep in mind for two reasons. First, the cyclical nature of primary commodity markets makes it difficult to project future demand (and price levels); and second, the industries are heavily dependent upon supplies which are highly uncertain. For example, very little is known about mineral occurrences in the state or the dynamics of the different fishery stocks.

The other three employment categories shown in Figure G.1 have all displayed much more rapid employment growth since statehood than the basic sector. The reasons for their growth reveal much about the process of economic growth in the state. The infrastructure

sector is loosely defined to include the transportation, communication, public utility, and construction industries, as well as business services. Annualized growth in this sector has been 5.5 percent since 1961 with a prominent "bulge" during the mid 1970s. This growth is largely the result of the undeveloped conditions of the economy prior to statehood combined with the scattered distribution of population in a huge state with sparse population. Thus, the level of infrastructure employment necessary to link the population together is high, and the process of building the infrastructure itself magnifies employment in this sector in the short run. The building is both for the purpose of "catching up" to the infrastructure levels of other regions, and also to meet the needs of the rapidly expanding Alaskan population. This is reflected in the fact that state and local government capital outlay per capita have historically averaged three to five times the national average.[3]

An important variable in the future economic growth of the state is the extent to which this process of infrastructure enrichment will continue to occur independent of growth in the basic sector. The answer in large part depends upon two factors. The first is the availability of public capital to fund infrastructure additions. Particularly in the early years after statehood, the funds to

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[3]U.S. Department of Commerce, Bureau of the Census, Governmental Finances, annual.

construct infrastructures came primarily from the federal government. During the 1970s, state government had been able to provide an increasing share of the funding for infrastructure as a result of the receipt of substantial oil revenues.

The second is the future rate of population growth. The faster this growth occurs, the more infrastructure development is required and the higher will be construction activity on a per capita basis.

State and local government forms the third sector of the economy. Employment growth in this sector has been particularly dramatic since statehood growing at an annualized rate of 8.2 percent. Interestingly, the rate of increase during the first decade after statehood--9.4 percent--exceeds that of the decade of the 1970s when the state began to receive substantial amounts of oilrevenues. State government revenues currently are derived almost exclusively from petroleum, and a large proportion of local government revenues are also dependent upon petroleum through state transfers and taxes on petroleum property. Consequently, the future size of this sector of the economy, which is second only to federal government in numbers employed, is closely tied to the future receipt of petroleum revenues.

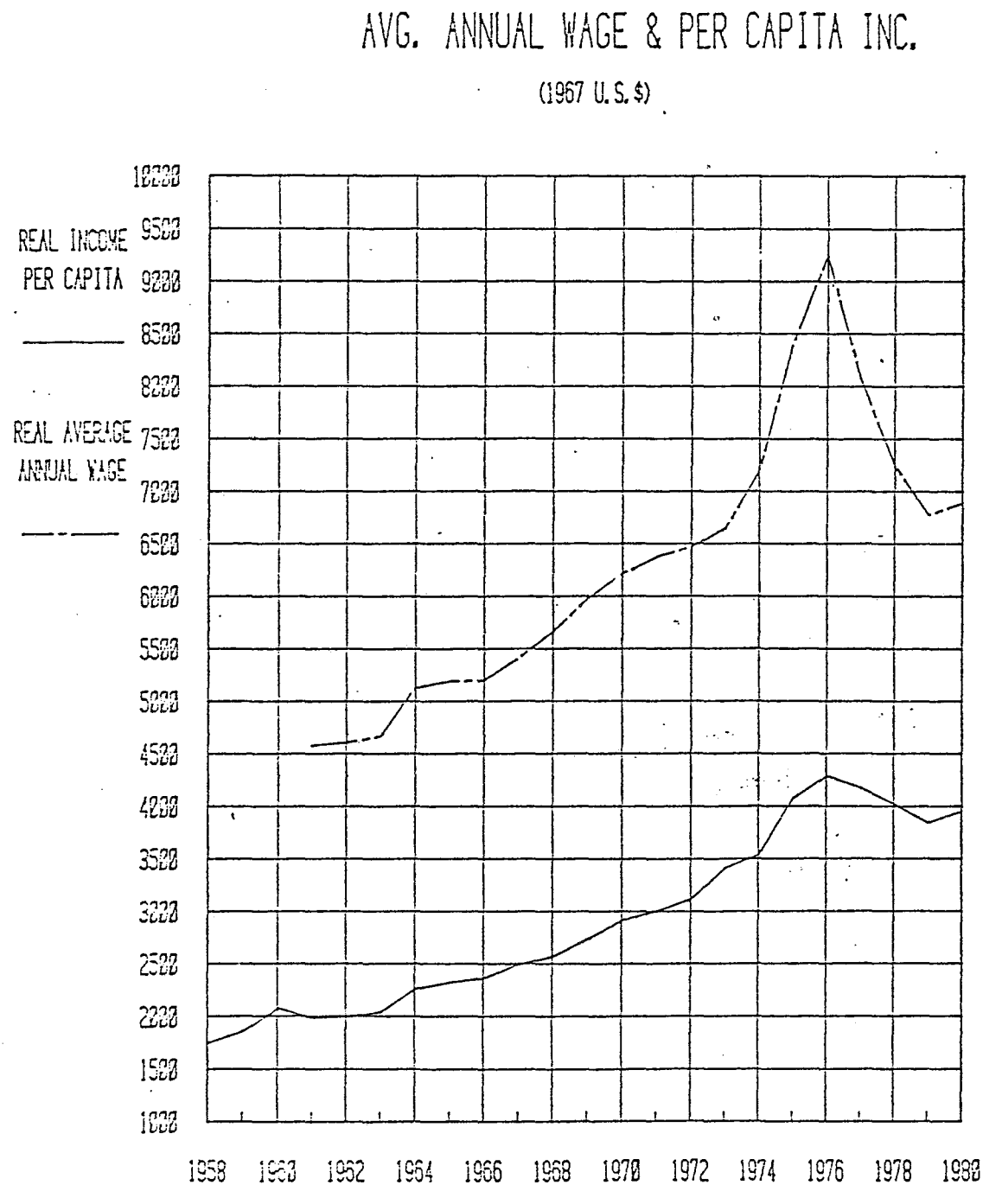
The final category of employment is support, consisting of the trade, finance, and service sectors of the economy. It has grown on an annualized basis at approximately the same rate, 8.3 percent, as

state and local government; and like state government, the growth rate was slightly faster, at 8.6 percent, during the first decade since statehood. The growth in this sector is only partially in response to the growth in the other three sectors of the economy. In 1961, for example, there were nineteen jobs in this sector for every 100 jobs in the rest of the economy, and if the same ratio held in 1980, there would be 27 thousand, rather than the 75 thousand support sector jobs which the economy actually provided in 1980.

This structural change of the economy can be characterized in three dimensions. First, there has been a change over time in the market basket of goods consumed within the state. Second, there has been a change over time in the methods by which support sector goods and services are produced within the state. Third, there has been a change over time in the goods and services which are locally available (import substitution).

These changes have primarily been the result of an increase in the size of the local market. First, and most obviously, the population of the state nearly doubled in the first twenty years of statehood--exhibiting a 2.9 percent annualized growth rate compared to 1.0 percent for the United States as a whole. Less obvious, but more importantly, has been the growth in income. Figure G.2 shows the growth of the average annual wage, and personal income per capita; both have increased markedly in real terms since statehood.

Figure G.2


AVG. ANNUAL WAGE & PER CAPITA INC.
(1967 U.S.$)
REAL INCOME PER CAPITA
REAL AVERAGE ANNUAL WAGE
10000
9500
9000
8500
8000
7500
7000
6500
6000
5500
5000
4500
4000
3500
3000
2500
2000
1500
1000
1958
1960
1962
1964
1966
1968
1970
1972
1974
1976
1978
1980

Both have, in addition, increased in relation to the national average. This is illustrated in Figure G.3, which shows that the Alaska/United States ratio of real disposable personal income, which historically hovered around .8, climbed above one briefly in the mid-1970s. The future direction of this indicator of the strength of the Alaskan market will be an important determinant of economic growth.

Several other factors have contributed to the structural change characterized by support sector growth. One is the increasing stability of the marketplace as measured both by the decreasing importance of seasonal and cyclical (associated with natural resource extraction activities) variations in economic activity, and by increasing wealth of the population. This provides a cushion which allows a region to support itself independent of wage and salary income. Alaska's personal income is more dependent on wages and salaries than most other states, but that dependence is gradually falling as the proportion of income from other sources increases. Between 1959 and 1980 that proportion more than doubled from 9 to 19 percent. This increase in market stability makes investment in support sector businesses less subject to the risks associated with economic fluctuations.[4]

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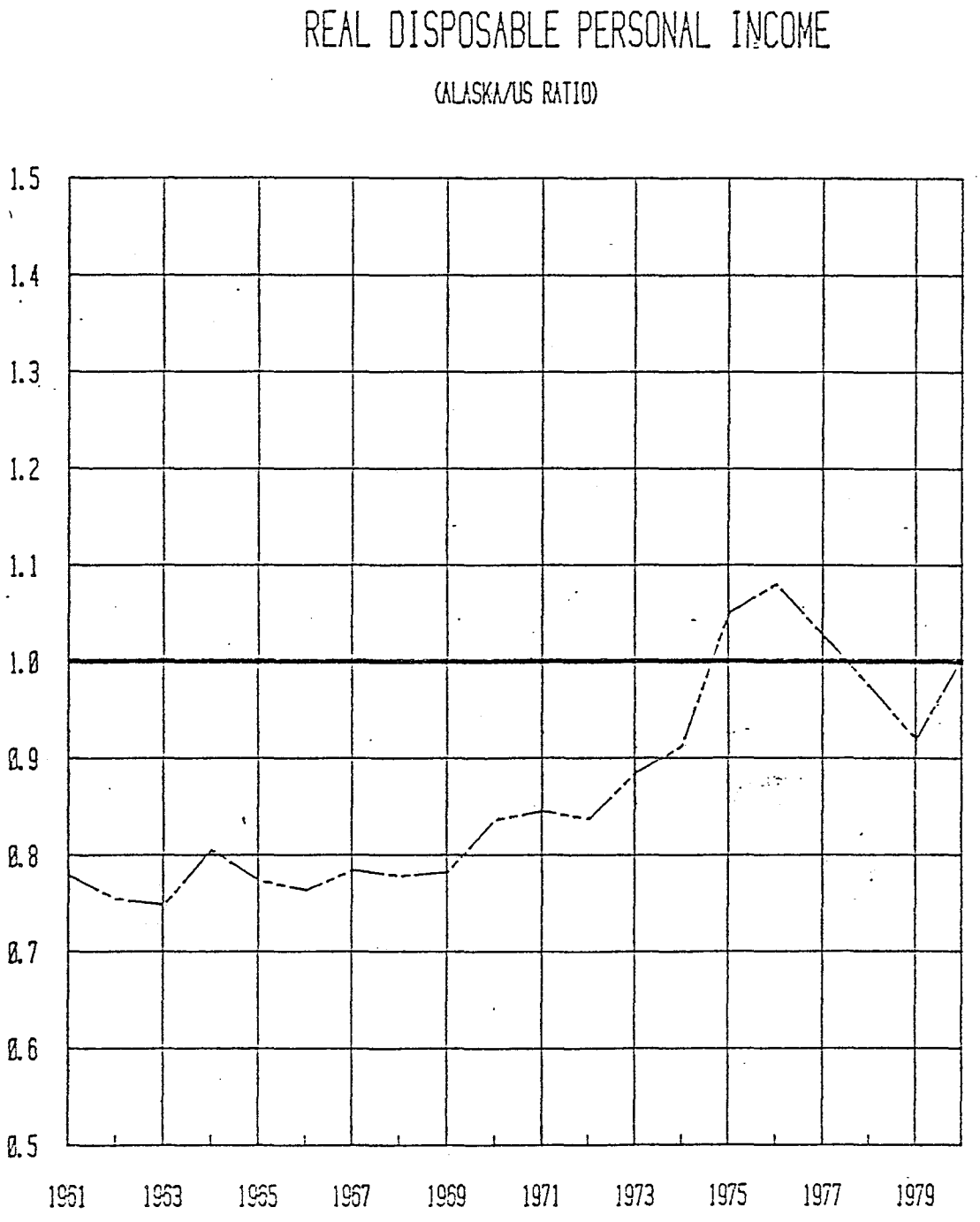
[4]An example of this new wealth is the ANCSA transfer of land and money to the Alaska Natives.

Figure G.3


REAL DISPOSABLE PERSONAL INCOME
(ALASKA/US RATIO)
1.5
1.4
1.3
1.2
1.1
1.0
0.9
0.8
0.7
0.6
0.5
1961
1963
1965
1967
1969
1971
1973
1975
1977
1979

A second factor is indicated by Figure G.4, which shows the dramatic increase since statehood in the proportion of the civilian population which is employed.[5] Between 1961 and 1979, it increased from 30 to 49 percent of the civilian population. This accounts for the fact that personal income per capita has historically grown more rapidly than the average wage rate (Figure G.2). This trend reflects a more market-oriented, consumption-oriented economy which can sustain a larger support sector.

One additional factor contributing to the growth of the support sector has been the downward trend in the ratio of the cost of doing business in Alaska relative to the U.S. average. Figure G.5 shows that this downward trend has been historically interrupted only during the mid-1970s when Alyeska oil pipeline construction generated local inflationary pressures in excess of the national average.

In sum, the pattern of employment growth in Alaska is characteristic of an underdeveloped economy undergoing structural change and rapid growth from a large number of causes.

The problem of projecting future economic activity then becomes one of sorting out those various factors contributing to past growth and trying to determine both how they will change in the future and

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[5]This measure is only an indication of the trend because employment is by place of work and population is residence-based.

Figure G.4

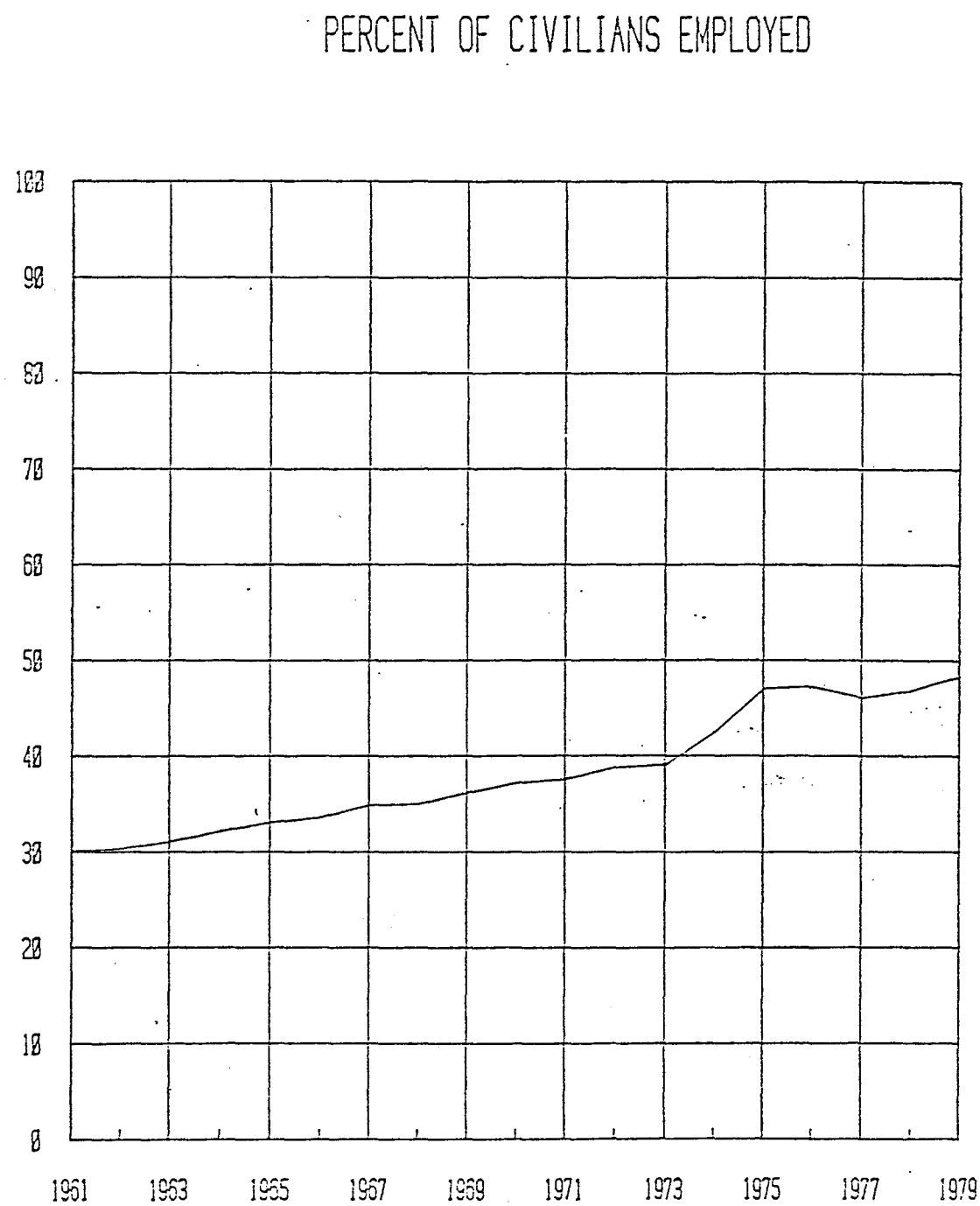
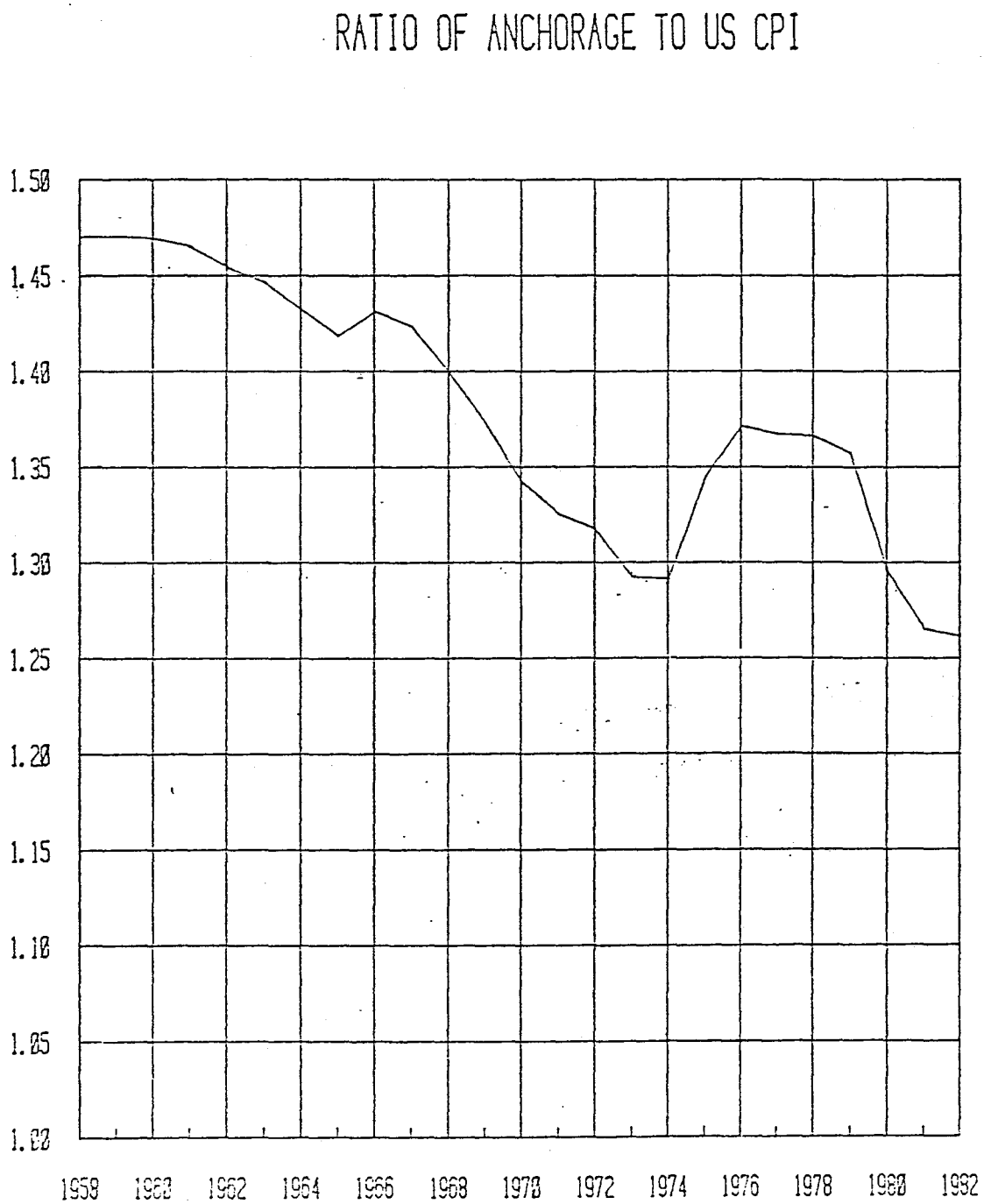

PERCENT OF CIVILIANS EMPLOYED
100
90
80
70
60
50
40
30
20
10
0
1961
1963
1965
1967
1969
1971
1973
1975
1977
1979

Figure G.5


RATIO OF ANCHORAGE TO US CPI
1.50
1.45
1.40
1.35
1.30
1.25
1.20
1.15
1.10
1.05
1.00
1958
1960
1962
1964
1966
1968
1970
1972
1974
1976
1978
1980
1982

how those changes will affect the growth trajectory of the economy. The exercise is complicated by the poor quality of the historical record (which is a result of this underdevelopment and rapid growth), which limits our understanding of the quantitative dimensions of the growth in the past.

It should be clear from this short discussion that there is a large degree of inherent uncertainty surrounding any projections of the future size of the Alaskan economy, and that unanticipated rapid economic change can easily occur. This uncertainty can be reduced, but not eliminated, by further analysis of the past.

This phenomenon is vividly demonstrated by the unprecedented growth of the Alaskan economy between 1980 and 1982. Primarily in response to a more than doubling of oil prices in 1979, employment increased 14 percent, and population 15 percent over the ensuing two-year period. The magnitude of the increase was similar to the growth when the Alyeska pipeline was under construction. Few, if any, analysts anticipated the rapidity and magnitude of the conversion of petroleum revenues into economic activity. Most importantly, this illustrates the dependence of the economy on natural resource industries and the volatility that dependence continues to impart to the whole economy.