

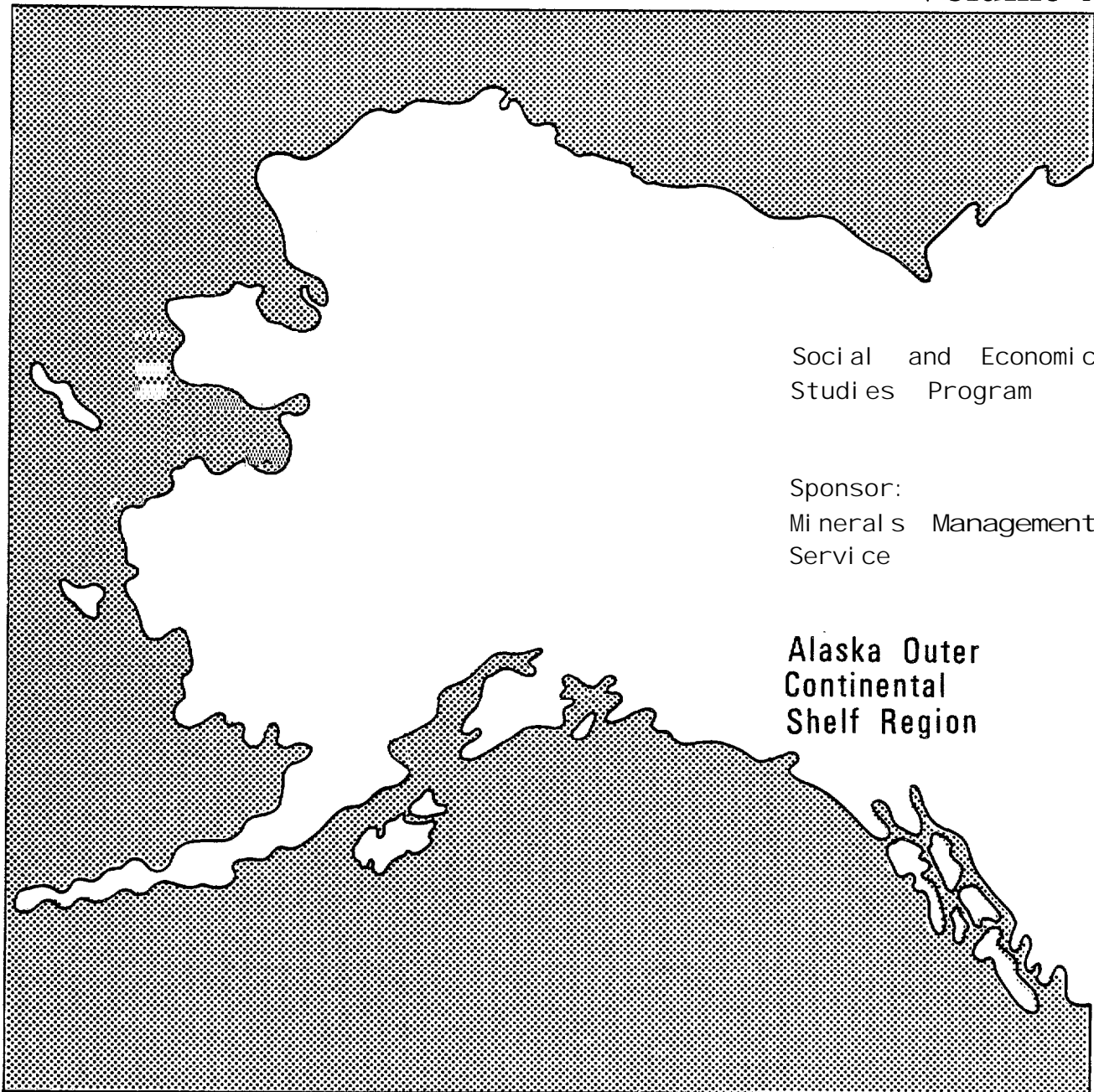
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Economic and Demographic Systems of the North Slope Borough: Beaufort Sea Lease Sale 97 and Chukchi Sea Lease Sale 109

ECONOMIC AND DEMOGRAPHIC SYSTEMS OF THE NORTH SLOPE BOROUGH:
BEAUFORT SEA LEASE SALE 97 AND
CHUKCHI SEA LEASE SALE 109

VOLUME I: DESCRIPTION AND PROJECTIONS

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Persons Preparing this Report

This report was prepared by staff of the Institute of Social and Economic Research between September 1984 and January 1986. Gunnar Knapp was the principal investigator for the study. Steve Colt prepared the North Slope model projections. Troy Henley assisted with data collection. Will Nebesky programmed the North Slope model originally, in connection with an earlier study for the Minerals Management Service. Cathi Dwyer and Darla Siver typed and assembled the report. We are grateful to Kevin Banks of the Minerals Management Service for patient and helpful guidance in preparing the report.

ABSTRACT

This report may be divided into four parts. The first part is an extensive description of the cash economy of the North Slope Borough, with separate chapters on the Borough's population, revenues, debt, expenditures, employment, and income. There is an extensive discussion of factors affecting North Slope Borough revenues, which are extremely important to the Borough's resident economy.

The second part of the report presents a number of different projections of future economic and demographic variables for the North Slope Borough, which were prepared using a model of the North Slope Borough economy. These projections suggest that the North Slope Borough will face a significant economic decline due to a decline in North Slope Borough GIP and operating expenditures. Although the Borough is well able to meet its current debt obligations, GIP expenditures cannot continue to be financed at past levels by borrowing against future revenues. Operating expenditures will fall as operating revenues from interest income, federal and state revenue sharing, and property taxes decline, with the decline in the latter two categories accelerated by declining Borough resident population and oil industry employment. With increasing unemployment, significant numbers of Native and non-Native residents will leave the Borough. After the turn of the century, out-migration is likely to exceed natural growth, causing the total population to decline.

The third part of the report examines projected impacts of the proposed Beaufort Sea OCS lease sale 97 and the Chukchi Sea OCS lease sale 109 on the economy and population of the North Slope Borough. The projections suggest that these lease sales would delay but not reverse the eventual decline in North Slope Borough revenues, expenditures, employment, and population. The lease sales would have a relatively small effect upon the Borough's already enormous tax base. The more significant effect would result from the presence of additional oil industry workers required to build and subsequently operate the OCS facilities. Since the Borough is permitted under state law to collect more than \$5 thousand dollars in additional property tax revenues for each additional oil worker, the thousands of oil workers associated with the lease sales during the peak years would permit Borough revenues to increase substantially. (However, if the state were to discontinue the counting of nonresident oil workers in the Borough population, this effect would be greatly reduced.)

Nevertheless, the OCS lease sales would not be sufficient to reverse the long-term decline in North Slope oil industry employment and Borough revenues. The lease sales would only briefly delay a long-term decline in Native employment (assuming that North Slope Native employment in the oil industry continues to be low]. Our projections suggest that even with the lease sales, Native out-migration would continue and would eventually exceed Native natural growth, leading to an overall decline in the North Slope Native population.

The fourth part of the report, published as a separate volume, is an extensive collection of data on North Slope Borough population, employment, revenues, expenditures, debt, property values, and income.

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CHAPTER I INTRODUCTION

With the creation of the North **Slope** Borough in 1972, the approximately 4000 **Inupiat** Eskimo residents of Alaska's North Slope gained a locally controlled government with the authority to levy property taxes on the enormously valuable petroleum property at **Prudhoe** Bay. This taxing authority has enabled the Borough to **collect** hundreds of millions of dollars in property taxes and to borrow over one billion dollars to fund a massive capital improvements program (**CIP**). Borough spending for operations and capital projects has provided greatly expanded public services and facilities as well as employment opportunities for Borough residents.

In this report, we describe the cash economy of Alaska's North Slope Borough and how the economy of the Borough may change in the future. We also present projections of the potential economic and demographic impacts of the proposed Beaufort Sea lease sale 97 and the Chukchi Sea lease sale **109**. In a separate volume, we include a variety of economic and demographic data for the North Slope Borough.

We have prepared the report under the sponsorship of the Minerals Management Service (MMS) Social and Economic Studies Program. This report expands upon the analysis which we presented in an earlier report for MMS entitled Economic and Demographic Systems Analysis, North Slope Borough (Social and Economics Studies Program Technical Report No. 100, October **1983**).

Organization of the Study

There are **five** parts to this study, reflecting several different objectives. First, in Chapters **II** through **VII**, we present a description of the cash economy **of the** North Slope Borough. Since this economy is based overwhelmingly upon North **Slope** Borough expenditures, a large part of the study is devoted to a discussion of Borough revenues, borrowing, and expenditures. **We** focus our discussion on **the** factors which **will** affect future Borough revenues, expenditures, and employment.

Second, in Chapter **VIII**, we examine the economic **future** of the North Slope Borough, using an economic and demographic model. **We** present eleven different sets of projections of the future Borough economy **and** population, based on different sets of assumptions about key factors affecting the Borough economy. These projections **help** to illustrate how the Borough economy may change **in** the future, and they provide **a** reasonable range for key variables such as population **and** employment.

Third, in Chapter **IX**, we examine the possible **effects** of the proposed **Beaufort** Sea **lease sale 97** and **the Chukchi** Sea **lease sale 109**. We present two sets of projections of the effects of each **sale**, based on **our** model of the North **Slope** Borough economy.

Fourth, we provide a variety of supporting material about the North Slope model and the development **of model** assumptions in Appendixes

A, B, D, M and O and extensive **tables** of-model projections in Appendixes C, N and P. These appendixes provide detailed documentation of **our** projection methodology and results.

Finally, in Appendixes E, **F, G, I, J, K,** and **L**, which are bound "separately, **we** present a wide variety of economic and demographic data for the North **Slope** Borough. These appendixes include data on Borough population, employment, revenues, debt, property values, expenditures, and income.

Throughout the study, we have restricted our attention to **the** North Slope Borough cash economy and, to a lesser extent, its population. Thus we have not attempted to discuss North **Slope** Borough politics, North Slope Native cultures, subsistence **activities**, social changes, or a variety of other subjects which are of importance to a broader understanding of the North **Slope** Borough and its people. Most of these subjects have been addressed in depth in other studies **listed** in the bibliography, many of which were also sponsored by the Minerals Management Service.

CHAPTER 11
THE POPULATION OF **THE** NORTH SLOPE BOROUGH

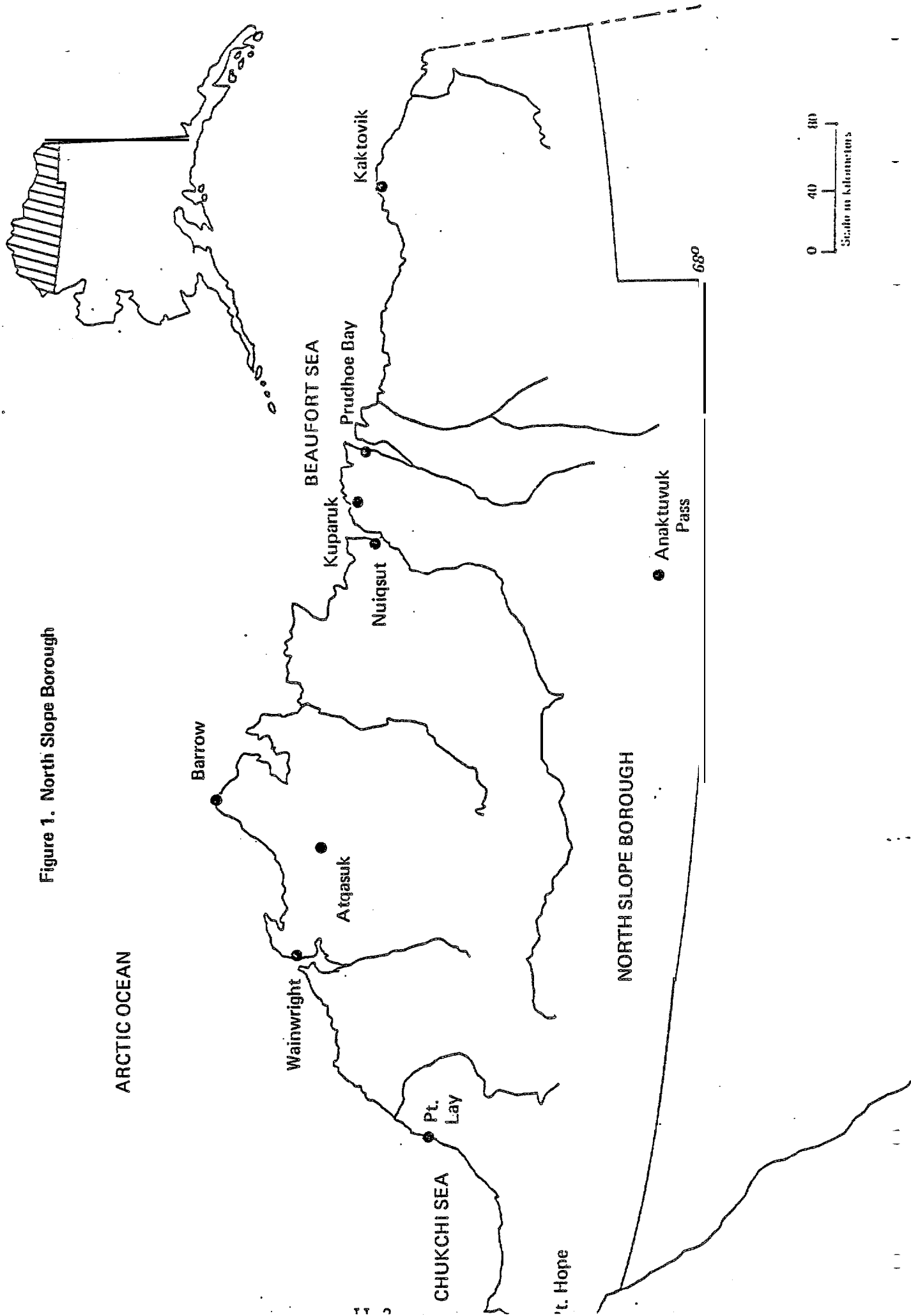
In this chapter, we describe the population of the North Slope Borough. We begin by defining what we mean **by** population. Next, we discuss available population data for the North Slope Borough. We then describe the Borough's population, how it has changed over time, and factors which are **likely** to affect population in the future.

Populated areas of the North Slope Borough include eight villages and a number of industrial and military sites. The eight villages are **Anaktuvuk** Pass, **Atkasuk**, Barrow, **Kaktovik**, **Nuiqsut**, Point Hope, Point Lay, and **Wainwright**. The locations of these villages are shown on the map **in** Figure 1. The overwhelming majority of industrial workers are located at or near the **Prudhoe** Bay industrial area, although other exploration camps are located on the National Petroleum Reserve-Alaska and on lands of the Arctic Slope Regional Corporation. Some construction workers are housed in camps outside of but near the eight villages. Military personnel are stationed at several sites.

Definitions of Population

A problem in discussing the population of the North Slope Borough is that there are many different possible definitions of population and population subgroups. In this report, we distinguish between

Figure 1. North Slope Borough



"Natives" and "non-Natives" and between North Slope "residents" and "nonresidents."

By "Natives," we refer to persons who think of themselves as North Slope Inupiat. This includes most persons with at least one parent of Inupiat ancestry. By "residents," we refer to persons who live in the North Slope Borough year-round and consider it their home.

In this study, we are primarily interested in the Native resident population and the non-Native resident population. However, we also discuss the Borough's nonresident population, which includes thousands of persons, almost all non-Natives, who work on the North Slope for part of the year at oil developments, military sites, construction camps, and villages. There are many possible ways of defining this population; for the purposes of this study, we define nonresident population as full-time equivalent employment within the North Slope Borough of persons who are not "residents."

In recent years, the population of non-white non-Native residents of the Borough has increased substantially. In particular, the Filipino population of Barrow is estimated to be approximately 200 (Smythe and Worl, page 196). In this report, we do not distinguish between these groups and other non-Native residents.

The definition and measurement of the population of the North Slope Borough is of critical importance to the Borough because, as we

discuss in Chapter **III**, the amount of tax revenue which the Borough may collect is **directly** related to its legally defined population. **As a result**, the Borough's population has been a subject of considerable controversy. For a detailed discussion of the legal and political controversy over the definition of the Borough's population and resulting differences in population figures, refer to Alaska Consultants' Barrow Arch Socioeconomic and Sociocultural Description (SESP Technical Report No. 101), pages 3 through 28.

These definitions of resident and nonresident population which we **stated** above are our own and do not necessarily correspond to other definitions of population used by other researchers or by government agencies. **In particular**, they **do not correspond to the legal** definitions of population which are **used** for revenue sharing and property tax limitation calculations. **Our** definition of "residents" may **well** exclude some persons who consider the Borough home and include some **who** do not. Nevertheless, we consider it to be the most **useful** of the wide variety of possible definitions.

Population Data for the North Slope Borough

There are numerous "problems in obtaining accurate and consistent data for the population of the North Slope Borough. These problems arise **mostly** as a result of inconsistent treatment of the persons whom we have defined as nonresidents. Some population **data** exclude these persons entirely; others include **all** persons physically present on the North Slope on a given date; and **still** others include

all persons employed on the North Slope. Below is a brief review of population data sources- and the definitions of population used by each. In Appendix F, we have collected population data for the Borough from a wide variety of sources. Below, we briefly review the major data sources of population data and how they differ.

U.S. Census Data (Tables F-1 through F-15, F-41, F-42, F-60 through F-75)

These data were collected for 1980, 1970, 1960, 1950, 1939, and earlier decades and are the most detailed published data on North Slope population. Census population data are available by village, age, sex, and race. The census data probably correspond fairly closely to our definition of "residents" since most persons were counted at their place of residence rather than at their place of work. (See Kruse and Travis, 1961, pages 16-18, for a discussion of the enumeration of Prudhoe Bay workers for the 1980 census.) We do not know the actual dates of enumeration for the 1980 census, although we believe the figures were collected over a period of time during the spring of 1980. Because the census population data are the most detailed available, we use them in this report as base data for our population projections for the North Slope Borough.

● Permanent Fund Dividend Data (Tables F-16 through F-18)

● Data are available on the numbers of 1982 and 1983 Permanent Fund dividends mailed to addresses in each North Slope community. These data probably represent a minimum estimate of resident population for these communities.

North Slope Borough 1980 Housing Survey (Tables F-24 through F-37)

This survey was conducted in 1980 by Alaska Consultants, Inc., who collected detailed data on population by village, age, sex, race, and length of residence.

School Enrollment Data (Tables F-38 through F-45, F-76)

Detailed data are available for school enrollment by village, grade, and year. These data provide detailed information about the school-age population.

North Slope Borough Chronological Population Estimates (Tables F-48 through F-61)

Annual population estimates are available for the years 1975-1984. These data are based on various sources and are not necessarily consistent in their definition of persons included as residents.

Resident Population in 1980

Using our definitions, according to the 1980 census, the 1980 resident population of the Borough was 3,827, of whom 3,208, or 84 percent, were Natives. In addition, we have estimated that an additional 4,431 "nonresident" persons were employed in the Borough in 1980.

Table II-1 summarizes the 1980 resident population of the North Slope Borough by race and village. Barrow, the largest village, had a population of 2,207, which accounted for 58 percent of the total

resident population, The share of Natives in total population was also lowest for Barrow, at 78 percent. For all other villages, the share of Natives was above 87 percent. Of the 617 Non-Natives who were residents of the Borough, 487, or 79 percent, lived in Barrow.

Of the remaining seven villages, two (Point Hope and Wainwright) had populations over 400; three (Anaktuvuk Pass, Nuiqsut, and Kaktovik) had populations between 150 and 210; and two (Atqasuk and Point Lay) had populations less than 110.

TABLE II-1
NORTH SLOPE RESIDENT POPULATION,
BY VILLAGE AND RACE, 1980

<u>Village</u>	<u>Tota l Population</u>	<u>Nati ve Popul ati on</u>	<u>Non-Nati ve Popul ati on</u>	<u>Nati ve Share of Popul ati on</u>
Anaktuvuk Pass	203	191	12	.94
Atqasuk	107	99	8	.93
Barrow	2,207	1,720	487	.78
Kaktovik	165	148	17	.90
Nuiqsut	208	181	27	.87
Point Hope	464	434	30	.94
Point Lay	68	63	5	.93
<u>Wainwright</u>	<u>405</u>	<u>372</u>	<u>33</u>	<u>.92</u>
Tota l	3,827	3,208	617	.84

SOURCE: 1980 Census Tape STF1 printouts, on file at the Institute of Social and Economic Research, Anchorage.

Table II-2 provides an estimate of the resident Native and Non-Native population by age group. There was a substantial difference in the age structure of Native and Non-Native residents of the Borough. Of Native residents, 46 percent were under age 20 and 4 percent were over age 64. In contrast, of Non-Native residents, only 24 percent were under age 20 and only 1 percent are over age 65.

TABLE II-2.
ESTIMATED NATIVE AND NON-NATIVE RESIDENT POPULATION
OF THE SINGLETON BOROUGH, BY AGE GROUP, 1980

<u>Age</u>	<u>Native</u>	<u>Non-Native</u>	<u>Share of Native Population</u>	<u>Share of Non-Native Population</u>
0-4	362	47	.11	.08
5-14	668	69	.21	.11
15-19	465	30	.14	.05
20-23	875	303	.27	.49
35-64	701	164	.22	.26
<u>65 +</u>	<u>137</u>	<u>6</u>	.04	.01
Total	3,208	619	1.0	1.0

SOURCE : Estimated based on 1980 census data from Census Tape STF2B. See Tables F-6 and F-8 in Appendix F for details of the calculations.

Since 75 percent of Non-Native residents were between the ages of 20 and 64, as opposed to 50 percent of Native residents, the share of Non-Natives in the adult or working-age population (defined here as ages 20-64) was greater than for the population as a whole (23 percent compared with 16 percent). This share was even higher for adult Non-Native males, who constituted 25 percent of adult males (see data in Appendix F, Tables F-5 and F-7).

Changes in Resident Population Over Time

Table 11-3 presents a number of population estimates for the eight North Slope Borough villages for the years 1970-1984. Although the methodologies for counting population differed between estimates, they nevertheless provide some indication of population trends over time in each village. Much of the variation in population estimates may result from differences in the number of nonresident construction workers who were present or counted during the surveys.

All of the villages have grown since the formation of the Borough in 1973. This growth has been most dramatic in the smallest villages: Atkasuk, Kaktovik, Nuiqsut, and Point Lay.

Table 11-4 provides U.S. census population data by village for 1960, 1970, and 1980 and for data from a North Slope Borough-sponsored census for 1982. The table also provides population growth rates for these years. According to these figures, the population of Barrow grew at a rate of 4.6 percent annually between 1960 and 1970,

TABLE II-3
POPULATION ESTIMATES FOR NORTH SLOPE BOROUGH VILLAGES
1970 - 1984

Date	App. F Table	Source	Anaktuvuk Pass	Atkasuk	Barrow	Kaktovik	Nuiqsut	Point Hope	Point Lay	Mainwright	TOTAL
1970	F-41	1970 Census	99	0	2,104	123		386		35	
Sept. 1975	F-43	Village count, reported births/deaths	134	0	2,167	144	128	376	31	353	3,333
Jan. 1975	F-44	" " " "	--	--	2,389	14	5		27	354	3,234
July 1975	F-45	" " " "	129	--	2,400	19	149		48	34	3,311
July 1976	F-46	" " " "	50	--	2,389	23	152	408	51	357	3,630
July 1977	F-47	" " " "	151	--		134	57	412	54	398	3,612
July 1978	F-48	" " " "	73	93	2,477	9	8		57	429	4,061
July 1979	F-50	" " " "	185	89	3,228	83	206	527	72	425	4,935
July 1980	F-5	" " " "	235	2	3,401	95	257	527	94	425	5,24
1980	F-	Census	203	107	2,207	165	208	464	68	405	3,827
980	F-19-26	AK Consultants Housing Survey(a)	211	108	2,389	9	252	480	91	395	4,118
July 1981	F-53	Census	285	195	2,539	201	270	53	105	410	4,486
July 1981	F-53a	NSB Census	235	12	2,765	201	271	53	126	410	4,651
1982	F-7	Perm. Fund Dividends	23	92	2,71	200	249	53	71	445	4,494
July 1982	F-54	Census	215	210	2,647	189	30	544	105	465	4,677
July 1982	F-54b	NSB Census	215	20	2,882	189	30	544	105	465	4,92
982	F-54a	AK Department of Labor	250	--	2,882	218	28	544	--	436	4,800
1983	F-17	Perm. Fund Dividends	195	165	2,461	180	245	499	76	428	4,249
1983	F-55	Census	228	231	--	203	305	570	126	483	--
1984	F-56	Census	232	214	--	208	313	--	129	494	--

-- Not available.

(a) Figures include residents who were counted but are not shown in Appendix F tables because age information was not available and exclude persons shown in tables who were nonresidents.

TABLE II-4.
CENSUS POPULATION COUNTS BY VILLAGE:
1960, 1970 AND 1980

Village	1960	1970	1980	1982	Growth Rate	Growth Rate	Growth Rate
	Population	Population	Population	Population	1960-1970 (Percent)	1970-1980 (Percent)	1980-1982 (Percent)
Barrow	1314	2104	2207	2882	4.6	0.5	14.3
Anaktuvuk Pass	35	99	203	215	11.0	7.4	2.9
Atqasuk	30 ^a	-	107	210			40.0
Kaktovik	120	123	165	189	0.3	3.0	7.0
Nuiqsut			208	302			20.5
Point Hope	324	386	464	544	1.8	1.9	8.3
Point Lay			68	105			24.3
Wainwright	253	315	405	465	2.2	2.5	7.2
Total, Non-Barrow	612	923	1,620	2,030	4.2	5.8	11.9
Total ^b	1,926	3,027	3,827	4,912	4.6	2.4	13.3

- Not available.

^aOld Atkasook.

^bTotals for 1960 and 1970 are likely to be slightly underestimated since resident population was not reported for seine areas. Therefore, growth rates maybe overestimated. However, the error is likely to be relatively small.

SOURCE : 1980 Source: 1980 Census Tape STF1 printouts, on file at the Institute of Social and Economic Research, Anchorage. 1960 and 1970 sources: North Slope Borough, "Official Statement Relating to the Original Issuance of \$80,000,000 General Obligation Bonds, Series P, Part II, Information Statement" (1982), p. 47. Figures for 1960 for Atqasuk and Kaktovik reported in Alaska Consultants, Inc., Background for Planning, Cities of Atqasuk and Kaktovik; prepared for North Slope Borough (June 1983). 1982 Source: Alaska Consultants, Inc., Background for Planning; prepared for North Slope Borough (June, July, and December 1983).

but at a t-ate of only .5 percent annually between 1970 and 1980. Growth subsequently increased between- 1980 and 1982 to an annual rate of 14.3 percent. The total population of the villages other than Barrow increased at an annual rate of 4.2 percent between 1960 and 1970, 5.8 percent between 1970 and 1980, and 11.9 percent between 1980 and 1982. Overall, the census data suggest a growth in the Borough's resident population of 4.6 percent annually between 1960 and 1970, 2.4 percent annually between 1970 and 1980, and 13.3 percent annually between 1980 and 1982.

Historical Factors Affecting Native Population

Population change is the result of births, deaths, out-migration, and in-migration. Similarly, the rate of population change is affected by birth rates, death rates, and rates of in-migration and out--migration. Changes in all of these rates have contributed to changes in Native population growth rates on the North Slope, both for individual villages as well as for the Borough as a whole.

One of the most important factors affecting North Slope Native populations during the first half of this century was disease such as epidemics of tuberculosis and whooping cough (Smythe and Worl, page 16). After the 1950s, health care conditions improved and variations in death rates became less of a factor in variations in population growth rates. Although we do not have sufficient data to examine changes in death rates over time for North Slope Natives, the trend is probably similar to that for all Alaska Natives shown

in Table 11-5. **Native** death rates declined significantly between **1950** and the late 1960s, after which they have remained **fairly** constant.

Changes in birth or fertility rates are a second major factor in changing population growth rates. Unfortunately, we do not have sufficient data to examine how fertility rates for individual age cohorts have been changing over **time** for Native North Slope women. The birth rate data for **all** Alaska Natives shown in Table **11-5** reflect both changes in fertility rates for women of a given age as **well** as changes in the age structure of the population. Birth rates for all Alaska Natives declined steadily between 1956 and 1978, after which they began to rise. The recent rise in birth rates reflects the arrival at child-bearing ages of the "baby-boom" Native women born during the late 1950s and 1960s. In 1980, Alaska Native women who were 20 to 34 years **old** comprised 14 percent of the population, compared to **10** percent in 1970. In contrast, Native women's fertility rates declined between 1970 and 1980. The average number of children ever born to Alaska Native women between the ages of 25 and 34 dropped from 3.8 in 1970 to **2.5** in 1980 (Institute of Social and Economic Research, **1984**).

The rate of natural growth for **all Alaska** Natives, which reflects changes in both birth and death rates, declined steadily between 1955 and 1978, after which it began to rise sharply. Assuming that trends are similar for North Slope Natives, natural growth has been

TABLE II-5.
ALASKA NATIVE BIRTH AND DEATH RATES, 1950-1982
 (births and deaths per hundred persons in Native population)

Year	Crude Birth Rate	Crude Death Rate	Rate of Natural Increase
1950	4.1	1.7	2.4
1951	4.2	1.8	2.4
1952	4.4	1.6	2.8
1953	4.5	1.4	3.1
1954	4.7	1.1	3.6
1955	5.0	1.0	4.0
1956	5.0	1.1	3.9
1957	4.9	1.1	3.8
1958	4.7	1.0	3.7
1959	4.7	1.0	3.7
1960	4.6	0.9	3.7
1961	4.7	1.0	3.7
1962	4.7	0.9	3.8
1963	4.6	0.9	3.7
1964	4.4	0.9	3.5
1965	4.2	0.9	3.3
1966	4.0	0.9	3.1
1967	3.6	0.7	2.9
1968	3.2	0.7	2.5
1969	3.1	0.7	2.4
1970	3.2	0.7	2.5
1971	3.2	0.7	2.5
1972	3.2	0.7	2.5
1973	3.2	0.7	2.4
1974	3.1	0.7	2.4
1975	3.1	0.7	2.4
1976	3.0	0.7	2.4
1977	2.9	0.8	2.1
1978	2.8	0.7	2.1
1979	3.1	0.7	2.4
1980	3.3	0.8	2.5
1981	3.4	0.7	2.7
1982	3.7	0.7	3.0

SOURCE : Indian Health Service, Vital Events Statistics, April 13, 1984.

and **will** continue **to** be an important contributor to Native population growth on the North Slope.

Although natural growth is responsible for **an** underlying pattern of growth in the **North** Slope Native population as a whole, migration has been a relatively more important determinant of the populations of individual villages. In the early decades of the twentieth century, the locations of schools, post offices, and stores established by non-Natives accelerated patterns of growth or decline of older Native settlements, which had been located at favorable hunting and trading sites. The Alaska Native "Land Claims Settlement Act contributed directly to the settlement of **Nuiqsut** in the early 1970s. More-recently, **economic** opportunities provided by the Borough Capital Improvement Program provided an opportunity and incentive for further migration from Barrow to smaller North Slope villages. This helps to account for the rapid growth in the population of smaller villages and the relatively slow growth of Barrow during the period 1970 through 1980.

Migration of North **Slope** Natives between the North Slope and other areas of Alaska has also been a significant factor in North Slope population trends. Many Natives appear to have moved from the North Slope to Anchorage or Fairbanks in the 1960s and to have returned subsequently in response to improved economic opportunities in North Slope villages.

ISER's 1977 North Slope survey provided a considerable amount of evidence as to the importance of migration in North Slope population change. According to this survey, in 1977 only about half of the Natives over age 55 lived in their villages of origin. Twenty-two percent of adult men and 39 percent of adult women did not live in their villages of origin. In 1977 nearly 70 percent of Native men and about 55 percent of Native women ages 18 and older had lived off the North Slope for at least three continuous months (Kruse et al, 1982, pages 25 and 97).

At least some of the apparent changes in population of different villages over time are probably due to differences in data collection methodologies. For example, census surveys are probably more accurate than surveys in other years and probably count fewer nonresidents. Most of the Borough's official population counts since 1980 have been taken during the summer, and these counts may have included persons who were not year-round residents of the Borough.

Nonresident Population

It is much more difficult to estimate nonresident population than resident population for the North Slope Borough. Most nonresident workers are not counted by the U.S. Census. Employment has varied greatly from year to year in the oil industry and in Borough construction projects. Similarly, within any given year, there is

considerable variation between seasons in nonresident employment so that estimates for a given **date** may not be typical for the entire year. **In** addition, nonresident employment is considerably greater than the number of nonresident workers actually present in the North Slope Borough at any "given time. Depending on their schedules, workers employed by the oil industry on **the** North Slope may spend **as** little as half their time actually on the North Slope.

In Table **II-6**, we have collected data on nonresident population of the North **Slope** Borough from a wide variety of sources. These data give us an idea of the approximate magnitude of nonresident population and how it has changed over time, although they do not permit precise estimation of non-resident population.

TABLE **II-6**
ESTIMATES **OF** NONRESIDENT POPULATION FOR NORTH SLOPE BOROUGH
SELECTED **YEARS**, FROM VARIOUS SOURCES

	<u>Industrial</u>	<u>Military</u>	<u>Unallocated</u>	<u>Total</u>
Borough Planning Staff counts plus industry count ^s				
July, 1979	3,028	92		3,120
July, 1980	3,896	92		3,988
July, 1981	5,221	68		5,202
North Slope Borough Special Census ^b				
July 1, 1981	6,620	132		6,752
July 1, 1982	7,843	193		8,036
1970 Census ^c	62	362		424
1980 Census ^d	250	36	86	372

Table II-6 (Continued)
 Estimates of Nonresident Population,
North Slope Borough, Selected Years

	<u>Industrial</u>	<u>Military</u>	<u>Unallocated</u>	<u>Total</u>
Annual Average Mining				
Employment ^e				
1974	290			
1975	261			
1976	1,271			
1977	1,961			
1978	2,420			
1979	2,568			
1980	2,763			
1981	3,860			
1982	3,564			
Persons at oil-related worksites, January and February of 1982 ^f	6,306			
Prudhoe Bay Employment				
1975	3,820			
1976	4,444			
1977	2,723			
1978	2,493			
1979	2,282			
Bureau of Economic Analysis Active-Duty Military Personnel Figures^h				
1975		101		
1976		97		
1977		46		
1978		28		
1979		26		
1980		26		
Average Number of Persons at Prudhoe Bay, 1983 Estimate ⁱ	5,309			
Alaska Department of Labor Estimate, 1983 ^j	7,016			
Prudhoe Bay & Alyeska Pipeline Census, June 15, 1977 ^k	5,318			

See following page for table notes.

NOTES FOR TABLE II-6

^aFigures are from Tables F-50, F-51, F-53a. "Industrial" figure includes **National** Petroleum Reserve, Census **Division** Remainder, and Prudhoe **Bay/Deadhorse/DEW** Line. Military figure includes Cape **Lisburne**.

^bFigures are from Tables F-53 and F-54.

' Source: North Slope Borough, "Original Statement Relating to the Issuance of \$80,000,000 General Obligation Bonds, Series P," Part **II**, Information Statement (1982), p. 47. Note that census figures exclude most nonresident workers. "Military" figure **is** for Cape **Lisburne** and **Prudhoe Bay/Deadhorse/DEW** Line. "Industrial" figure **is** for Census Division Remainder.

' Figures are from Table F-10. Note that census figures exclude most nonresident workers. Figures are for persons counted by the 1980 census in locations other than the eight North Slope Borough villages; figures include 250 persons at Prudhoe **Bay** and **Deadhorse** (industrial), **36** at Cape **Lisburne** (military), and 86 outside of Barrow (unallocated). Source: 1980 Census Tape STF1 printouts, on **file** at Institute of Social and Economic Research, Anchorage.

' Figures are from Tables **E-1**, and E-22-25. Note that figures do not include other major components of nonresident employment, such as construction and transportation employment.

' Figures are from Table **P.3**. Source: Dave Swanson, "Special Census Results for Oil-Related Worksites in the North Slope Borough," in Alaska Department of Labor, Alaska Economic Trends (March 1983), **p. 2**.

^gFigures are from Table **E-53**.

' Figures are from Table **E-51**.

' Difference between number of persons living "full-time on the North **Slope**" and figure adding in average number of workers of Prudhoe "Bay," given by Mark Lewis, Commissioner of Community and Regional Affairs, according to article by Bill White, "Slope Census Finds an Answer or Two," Anchorage Times, August **18**, 1983.

^jFigure **is** from Table F-56, footnote **d**.

' Figure **is** from Table F-77.

It appears that **military-related** nonresident population **over** the period 1976-1982 was **less** than 200--probably about 100. Oil industry-related nonresident employment appears to have been **over** 3,000 **since 1975**, and **much** greater **at times**. However, the number of **nonresident** oil workers physically present on **the** North Slope **at any given** time **is** likely to have been smaller since very few oil industry employees actually live on the North Slope. (In 1982, less than 4 percent of persons **at** oil-related worksites in the North Slope Borough claimed the North Slope Borough as their **usual place of residence**.)¹ We have almost no data on the employment of nonresidents on Borough construction projects.

In summary, since 1975, the annual average nonresident population of the North Slope Borough--defined as persons physically present in the Borough who do **not live** year-round in one of the eight **villages** or consider the Borough home--appears to have been at **least 2,000**, and at times much higher.

Current Population Assumptions

Table II-7 shows our assumptions for the current population of the North Slope Borough, broken down into Native resident population, non-Native resident population, and nonresident population. Our 1980 resident population assumptions are based on the 1980 U.S.

¹Dave Swanson, "Special Census Results for Oil-Related Worksites in the North Slope Borough," in Alaska Department of Labor, Alaska Economic Trends (March 1983), page 3. Figures reprinted in Table P.4.

Census. Our **Native** population estimates for subsequent years are based on projected natural growth estimates while our non-Native population estimates are based on employment **estimates**.

TABLE II-7
POPULATION ASSUMPTIONS FOR THE NORTH SLOPE BOROUGH
1980 - 1984

<u>Year</u>	<u>Native Resident Population</u>	<u>Non-Native Resident Population</u>	<u>Tots 1 Resident Population</u>	<u>Non-Resident Population</u>	<u>Total Population</u>
1980	3208	619	3827	2978	6805
1981	3268	875	4142	4633	8776
1982	3363	938	4301	5058	9360
1983	3460	1088	4548	5402	9950
1984	3562	1098	4 4 6 0	4863	9523

SOURCES: 1980 figures for Native and non-Native resident population are **based** on the 1980 U.S. Census figures **shown** in Table II-2. The remaining population assumptions were estimated using **ISER's** North Slope model (Medium Base Case, DSET NSLP.861). See Chapter VIII for a detailed discussion of the model and our projections.

Factors Affecting Future Resident Population

Population change results from two factors: natural increase and migration. Both of these factors **will** affect the **future** population of the North **Slope** Borough. **It** is relatively **easier** to project **natural increase** than migration, **but it is likely** that migration **will be** relatively more important **in** determining the Boroughs **future** population.

By "migration" **we** mean "net migration," or the difference between the number of **people** moving into the Borough and the number leaving **the** Borough. **In** any given year, there is a considerable turnover among the Borough's population, such **as** among **school** teachers who **leave** jobs to be replaced **by** other **school** teachers. However, a population change **due to** migration occurs **only if** the number of **people leaving** the Borough is greater than the number of **people** arriving.

Migration occurs for many reasons, among the most important of which are economic opportunities. Non-Natives in particular are **likely to** move into **North Slope** villages as new jobs become available or **leave** as job opportunities decline. **In fact,** the **non-Native** resident population of **the** Borough appears to be very **closely** tied to employment. Because of the high **costs and** the hostile natural environment **of the North Slope,** very few **non-Natives would** choose to **live in** the North **Slope** Borough without a means of supporting themselves. Therefore, we believe that the future **non-Native**

resident population **of** the **Borough** will vary in proportion **to** non-Native resident employment. Moreover, the age structure of the non-Native resident population is likely to remain relatively constant over time due to turnover among the non-Native population.

The Native population of the Borough is likely to respond **less** directly to economic conditions in the Borough. It cannot increase directly in response to economic conditions because there are only a limited number of **Inupiat living** outside the Borough who could "return" to take new jobs. Similarly, because **Inupiat** consider the North Slope their home, they are **less likely** to leave directly in response to fewer job opportunities. Nevertheless, under severe economic circumstances, it is likely that significant numbers of **Inupiat** would choose to leave the North Slope. The fact that substantial numbers of Natives have **lived** off the North **Slope** for at least short periods of time suggests that some might choose to do so again. Moreover, future patterns of migration in response to economic changes will not necessarily be similar to past patterns of migration. North Slope Native tastes and expectations may have changed, and opportunities within and outside of the Borough differ from those of previous decades. **In** addition, some Natives are likely to leave regardless of economic conditions in order to accompany non-Native spouses, to attend school, or for other diverse reasons.

The **Native** population **will** tend to grow over time **as a result** of natural increase, or the difference between births and deaths. The rate of natural increase will depend upon the age structure of the population. Because the **Inupiat** population is relatively **young**, with a large proportion of women of child-bearing age, the rate of natural increase is relatively high. However, **it may** decline in the future as the proportion of women in child-bearing ages declines. The rate of natural increase **also** depends upon the extent of inter-marriage, and whether or not children with one Native parent are considered Native or non-Native.

In sum, the future resident population of **the North Slope Borough is likely** to be affected primarily by two **factors**: economic **opportunities** for Native and **non-Native** residents, and the **rate of natural increase** for the **Native** population. The resident non-Native population is likely to be very closely tied to employment opportunities for non-Natives. **If these** opportunities increase, the non-Native population **will** rise; **if** they decline, the non-Native population **will fall**. The Native population **will** tend to rise due to **natural increase**. Over time, the rate **of natural increase** may shift **due to** changes in the age structure **of** the Native population and changes in birth and death rates. The growth in **the Native** population **will** be reduced to the extent that Natives **leave** the Borough. **Although** the **link** between migration and economic conditions **is less strong** than for non-Natives, some **Natives** are **likely to leave** if economic opportunities for Natives should decline significantly.

CHAPTER III
NORTH SLOPE BOROUGH REVENUES

Introduction

North Slope Borough revenues, primarily from oil taxes levied on the oil industry, are the driving factor in the North Slope Borough economy. Borough revenues determine not only Borough operating expenditures but also capital expenditures through their effects on the Borough's ability to borrow. This chapter examines the factors affecting past, current, and future North Slope Borough revenues.

Summary of Current North Slope Borough Revenues

Table III-1 summarizes the fiscal year 1985 North Slope Borough general fund revenue estimates. Total projected revenues are \$317 million, of which property taxes account for \$225 million, or 71 percent. However, a large share of Borough revenues must be used to pay for previous Borough expenditures. Over \$199 million of the Borough's FY 1986 revenues are restricted to payments on the Borough's debt.

Table III-2 presents a similar breakdown of Borough revenues for the past thirteen fiscal years. Total Borough revenues increased from \$6 million to \$329 million in FY 1986. However, most of this increase has been in revenues which are restricted to debt service. Revenues restricted to debt service increased from \$9 million in 1978 to \$224 million in 1985.

TABLE III-1
 NORTH SLOPE BOROUGH FISCAL YEAR 1984-1985
 GENERAL FUND REVENUE Estimates

	<u>Thousands of Dollars</u>	<u>Percent of Total</u>
Property Taxes: Total	225,267.3	71.0
" Operations	40,615.3	12.8
Debt Service	184,652.0	58.2
Sales Taxes	4,231.1	1.3
Interest Income	44,510.0	14.0
Intergov't Revenues: Total	36,345.0	11.4
School Debt Service	15,000.0	4.7
Education Foundation Funding	10,120.0	3.2
Health & Social Services	3,122.6	0.1
Other	8,102.4	2.5
Charges for Services	7,027.3	2.2
TOTAL	<u>317,380.0</u>	<u>100</u>
Restricted to Debt Service	199,652.0	62.9
Other Funds	117,728.0	37.1

^aTotals may not add exactly due to rounding.

NOTE : These revenue estimates are for the general fund only; revenue expected from Service Area Number 10 (Prudhoe Bay industrial area), which was estimated to be \$18,003,600, is not included.

SOURCE : North Slope Borough, Budget Document, FY 1984-1985, pages 21-37.

Table III-2

Summary of North Slope Borough General Fund Revenues
 (\$ millions)^a
FY73–FY86

	Actual FY73-74	Actual FY74-75	Actual FY75-76	Actual FY76-77	Actual FY77-78	Actual FY78-79	Actual FY79-80	Actual FY80-81	Actual FY81-82	Actual FY82-83	Actual FY83-84	Budget FY84-85	Budget FY85-8
Property Taxes: Total	3.5	6.6	6.9	18.7	26.8	35.1	52.4	59.1	109.7	133.7	152.4	225.3	235.8
Operations					18.8	26.1	26.1	26.4	34.8	38.5	33.1 ^b	40.6	22.9
Debt Service					8.0	9.0	26.3	32.8	75.0	95.2	118.9 ^b	184.6	212.9
Sales Taxes	1.0			.4	1.5	.4			4.3	4.3	3.9	4.2	4.0
Sales Taxes restricted to debt service						1.8	2.1	2.7					
Interest income	.2	1.7	2.2	1.4	4.6	6.6	7.4	8.8	44.4	44.4	59.2	44.5	45.0
Intergovernment Revenue Total	1.2	5.2	6.6	8.1	11.4	12.3	16.2	22.3	35.0	34.8	41.2	36.3	37.5
School debt service		.2	0	.1	.7	1.4	1.5	4.3	8.0	9.0	14.3 ^b	15.0	n.a.
Education Found. Funding	.6	3.3	3.2	4.2	4.4	5.5	6.7	8.3	9.9	9.7	9.8 ^b	10.1	10.7
Health & Social Services		0	.1	.5	1.3	1.2	1.1	.8	.7	2.5	2.2 ^b	3.1	n.a.
Other	.6	1.7	3.3	3.3	5.0	4.2	6.9	8.9	16.4	13.6	7.5 ^b	8.1	n.a.
Charges for Services	.1	.4	.9	.8	.5	.9	1.6	1.4	3.7	7.2	9.0	7.0	6.3
Miscellaneous					.5	.5							
TOTAL^c	6.2	13.9	36.6	28.8	45.3	57.2	79.7	94.3	197.1	224.4	265.7	317.4	328.6
Restricted to debt service ^d					8.7	10.4	27.8	37.1	83.0	104.2	133.2	199.6	223.6
Unrestricted					36.6	46.8	51.9	57.2	114.1	120.2	132.5	117.7	105.0

Note: Columns may not total exactly, due to rounding error.

^aFigures for FY74-FY84 are actual revenues. Figures for FY85 and FY86 are estimates from budget documents.

^bBudgeted figures; actual figures not available.

^cPrior to FY78, the SNB Budget Documents do not separate property tax dedicated to debt service from unrestricted property tax.

^dThis category is composed principally of property taxes restricted to debt service and of intergovernmental revenue restricted to school debt services.

Source: North Slope Borough Budget Document, Fiscal Years FY74/75 to FY85/86.

Borough revenues **for** operations have also increased rapidly, from **\$6 million** in FY 1974 to **\$133 million** in FY 1984. However, operating revenues peaked in **that** year, and by 1986 have declined **by 20 percent, to \$105 million.**

In the remainder **of** this **chapter,** we describe Borough revenues in greater detail and the reasons for these trends.

North Slope Borough Revenue Sources

As shown in **Tables III-1** and **III-2,** the North Slope Borough receives revenues from **five** principal sources: property taxes, interest earnings, intergovernmental (state and federal) transfers, charges **for** services and utilities, and **sales** taxes. **Below,** we **discuss each** of these sources of revenue.

Property Taxes

The North Slope Borough property taxes have risen from **\$3.5 million** in fiscal year **1974** to **\$236 million** in fiscal year **1986** (**Table III-2**). However, a steadily increasing share of **these** property taxes has been restricted to payment **of** the Borough's debt service. **In FY 1986,** property **taxes** for operating revenues totaled **\$22.9 million,** compared with **\$212.9 million** for operating revenues.

North Slope Borough property taxes depend upon-the assessed **value of** taxable property as **well** as the rate at which this property **is** taxed. **Below,** we first discuss the Borough's property tax base and then the factors affecting the rate **at** which it is **taxed.**

NORTH SLOPE BOROUGH PROPERTY TAX BASE

The enormous value of oil industry property provides the foundation for the North Slope Borough's revenues. The assessed value of property within the North Slope Borough has risen from \$203 million in 1974 to **\$12.3 billion** in 1985 (Table 111-3). More than 95 percent of assessed value is oil industry-related property (North Slope Borough, Comprehensive Annual Financial Report, **Fiscal** Year July 1, **1983**, through June 30, **1984**, **Table 4**, page **83**, footnotes).

Oil and gas properties are assessed by the **state**, which uses different procedures for valuing exploration facilities, production facilities, and pipelines. Production facilities and pipelines account for **all** but a small share of oil and gas property values. Production facilities are valued at replacement cost, **with** straight-line depreciation over the field life. Pipelines are **valued** using a complicated formula based on the present discounted value of expected future pipeline earnings. "A rough approximation of future pipeline values may be gained from straight-line depreciation of construction cost over the expected life of the pipeline. However, new discoveries of **oil**, by expanding the expected life of a pipeline, may cause its assessed value to increase.

TABLE III-3
NORTH SLOPE BOROUGH ASSESSED AND ESTIMATED
ACTUAL VALUE OF TAXABLE PROPERTY
LAST TEN FISCAL YEARS

<u>Fiscal</u> Year Ended <u>June 30</u>	<u>Real</u> <u>Property</u> Assessed <u>Value</u>	<u>Personal</u> <u>Property</u> Assessed <u>Value</u>	<u>Total</u> Assessed <u>Value</u>
1974			\$ 203,000,000
1975			256,000,000
1976	\$ 360,909,869	\$ 198,844,381	559,754,250
1977	1,566,841,100	222,048,130	1,788,889,230
1978	3,262,552,200	290,928,125	3,553,480,325
1979	4,408,402,490	276,824,240	4,685,226,730
1980	4,760,771,260	301,184,320	5,061,955,580
1981	5,411,867,400	311,714,680	5,723,582,080
1982	6,161,557,670	460,094,370	6,621,652,040
1983	7,457,860,905	729,125,670	8,186,986,575
1984	9,150,325,890	845,963,820	9,996,289,710
1985	11,130,141,420	1,131,279,760	12,261,421,180

Figures for remaining years are reprinted from Comprehensive Annual Financial Report of the North Slope Borough, Alaska, fiscal year July 1, 1983 through June 30, 1984, Table 4, page 83.

1974 and 1975 figures are from Alaska Department of Community and Regional Affairs, Alaska Taxable, 1977.

The **Borough's** property tax base is projected to continue to rise **in** the future, as currently planned onshore development continues. Even **without** any new oil discoveries, a great deal of additional investments **will** take **place** on the North Slope, including additional production **wells** and enhanced recovery projects. A 1985 projection **by** the Alaska Department of Revenue shows Borough property values peaking in **1990** at a **value** of over \$16 billion (Table III-4). Other property **value** projections which have been done for the North **Slope** Borough Planning Department by consultants but which have not yet been released to the public are similar to the Department of Revenue projections.

In the more distant future, the Borough's property values are likely to continue to fall, although the rate at which they will fall is uncertain. **In** our projections, we assume that they continue to fall by \$780 million per year after 2000, which results in a property **value** of \$3.7 billion in 2010. However, property values could **well** be much higher than this if new developments occur other than those currently planned. Developments which could contribute to a substantial North Slope Borough property tax base in the twenty-first century include:

- Construction of a natural gas pipeline, permitting the marketing of the North Slope's extensive gas reserves.
- Development of known **oil** reserves which are currently not economic due to high costs, such as the Ugnu formation.

TABLE III-4
PROJECTED FUTURE NORTH SLOPE BOROUGH PROPERTY VALUES
(in billions of dollars)

	<u>Mean</u>	<u>Low</u>
1985	12.3	12.3
1986	13.42	13.39
1987	14.73	14.48
1988	15.51	15.17
1989	16.10	15.56
1990	16.29	15.65
1991	15.99	15.24
1992	15.68	14.73
1993	15.34	15.64
1994	14.98	13.81
1995	14.55	13.17
1996	14.07	12.53
1997	13.55	11.89
1998	12.95	11.25
1999	12.28	10.41
2000	11.50	9.57

SOURCE: Prepared by **Gerald Heier**, Alaska Department of Revenue, Division of Petroleum Revenue, **April 1985**. The projections assume that the remaining life for economic production is 21 years, and that additional investment will be made as follows:

During 1985	\$1,300,000,000
1986	1,500,000,000
1987	1,000,000,000
1988	800,000,000
1989	300,000,000

The mean case assumes a 4 percent annual inflation rate while the low case assumes a 3 percent annual inflation rate. Projections are included in a letter from Gerald Heier to Jim Sharpe, North Slope Borough finance director, dated April 15, 1985.

- Development of the North Slope's extensive **coal** resources.
- e Development of hard-rock mining **in** the Brooks **Range**.

Most of these developments are dependent upon substantial increases in world energy prices.

It is also possible that North Slope Borough property values could **fall** below their projected levels. **If oil** prices were to drop substantially, this might both slow projected oil development as well as contribute to a reduction in the value of existing facilities. Political changes could also result in a reduction in the Borough's tax base. If a settlement between the State of Alaska and the **trans-Alaska** pipeline owners **result** in substantially lower pipeline tariffs, this could reduce the taxable value of the pipeline. **In** addition, changes in the Borough's boundaries could result in the **loss** of new taxable property from developments such as the proposed Red Dog Mine.

NORTH SLOPE BOROUGH PROPERTY TAX RATES

The tax rate which the North Slope Borough has applied to its property base fell from 13 mills (1.3 percent) in **1975** to 7.28 mills in 1979, after which it rose to 18.37 **mills** in 1986 (Table 111-5). This pattern in the total tax rate is the result of dramatically different patterns in the tax rates for operating and debt service revenues. The tax rate for operating revenues has declined steadily (except for a small increase in 1982) from a high of 13 mills in

TABLE III-5
NORTH SLOPE BOROUGH ASSESSED VALUES, PROPERTY TAX REVENUES
AND MILL RATES, FISCAL YEARS 1975-85

Fiscal Year	Assessed Value (dollars) (a)	Property Tax Revenues (millions of \$)			Mill Rate		
		Operations (b)	Debt Svc. (b)	Total (b)	Operations (a)	Debt Svc. (a)	Total (a)
1975				6.6			13.0
1976	559,754,250			6.9			12.36
1977	1,788,889,230			18.7	7.68	2.62	10.30
1978	3,553,480,325	18.8	8.0	26.8	5.40	2.12	7.52
1979	4,685,226,730	26.1	9.0	35.1	5.34	1.94	7.28
1980	5,061,955,580	26.1	26.3	52.4	5.21	5.14	10.35
1981	5,723,582,080	26.4	32.8	59.1	5.07	5.20	10.33
1982	6,627,652,040	34.8	75.0	109.7	5.47	11.23	16.70
1983	8,186,986,575	38.5	95.2	133.7	4.14	12.28	6.42
1984	9,996,289,710	33.1	118.9	152.0	3.34	11.97	15.31
1985	12,261,421,180	" 40.6	184.6	225.3	3.31	15.06	18.37
1986	12,834,230,060	22.9	212.9	235.8	1.78	16.59	18.37

NOTE: Because of differences in definitions between sources, property tax revenues are not necessarily exactly equal to the figure obtained by applying mill rates to assessed values.

(a) North Slope Borough, "Preliminary Official Statement, related to the original Issuance of \$153,945,000 General obligation Bonds," October 5, 1984, pp. 30, 31.

(b) North Slope Borough Budget Documents, Fiscal Years 1975-86. See Table III-2.

1975 to only **1.78 mills** in **1986**. In contrast, the tax rate for debt service revenues has risen over time to 16.59 mills in 1986.

STATE RESTRICTIONS ON PROPERTY TAX RATES

Under a 1978 state Supreme Court ruling, the state cannot restrict the rate at which the Borough may tax property to raise funds for paying principal or interest on bonds. Thus, the Borough's tax rate for debt service revenues has increased steadily, even **while** the property tax base has been rising, as its debt service requirements have grown steadily.

In contrast, the Borough's property taxes for operating revenues are limited by state law, and this limit has significantly affected the Borough's operating revenue tax **rate**. This tax rate is restricted by state law in two ways:

1. The amount of property tax which may be collected per borough resident for operating purposes is limited to the greater of two numbers:
 - \$1,500 or
 - e 6.75 percent of the average per capita assessed value of property in Alaska.
2. The property tax rate for operating revenues may not exceed 30 mills (3 percent of assessed value).

¹Legally, one arrives at this figure by limiting property tax collections to 3 percent of a maximum assessed value arrived at by multiplying 225 percent of the average per capita assessed value of property in Alaska by the number of residents of the Borough. These restrictions are provided for by Alaska Statutes 29.53.045 (a-c).

Neither of these restrictions **is** currently **limiting** Borough revenues. However, the **first** restriction has significantly limited Borough revenues in the past and may **well** limit Borough revenues in the future.

Prior to 1979, North **Slope Borough** property tax operating revenues were **limited** to \$1,500 per **capita**. In subsequent years, as statewide per capita property **values** have risen, the **per capita** revenue **limit** has risen **well** above **\$1,500** to a value of **\$5,549** in **fiscal year 1986** (Table **III-6**).

Until fiscal year 1983, the Borough raised the maximum property tax operating revenues permitted **under** this **limit**. Beginning **in 1984**, however, **the** Borough began to **tax** at a **level well below this limit**. **In 1986**, **the Borough is only raising** one-third the **level of** operating revenues from property taxes that **would** be theoretically permissible under the state limit.

There are several reasons for this. **First**, although property tax operating revenues have been **well below** the state-imposed **limit** for three years, the Borough's **total** tax rate has been at a record high of **18.37 mills** (Table **III-5**). This has been due to a steadily increasing tax rate for debt service due to steadily increasing revenue requirements for debt service. The Borough administration perceives that any further increase in the total tax rate could have adverse political and economic consequences. Thus, the Borough has

TABLE III-6
STATE-IMPOSED LIMITATIONS ON NORTH SLOPE BOROUGH PROPERTY TAX
OPERATING REVENUES AND ACTUAL REVENUES

Fiscal Year	Borough Population Figure Used in Calculating Operating Revenue Limit	Statewide Value of of Property <u>Per Capita (\$)</u>	Per Capita Limit on North Slope Borough Operating Revenues (\$)	Maximum North Slope Borough Property Tax Operating Revenues Permitted	Actual Property Tax Operating Revenues <u>Budget</u>
1978	12,614		1,500.00	18,922,000	18,922,000
1979	9,139	40,280	2,718.90	24,848,000	24,848,000
1980	8,187	47,342	3,195.59	26,162,200	26,162,200
1981	8,055	53,354	3,601.40	29,009,200	29,009,200
1982	9,234	57,997	3,914.80	36,149,200	36,149,200
1983	7,098	70,538	4,761.32	33,795,800	33,795,800
1984	7,552	75,844	5,119.47	38,662,200	33,117,600
1985	10,171	75*553	5,099.83	51,870,300	40,560,300
1986	12,359	82,213	5,549.37	68,584,700	22,850,000

SOURCE: North Slope Borough, Budget Document, through FY 86. All figures are from most recent budget document in which they appear. Figures for FY 85 and FY 86 are budget estimates; other figures are actual values.

attempted to hold the **total** tax rate steady by reducing the tax rate for operating revenues to make up for an **increasing** tax rate for debt service revenues. **Partly due to this** policy and **partly due to** steadily increasing property **values, the mill rate for operating** revenues has declined from **13.0 in 1975 to only 1.78 in 1986.**

However, debt service payments are projected to peak in **1988. In** subsequent years, as debt service revenues decline more rapidly than Borough property values, the tax rate for debt service **should** decline. The Borough will then be able to increase its tax rate for operating revenues without increasing the **total** tax rate. **If it** does so, property tax revenues for operations will increase, and the state-imposed restrictions may once more become a limiting factor **on** operating revenues.

Secondly, since **fiscal year 1982, the** Borough has enjoyed interest earnings of more than \$40 **million** per year on its cash balances of funds from bond **sales** for capital projects. **In** the future, as these cash holdings are spent **in** the construction of capital projects, the **Borough's** interest earnings are **likely to decline.** To the extent that the Borough attempted **to make up** for this **decline in** interest earnings **by** increasing **its** property taxes for operations, the property tax revenues might once again rise to a **level** at which they were **limited by** state restrictions.

The **second** restriction, which limits the tax rate **for** operating revenues to a maximum of **30** mills, has never applied in the North Slope Borough. It is likely that it **will** not apply for at least several decades since revenues will be limited by the first restriction long before the **mill** rate would rise to 30 due to the Borough's high property values.

COMPARISON **OF** NORTH SLOPE BOROUGH PROPERTY TAX REVENUES
WITH OTHER MUNICIPALITIES' PROPERTY **TAX** REVENUES

Table III-7 provides selected comparisons of 1981 property values and taxes for the North Slope Borough, the Municipality of Anchorage, and the Fairbanks North Star Borough. This table provides some perspective on the magnitude of North Slope Borough property values and tax revenues. The **full** property **value** of the North Slope Borough in 1981 was almost as high as that **in** Anchorage and more than double the full value of all property in Fairbanks. Oil and gas property accounted for **93** percent of the total North Slope Borough property value, compared with **7** percent for Anchorage and 20 percent for Fairbanks. The per capita valuation of the North Slope Borough was more than **18** times that of either Anchorage or Fairbanks. However, North **Slope** Borough property owners were taxed at a rate more than twice that at which Anchorage property owners were taxed and more than three times that at which Fairbanks property owners were taxed.

TABLE III-7
PROPERTY VALUE AND PROPERTY TAXES,
SELECTED COMPARISONS OF NORTH SLOPE BOROUGH,
MUNICIPALITY OF ANCHORAGE, AND FAIRBANKS
NORTH STAR BOROUGH, 1981

	<u>North Slope Borough</u>	<u>Municipality of Anchorage</u>	<u>Fairbanks North Star Borough</u>
Population	7,098	1809740	51,659
Full Value Determination (millions of dollars)	6,705	8,003	2,607
Total Property Taxes (millions of dollars)	110.3	59.5	12.8
Per Capita Valuation	944,596	44,280	50,463
Property Taxes as % of Full Value	1.65	0.74	0.49
Oil and Gas Property Taxes as Percent of Total	92.6	6.8	26.1

SOURCE : Alaska Department of Community and Regional Affairs, Alaska Taxable 1981, January 1982, pp. 33, 61.

Interest Earnings

After property taxes, the second largest share of the Borough's revenues **has** come from interest earnings on the Borough's cash holdings. Since 1982, the Borough has enjoyed interest earnings of more than \$40 **million** per year, peaking at \$59 million in 1984 (Table III-2). These interest earnings may be used for Borough operations.

The Borough's cash holdings are derived primarily from bond sales for capital projects. The average balance of the Borough's cash holdings in fiscal year 1986 **is** projected to total \$622 million, of which \$232 million is in regular debt service funds; \$287 million is in the Borough's emergency debt service and permanent funds; \$50 million is in the general fund; and \$53 million is in funds from new bond sales (see Table G-7, under "Interest Income"). The fiscal "year 1986 budget projects earnings of more than \$45 million on these funds, based on a projected average interest rate of 8 percent. These earnings are projected to account for 43 percent of total operating revenues.

However, as noted above, the Borough's interest earnings are likely to decline in the future as these cash holdings are spent in the construction of capital projects. In order to partially offset this decline, the Borough established a Permanent Fund in **1984**, with total assets in that year of \$28 million (Comprehensive Annual Financial Report of the North **Slope** Borough, Fiscal Year July 1, 1983-June 30, 1984, Statement E-1, page 63.)

The Permanent Fund is to be built up partially by appropriations from the General Fund as well as "by transfers from the Borough's Emergency Debt Service Reserve Fund. The Emergency Debt Service Reserve Fund is required to be maintained at a balance of 15 percent of the principal of general obligation bonds outstanding. The policy of the present Borough administration is to transfer funds from the Emergency Debt Service Reserve Fund to the Permanent Fund as the Borough's outstanding debt is paid off.

The importance of interest earnings in the Borough's operating revenues indicates that the Borough faces an important trade-off between the expenditures of capital funds and the receipt of operating revenues. The more rapidly the Borough spends its capital funds, the lower will be its future interest earnings on these funds.

Intergovernmental Revenues

The third largest source of revenues for the Borough over the past five years has been revenues received from the state and federal governments under a number of programs. The total value of intergovernmental revenues increased steadily from \$1.2 million in 1974 to a peak of \$41.2 million in 1984 (Table III-2). These revenues have subsequently declined slightly.

Most of these funds are specifically earmarked for certain purposes. Over the past thirteen years, more than half have been for education. The state supports a significant proportion of school operating

expenses (approximately **\$10 million** annually **over** the last five years), although this' share **is lower** than in many other areas due to the high level of expenditures per student in the North Slope Borough.

The state also provides the Borough with significant levels of funding **to** support debt service for educational facilities. The state will reimburse the Borough for **100** percent of payments made on debt for educational facilities issued prior to July 1, 1977. In addition, the state can reimburse the Borough **for up** to 90 percent of cash payments or debt service payments for school construction made after that date, subject to approval by the Department of Education (**AS14.11 .100**). These state reimbursements totaled **\$15** million in 1985 (Table III-2). Normally, the state does not provide enough funding to reimburse the full 90 percent. **It is likely** that the state's contribution to school construction costs **will** decline in the future as state revenues decline. Other intergovernmental revenues are documented in detail in Table G-7 (Appendix G). Among the most significant of these are state and federal health and social services revenues (\$5 million in FY **1984**), business licenses and corporate income tax sharing (\$1.2 million in FY 1984), and state revenue sharing (\$842 thousand in FY 1984).

Charges for Services and Utilities

The Borough collects some revenues from charges for services and utilities. These revenues totaled \$9 million in **1984**. The most significant of these charges are for rent on Borough housing

(\$3 million in 1985) and Borough utilities (\$2.5 million in 1985). These charges are documented in detail in Table G-7 (Appendix G).

The North Slope Borough provides selected utility services to the Prudhoe Bay industrial area (Service Area #10) as well as industrial facilities at the Kuparuk Industrial Center. Operations and debt service costs for these facilities are covered by user fees, which currently total approximately \$26 million per year (Table J-3). Because these revenues and expenditures are separate from the village economy of the Borough, we do not discuss them in this report.

Sales Tax

The Borough also levies a 3 percent sales tax which is restricted to the first \$1,000 of each sale. This tax has provided about \$4 million in revenues annually over the past five years.

Factors Affecting Future North Slope Borough Revenues

Future North Slope Borough revenues will be affected by a number of factors, including the following:

- Existing and potential state-imposed limits on Borough revenues
- Borough residents' willingness to assume property tax burdens
- Future North Slope oil development. (through its effects on Borough property values and population)
- State and federal revenue-sharing policies
- Interest earnings on Borough cash holdings

In this section, we examine the possible effects of these factors upon future Borough revenues.

State-Imposed Limits on **Borough** Revenues

As we discussed above, existing state regulations restricted Borough operating revenues in the **past**. Although these regulations are not currently limiting the Borough's property tax revenues, they may well do **so** in the future.

In addition, further restrictions may be placed upon Borough revenues in the future. One potentially significant limitation could result from a revision of the procedure which is used to count the North Slope Borough population when applying the per capita revenue limit. Since 1983, the state has assigned "split" Borough resident population figures: one for revenue sharing purposes and the other for property tax limitation **purposes**. The property tax estimate has been much higher than the revenue sharing estimate. For example, in FY 1984, the population estimate certified by the Department of Community and Regional Affairs for property tax limitation purposes was 10,171, while the population estimate used for revenue sharing purposes was 7,701 (NSB Budget Document, FY 1984, page 27). A change in the procedure for counting the Borough's population could reduce the level of operating revenues which the Borough could collect. Other possible future restrictions could include a change in the existing rule to lower the per capita operating revenue limit, or a change in the procedure used to assess oil property values.

The reasons for existing and potential state-imposed limitations on North Slope Borough revenues are to be found in the direct tradeoff between oil property revenues received by the North Slope Borough and revenues received by the State of Alaska and by other municipalities throughout the state. Limitations on Borough revenues may be understood as attempts by residents of other areas of the state to limit the share of the total North Slope property "tax pie" which is taken by the North Slope Borough in order to obtain more for themselves.

At present, the division of the property tax pie works as follows. The State of Alaska taxes oil and gas property at a rate of 20 mills (2 percent). Property taxes collected by municipalities (such as the North Slope Borough) are subtracted from this tax obligation. Thus, up to a tax rate of 20 mills, any increase in Borough oil and gas property tax revenues (which account for almost all borough property-tax revenues) results in a decrease in state revenues. Above a tax rate of 20 mills, further increases in Borough property tax revenues would no longer directly translate into lowered state revenues. However, they might have other indirect statewide effects such as potentially discouraging future North Slope oil development.

For example, in 1983 the assessed value of oil and gas property within the North Slope Borough was approximately \$9.45 billion (Table 111-8). At a tax rate of 20 mills, this resulted in a total property tax pie of \$189 million. Total Borough property taxes on

TABLE III-8
DISTRIBUTION OF STATE PETROLEUM PROPERTY TAXES, 1981-1983

<u>1981</u>				
<u>Municipality</u>	<u>Assessed Value</u>	<u>Total Tax</u>	<u>Local Credit</u>	<u>Net to State</u>
Unorganized	3,992,227,950	79,844,559	-0-	79,844,559
North Slope	6,297,616,550	125,952,331	105,150,647	20,801,684
North Star	639,604,430	12,792,089	3,581,162	9,210,927
Anchorage	50,612,980	1,012,260	436,043	576,217
Kenai	562,862,700	11,257,254	1,569,841	9,687,413
Valdez	1,620,048,000	32,400,960	10,309,985	22,090,975
Mat-Su	5,627,910	112,558	40,634	71,924
Yakutat	2,032,760	40,655	27,849	12,806
Total	<u>13,170,633,280</u>	<u>263,412,666</u>	<u>121,116,161</u>	<u>142,296,505</u>
<u>1982</u>				
Unorganized	3,850,823,000	77,016,460	-0-	77,016,460
North Slope	7,722,388,820	154,447,776	126,781,999	27,665,779
North Star	618,606,800	12,372,136	4,013,657	8,358,479
Anchorage	60,531,510	1,210,630	436,089	774,541
Kenai	578,465,660	11,569,313	2,027,740	9,541,573
Valdez	1,575,389,000	31,507,780	10,871,602	20,636,178
Mat-Su	2,184,110	43,682	12,240	31,442
Yakutat	2,059,780	41,196	28,219	12,977
Total	<u>14,410,448,680</u>	<u>288,208,973</u>	<u>144,171,544</u>	<u>144,037,429</u>
<u>1983</u>				
Unorganized	3,743,264,300	74,865,286	-0-	74,865,286
North Slope	9,450,158,880	189,003,178	144,625,348	44,377,830
North Star	640,786,260	12,815,725	4,351,448	8,464,277
Anchorage	96,386,770	1,939,735	843,675	1,096,060
Kenai	605,404,110	12,108,082	3,040,101	9,067,981
Valdez	1,519,474,000	30,389,480	17,918,701	12,470,779
Mat-Su	1,626,460	32,529	12,849	19,680
Yakutat	1,997,400	39,948	24,568	15,380
Unalaska	137,940	2,759	1,734	1,025
Total	<u>16,059,836,120</u>	<u>321,196,722</u>	<u>170,818,424</u>	<u>150,378,298</u>

The assessed values for 1981, 82 and 83 do not include audit adjustments or supplemental rolls.

SOURCE: Alaska Department of Revenue, Division of Petroleum Revenues, provided by Gerald Heier, State Petroleum Property Assessor, October 1983.

this property in 1983 were \$145 million. Thus, the Borough received 77 percent of the property tax pie in that year. Since the Borough was taxing at a rate of less than 20 mills, there was a direct tradeoff between state and borough revenues.

This tradeoff has led to a struggle over the North Slope oil property tax pie which has continued in the political and judicial arenas since the incorporation of the Borough. This struggle has been both over new legislation restricting revenues and over the proper interpretation of existing legislation. Nor are property taxes for operating revenues the only area in which efforts have been made to limit Borough revenues; efforts have also been made to restrict sales taxes, state revenue sharing receipts, and property taxes for debt service (Table III-9).²

For a number of reasons, we expect that the current state limitations on Borough revenues will continue and that new kinds of limitations may appear. Current state limitations were imposed at a time of rising state revenues. In the future, state petroleum revenues are

²A reviewer has offered the following comment on the discussion in this paragraph: "You are editorializing the motives of those who would change the rules of the game for local greed, envy, and indeed racial prejudice. Before the Eskimo area had an industry, there was no equalizing the pie of the richer urban Alaska. The name of the game was that those that had a tax base did not share, and those "with the most population got additional state aid and capital projects. The state majority is trying to do with the North Slope Borough what the eastern states are trying to do with the western states--steal their tax and resource revenues. If they have the political power, they will do so" (Robert Dupere, personal communication, February 22, 1983).

TABLE III-9
LEGAL AND POLITICAL BATTLES OVER NORTH SLOPE .
 BOROUGH REVENUES: A BRIEF SUMMARY

July 1972	Borough formally incorporated
1973 "	Special legislative session establishes per capita limit on municipalities' ability to tax as well as ceiling on property tax rate
1973-1974	Oil company suit attempts to exclude Prudhoe Bay area from North Slope Borough
1976	Legislature increases municipalities' per capita property tax revenue limit from \$1,000 to \$1,500
1976	Oil company suit argues Borough cannot tax property above limit for debt service; Borough bonding delayed
1978	State Supreme Court rules Borough not limited in debt service bonding
1982	Bill which would increase the share of oil workers included in Borough population, thereby increasing Borough property tax revenues, fails to pass legislature
November 1983	Outgoing Hammond administration signs emergency regulation to raise Borough's legal population
May 1983	Legislation introduced in Alaska legislature to limit bond debt of local governments
August 1983	Alaska Commissioner of Community and Regional Affairs certifies Borough population at 5,118 for revenue sharing purposes and 10,427 for tax-ceiling purposes, thus lowering Borough revenue sharing receipts but raising property tax revenues
January 1986	Local Boundary Commission considers proposal to detach area of proposed Red Dog mine from North Slope Borough.

likely to decline, with per capita revenues declining even faster as the state population rises. Property taxes are likely to become a larger share of the declining state oil revenue pie. As a result, political competition for limited revenues between municipalities is likely to become more intense, particularly for oil and gas properties tax revenues. It is likely that other regions of the state, in attempting to keep their current shares of that pie, will continue to try to limit the share of oil industry property taxes going to the North Slope Borough. They are likely to be increasingly successful since the relative political power of the urban areas of the state is likely to increase as their populations grow relative to the rural areas.

Thus, current revenue limitations rules are not fixed for the indefinite future. If anything, they are likely to become less favorable to the Borough. More generally, we believe that it is unlikely that the share of the total municipal revenue pie received by the North Slope Borough will increase in the future; it is possible that it will decline.

Even if new restrictions are not instituted, the possibility of "provoking" such restrictions significantly limits the Borough's flexibility in raising tax revenues. The policy of the present Borough administration of holding the mill rate constant at its present level, even in the face of declining operating revenues, may be viewed as the result of an indirect political and economic restriction on any further increase in the tax rate.

Borough Residents' Willingness to Assume Property Tax Burdens

In most municipalities, property taxes are limited not by legal limits upon operating revenues, but rather by the willingness of the residents to tax themselves. Since North Slope Borough residents pay only a small portion of **the** total property taxes collected, residents' concerns over tax rates have been less of a limiting factor for tax revenues than in other areas. Nevertheless, the Borough's tax rate is so high that it probably constitutes a significant burden for **local** property owners. These residents' concerns over property taxes may also serve to **limit** the Borough's property tax revenues in the future.

In **1982**, the Borough announced a two-month extension of the Borough property tax payment deadline to give residents having difficulty paying their taxes extra time to make these payments. This suggests that the Borough property tax rate, which rose to 16 mills in 1982, had reached a burdensome level for local property owners.

Future North Slope Oil Development

We discussed projected future property values for the North Slope Borough **earlier** in this chapter. According to current projections, Borough property values are likely to peak around 1990 and to decline significantly in the more distant future. Although the Borough's property tax base is enormous by any standard, it is not unlimited. For the past several years, the Borough's revenues have been directly tied to its property tax base since the Borough

administration has followed a policy of holding the tax rate constant.

In the future, however, the connection between the Borough's tax base and its revenues may be less direct. Assuming the total mill rate remains constant, when debt service requirements begin to decline in the late 1980s, the Borough will be able to increase property taxes for operating revenues. Once operating revenues rise to the maximum level permitted under the state per-capita restrictions, further increases in Borough property values will increase Borough revenues only in proportion to the increase in statewide property values which they represent.

Another connection between future oil development and Borough revenues results from the fact that oil field workers are counted in the Borough's population for the purpose of calculating the Borough's revenue limit. Under this limit, in 1986 the Borough was permitted \$5,500 in property tax revenues for each oil field worker (Table 111-6). Since this per capita limit is not at present the effective limit on Borough revenues, the number of oil field workers does not affect Borough revenues. In the future, however, if operating revenues are again restricted by this limit, the number of oil field workers will directly affect Borough revenues.

We illustrate the effects of property values and population on Borough revenues in Table III-10, in which we compare the increase

TABLE III-10
 COMPARISON OF INCREASES IN PROPERTY VALUES OR POPULATION
 REQUIRED TO INCREASE NORTH SLOPE BOROUGH PROPERTY
 TAX OPERATING REVENUES BY \$1 MILLION,
 UNDER DIFFERENT EFFECTIVE LIMITS TO
 BOROUGH PROPERTY TAX OPERATING REVENUES

<u>Effective Limit on Borough Revenues</u>	<u>Increase in Population Required to Increase Revenues by \$1 Million</u>	<u>Increase in Property Values Required to Increase Revenues by \$1 Million</u>
Total mill rate not to exceed 18.39 mills	(increase in population has no effect)	\$54.4 million
Per capita revenues not to exceed state- imposed limit of \$5,549 per capita	180	\$656.3 million

Note: Calculations based on fiscal year **1986** assumptions of state population of 547,475, **total** state property values of \$45.009 **billion**, North Slope Borough population of 12,359, and North Slope Borough property values of \$12,834 billion (Sources: Table **III-6** and Alaska Department of Revenue, Alaska Taxable, 1984, January **1985, p. 8**).

in property values or population required to increase Borough revenues by \$1 million, depending upon whether the effective limit to revenues is the Borough's mill rate or the state-imposed per capita limit. If the effective limit is the Borough's current tax rate of 18.37 mills (as it is at present), then an increase in population would have no effect upon Borough revenues, while an increase of \$54.3 million in Borough property values would be sufficient to increase revenues by \$1 million. In contrast, if the effective limit to Borough revenues were the current state-imposed per capita revenue limit, then an increase in population of 180 would be sufficient to increase Borough revenues by \$1 million. In contrast, property values would have to increase by \$656 million to increase revenues by \$1 million since Borough revenues would increase only in response to statewide per capita property values.

Since we believe that the state-imposed limit on per capita revenues is likely to become the effective limit on Borough revenues in the future, the number of oil field workers may become a significant factor affecting Borough revenues--assuming that the state continues to count oil field workers in the Borough population for the purpose of calculating the revenue limit.

The link between population and Borough revenues increases the sensitivity of the Borough economy to Borough capital and operations spending. In the future, any employment decrease could be multiplied by the out-migration of some workers and their families

since the resulting decline in population would cause Borough revenues, **expenditures**, and employment to decline.

State and Federal Revenue-Sharing Policies

Intergovernmental revenues currently represent a significant share of North Slope Borough revenues, in particular for educational operating and capital expenditures. As we discussed above, in the future, as state revenues decline and as the balance of political power in the legislature shifts in favor of urban areas, it is likely that these state transfers **will** decline.

Interest Earnings on Borough Cash Holdings

As we discussed above, North Slope Borough interest earnings on the Borough's cash balances have represented a significant share of the Borough's operating revenues over the past several years. The Borough faces a trade-off between higher future revenues, by slowing capital expenditures and increasing Permanent Fund savings, or higher current spending. Given the political pressure likely to develop to continue spending despite bonding reductions, it may be difficult for the Borough to follow a policy of increasing future revenues through current saving.

Summary of Factors Affecting Borough Revenues

Figure 2 illustrates how the factors discussed above affect North Slope Borough revenues. As we have seen, these factors are both complex and uncertain, and political factors may be as important as the Borough's property tax base.

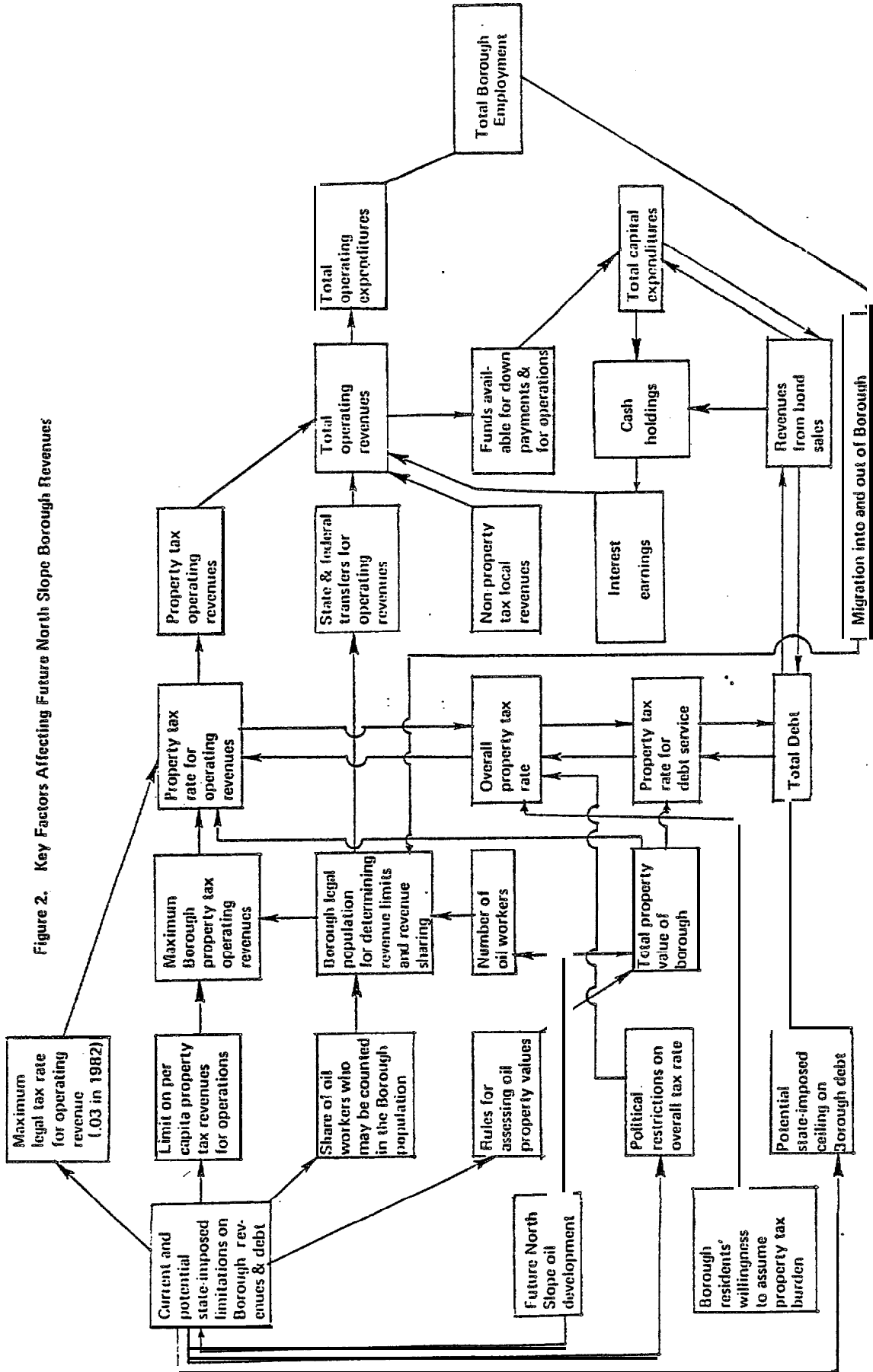


Figure 2. Key Factors Affecting Future North Slope Borough Revenues

CHAPTER IV
NORTH SLOPE BOROUGH BORROWING AND DEBT

Over the past ten **years**, the North Slope Borough has **sold** over \$1 billion in bonds. These bond sales have provided the funds for the Borough's massive Capital Improvements Program (**CIP**). The Borough's annual debt service payments have risen steadily and exceeded \$180 **million** in **1985**.

In this chapter, we examine the Borough's past borrowing and debt payments and how borrowing and debt payments may change in the future. We have included further information on the Borough's borrowing and debt in the tables in Appendix **I**.

Types of Debt

The North Slope Borough has sold three types of bonds: general obligation bonds, general obligation refunding bonds, and bond anticipation notes. A general obligation (go.) bond is a long-term debt obligation of the Borough. It **is** primarily used to finance and construct capital projects. In order for the **Borough** to issue a go. bond, a certified election must approve the issuance. A general obligation refunding bond is a long-term debt obligation used **to** pay off outstanding go. bonds when it is advantageous **to** do so, generally when current interest rates are **lower** than when the previous bond issue was sold. It is not necessary **to** have an election to sell go. refunding bonds, but the Assembly must approve the issuance with an ordinance. A bond anticipation note is a

short-term obligation that is used to provide interim financing for capital projects until authorized go. bonds are issued, at which time the bond anticipation notes are retired.

Past North Slope Borough Borrowing

The Borough began selling bonds in 1974. Table IV-1 shows the growth of the Borough's net bonded debt between 1977 and 1985. The Borough's net bonded debt increased by more than \$100 million in every year between 1980 and 1985 except for 1984. Net bonded debt increased by \$449 million in 1983.

As of October 1984, the Borough had sold 22 issues of go. bonds, 3 issues of go. refunding bonds, and 2 issues of bond anticipation notes. As of October 1984, there were only 13 issues of go. bonds, 3 issues of go. refunding bonds, and 1 issue of bond anticipation notes outstanding. As shown in Table IV-2, the amount outstanding on these bonds totaled \$1,203,440,000.¹

Compared with other municipalities in Alaska or the rest of the United States, the North Slope Borough's bonded debt is enormous. As shown in Table IV-3, in 1982, when the Borough's total debt was less than half what it is today, its per capita debt was \$77 thousand, or more than fifteen times as high as the statewide average.

¹Information in this section was compiled from Official Statements of the North Slope Borough relating to various bond sales. Statements from 1977, 1979, 1980, 1982, 1983, and 1984 were used.

TABLE IV-1.
NORTH SLOPE BOROUGH **NET** BONDED DEBT
1977-1985

<u>Fiscal</u> <u>Year</u>	<u>Net Bonded Debt</u> <u>(millions of dollars)</u>	<u>Increase in</u> <u>Net Bonded Debt</u> <u>(millions of dollars)</u>
1977	33	
1978	81	48
1979	148	67
1980	257	109
1981	389	132
1982	507	118
1983	956	449
1984	1,049	93
1985	1,158	109

SOURCE: North Slope Borough, Preliminary Official Statement Relating to the Original Issuance of 153,945,000 Floating Rate Monthly Demand General Obligation Bonds, p. 36.

TABLE IV-2.
DEBT SUMMARY

Serial General Obligation Bonds and Notes Outstanding
Upon Issuance of the General Obligation Bonds, Series V*

<u>Series</u>	<u>Purpose</u>	<u>Year of Issuance</u>	<u>Primary Interest Rates</u>	<u>Amount (\$000)</u>
I	General Obligation Bonds	1978	5.076-6.75%	7,400
J	General Obligation Bonds	1979	5.57%-7.25%	0
K	General Obligation Bonds	1980	10.5%-11.875%	0
L	General Obligation Bonds	1980	7.0%-9.25%	12,000
M	General Obligation Bonds	1981	11.25%	18,000
N	General Obligation Bonds	1982	11.20%	10,000
O	General Obligation Bonds	1982	13.00%-15.5%	64,000
P	General Obligation Bonds	1982	11.25%-13.75%	21,000
Q	General Obligation Bonds	1982	9.75% - 11%	56,000
R	General Obligation Bonds	1983	8.75%-11%	47,000
A	General Obligation Refunding Bonds	1983	9.50%-12.25%	214,500
B	General Obligation " Refunding Bonds	1983	8.75%-13.10%	90,800
S	General Obligation Bonds	1984	7.50%-8.75%	86,525
T	General Obligation Bonds	1984	(variable)	100,000
U	General Obligation Bonds	1984	(variable)	108,470
B	Bond Anticipation Notes	1984	7.875%	[153,945] **
C	General Obligation Refunding Bonds	1984	9.50%. 1.0.50%	213,800
V	General Obligation Bonds	1984	[variable]	153,945
ToTAL				<u>\$1,203,440</u>

*In t-he Borough's elections held in -October 1984, voters authorized issuance of an additional \$65,800,000 in general obligation bonds which have not yet been issued.

**Not included in total; to be retired from proceeds of general obligation bonds, Series V.

SOURCE : North Slope Borough, "Preliminary Official Statement Related to the Original Issuance of \$153,945,000 Floating Rate Monthly Demand General Obligation Bonds, Series V," dated October 5, 1984, page 8.

TABLE IV-3. ALASKA MUNICIPAL DEBT RATIOS, FY 1982

<u>City/Borough (Population)</u>	<u>G.O. Debt Per Capita</u>	<u>Debt as Percentage of Assessed Value</u>
North Slope Borough *	\$97,781	7.10
Municipality of Anchorage *****	1,278	2.46
Kenai Peninsula Borough ***	3,064	4.45
City of Valdez *	22,864	4.97
Fairbanks North Star Borough ****	1,146	2.78
Matanuska-Susitna Borough ***	2,508	5.42
City and Borough of Juneau **	1,267	2.69
Kodiak Island Borough **	1,576	4.58
City and Borough of Sitka *	2,127	4.15
Ketchikan Gateway Borough **	1,166	2.17
City of Fairbanks ***	463	1.12
City of Ketchikan *	1,043	2.58
Bristol Bay Borough *	3,064	4.45
City of Kenai *	706	1.80
City of Palmer	1,438	3.93
City of Unalaska *	1,821	4.76
City of Kodiak *	553	1.00
City of Petersburg *	985	2.32
City of Homer *	993	1.85
City of Nenana *	5,046	30.39
City of Wrangell *	1,085	2.94
City of Skagway *	2,312	3.21
City of Cordova *	747	1.44
Haines Borough *	499	1.30
City of Haines *	746	0.23
City of Bethel *	159	0.41
City of Nome *	148	0.32
City of Seldovia *	590	2.26
City of Dillingham *	40	0.11
City of Craig *	62	0.17
Statewide Average	<u>\$4,648</u>	<u>3.75</u>

Moody's Local Debt Medians

	<u>Population</u>		
*****	200,000- 300,000	361	2.1
****	50,000 - 100,000	391	1.8
***	25,000 - 50,000	289	1.9
**	10,000 - 25,000	422	2.7
*	Under 10,000	600	3.2

SOURCE : Alaska Department of Community and Regional Affairs. Alaska Taxable, Fiscal Year 1982, as published by Municipal Finance Officers Association in A Review of Debt Capacity and Debt Management for the State of Alaska, p. 120. Printed as Table 16 in Alaska Consultants, Inc., et al., Barrow Arch Socioeconomic and Sociocultural Description (January 1984), p. 78.

Debt Service

Table IV-4 shows past and projected levels of Borough debt service payments as of October 1984. Debt service payments have risen steadily, exceeding \$25 million in 1980 and \$100 million in 1984. Future debt service requirements as of October 1984 totaled \$2,149,875,694. The yearly payment requirements on debt peaked in FY 1988 at a level of \$218,456,750. With the exception of FY 1991, the levels of debt service stayed above \$100,000,000 a year until FY 1996, after which they dropped sharply. By FY 1999, debt service was less than \$20,000,000 annually. These debt service figures were based on the assumption that the primary interest rates paid by the Borough would be between 7.10 percent and 7.60 percent (North Slope Borough, Preliminary Official Statement, October 1984, page 10). If interest rates strayed out of this band, the debt service requirements could be different.

At the North Slope Borough municipal election on October 1, 1984, Borough voters authorized the issuance of an additional \$65,800,000 of go. bonds (North Slope Borough, Preliminary Official Statement, October 1984, page 8). These bond sales as well as future sales of general obligation bonds and general obligation refunding bonds may be expected to change the amounts and timing of the Borough's future debt service obligations from the figures shown in Table IV-4. In several recent bond sales, the Borough has rescheduled its debt service to pay off its debt within a much shorter period of time.

TABLE IV-4.
NORTH SLOPE BOROUGH HISTORIC AND PROJECTED DEBT SERVICE

(dollars)

<u>Fiscal Year</u>	<u>Debt Service</u>
1976	1,945,000
1977	3,754,000
1978	4,820,000
1979	15,147,000
1980	26,080,000
1981	35,617,000
1982	67,876,000
1983	95,311,000
1984	129,950,000
1985	188,078,765
1986	199,717,239
1987	208,894,750
1988	218,456,750
1989	210,322,850
1990	183,166,600
1991	98,545,000
1992	160,272,500
1993	151,122,250
1994	140,638,750
1995	130,076,150
1996	77,322,350
1997	38,826,650
1998	31,355,000
1999	16,210,000
2000	15,735,000
2001	15,320,000
2002	14,915,000
2003	14,560,000
2004	14,145,000
2005	13,770,000
2006	8,425,000

SOURCES: 1976-1984: North Slope Borough, "Comprehensive Annual Financial Report, Fiscal Year July 1, 1983, to June 30, 1984," page 80.

1985-2006: Preliminary Official Statement Relating to the Original Issuance of \$153,945,000 Floating Rate Monthly Demand General Obligation Bonds, North Slope Borough, October 5, 1984, page 8. Includes projected service on bond issues through Series V.

Factors Affecting Future Borrowing

Political Limitations on Borough Borrowing

Currently, there are no legal limitations on North Slope Borough borrowing. However, it is possible that the state may impose restrictions on future borrowing. Several legislators have already called for restrictions on local government borrowing in Alaska, which would primarily affect the North Slope Borough (Government Finance Research Center, page 83).

There are several reasons for which the state might limit the Borough's future borrowing. First, as we discussed in Chapter III, there is a direct tradeoff between oil property tax revenues collected by the Borough and by the state. Since the state cannot restrict the Borough's property tax revenues collected for debt service once bonds have been sold, the state may instead seek to limit the borough's bond sales.

Second, the state might restrict future Borough bonding due to concerns about the sheer size of the Borough's debt and the potential statewide adverse implications in the event of a Borough default. If the Borough were to default, both the state and other municipalities might face difficulties in future bond sales. Thus, although legally the state would not be required to cover the Borough's debt costs, political and financial considerations might force it to do so.

Third, the state reimburses local governments for a portion--currently up to 90 percent--of the debt they issue for school construction. **Since** a large portion of the Borough's **borrowing** has been for construction of educational facilities, the state has incurred a substantial share of these debt service costs. Thus, the state might seek to **limit** the Borough's bonding for educational facilities.

Financial Market Concerns

Financial market concerns may also limit future Borough bonding by adding **to** the cost of borrowing. The greater the Borough's debt, the more risk investors are likely to perceive in the Borough's bond offerings, and the more interest they are likely **to** demand.

The ratings which bond issues receive from independent agencies such as Moody's, Fitch, and Standard and Poor's provide an indication of how financial markets view the Borough's bonds. While several agencies continue to rate the Borough's bonds favorably, at least one has recently lowered its rating.

For example, Moody's has consistently rated the Borough's bonds "A," indicating "upper medium quality" (below "prime quality" and "excellent quality"). **In March 1985**, Fitch Investors Service reaffirmed their "AA" rating, citing these strengths of the Borough's tax base:

- "The expanding presence of the oil industry"
- "The tax base has doubled since FY 1981-82 and is anticipated to increase by another 50 percent in the next few years"
- ". . . oil price fluctuations will not directly affect revenue sources"
- ". . . the payments are not a function of production of oil or market prices"

In contrast, Standard and Poor's by 1984 had reduced its rating from "A" to "BBB+," meaning "lower medium quality." Standard and Poor's Creditweek of November 5, 1984, cited these perceived weaknesses:

- "the narrowness of the Borough's economic base"
- "the large amount of debt supported by that base"
- "relies almost totally on the oil and gas industry"
- "the outlook for diversification is poor"
- "No basic industry is projected to supplement the oil industry"

We do not believe that these perceived weaknesses in the Borough's ability to repay debt are valid. The Borough's tax base appears to us to be more than adequate to support the payment of existing as well as new debt obligations. The Borough does not face substantial difficulties in repaying its existing debt, but rather in the fact that it cannot continue to spend at past rates.

Nevertheless, whether or not these negative perceptions are valid, lower bond ratings could increase the cost of the Borough's borrowing. For example, in 1982 bonds rated "13813" by Standard and

Poor's commanded an interest rate **about** half a percentage point **higher** than bonds rated "A" (Government Finance Research Center, page 40).

Operating Costs for Capital Facilities

Another potential constraint to future Borough borrowing for capital projects is the cost of operating new facilities. Even if the Borough were able to borrow and repay **an** unlimited amount, it would not have unlimited funds to operate new facilities. As we discuss in Chapter V, little information is available on the effects of additional Borough construction upon operating costs. However, if we assume that operating costs are between five and fifteen percent of total construction costs, then every additional \$100 million in **CIP** expenditures increases Borough operating costs by between \$5 and **\$15** million. **Thus**, even in the future, even if the Borough were **to** pay off a substantial portion of its debt, easing financial and **political** concerns over the magnitude of its debt, limitations on its operating revenues might **still** constrain **its future** borrowing.

Conclusions

Over the past ten years, the North Slope Borough has financed its ambitious CIP program by borrowing more than **\$1** billion in national and international bond markets. Annual bond sales exceeded \$100 million in most years. Since 1980, debt service **costs** have risen sharply and are projected to exceed **\$200/million** in 1988 and 1989 and to remain above \$100 million **until 1996**.

Although no legal restrictions prevent the Borough from continuing to borrow substantial sums of money, a variety of political, legal, and economic factors are likely to eventually sharply curtail future Borough borrowing. These include potential state restrictions on Borough bonding, financial market concerns over the size of the Borough's debt, and the costs of operating new capital facilities. As we discuss in Chapter V, the current Borough administration is planning to reduce future CIP expenditures substantially.

In sum, past bond sales have provided a vehicle for the Borough to spend large sums on capital projects within a relatively short period of time. However, borrowing cannot provide the Borough with funds of this magnitude indefinitely. Although we cannot predict the exact magnitude or timing of future Borough bond sales, they are likely to be significantly lower.

CHAPTER V
NORTH SLOPE BOROUGH EXPENDITURES

North Slope Borough expenditures have been the vehicle for enormous economic change in North **Slope** villages. In this chapter, we examine the Borough's expenditures to date and how expenditures are likely to change in the future.

North **Slope** Borough expenditures fall into three general categories: operating expenditures, capital expenditures, and debt service. Table V-1 shows historical expenditures in each of these three categories as well as recent Borough projections of future capital and debt service expenditures.

The Borough's operating expenditures rose rapidly from \$9 million in 1975 to a peak of \$103 million in FY 1985, after which they dropped slightly. Capital expenditures rose even more rapidly, from \$7 million in 1975 to more than \$300 **millionin** 1983. Since 1978, the Borough's capital expenditures have substantially exceeded its operating expenditures. In **1983**, capital expenditures were more than four times as great **as** operating expenditures. Since **1983**, capital expenditures have declined significantly although they are **still** well over **\$100** million. According to projections by the current North Slope Borough administration, the Borough's capital expenditures will continue to decline substantially over the next five years.

TABLE V-1. NORTH SLOPE BOROUGH EXPENDITURES,
HISTORICAL AND PROJECTED
(millions of dollars)

Fiscal Year	Operations	Capital Improvements Program	Debt service
1975	9	7	
1976	12	27	2
1977	18	14	4
1978	25	35	5
1979	30	72	15
1980	40	93	26
1981	50	131	36
1982	63	211	68
1983	69	302	95
1984	79	211	130
1985	103	199	188
1986	97	124	200
1987	NA	81	209
1988	NA	35	218
1989	NA	31	210
1990	NA	5	183
1991	NA	0	99
1992	NA	0	160
1993	NA	0	151
1994	NA	0	141
1995	NA	0	130
1996	NA	0	77
1997	NA	0	39
1998	NA	0	31
1999	NA	0	16
2000	NA	0	16
2001	NA	0	15
2002	NA	0	15
2003	NA	0	15
2004	NA	0	14
2005	NA	0	14
2006	NA	0	8

SOURCE: Capital Improvements Program Expenditures: North Slope Borough Summary Sheet (original figures provided by Main Hirschman and North Slope Borough ordinance 84-10B). Operations and Debt Service Expenditures, 1975-1984: Comprehensive Annual Financial Report of the North Slope Borough Alaska, Fiscal Year July 1, 1983-June 30, 1984, p. 80. Debt service 1985-2006: North Slope Borough, Preliminary Official Statement Relating to the Original Issuance of 153,945,000 Floating Rate Monthly Demand General Obligation Bonds, p. 10. Operations Expenditures after 1986: North Slope Borough Budget Document, ordinance 85-3, FY 1985-86, page 10. Operations expenditures after 1986 not available.

The Borough's debt service expenditures have also expanded very rapidly and are projected to exceed \$200 million annually during the period 1986-1990. Debt service expenditures are likely to considerably exceed both operating and capital expenditures until at least the mid-1990s.

North Slope Borough Operating Expenditures

Table V-2 summarizes North Slope Borough operating expenditures by category. Over the period 1975-1985, total operating expenditures increased by a factor of ten, to over \$100 million. Operating expenditures increased by \$24 million between 1984 and 1985 alone. In 1986, operating expenditures fell for the first time declining by 6 percent. This decline in operating expenditures reflects the response of the current Borough administration to the decline in Borough unrestricted revenues which began in 1984 (see Table III-2).

Education accounts for the largest share of Borough operating expenditures. Education expenditures total \$29 million in the 1986 budget, or 30 percent of total operating expenditures. The share of education in total expenditures has fallen steadily from 45 percent in 1979 to 30 percent in 1986. The share of education in Borough discretionary expenditures is actually somewhat smaller since about one-third of these expenditures are funded by state educational foundation funds.

TABLE V-2.
NORTH SLOPE BOROUGH OPERATING EXPENDITURES BY FUNCTION^a
LAST TEN FISCAL YEARS

(In \$000 to Nearest \$1,000)

<u>Fiscal Year</u>	<u>General Government</u>	<u>Public Safety</u>	<u>Public Works</u>	<u>Public Utilities</u>	<u>Housing</u>	<u>Health & Social Services</u>	<u>Education</u>	<u>Other</u>	<u>Total operating Expenditures</u>
1975	\$2,355	\$	\$	\$	\$	\$	\$5,879	\$955	\$9,189
1976	2,862		1,789			290	6,869	633	12,443
1977	3,006	618	2,929			570	10,002	963	18,088
1978	5,077	1,137	4,040		232	1,724	12,389	777	25,376
1979	6,038	1,702	5,590		537	2,075	13,408	773	30,123
1980	7,651	3,180	3,788	4,163	1,016	2,424	16,406	1,057	39,685
1981	10,900	3,011	4,101	5,305	2,320	3,664	20,006	713	50,020
1982	13,640	5,609	5,830	7,348	3,693	5,332	21,400	654	63,506
1983	14,910	5,588	5,540	8,397	4,775	5,379	22,681	1,537	68,807
1984	16,193	7,025	5,843	9,654	4,984	5,953	27,562	1,330	78,544
1985	18,133	9,139	7,823	15,450	7,315	9,182	29,698	5,237	102,577
1986	16,757	5,158	5,917	13,521	5,731	8,708	28,850	9,254	96,896

Share of Operating Expenditures (percent)^b

1979	20	6	19	0		7	45	3	100
1984	21	9	7	12		8	35	2	100
1986	17	8	6	14		9	30	10	100

^aIncludes General and Special Revenue Funds.

^bTotals may not add exactly to 100 due to rounding.

SOURCE : 1975-1984: **Comprehensive Annual Financial Report of the North Slope Borough, Alaska, Fiscal Year July 1, 1983, through June 30, 1984, Table 1, page 79.**

1985 and 1986: North Slope Borough Budget Document, ordinance 85-3, FY 1985-86, page 10.

General governmental activities, such as administration and planning, account for the next largest share of Borough **expendi-**ures, followed by public utilities and health and social services. Operating expenditures rose rapidly in all categories prior to 1985, and **all** categories experienced cutbacks in 1986.

We expect that future North **Slope** Borough operating expenditures will depend in **large** part upon Borough revenues. **As** we discussed in Chapter **III**, Borough revenues are currently limited by the administration's policy of not raising the mill rate. In the future, if property values increase substantially or taxes for debt service decline, revenues may instead be limited by the **state-**imposed limit on per capita revenues.

Much of the increase in Borough operating expenditures may be attributed to the costs of operating and maintaining new facilities completed under the Borough's Capital Improvement Program (**CIP**). These costs are probably reflected to some extent in every operating expenditure category. However, the Borough has not gathered data designed to measure directly the operating costs of new facilities. To gain indirect evidence on the extent to which new facilities **have** added to Borough operating costs, we estimated the total values of completed **CIP** projects over the period 1975 to 1984 and compared these values with **total** Borough operating expenditures (Table V-3). After **1979**, Borough expenditures rose annually by between 3 and 20 percent of the increase in the value of completed projects.

TABLE V-3
COMPARISON OF VALUE OF COMPLETED CIP FACILITIES
AND BOROUGH OPERATING EXPENDITURES

	Estimated Value of Completed Projects	Total Operating Expenditures	Increase in Borough Expenditures as Source of Increase in Value of Completed Projects
	(thousands of dollars)		(percent)
1975	2,625	9,189	
1976	12,530	12,443	33
1977	19,787	18,088	78
1978	51,351	25,376	23
1979	113,380	30,123	8
1980	163,654	39,685	19
1981	244,591	50,020	13
1982	318,772	63,506	18
1983	480,068	68,807	3
1984	543,549	78,544	15

SOURCE: Tables J-6 and V-2.

However, we do not know **what** share of the increases in Borough expenditures can be **attributed directly to** the operation of Borough facilities. It seems **likely** that operating costs as a **share** of newly completed projects' are somewhere in this range--perhaps around **ten** percent. However, operating costs for a CIP facility are not fixed. These costs depend in large part upon how intensively facilities **are** used and how **well** they are maintained. The Borough is likely to face a difficult choice **in** the future between limiting **CIP** facility operating costs and **fully** utilizing and maintaining these **facilities**.¹

North Slope Borough Capital Expenditures

A major goal of the North Slope Borough has been the provision of facilities such as schools, housing, and water and sewage facilities. To provide these facilities, the Borough undertook a major Capital Improvement Program, under which it has spent well over **\$1** billion.

Table V-4 shows North Slope Borough capital expenditures in each of the sixteen major **CIP** funds for the period **1977** through **1984**. **Total** CIP spending increased dramatically in each year, to a peak of over \$302 million in 1983, and subsequently **fell** to **\$211** million in 1984.

¹See **Scott** Goldsmith et al., Public Capital Formation in Alaska: Current Levels, Fiscal Effects, and Future Prospects (Institute of Social and Economic Research, August **1984**) for a discussion of the fiscal effects of capital expenditures and an examination of these effects for state capital expenditures.

TABLE V-4
 NORTH SLOPE BOROUGH CAPITAL PROJECTS FUNDS EXPENDITURES,
 1977 - 1984 (Fiscal Year)

FUND	1977	1978	1979	1980	1981	1982	1983	1984
Educational Facilities	3,230,888	11,330,579	22,535,951	24,572,309	25,095,045	30,408,630	53,238,160	25,30,133
Public Roads	1,573,319	4,160,389	3,878,544	6,943,105	9,433,404	29,063,687	31,496,704	22,332,021
Public Housing	5,272,699	10,299,948	21,136,202	33,281,291	23,989,395	25,550,943	31,633,979	24,954,518
Water Facilities	622	564,331	1,784,870	6,482,878	19,377,007	32,691,124	47,159,188	20,135,102
Sewage Treatment Disposal Facilities	1,982	217,801	2,014,803	5,178,997	21,284,054	33,834,918	47,142,980	22,582,962
Airport Facilities	13,744	8,870	884,727	1,277,003	5,061,234	3,033,895	12,901,029	10,298,458
Urban Development	380,782	391,641	362,398	544,737	2,439,153	1,040,479	193,183	72,486
Light, Power, and Heating Systems	1,835,447	2,216,899	5,033,411	5,360,398	7,641,591	10,245,730	18,559,653	20,495,353
Public Safety Facilities	--	--	568,544	2,178,136	3,626,717	21,404,292	15,359,765	5,857,563
Sanitary Facilities	1,498,252	4,968,634	3,181,217	4,856,785	10,163,528	11,744,363	14,309,975	6,496,278
Industrial Parks	--	--	--	--	175,000	5,647,636	9,134,922	28,489,272
Communication	--	--	6,534	158,230	2,159,074	511,587	3,911,286	2,797,106
General Capital Projects	63,442	208,155	356,174	494,951	143,609	36,595	1,310,271	1,189,216
Health Facilities	174,193	243,451	151,469	1,721,756	643,901	3,879,094	10,879,787	8,840,375
Library/Cultural Facilities	--	--	43,590	750	1,858	2,188	120,167	168,277
Administration Facilities	--	--	--	--	124,962	1,498,936	4,851,062	863,423
TOTAL	14,045,370	34,610,698	71,938,434	93,051,326	31,359,532	210,594,097	302,202,111	20,702,483

SOURCE: Various Financial Reports of the North Slope Borough, Fiscal Years 1977 through 1984.

As shown in Table V-5, educational facilities have accounted for nearly \$200 million, or 18 percent of all CIP spending. Public housing expenditures accounted for \$176 million, or 16 percent of total expenditures, followed by sewage facilities (\$132 million), water facilities (\$128 million), and public roads (\$109 million). Among the most expensive of hundreds of CIP projects have been a more than \$70 million high school in Barrow and a more than \$200 million utilidor in Barrow.

Future CIP expenditures will depend on a number of factors. First, as we discussed in Chapter IV, future Borough borrowing for CIP projects may be constrained by political and financial market concerns over the size of the Borough's debt as well as the effects of debt service costs upon the Borough's tax rate. Although the Borough has the option of funding capital projects directly from current property tax revenues, such expenditures would be limited by state restrictions on per capita property tax revenues not used for debt service.

Second, the more the Borough builds under the CIP program, the more operating costs may be expected to rise. At some point, the additional operating costs posed by new facilities--or the cost of effectively utilizing these facilities--may pose an effective constraint to further construction. It is likely that operating and maintenance costs will become increasingly important in determining the kind of projects which the Borough will undertake.

TABLE V-5
NORTH SLOPE BOROUGH CAPITAL PROJECTS FUNDS
TOTAL EXPENDITURES,

Through Fiscal Year 1984

<u>Fund</u>	<u>Expendi ture</u>	<u>Percent of Total</u>
Educational Facilities	195,541,695	18.3
Public Roads	108,881,173	10.2
Public Housing	176,118,975	16.5
Water Facilities	128,195,122	12.0
Sewage Facilities	132,258,497	12.4
Airport Facilities	33,478,960	3.1
Urban Development	5,424,859	0.5
Lights, Power	71,388,482	6.7
Public Safety	48,994,957	4.6
Sani tary	77,219,032	7.2
Industrial Parks	43,446,830	4.1
Communi cations	9,543,817	0.9
General CIP	3,802,413	0.4
Health Facilities	26,534,026	2.5
Library/Cultural	336,830	
Admi ni strati on	<u>7,338,3%3</u>	<u>0.7</u>
 TOTAL	 1,068,504,051	 100.0

- less than 0.5 percent

Note: Percentages may not total 100.0 due to rounding.

Third, the outlook for **future** state capital funding assistance for the Borough is poor. State capital expenditures have been drastically reduced due to the decline in state revenues. Future state capital expenditures are **likely** to be restricted to traditional kinds of projects such as schools (for the unincorporated borough), roads, and harbors--none of which are likely to be built within the North Slope Borough.

Working against these **limiting** factors to **CIP** spending is the political pressure **within** the Borough to continue to build **CIP** projects. As we discuss in Chapter VI, over the past few years **CIP** expenditures have accounted for a large share of North Slope Borough employment. For many Borough residents the jobs provided by the **CIP** have become more important than the **CIP** facilities themselves. Cutbacks in **CIP** expenditures over the past year have generated significant political opposition as unemployment has risen. Thus the Borough is likely to continue to build some capital projects simply in order to provide jobs.

On balance, **we** expect Borough capital expenditures to remain significant for at **least** several more years. According to information prepared by **the** Borough in June of **1985**, prior to **1990** the Borough will spend **\$117** million to **complete CIP** projects presently underway (Table V-6). In addition, another \$202 million in new **CIP** projects are included under the current six-year **CIP** plan. Together, the total value of projected expenditures on

TABLE V-6
NORTH SLOPE BOROUGH
PROJECT BUDGET STATUS REPORT
AS OF MAY 31, 1985

	Unencumbered Funds Balance At 5/31/85	Projected Authorization	Total Fund: Actual and Projected	Projects to Start Per Ord. #85-10	Projects in Progress Cost to Complete	Total Projects Start and in Progress
56- Educational Facilities	\$12,436,812	\$13,	\$25,596,312	\$7,826,000	\$20,523,613	\$28,349,613
57- Public Roads	32,955,377	16,642,000	49,597,373	32,435,000	2,594,569	53,029,569
58- Public Housing	25,776,523	0	25,776,523	3,600,000	21,174,091	24,674,091
59- Water Facilities	18,367,920	42,451,000	60,818,923	45,406,000	11,504,40	56,81,40
60- Sewage Facilities	15,27,066	27,713,000	42,984,065	35,746,000	2,788,426	38,534,426
61- Airport Facilities	15,627,453	3,77,000	18,804,468	1,740,000	6,029,307	17,769,307
62- Urban Development	291,518		na			
63- Light, Power, Heating	38,936,458		5,58,458	5,1,	24,	49,336,228
64- Public Safety	2,537,665	0	2,537,668	0	,730,880	1,730,880
65- Sanitary Facilities	16,324,533	2,214,000	18,538,533	1,312,000	,494,659	12,806,659
66- Industrial Parks	2,708,311	0	2,708,31	900,000	0	900,000
67- Communications	2,434,965	0	2,434,965		,734,836	3,234,836
68- General Capital	2,348,379	0	2,348,379	0	575,919	575,919
69- Health Facilities	6,711,306	898,000	7,609,306	2,000,000	2,863,380	4,863,380
70- Library/Culture	2,073,698	0	2,073,698	0	0	0
71- Administrative Facilities	27,217,234	0	27,217,234	26,000,000	797,639	26,797,639
TOTAL	\$222,019,321	8,900,000	340,999,321	202,513,000	16,900,687	319,413,687

*About one-half of these funds (\$10.1 million) will be set aside for Borough administration of projects over the period 1985-86 through 1989-96 leaving an adjusted balance of \$11.4 million.

SOURCE: North Slope Borough, financial materials prepared for presentation to members of the Banking Community, San Francisco, California, June 14, 1985.

projects currently underway or planned is **\$319 million**. These projects are to be paid for out of \$222 million currently **in CIP** funds, as **well** as projected additional borrowing of \$119 million (subject to voter approval).

Nevertheless capital expenditures **will** be far below the peak levels of the early 1980's, and they are likely to continue to decline over **time**. **Table V-1** includes one set of Borough CIP expenditure projections as of early 1985. Actual expenditures are likely to be somewhat higher, partly because the Borough's projections were based on a six-year plan, which reflect only currently planned projects. Capital expenditures are unlikely to fall to zero since the Borough **will** probably continue **to** sell some bonds, receive limited state funding, and use some general fund money to build capital projects. However **it** is clear that the Borough cannot continue a level of capital expenditures anywhere near the level of the early 1980s, and that future annual expenditures **will** be at most in the tens rather than the hundreds of millions of dollars.

North Slope Borough Debt Service Expenditures

Beginning in **1986**, North Slope Borough debt service expenditures **will** exceed both capital and operating expenditures. Debt service is projected to exceed \$200 million annually during the period 1986-1990. However, unlike operating and capital expenditures, debt service expenditures do not generate jobs or economic activity within the Borough. Since its formation, Borough operating and

capital expenditures have vastly exceeded Borough revenues, with the difference made up by bond sales. In the future, this pattern will be reversed, and Borough operating and capital expenditures will be significantly below revenues, as the Borough pays off its debt.

CHAPTER VI
NORTH SLOPE BOROUGH EMPLOYMENT

In this chapter, we examine employment in the North Slope Borough. We focus our attention primarily upon employment during the years 1980 through 1984 and upon employment of North Slope Borough Native residents.

A primary goal of the North Slope Borough has been to increase employment opportunities for Natives. To date, the Borough has been very successful in this respect. It has hired large numbers of Natives, both for work in Borough operations and on CIP construction projects. A very large share of Native employment--perhaps as high as three-quarters--results either directly or indirectly from North Slope Borough expenditures.

However, as CIP construction projects are completed and CIP expenditures decline in the future, Borough-sponsored Native employment is likely to decline significantly. In particular, Native male employment is likely to decline since CIP construction employment has accounted for as much as half of Native male employment.

North Slope oil development has been indirectly responsible for most of North Slope Native employment by providing a tax base for the North Slope Borough. However, very few Natives work directly for the oil industry. This is partly because relatively more attractive

jobs have been available in Borough villages. However, even when these employment opportunities decline, a variety of other factors are likely to constrain future Native oil industry employment.

Below, we begin by reviewing our definition of employment as well as the categories into which we divide employment. Next, we discuss sources of data on North Slope Borough employment and problems in using these data. We then present estimates of employment by category for the period 1980 through 1984. We discuss Native employment and the distribution of Native employment among different categories of jobs.

Next, we discuss North Slope Borough operating and construction employment and factors which will affect future Borough employment of Natives. Finally, we discuss past and future oil industry employment of Natives.

Definitions of Employment

Measures of employment differ depending upon how employment is defined. Key factors in any definition of employment include:

- The period of time over which employment is measured. Employment may be vastly different if measured at a single point in time than if it is averaged over a period of time such as a year.
- How part-time workers are counted. Counting part-time jobs as equivalent to full-time jobs will result in a higher level of employment.

- Who is counted. In North Slope Borough villages, many jobs are held by nonresident workers who live in construction camps for the duration of a particular project. Whether or not these jobs are counted can significantly affect employment figures.

In **this** chapter, we use the concept of annual average full-time equivalent employment to describe employment on the North Slope. We **define** employment as the total number of hours worked during the year divided by the number of hours in an average full-time job. Rather than constantly repeating the term "annual average full-time equivalent employment," we simply use the term "employment" or "jobs." In addition, for non-Natives we differentiate between resident employment and nonresident employment (we considered all Native employment to be resident employment). Our definition of "resident" employment is the same that we used for population in Chapter II--persons who live in the North Slope Borough year-round and consider it their home.

Employment Data

Unfortunately, available data for the North Slope Borough employment vary considerably in the concept of employment which has been measured. Some data measure employment only at a particular point in time, and other data do not distinguish between resident and nonresident workers or full-time and part-time jobs. Data which distinguish between resident and nonresident employment are not available for more than individual years. Even fewer data are available for North Slope Native employment. Thus, we have had to

estimate Borough resident employment and Native employment based on a variety of data sources.

Below, we summarize the major sources of data available for North Slope employment. We have collected all of these data in Appendix E.

Alaska Department of Labor Employment and Payroll Data (Tables E-1 through E-26 and E-56)

The Alaska Department of Labor publishes monthly data for wage and salary employment by industry within the North Slope Borough. These data are summarized for the period 1980 through 1984 in Table VI-1. They are probably the most reliable and consistent data available for annual full-time equivalent employment on the North Slope. Unfortunately, they do not distinguish between oilfield employment and employment in the villages. As a result, they cannot be used to estimate resident employment. In addition, the data do not distinguish between Native and non-Native employment.

TABLE VI-1
NORTH SLOPE BOROUGH AVERAGE QUARTERLY EMPLOYMENT DATA
 FROM STATISTICAL QUARTERLY, 1980 - 1984

<u>Year & Quarter</u>	<u>Total</u>	<u>Mining</u>	<u>con- struction</u>	<u>Transport., Communicn, & Utilities</u>	<u>Wholesale Trade</u>	<u>Retail & Real Estate</u>	<u>Finance, Insurance</u>	<u>Services</u>	<u>Federal Gov't</u>	<u>State Gov't</u>	<u>Local Gov't</u>
1980 I	5493	2622	500	348	0	318	0	287	249	47	1048
1980 II	5798	2697	583	381	0	273	69	383	252	47	1114
1980 III	5710	2384	506	523	0	412	0	454	236	43	1081
1980 IV	7472	3399	1233	441	0	313	0	479	260	28	1225
1981 I	8178	3866	1477	421	0	346	86	562	253	22	1134
1981 II	8049	3723	1420	462	0	314	95	670	237	20	1075
1981 III	9347	3828	2009	553	0	380	99	897	237	19	1308
1981 IV	9469	4024	2070	553	0	365	101	864	235	15	1206
1982 I	9247	3864	2012	519	0	295	95	966	218	19	1215
1982 II	9653	3642	2340	538	0	304	120	1138	216	21	1297
1982 III	9836	3576	2416	632	0	339	136	1260	145	21	1274
1982 IV	9816	3174	2887	427	0	322	160	1301	149	21	1349
1983 I	9691	3587	2512	419	0	364	127	1049	155	24	1384
1983 II	10074	3214	3060	461	0	354	141	1038	160	30	1549
1983 III	10563	3285	3377	536	0	397	0	1205	154	31	1354
1983 IV	10942	3210	4020	402	83	356	149	1148	118	35	1421
1984 I	9875	3606	2623	429	0	365	0	1126	136	34	1381
1984 II	9996	3630	2290	474	0	424	0	1218	148	36	1606
1984 III	9333	3732	1782	468	31	433	148	1106	144	35	1455
1984 IV	9119	3453	2055	385	43	426	142	1063	142	36	1375
<u>Yearly Averages</u>											
1980	6118	2776	706	423	0	329	17	401	249	41	1117
1981	8761	3860	1744	497	0	351	95	748	241	19	1181
1982	9638	3564	2414	529	0	315	128	1166	182	21	1284
1983	10318	3324	3242	455	21	368	104	1110	147	30	1427
1984	9581	3605	2188	439	19	412	73	1128	143	35	1454

SOURCE : Alaska Department of Labor, Statistical Quarterly. Note: Figures are from revised edition of the Statistical Quarterly, which begin in 1980. Thus, they may differ from figures shown in Tables E-23--25.

U.S. Census Data for 1980 (Tables E-34 through E-36 and E-170 through E-172)

The 1980 U.S. Census provided a variety of data on employment, broken down by village and industry. These data are summarized in Table VI-2. However, these data do not distinguish between Native and non-Native employment. The data were collected for a given date and may not accurately reflect annual average full-time equivalent employment. The dates for which census employment data were collected are unclear and may not be consistent (these data were probably collected during the summer or spring of 1980). In addition, other problems may have introduced biases into census employment estimates.¹

Alaska Consultants 1980 and 1982 Housing Surveys (Tables E-18 through E-26 and E-90 through E-135)

In 1980 and 1982, Alaska Consultants surveyed all employers in North Slope Borough villages and prepared estimates of full-time equivalent employment by industry. These data are summarized in Tables VI-3 and VI-4. The Alaska Consultants' surveys provide useful information on resident employment in 1980 and 1982. In addition, the 1980 survey provides information on both Native and non-Native employment.

¹For a discussion of potential problems with 1980 census data, see John A. Kruse and Robert Travis, A Technical Review of the 1980 U.S. Census in Alaska: Interviews with Census Workers. (Anchorage, Institute of Social and Economic Research, October 1981.)

TABLE VI-2
1980 CENSUS DATA FOR OCCUPATIONS OF EMPLOYED WORKERS
 16 YEARS AND OLDER, BY INDUSTRY AND PLACE, NORTH SLOPE BOROUGH VILLAGES

<u>Industry</u>	<u>Anak- tuvuk</u>	<u>Atka- sook</u>	<u>Barrow</u>	<u>Kakto- vik</u>	<u>Nuiqsut</u>	<u>Point Hope</u>	<u>Point Lay</u>	<u>Wain- wright</u>	<u>Total -8 Villages</u>
Agriculture, Forestry, Fishing and Mining	0	2	16	7	0	5	0	4	34
Construction	0	5	238	20	11	29	2	43	348
Manufacturing: Nondurable Goods	6	0	4	0	2	0	0	0	12
Manufacturing: Durable Goods	0	0	5	0	2	0	0	2	9
Transportation	3	11	40	4	3	2	2	7	12
Communication and Public Utilities	0	2	69	4	3	10	0	1	95
Wholesale Trade	3	0	3	0	3	0	0	13	22
Retail Trade	8	0	62	0	0	4	2	10	86
Finance, Insurance, and Real Estate	0	4	39	3	2	10	0	4	62
Business and Repair Services	3	0	22	0	3	2	0	0	30
Personal Entertainment and Recreation Services	3	0	53	6	0	2	0	3	67
Professional Health Services	4	0	43	5	3	5	0	3	63
Professional Education Services	6	8	179	16	26	69	8	37	349
Other Professional Services	0	0	26	2	0	6	0	2	36
Public Administration	9	2	200	18	7	14	2	6	258
Total	45	34	999	85	65	158	16	141	1,543

SOURCE : 1980 Census Tape **STF3A**, Table 65; printouts on file at the Institute of Social and Economic Research.

TABLE VI-3
COMPOSITION OF EMPLOYMENT BY RACE AND SEX^{a,b}
NORTH SLOPE BOROUGH VILLAGES,
1980

	Native			Non-Native			Total		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Mining	26	4	30	0	0	0	26	4	30
Contract construction	71	5	76	118	7	125	189	12	201
Transport., Communic., Pub. Utilities	36	11	47	50	10	60	86	21	107
Trade	18	17	35	23	11	34	41	28	69
Finance, Insurance, Real Estate	47	29	76	17	14	31	64	43	107
Services	15	20	35	27	9	36	42	29	71
Government	16	13	29	45	26	71	61	39	100
Federal	3	4	7	1	4	5	4	8	12
State	428	225	653	211	128	339	639	353	992
Construct..	(249)	(43)	(292)	(51)	(7)	(58)	(300)	(50)	(350)
Non- Construct.	(179)	(182)	(361)	(160)	(121)	(281)	(339)	(303)	(642)
TOTAL	660	328	968	492	209	701	1152	537	1689

^aEmployment was not necessarily full-time or permanent. People were asked only to list their employer or major source of income.

^bEmployment figures exclude 121 Alaska Natives (59 males and 62 females) and one non-Native who listed various forms of assistance, primarily Social Security, as their major source of income. Employment figures also exclude 947 Alaska Natives (400 males and 547 females) and 100 non-Natives (32 males and 68 females) aged 16 and over for whom no employment information was provided or who claimed to be unemployed.

SOURCE: Alaska Consultants, Inc., North Slope Borough Housing Survey, prepared for the North Slope Borough, Public Works Department. Anchorage, September 1980.

TABLE VI -4
 AVERAGE ANNUAL FULL-TIME Employment
 NORTH SLOPE BOROUGH VILLAGES
 1982

<u>Industry Classification</u>	<u>Number</u>	<u>Percent of Total</u>
Agriculture, Forestry, and Fishing	0.0	0.0
Mining	50.5 ^a	2.6
Contract Construction	435.0	22.0
Manufacturing	0.0	0.0
Transportation, Communications, and Public Utilities	188.0	9.5
Trade	110.5	5.6
Finance, Insurance, and Real Estate	80.5	4.1
Services	108.5	5.5
Government	1,002.60	50.7
Federal	(66.5)	(3.4)
State	(13.0)	(0.7)
Local	(922.5)	(46.7)
TOTAL	1,975.0	100.0

^aincludes jobs held by village residents in the Prudhoe Bay area except those from Barrow.

SOURCE : Reprinted from Alaska Consultants, Inc., Barrow Arch Socioeconomic and Sociocultural Description, Social and Economic Studies Program Technical Report No. 101 (Anchorage, Minerals Management Service, Alaska OCS Office, January 1984), page 33.

North Slope Borough Personnel Department and Payroll Data
(Tables E-46, E-143 through E-152, and E-136 through E-139)

The North Slope Borough made available personnel department employment summaries which include data on the division of Borough employment between Native and non-Native workers. In addition, the Borough planning department made available detailed information from Borough payroll records for 1984, from which we constructed Borough employment and wage data for that year.

North Slope Borough School District Employment Data (Tables E-48 through E-50 and E-158 through E-167)

The North Slope Borough school district provided us with detailed employment data for 1985.

Other Employment Data

Our discussion in this chapter is based primarily upon the data sources listed above. Additional North Slope employment data are available from a variety of other sources, including a 1977 survey of North Slope Natives carried out by ISER in several villages, a 1982 special census of oilfield workers, and North Slope Borough budget documents.

Categories of Employment

In order to examine North Slope Borough employment, we divided all employment into **six** different categories:

- North Slope Borough Operating Employment*
- North Slope Borough **CIP** Employment*
- Private **CIP** Employment
- Support Employment*
- Federal and State Government Employment
- Oil Industry Employment

*All employment assumed to be resident.

Within three of these categories (private CIP employment, federal and state government employment, and oil industry employment), we distinguish between resident and nonresident employment. In the remaining three categories (North Slope Borough operating employment, North Slope Borough **CIP** employment, and support employment), we assume that all employment is resident employment.

North Slope Borough **operating employment includes regular operating** employment as well as North Slope Borough school district employment. North **Slope** Borough **CIP** employment includes workers on **CIP** projects who are paid by the North Slope Borough. **Unlike** most municipalities, the Borough has directly hired significant numbers of construction workers--primarily Native residents--who work on **CIP** projects under the management of private contractors. **Private** CIP employment includes 'all other workers on CIP projects. **We** assume that non-Native private CIP employment is nonresident. Oil industry

employment includes all workers at Prudhoe Bay or other oil fields -- not just oil company employees but also construction workers, transportation, food service, and other service workers. Finally, support employment includes all remaining workers except for state and federal government employees.

Although these categories are somewhat different from categories which we might ordinarily use to describe employment, we feel that they are useful in understanding the unique nature of the Borough economy as well as the factors likely to influence employment in the future.

North Slope Borough Employment Estimates

In Table VI-5, we summarize our estimates of resident and non-resident employment for the years 1980 through 1984. Below we briefly describe how we derived these employment estimates. We describe this derivation in detail in Appendix D.

We based our figures for total employment, federal and state employment, and total North Slope Borough (local government) employment on data published by the Alaska Department of Labor in the Statistical Quarterly (Table VI-1). Because these data do not distinguish between oilfield and village employment, we were unable to use them further. Next we divided North Slope Borough employment into operating and CIP employment, based on Borough personnel figures for 1980 and 1984 and trends in Borough operating and CIP expenditures.

TABLE VI -5
NORTH SLOPE BOROUGH EMPLOYMENT ESTIMATES
1980 - 1984

	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>
NSB Operating Employment.					
Resi dent	795	818	828	970	1028
Nonresi dent	0	0	0	0	0
Total	795	818	828	970	1028
NSB CIP Empl oyment					
Resi dent	322	363	456	457	427
Nonresi dent	0	0	0	0	0
Total	322	363	456	457	427
Private CIP Empl oyment					
Resi dent	26	70	161	146	172
Nonresi dent	45	120	274	249	292
Total	71	190	435	395	464
Support Empl oyment					
Resi dent	393	427	488	528	545
Nonresi dent	0	0	0	0	0
Total	393	427	488	528	545
State and Federal Government Empl oyment					
Resi dent	80	80	80	80	80
Nonresi dent	211	180	123	97	98
Total	291	260	203	177	178
Oil Industry Empl oyment					
Resi dent	30	30	30	30	30
Nonresi dent	4216	6673	7198	7761	6909
Total	4246	6703	7228	7791	6939
Total Empl oyment					
Total Resi dent	1646	1788	2043	2211	2282
Nonresi dent	4472	6973	7595	8107	7299
Total	6118	8761	9638	10318	9581

SOURCE : ISER estimates. See Appendix D for discussion.

We based our figures for private CIP employment on Alaska Consultants' survey figures for 1982 (Table VI-4), trends in CIP expenditures, and our estimates of Borough CIP employment. Next we estimated resident employment in each of these categories, based on data from Alaska Consultants' surveys for 1980 and 1982 (Tables VI-3 and VI-4). We assumed constant Native resident oil industry employment of 30, based on Alaska Consultants' 1980 survey (Table VI-3). We then estimated resident support employment by assuming a constant ratio of resident support employment to other resident employment. Finally, we assigned all remaining employment to the oil industry.

For some categories of employment, our estimates are supported by data which we believe to be reasonably reliable while for other categories our estimates are based on sketchy data and uncertain assumptions. Data from different sources conflicted as to employment in some categories. However, we believe that our estimates present a reasonable picture of relative levels of employment in each category and how they have changed over time.

According to our estimates, total employment in the North Slope Borough increased from 6,118 in 1980 to 10,318 in 1983, and then declined to 9,581 in 1985. However, nonresident oil industry employment accounted for more than two-thirds of this total. Resident employment, which is our primary interest in this chapter, was much smaller, rising from 1,646 in 1980 to 2,282 in 1984.

In 1984 **North** Slope Borough operating employment accounted for about 45 percent of total resident employment; Borough CIP employment accounted for 19 percent; and private CIP employment **accounted** for **8** percent (Table **VI-6**). These **figures** illustrate the most **signifi-**
cant feature of the **North** Slope Borough economy: North Slope Borough
expenditures directly account for nearly three-quarters of total
resident employment.

We estimate that support activities account for about one-quarter of resident employment, state **and** federal government accounts for about 4 percent, and the **oil** industry accounts for **only** about 1 percent of resident **employment.**

TABLE VI-6
 SHARES OF EMPLOYMENT CATEGORIES IN ESTIMATED
 NORTH SLOPE BOROUGH RESIDENT EMPLOYMENT
 1980 - 1984

(percent)

	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>
NSB Operating Employment	48	46	41	44	45
NSB CIP Employment	20	20	22	21	19
Private CIP Employment	2	4	8	7	8
Support Employment	24	24	24	24	24
State and Federal Government Employment	5	4	4	4	4
Oil Industry Employment	2	2	1	1	1
TOTAL	100	100	100	100	100

SOURCE: Table VI-5.

Native and Non-Native Resident Employment

Only limited data are available on the **division of** employment between **Natives** and non-Natives. According to 1980 U.S. census data **for the labor force status of North Slope** residents, **1,111 Natives** and 623 non-Natives were employed, exclusive of **military** personnel (Table VI-7). Another source of data **for Native** employment is Alaska Consultants' 1980 survey of village employment (Table VI-3). According to **this** survey, **58** percent of all North Slope village jobs were **held by** Natives (Table VI-8). **Natives accounted** for 56 percent of North Slope Borough operating employment and 83 percent of North Slope Borough CIP employment, but **only** 32 percent of federal and state government employment and 37 percent of private CIP employment

In order to **derive rough** estimates of Native and non-Native resident employment **by** category, we multiplied the **Native** employment **shares** for each category of employment in Table VI-8 by our estimates for **total** resident employment (Table VI-5). Our resulting estimates of Native and **non-Native** resident employment are shown in Table VI-9.

The figures for 1980 employment (1,011 for Natives and 636 for non-Natives) are **similar** in magnitude to the census figures mentioned above. **Assuming Native** employment shares in each category remained constant, **total Native** employment increased from 1,011 in 1980 to 1,458 in 1984. North Slope Borough Native operating employment increased from 445 in 1980 to 576 in 1984, while Native CIP employment (Borough and private combined) increased from 293 in 1980 to 526 in 1984.

TABLE VI-7
 NORTH SLOPE BOROUGH LABOR FORCE STATUS BY RACE AND SEX.
 PERSONS 16 YEARS AND OVER, 1980

<u>Male</u>	<u>Native</u>	<u>Non-Native^a</u>	<u>Total</u>
Armed Forces	2	120	122
Employed	695	460	1,155
Unemployed	85	14	99
<u>Not in Labor Force</u>	<u>337</u>	<u>19</u>	<u>356</u>
Total	1,119	613	1,732
Total, ages 19-64	921	--	
 <u>Female</u>			
Armed Forces	0	35	35
Employed	416	163	579
Unemployed	39	2	41
<u>Not in Labor Force</u>	<u>502</u>	<u>32</u>	<u>534</u>
Total	957	232	1,189
Total, ages 19-64	746	--	--
 <u>Total</u>			
Armed Forces	2	155	157
Employed	1,111	623	1,734
Unemployed	124	16	140
<u>Not in Labor Force</u>	<u>839</u>	<u>51</u>	<u>890</u>
Total	2,076	845	2,921
Total, ages 19-64	1,667	--	--

^aCalculated as total minus Native.

SOURCE : 1980 U. S. Census, Tape STF3A, Table 55. Printout on file at Institute of Social and Economic Research. Total, ages 19-64 is from Table B-2.

TABLE VI-8
 SHARE OF NATIVES IN TOTAL EMPLOYMENT,
 BY VILLAGE AND TYPE OF EMPLOYMENT, 1980

(Percent]

	Type Of Employment					All Jobs (b)
	Federal & State Gov't	NSB Operating (a)	NSB CIP	Private CIP	All Other Employmt (b)	
North Slope Borough	32	56	83	37	55	58
Anaktuvuk Pass	10	64	94	17	75	62
Atkasuk	0	69	100	0	0	75
Barrow	31	49	75	36	47	52
Kaktovik	33	60	100	25	53	59
Nuiqsut	0	62	100	3	87	50
Point Hope	100	67	--	100	86	82
Point Lay	--	74	20	--	100	61
Wainwright	100	71	100	0	93	83

(a) Includes NSB School District employment.

(b) Does not include oil industry employees.

-- Data not available.

SOURCE : Alaska Consultants, Inc., 1980 North Slope Borough Survey.
 See Appendix Tables E-90 through E-135.

TABLE VI -9
 NORTH SLOPE BOROUGH NATIVE AND NON-NATIVE
 RESIDENT EMPLOYMENT ESTIMATES
 1980 - 1984

	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>
<u>Native Employment</u>					
NSB Operating Employment	415	458	464	543	576
NSB CIP Employment	267	301	378	379	354
Private CIP Employment	26	70	161	146	172
Support Employment	216	235	268	290	300
State and Federal Government Employment	26	26	26	26	26
Oil Industry Employment	30	30	30	30	30
Total Employment	1011	1121	1328	1415	1458
<u>Non-Native Resident Employment</u>					
NSB Operating Employment	350	360	364	427	452
NSB CIP Employment	55	62	78	78	73
Private CIP Employment	0	0	0	0	0
Support Employment	177	192	220	238	245
State and Federal Government Employment	54	54	54	54	54
Oil Industry Employment	0	0	0	0	0
Total Employment	636	668	716	797	824

SOURCE: ISER estimates; see text for discussion.

According to our estimates, Borough operating employment accounted for more 43 percent of Native employment in 1984 (Table VI-10). Borough CIP employment accounted for 24 percent of Native employment, and private CIP employment accounted for 12 percent of Native employment. Although these figures are only approximate, they clearly illustrate the current importance of North Slope Borough operations and capital spending as a source of employment for North Slope Natives.

TABLE VI-10
SHARES OF EMPLOYMENT CATEGORIES IN ESTIMATED
NORTH SLOPE BOROUGH NATIVE EMPLOYMENT
1980 - 1984

	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>
NSB Operating Employment	45	43	40	42	43
NSB CIP Employment	26	27	29	27	24
Private CIP Employment	3	6	12	10	12
Support Employment	21	21	20	21	21
State and Federal Government Employment	3	2	2	2	2
Oil Industry Employment	3	3	2	2	2
Total Employment	100	100	100	100	100

SOURCE: Table VI-9; see text for discussion.

During the early 1980s, jobs were relatively plentiful in North Slope villages, compared with other areas of rural Alaska. Employment participation was also relatively high. According to the 1980 U.S. census, about 62 percent of adult Native men and 43 percent of adult Native women were employed (Table VI-7). The North Slope Borough was clearly successful during this period in providing jobs to Native residents, primarily by hiring Natives directly in Borough operating or construction jobs.

Differences Between Male and Female Native Employment

Table VI-11 shows the distribution of Native employment by category and by sex, as measured by Alaska Consultants' 1980 survey. (The distribution of total Native employment differs slightly from the distribution shown in Table VI-10, due to differences in the underlying estimates of the distribution of 1980 employment. The share of Borough operating employment in Native employment is lower while the share for Borough CIP employment is higher. However, the total of these two shares is the same for each table.)

There are significant differences between the employment distribution of Native men and Native women. More than half of Native female employment was in North Slope Borough operations, compared with only about one-quarter of Native male employment. Borough and private CIP jobs combined accounted for nearly half of all Native male employment, compared with only 15 percent of female employment.

TABLE VI-11
DISTRIBUTION OF NORTH SLOPE BOROUGH NATIVE EMPLOYMENT
BY VILLAGE AND TYPE OF EMPLOYMENT, 1980

(Pet-cent)

	Type of Employment					All Jobs
	Federal & State Gov't	NSB Operating (a)	NSB -CIP	Private CIP	All Other Employmt	
<u>TOTAL</u>						
North Slope Borough	4	37	30	8	21	100
Barrow	4	36	28	6	26	100
Other villages	3	37	32	10	18	100
<u>MALE</u>						
North Slope Borough	3	27	38	11	21	100
Barrow	3	26	37	9	25	100
Other villages	2	29	38	14	17	100
<u>FEMALE</u>						
North Slope Borough	5	55	13	2	25	100
Barrow	6	55	11	1	27	100
Other villages	5	57	16	2	20	100

(a) Includes NSB School District employment.

SOURCE: Alaska Consultants, Inc., 1980 North Slope Borough Survey.
 See Appendix Tables E-133 through E-135.

These and other differences between Native male and female employment patterns were well-documented by the ISER 1977 North Slope survey (Kruse et al., 1981), and have been described by Kleinfeld (1981). In that survey, only 4 percent of female Native workers reported blue-collar occupations (primarily construction-related), compared with 74 percent of Native male workers (Table E-63).

In the future, CIP employment is likely to decline significantly due to reductions in CIP expenditures. These employment losses will be concentrated among Native males. This could aggravate the social effects of future North Slope Borough spending reductions.

North Slope Borough Operating and CIP Employment

We turn next to a more detailed examination of North Slope Borough operating and CIP employment, as well as factors affecting future Borough employment. Table VI-12 shows 1984-1985 employment data for the North Slope Borough school district. Table VI-13 shows estimates for North Slope Borough operating and CIP employment, which we calculated using North Slope Borough payroll records.

The combined Borough employment total from these two tables is 1,509, which is roughly comparable to the Alaska Department of Labor local government employment figure of 1,455 (Tables VI-1 and VI-5). School district employment was 362; other Borough operating employment was 705; and Borough CIP employment was 443. School

TABLE VI-12
ESTIMATED NORTH SLOPE BOROUGH SCHOOL DISTRICT
FULL-TIME EQUIVALENT EMPLOYMENT,
1984 - 1985

	Native			Non-Native			Total		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Anaktuvuk Pass	6	11	16	5	7	12	10	18	28
Atkasuk	5	7	12	5	4	9	9	11	20
Barrow	13	35	48	74	75	149	87	110	197
Kaktovik	3	3	5	6	5	11	9	8	17
Nuiqsut	3	8	11	5	5	10	8	13	21
Point Hope	6	18	24	6	6	12	12	24	36
Point Lay	2	2	4	3	6	9	5	8	13
Wainwright	6	12	18	7	5	12	13	17	30
TOTAL	43	95	138	111	113	224	154	208	362

NOTE: Totals may not add exactly due to rounding.

SOURCE: Based on data received from North Slope Borough School District (see Appendix Tables E-158 through E-167). In calculating full-time equivalent employment, full-time nine-month jobs were multiplied by .75 and part-time jobs were multiplied by .25.

TABLE VI-13 -
NORTH SLOPE BOROUGH FULL-TIME EQUIVALENT EMPLOYMENT*,
CALENDAR YEAR 1984,
BY FUND AND RACE

<u>Fund</u>	<u>Name</u>	<u>Alaska Native</u>	<u>Non-Native</u>	<u>Race Not Known</u>	<u>Totals</u>
10	General Fund	264.2	208.0	85.3	557.5
31	Service Area 10	26.5	67.2	9.0	102.7
32	Industrial Devel.	0.2	--	--	0.2
33	Kuparuk Ind. Center	0.3	--	--	0.3
50	CIP Administration	17.8	17.3	8.9	44.0
	Total Operating	309.0	292.5	103.2	704.7
<hr/>					
56	Educational	1.0	0.9	0.6	2.5
57	Roads	26.5	20.1	63.2	109.8
58	Housing	36.2	18.0	19.0	73.2
59	Water	45.1	42.2	21.0	108.3
60	Sewage Treatment	48.9	43.8	19.2	111.9
61	Airport	2.1	0.3	3.9	6.3
62	Urban Development				
63	Light, Power	0.4	0.3	--	0.7
64	Public Safety				
65	Sanitary Facilities	0.9	--	25.2	26.1
66	Industrial Parks	0.9	--	0.8	1.7
67	Communications	0.8	--	1.0	1.8
68	General Projects				
69	Health Facilities				
70	Library, Cultural	--	--	0.2	0.2
71					
72	Admin. Facilities	--	--	0.1	0.1
<hr/>					
	TOTAL CIP	162.8	125.6	153.9	442.6
<hr/>					
	TOTAL	472.0	418.3	256.9	1,147.2

NOTE : Totals may not add exactly due to rounding.

*Full-time equivalent employment of 1 is 26 pay periods of 75 hours, or 1,950 hours (including regular hours, overtime hours, and leave hours).

SOURCE: North Slope Borough Payroll Data.

distric-let employment was a major-source of Native employ merit., in particular for Native women, primarily in teacher aide and food service jobs. School district jobs accounted for approximately ten percent of total Native employment. Other Borough employment was widely distributed among a number of departments, with the greatest amount of Native employment in the health department (primarily female), administration and finance department (primarily female), and utilities (primarily male) (Table E-157). Borough CIP employment was concentrated in roads, housing, and water and sewage treatment plant construction.

Borough employment has been very well-paying, providing an important source of cash income to Native residents. Borough hiring policy has been flexible, permitting employees to take time off when they wish to and allowing employees to be rehired after quitting or being fired. Turnover in Borough employment has been very high. The Borough has accepted the high costs of liberal wages and hiring practices in order to channel employment and income to residents.²

²According to Robert Dupere, former bond counsel to the Borough, "The Borough in the Capital Improvements Program is required by state law to pay the posted labor rate schedules provided by the Department of Labor (the Borough's pay scales for operating employment are those of the state). The cost differential outlined in the state scales indicated the Borough area salaries" (Robert Dupere, personal communication, February 22, 1983).

Factors Affecting Future CIP Employment

As we discussed in Chapter V, future Borough CIP expenditures are likely to decline significantly, causing substantial drops in Borough CIP employment. Between 1980 and 1984, there were approximately two to three Native jobs for every million dollars of CIP expenditures (Table VI-14). In total, there were about four jobs for every million dollars of CIP expenditures. The decline in employment as CIP spending declines will depend upon how these ratios change in the future. The Borough might increase local employment per dollar of CIP spending by reducing CIP wages, increasing local-hire requirements, or by building projects with lower materials costs or lower skilled labor requirements. However, as CIP funds become more scarce, the Borough is likely to seek to utilize CIP funds as efficiently as possible. Attempts to reduce costs may conflict with local-hire goals or the construction of more local-labor intensive projects.

TABLE VI-14
ESTIMATED NATIVE CIP EMPLOYMENT
PER. MILLION DOLLARS OF CIP EXPENDITURES
1980 - 1984

	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>
Estimated Native CIP Employment (Borough and Private)	293	371	539	525	526
Total CIP Expenditures (Millions of Dollars)	93	131	211	302	211
Native CIP Jobs per Million Dollars of CIP Expenditures	3.2	2.8	2.6	1.7	2.5

SOURCES: Tables VI-5 and V-4.

Factors Affecting Future Borough Operating Employment

The prospects for future Borough operating employment are considerably brighter than for CIP employment. Although some reductions in operating employment are likely due to reduced Borough revenues, these reductions will take place more gradually and will not be as significant.

The Borough may be able to expand operations in the provision of services to the oil industry, such as the Prudhoe Bay Service Area and the planned Kuparuk facility. These facilities do not represent an additional drain on operating revenues since they can pay for themselves through user fees. However, they provide an additional opportunity for the Borough to hire Natives under flexible working conditions. Since the Borough enjoys a monopoly in the provision of public services, it can charge fees sufficient to cover extra operating costs generated by these policies.

Another factor affecting future operating employment will be the share of nonlabor costs in total expenditures. The share of labor costs in total budgeted operating expenditures rose from 54 percent in 1980 to 61 percent in FY 1983 (Table VI-15). During this period, the share of fuel costs also rose while the share of other costs fell by about 10 percent. However, the extent to which the share of labor costs can continue to rise is limited. Fuel costs are likely to increase disproportionately as more CIP projects are completed.

TABLE VI-15
NORTH SLOPE BOROUGH OPERATIONS EXPENDITURES.
BY EXPENDITURE CATEGORY^a

(dollars)

	<u>1979/1980</u>	<u>1980/1981</u>	<u>1981/1982</u>	<u>1982/1983</u>
Total Expenditure (Excluding service area #10)	25,378,838	32,967,818	50,437,200	58,348,400
Total Labor Costs	13,676,295	19,133,888	30,046,400	35,533,500
Total Fuel Costs	1,310,352	1,693,360	3,372,200	4,428,100
Total Other Costs	10,392,191	12,140,570	17,018,600	18,386,800
Share of Labor Costs	53.9	58.0	59.6	60.9
Share of Fuel Costs	5.2	5.1	6.7	7.6
Share of Other Costs	40.9	36.9	33.7	31.5

^a**Includes** only budgeted sums; does not **include** education.

SOURCE : North **Slope** Borough Budget Document, Ordinance 82-3,
 FY 1982-83.

Oil Industry Employment

The oil industry accounts for more than two-thirds of all employment in the North Slope Borough (Table VI-5). However, the overwhelming majority of oil industry jobs are held by nonresident workers, and only a very small number of North Slope Natives work in the oil industry. In this section, we examine data for Native oil-industry employment, reasons for the past low level of Native oil-industry employment, and factors which may affect Native oil-industry employment in the future.

Data for Native Oil Industry Employment

A major problem in studying Native employment in the oil industry is the lack of good recent data. Our Table VI-5 figure of 30 for Native oil-industry employment is based upon Alaska Consultants' 1980 survey figure (Table VI-3]. More generally, evidence from a variety of sources suggests that the number of Natives employed by the oil industry is very small. According to data collected by ISER in its 1977 survey, only 25 percent of Inupiat men and 1 percent of Inupiat women had worked for oil companies at any time before September 1977 (Table E-62). Only 17 percent of the jobs held by Inupiat ages 18 and over between October 1976 and September 1977 were with "private business," and "those working for oil and pipeline companies made up a very small part of this category" (Table E-60). Another 1977 survey found that mining and construction were the primary sources of income for only 2 and 5 percent, respectively, of heads of households (Alaska Consultants,

1980; reprinted in North Slope Borough, Annual Overall Economic Development Program Report, page 16).

According to a special census conducted by the Alaska Department of Labor during the winter of 1982, only 178 of 6,306 persons working at oil-industry work sites claimed the North Slope Borough as their primary place of residence. This included persons who did not indicate a place of residence, and it also included non-Inupiat workers (Table E-31).

Alaska Consultants' 1982 survey reported oil-industry employment of 50.5 (table VI-4). However, some of these jobs were held by non-Natives.

Thus, although precise figures are unavailable for Native employment in the oil industry, it appears reasonable to assume that this figure was very small during the early 1980s--probably in the neighborhood of 30.

Factors Affecting Past Native Oil Industry Employment

A variety of factors help to explain past and current low levels of Native oil industry employment. We have discussed these factors in detail in a previous report for MMS (Economic and Demographic Systems Analysis, North Slope Borough (SESP Technical Report No. 100, October 1983)). In this section, we briefly review these factors.

First, for a **variety of** reasons, Natives have preferred employment. **with** the North Slope Borough to **oil industry jobs**. Borough jobs have been available in **the** villages. Borough jobs have provided flexible **working** conditions, allowing **time off** for subsistence activities. **Borough** jobs have **paid** as well as or better **than** most **oil industry jobs** which **have been** available to Natives. Natives working at Borough jobs can work together with other **village** residents **while** Natives employed in the **oil industry** find themselves **a small** minority in a primarily **white** work force, living in an uncomfortable environment.

Second, oil industry firms have been reluctant to change established hiring practices **which** work to the disadvantage of Natives, **or to** favor Natives **in hiring and** promotion. Firms draw upon a nationwide pool **of labor, attracting highly** skilled and well-disciplined **labor** through **high wages,** comfortable **living** conditions, excellent **food,** and **liberal** time-off **policies**. Although **this** work force is expensive, **it is reliable**. **Work is not** subject to costly **delays** due to **worker** discontent, absenteeism, or **lack** of skills. Many workers **are** hired for relatively **short** periods **of time for** specific project **labor** needs. Unionized firms hire through **union hiring halls** usually located **in** Fairbanks or Anchorage **while** other firms hire directly from offices located mostly in Anchorage, Fairbanks, or **Prudhoe Bay**. In many firms, informal **hiring practices** favor the hiring of employees' friends or relatives. **All** of these factors make it **difficult** for North Slope Natives to **learn** about or to **apply**

for **new** job openings or for companies **to change hiring policies to** favor Natives.

Third, many Natives have difficulty adapting to **rigid** industry work schedules, partly because **they** may conflict with subsistence activities. Oil industry firms" are generally not **able** to offer flexible work schedules to Natives in order **to** permit Natives to participate **in** subsistence activities, partly because oil industry activities are generally not well-suited to flexibility in work schedules. Companies need labor to keep high-cost operations going, especially during critical operating seasons. They cannot afford to **be** subjected to uncertainties as to when workers will be available.

Fourth, many North Slope Natives do not have formal training and certification for **oil** industry **skills**. Even where Natives have learned **to** operate equipment **on** local jobs, they often do not have formal evidence of these **skills** which they can use in applying **for** jobs. Firms are usually willing **to** pay for special training **programs** for Natives only if they are convinced that Native workers are committed to remaining with the company. Both **Sohio** and **ARCO** have undertaken special recruiting and training programs for North Slope Natives. However, the high rate of turnover among Natives hired by these companies suggests **that** these hiring and training programs **are** only a first step toward meaningfully increasing Native employment. Similarly, Pingo corporation, an **oilfield** service company jointly owned by several North **Slope** village corporations,

has had difficulty in substantially increasing Native oilfield employment, although this is one of its primary goals.

Future Native Oil Industry Employment

In the future, as village employment opportunities decline, oil industry employment is likely to appear relatively more attractive to many North Slope Natives. Not only will there be fewer Borough jobs, but these jobs will be lower-paying and less flexible in working conditions. At the same time, villagers' demands for cash income are likely to be rising, due to the need topsy for utilities and other services which are becoming available as well as to satisfy new consumption habits.

Nevertheless, Native oil industry employment is likely to continue to be constrained by many of the factors listed above, including the distance of oilfield jobs from most North Slope villages, inflexible work schedules, the unfamiliar workplace environment, disadvantages in learning about and applying for jobs, and industry requirements for specialized skills. Those Natives who are most qualified for oil industry jobs and best able to adapt to oil industry working conditions are also most likely to be able to retain Borough jobs as Borough expenditures decline. In addition, statewide competition by non-Natives for North Slope oil industry jobs is likely to intensify in the future. Thus, we believe that Native oil industry employment will rise only gradually and will not serve to offset the significant decreases in Borough employment. which we expect will occur.

CHAPTER VII
NORTH SLOPE BOROUGH RESIDENT INCOME

In **this** chapter, we examine North Slope Borough resident income. Our discussion is limited by the lack of recent or complete data on sources of resident income. However, there does appear to be sufficient evidence to suggest that wages, in particular from North Slope Borough jobs, are by far the most important source of income for North **Slope** Borough residents. This suggests that future employment losses will significantly reduce the incomes of Borough residents. **Nonwage** income, although undoubtedly important for lower-income Borough residents, is relatively small in magnitude compared to wage income. In addition, state and federal cutbacks in transfer programs are likely **to** reduce non-wage income at the same time that Borough spending cutbacks reduce wage income.

North Slope Borough Income Data

Only limited information is available about North Slope Borough resident income. We have collected information from several different sources in Appendix L. Among the most useful sources of data are estimates prepared by the Bureau of Economic Analysis, the **1980** U.S. census, a 1980 survey by Alaska Consultants, federal income tax return data, and data for state and federal transfer programs.

Resident Income

Probably the best data available for North Slope Borough total resident income are estimates prepared by the Bureau of Economic Analysis (Table VII-1). According to these estimates, resident income rose rapidly from \$7 million in 1980 to \$28 million in 1975 and \$113 million in 1984. Per capita income rose from \$2,500 in 1970 to \$12,200 in 1975 and \$26,007 in 1984. Total income reported to the Internal Revenue Service increased from \$31 million in 1978 to \$59 million in 1982.

Available data suggest that increases in total income since the formation of the Borough have been accompanied by dramatic increases in median income for Natives as well as for non-Natives. Estimates of median Native family income increased from less than \$7 thousand in 1970 to more than \$26 thousand in 1979 (Table VII-2). Unfortunately, we do not have more recent data on Borough income distribution.

TABLE VII-1
ESTIMATES OF NORTH SLOPE BOROUGH RESIDENT PERSONAL INCOME

[thousands of dollars)

<u>Year</u>	<u>Total Resident Personal Income</u>	<u>Wages and Salaries</u>	<u>Dividends Interest and Rent</u>	<u>Transfer Payments</u>	<u>Per Capita Personal Income</u>	<u>Total Income Reported to Internal Revenue Service</u>
1970	7,466	6,252		1,033	2,466	
1975	28,415	22,843		4,986		
1976	37,220	32,524		3,846		
1977	46,145	41,300	933	3,912	12,224	
1978	49,202	44,259	1,090	3,853	13,251	30,881
1979	52,679	46,539	1,406	4,734	13,870	
1980	64,039	56,774	1,495	5,770	15,182	
1981	95,771	87,070	1,756	6,945	21,736	50,105
1982	97,593	84,193	2,760	10,040	21,101	59,478
1983	104,473	90,007	3,264	11,202	24,675	
1984	113,332	99,825	3* 545	9,962	26,007	

- not available

SOURCE: Bureau of **Economic** Analysis estimates. Figures for 1970-1978 are from **Tables L-7, L-25, II-4** (for 1970 population-figure of 3,027]; figures for 1979-1984 are from Bureau of **Economic Analysis**, Regional **Economic Information** System, April 1986. Internal Revenue Service data are from **Table L-15**.

TABLE VII-2
SUMMARY OF MEDIAN FAMILY INCOME ESTIMATES
NORTH SLOPE BOROUGH

<u>Year</u>	<u>Source</u>	<u>Nati ves</u>	<u>All Resi dents</u>
1960	U.S. Census, Natives Only (Table L-3)	3,438	
1969	1970 U.S. Census (Table L-11)		8,575
1970	U.S. Department of the Interior, <u>2(c) Report: Federal Programs and Alaska Natives</u> (Table L-3)	6,923	
1977	ISER North Slope Survey, 1979 (Table L-3)	17,347	
1979	1980 U.S. Census (Table L-9)	29,797	32,333
1979	1980 Alaska Consultants 1980 Survey (Household Income) (Table L-21)	26,277	30,137

Sources of Income

Bureau of Economic Analysis estimates suggest that wages account for about 88 percent of **total** resident income (Table VII-3). The share of wage income **has** increased and the share of transfer income has declined since the **early 1970s**. Wages from North Slope Borough operating and CIP employment are undoubtedly **the single** most important source of North Slope Borough income. In 1978 Borough gross wages were \$14 million (Table L-1), or 29 percent of total income as estimated by BEA. Budgeted Borough personnel expenditures in fiscal year 1982 totaled \$30 million (Table VI-15), or 32 percent of total income as estimated by BEA for 1982.

TABLE VII-3
ESTIMATES OF SURVEY OF NORTH SLOPE BOROUGH
RESIDENT INCOME

(percent)

Bureau of Economic Analysis Estimates

<u>Year</u>	<u>Wages and Salaries</u>	<u>Dividends Interest and Rent</u>	<u>Transfer Payments</u>	<u>Total</u>
1970	84		14	100
1975	80		18	100
1976	87		10	100
1977	90	2	8	100
1978	90	2	8	100
1979	88	3	9	100
1980	89	2	9	100
1981	91	2	7	100
1982	87	3	10	100
1983	86	3	11	100
1984	88	3	9	100

Income Reported to the Internal Revenue Service

<u>Year</u>	<u>Wages</u>	<u>All Other Sources</u>	<u>Total</u>
1978	98	2	100
1981	96	4	100
1982	94	6	100

NOTE: Totals may not add exactly to 100 due to rounding.

SOURCES: Tables VII-1 and L-15

Bureau of Economic Analysis estimates suggest that **nonwage income** accounts for **about 9 percent** of **total income**. Table VII-4 shows BEA estimates of the transfer payments to North Slope Borough residents for the years **1979** through **1984**. The 13EA estimated that **transfer payments totaled \$9.9 million** in **1984**, a **decrease of \$1.3 million** from **1983**. Of this total, retirement, disability, and health insurance benefit payments totaled **\$5.6 million**, or more than **half** of **all** transfer payments. Income maintenance benefit payments for programs **such as Aid to Families with Dependent Children** totaled \$932 thousand, or about one-tenth of **all** transfer payments and **less** than one percent of total income. Unemployment insurance benefit payments totaled \$643 million.

Tables VII-5 through VII-7 provide **some** evidence on payment amounts and caseloads for some transfer programs. In **1976**, there were five different transfer programs--social **security**, **longevity** bonuses, unemployment compensation, **AFDC**, and **old age assistance**--from which at least five percent of **Native** households **received well over \$1 thousand annually** (Table VII-5). However, sources of **income** are **likely** to have changed considerably since **1976**. Table VII-6 summarizes case **loads** and monthly **payments** for several public assistance cash payment programs for various **months** between **1978** and **1984**. Average **case** loads for these programs have **declined** over time although **it** is not **clear** whether this decline **is** due to increases in income of North Slope residents or tightening of eligibility requirements.

TABLE VII-4
 BUREAU OF ECONOMIC ANALYSIS ESTIMATES OF TRANSFER PAYMENTS
 TO NORTH SLOPE BOROUGH RESIDENTS; 1979-1984
 (thousands of dollars)

	1979	1980	1981	1982	1983	1984
Retirement, disability and health insurance benefits	2,177	2,892	3,565	4,162	5,156	5,576
Unemployment insurance benefit payments	329	377	696	596	621	643
Income maintenance benefit programs	626	835	923	823	842	932
Veterans benefit payments	144	177	181	190	218	225
All other payments*	1,458	1,489	1,580	4,269	4,365	2,586
TOTAL	4,734	5,770	6,945	10,040	11,202	9,962

*Includes Permanent Fund dividend payments.

TABLE VII-5
 PERCENTAGE OF ESKIMO HOUSEHOLDS RECEIVING INCOME
 FROM VARIOUS SOURCES
 1976

Source of Income	Percentage of Households Receiving Income from Source	Average Income" from Source*
Wage Employment	70%	\$22,256
Social Security	13	2,458
Native Crafts	12	1,497
Longevity Bonus	10	1,849
Per Diem	10	1,162
Unemployment Compensation	7	2,311
Trapping	6	2,658
Babysitting	6	791
AFDC	5	2,614
Old Age Assistance	5	1,572
Food Stamps	3	1,282
National Guard	3	936
BIA General Assistance	1	1,731
Aid to the Disabled	1	1,890
Neighborhood Youth Corps	1	1,000
Other	12	3,842
 (Total Households)	 (290)	

*Among households receiving income from particular source.

SOURCE : Jack Kruse et al. Energy Development and the North Slope Inupiat: Quantitative Analysis of Social and Economic Change, Man-in-the-Arctic Program Monograph No. 1, page 101.

"TABLE VII-6
SUMMARY OF PUBLIC ASSISTANCE CASH PAYMENT PROGRAMS
NORTH SLOPE BOROUGH

(Cases and Monthly Distributions in Dollars)

<u>Date^a</u>	<u>OAA</u>	<u>ABL</u>	<u>APD</u>	<u>AFDC w/Adult</u>	<u>AFDC w/o Adult</u>	<u>AFDC Total</u>	<u>FS</u>	<u>Total</u>	<u>Avg. Per Case (per month)</u>	<u>\$\$</u>
Sept. 1978 \$	40 cases 6,087	1 case 116	9 cases 1,346	44 cases 16,371	33 cases 6,582	77 cases 22,953		118 cases 30,502	258	
March 1979 \$	39 cases 5,241	1 case 116	9 cases 1,303	40 cases 13,289	30 cases 5,563	70 cases 18,852		119 cases 25,512	214	
October 1979 ?	40 cases 5,428	1 case 116	12 cases 1,646	32 cases 10,843	31 cases 5,728	63 cases 16,571		116 cases 23,761	205	
March 1980 \$	40 cases 5,199	1 case 127	11 cases 1,509	32 cases 11,064	27 cases 5,300	59 cases 16,364		111 cases 23,199	209	
October 1980 \$	40 cases 6,116	2 cases 219	11 cases 1,565	37 cases 14,892	25 cases 5,937	62 cases 20,829		115 cases 28,729	250	
October 1981 \$	41 cases 6,384	1 case 161	10 cases 1,444	36 cases 18,688	24 cases 6,492	60 cases 25,480		112 cases 33,469	299	
October 1982 \$	46 cases 6,878	0 cases 0	11 cases 2,265	37 cases 21,369	15 cases 4,658	52 cases 26,027		109 cases 35,170	323	
July 1984 ^b \$	27 cases 6,163	0 cases 0	8 cases 1,812	12 cases 7,532		12 cases 7,532	8 cases 1,094	55 ^c cases 16,601	302	
August 1984 \$	25 cases 5,817	0 cases 0	8 cases 2,031	20 cases 16,147		20 cases 16,147	15 cases 4,293	68 cases 28,288	416	
Sept. 1984 \$	24 cases 5,503	0 cases 0	9 cases 2,238	17 cases 12,030		17 cases 12,030	10 cases 3,032	60 cases 22,803	380	

6-1 V

Key: OAA--Old Age Assistance; ABL--Aid to the Blind; APD--Aid to Disabled; AFDC--Aid to Families with Dependent Children; FS--Food Stamps.

^aAll cases and grant amounts are for the month named.

^bThere is a break in methods of data collection between October 1982 and July 1984. Information from September 1979 to October 1982 was from a series of statistical reports published by the Division of Public Assistance. Information starting with July 1984 was verbally received from Karen Brittan, Information Office, Division of Public Assistance. The main differences are that no Food Stamp data is available prior to July 1984, and that after October 1982 both categories of AFDC are lumped together.

^cNote that these totals indicate the number of cases--not the number of persons receiving assistance. It is quite possible that one person could receive both AFDC and Food Stamps, for example.

TABLE VII-7
UNEMPLOYMENT INSURANCE, SELECTED YEARS
NORTH SLOPE BOROUGH

	January	February	March	April	May	June	July	August	September	October	November	December	Total
1981													
Regular	\$36,877	41,334	51,125	44,044	52,133	52,024	57,726	40,737	34,507	36,718	41,921	43,257	532,403
Federal	710	568	568	340	0	200	336	876	118	0	0	0	3,716
Veteran	0	0	0	0	0	0	0	0	0	0	0	0	0
Regular EB	3,230	1,893	2,539	5,220	6,408	5,506	10,318	9,964	10,554	5,827	2,697	6,898	74,054
Federal EB	0	0	0	0	0	0	0	0	0	0	0	0	0
Veteran EB	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	40,817	43,795	54,232	49,604	58,541	60,730	68,380	51,577	45,179	42,545	44,618	50,155	610,173
1982													
Regular	38,625	51,755	54,473	40,971	29,152	41,036	47,013	19,726	33,803	33,748	38,668	42,754	491,723
Federal	80	452	378	1,614	1,212	912	1,740	600	834	576	0	0	8,398
Veteran	0	0	0	0	0	0	0	0	0	0	0	0	0
Regular EB	5,863	6,255	4,526	3,879	3,226	2,956	6,488	4,740	3,574	4,300	932	0	46,739
Federal EB	80	160	80	0	0	0	0	0	0	0	0	0	320
Veteran EB	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	44,648	58,622	59,457	46,464	33,590	44,904	55,241	45,065	38,211	38,624	39,600	42,754	547,180
983													
Regular	56,844	36,704	35,990	28,224	31,004	34,802	37,152	41,587	29,657	29,199	44,845	62,443	468,451
Federal	0	612	816	392	1,350	1,158	1,020	0	0	0	468	878	6,694
Veteran	0	0	0	0	0	0	0	0	0	456	0	0	456
Regular EB	0	2,090	7,430	5,578	5,878	3,884	3,006	1,352	222	0	0	0	29,440
Federal EB	0	0	0	0	0	0	0	0	0	0	0	0	0
Veteran EB	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	56,844	39,406	44,236	34,194	38,232	39,844	41,178	42,939	29,879	29,655	45,313	63,321	505,041
1984^a													
Regular	82,095	67,951	66,195	41,165	28,969	31,290	20,557	27,026	NA	NA	NA	NA	365,048
Federal	1,114	1,016	566	1,560	468	468	884	312	NA	NA	NA	NA	6,388
Veteran	0	0	0	0	0	0	0	0	NA	NA	NA	NA	0
Regular EB	0	5,187	9,858	7,042	8,574	7,794	4,379	1,259	NA	NA	NA	NA	44,093
Federal EB	0	0	0	156	156	0	0	0	NA	NA	NA	NA	312
Veteran EB	0	0	0	0	0	0	0	0	NA	NA	NA	NA	0
TOTAL													

^aTotal is for eight months only.

KEY: Regular is the standard unemployment insurance program; Federal is unemployment insurance for former federal employees; Veteran is the unemployment program for recently separated former military employees; and EB is the Extended Benefit Program.

SOURCE: Alaska Department of Labor, Research and Analysis.

In general, the total income received from programs such as AFDC and unemployment insurance is relatively small in comparison to the magnitude of total wage income in the Borough. One of the most significant sources of transfer income may well be the Alaska Permanent Fund dividend program.

A further source of income for Borough residents is the indirect or imputed income represented by Borough housing and fuel subsidies, school lunch programs, and other Borough subsidies. Although we have not estimated the magnitude of these subsidies, we suspect that they may be comparable in magnitude to transfer programs, or perhaps greater. Future cutbacks in Borough revenues could affect these subsidies as well as Borough wage expenditures.

CHAPTER VIII
NORTH SLOPE MODEL BASE CASE PROJECTIONS

In this chapter, we present projections of the future economy and population of the North Slope Borough in the absence of lease sales 97 or 109. We refer to these projections as our "base case" projections.

We have prepared these projections using a computer simulation model of the North Slope economy, known as the "North Slope Model." Our model projections are based on assumptions about how certain key factors will affect the North Slope Borough economy in the future. Since we cannot be certain about these effects, our projections should not be viewed as predictions but rather as illustrations of how the North Slope Borough economy may change in the future if our assumptions prove to be true. To illustrate the range of conditions which may prevail in the borough's economy, we have prepared a number of different sets of projections based on different sets of assumptions. Below, we first describe the North Slope Model. Next, we review the assumptions underlying the different sets of projections, or "cases." We then describe the projections in detail.

The North Slope Model

The North Slope Model is a computer simulation model which projects North Slope Borough population, employment, revenues, expenditures, and a variety of other variables based on a number of assumptions about future trends in key factors affecting the borough's cash

economy. Our principal purpose in developing the model was to be able to examine the effects of factors such as CIP expenditures, state limits on borough revenues, Native labor force participation, or Native migration trends on Native employment, income, and population.

The North Slope model looks at the borough's economy and population as a whole. It cannot be used to project changes in the economy or population of individual villages. This would be a much more complex task that would require very detailed study of factors specific to individual villages. Thus, our model projections show general trends which may not hold for individual villages. For instance, our model projections suggest that borough employment will decline overall as a result of declining total borough expenditures; however, employment in some villages could rise if remaining borough expenditures were concentrated in those villages.

Readers desiring a more complete description of the model should refer to Appendix A, where we describe the model in detail. This appendix also includes a list of all of the equations of the model.

Figure VIII-1 shows the overall structure of the model. There are six submodels: the population model, the fiscal model, the income model, the employment model, the labor market model, and the migration model. Each of these submodels consists of a set of equations relating different economic or demographic variables to each other. Below, we briefly describe each of the submodels.

The Fiscal Model

The fiscal model calculates North Slope Borough revenues, debt repayment **costs**, and tax rates based on assumptions about state revenue **limits**, mill rate limits, population, property values, and **CIP** construction spending. Another key input to this **submodel** is the projections by the population **submodel** of the borough's population.

The fiscal model calculates property tax operating revenues as the maximum permitted under state restrictions on per capita operating revenues, or the maximum possible without raising the borough's total mill rate **above a** borough-imposed maximum rate--whichever is **lower**. Interest earnings are determined by multiplying the borough's total fund balances by an assumed rate of interest earnings. Other operating revenues are calculated by multiplying borough population by a per capita figure which is assumed to decline over time due to lower state and federal revenue sharing. The model assumes that all operating revenues are spent as operating expenditures.

We assume future levels of borough **CIP** spending. The model assumes that the borough funds a certain fraction of construction spending from current fund balances and the remainder through new bond issues. Thus, the model projects that the borough's fund balances will decline over time, causing interest earnings to decline over time as well. The model projects new debt repayment costs and adds

these to **existing** debt repayment requirements to determine **total** debt repayment costs. These **funds** are **raised** through property taxes. **Together, property** taxes for operations **and** property taxes for debt repayment determine **total** property taxes, **which** are combined with assumptions **about total** property **value to** calculate tax rates.

The Employment Model

The model has three categories of workers and seven categories of employment. The categories of workers are Natives, non-Native residents (non-Native workers **living** in the villages), and nonresidents (non-Native workers **living** in work camps at the Prudhoe Bay oil field, remote government installations, or for short **periods** of time **in** village work camps).

Categories of employment include borough operating employment, borough **CIP** employment, **private CIP** employment, support employment, federal and state government employment, **oil industry** employment, and other **basic** employment (**we assume** that **this last** category is **zero** throughout). The **model** does not attempt to estimate employment in subsistence activities although we **recognize** that these activities are very important **to** many Native residents of the borough. The model **only** attempts **to** project **the** cash-related portion of the borough's economy.

The model calculates borough operations employment as proportional to borough operations spending. Similarly, borough CIP employment and other CIP employment are proportional to borough **CIP** spending. **We** assume future **levels** of **oil** industry employment, other basic employment, and federal and state government employment as inputs to the model. Support employment is assumed to be proportional to total resident employment (resident and nonresident shares of each type of employment are determined by the **labor** market model).

The Income Model

The model's income projections are **simple** estimates which are for illustrative purposes only. Wage income **is** calculated by multiplying resident employment by a single wage rate. **Native** nonwage income is calculated by multiplying Native population by an assumed per capita **nonwage** income level, while non-Native nonwage income is assumed to be zero.

The Labor Market Model

The labor market calculations are a key part of the North **Slope** model projections since they affect the projections of Native and non-Native employment, which subsequently affect migration and population growth. The model calculates a **total** Native labor force by multiplying the adult Native population by a labor force participation rate. These Native workers are then allocated to jobs in different industries in a series of steps. First, employment of each type is divided between those jobs which are available to

Natives **and** those jobs which are not. **Native** workers are allocated **first to non-oil jobs**. Subsequently, if not enough non-oil jobs are available to **employ all Native** workers, a share **of** the remaining workers are assumed to **seek work in the oil industry**. **Of jobs not taken by Natives**, borough **operations jobs**, borough **CIP jobs**, **federal** and state government **jobs**, and support **sector jobs** are assumed **to be taken by non-Natives who become residents** of the borough. Other **jobs are** taken by nonresidents, who **live in work camps rather** than in North Slope Borough villages. **In particular**, this is the case for **oil industry** workers and private **CIP** construction workers.

The Population and Migration Models

The model calculates **Native** population through a detailed **accounting of births and deaths** for Natives **of each** age over time. **Native** population **is divided into 66** age groups (ages 0 through **64**, and age **65 or above**). Population **change** occurs **both as a result** of natural increase and as a **result of migration**. **In each year**, population in each age **group is** the population the previous year multiplied **by** an assumed survival rate. Population in the youngest **age group** (age 0) is calculated **by multiplying** population **in all** other age groups **by** assumed fertility rates. Migration **levels** are a function **of increases in** unemployment as **well as** -the **total** unemployment level. **In any year in which** the unemployment rate **rises**, a certain percentage of newly unemployed workers are assumed **to migrate out of** the borough. **In addition**, above a maximum unemployment rate, **all** additional unemployed workers **are** assumed to migrate out of the

borough. **In** each age group, population is assumed to migrate out of the borough in the same proportion as migrating workers represent in the adult Native population.

The resident non-Native population is assumed to be proportional to non-Native employment, with a constant age-sex distribution. "Nonresident population" **is** arbitrarily defined as two-thirds of nonresident employment since nonresident workers actually **live** on the North Slope only part of the time.

North Slope Model Cases and Assumptions

For this study, **we .have** prepared fifteen different North **Slope** Model "cases," or sets of projections. Each case is based on a different set of assumptions about those **key** model variables to which the projections are most sensitive or about which we are most uncertain. These cases represent fifteen different sets of possible economic and demographic futures for the North Slope Borough. Which of these cases the future **will** most closely resemble depends on factors such as how much **oil** development actually occurs and the extent to which political restrictions are placed upon North Slope Borough revenues.

The names of the cases are as follows:

Medium Base Case
Low Migration Base Case
High Migration Base Case
Low Revenues Base Case
High Revenues Base Case
Moderate High Revenues Base **Case**
Low Employment Base Case
High Employment Base Case
Extreme Low Base Case
Extreme **High Base Case**
High **Impact Base Case**
Sale 97 Medium Impact Case
Sale 97 High Impact Case
Sale 109 Medium Impact Case
Sale 109 High Impact Case

Eleven of the cases are "base cases." These cases do not assume any exploration or development associated with OCS Sales 97 or 109. The other four cases are "impact cases," which assume that exploration and development associated with these sales takes place. In order to examine the impacts of Sales 97 and 109, we compare our impact case projections with our base case projections. We discuss these projected impacts in Chapter IX. In the remainder of this chapter, we discuss our different base case projections and what they indicate about future economic and demographic trends for the North Slope Borough.

The Medium Base Case

The Medium Base Case is our "most likely" case. This case is based on what we consider to be the most reasonable or most likely assumptions. However, since the model is very sensitive to some of those assumptions about which we are most uncertain, our Medium Base

Case **is in** no sense a "prediction" of the future of the North **Slope** Borough. **It should** Instead be viewed as an illustration of one possible future for the North **Slope** Borough.

Below, we will first describe our assumptions for the medium base case in detail. Next we will describe our **medium** base case projections, and how key assumptions affected the projections. **Finally**, we **will** compare our medium base case projections with projections for the other base cases, in order to illustrate how the projections change when certain key assumptions are **changed**.

Medium Base Case Assumptions

Table **VIII-1** summarizes the assumptions which we used for the medium base case. These assumptions are fully documented in Appendix B.

Native birth rates and survival rates. The starting point for our population projections are the population figures for Natives and non-Natives reported in the 1980 U.S. Census. Essentially, the model projects population forward from 1980 by calculating how many Natives are born each year (based on the number of women **in** child-bearing ages and assumed fertility rates for women of these ages) and how many Natives die each year (based on survival rates for Natives of different ages). As we stated in Chapter **II**, we do not have reliable historical information on North Slope Native fertility rates and death rates for different ages. Even if we did have this data, how these fertility and death rates might change in

TABLE VIII-1
SUMMARY OF ASSUMPTIONS USED FOR NORTH SLOPE
MODEL MEDIUM BASE CASE PROJECTIONS

<u>Category</u>	<u>Assumption</u>
<u>POPULATION MODEL</u>	
● Native birth rates and survival rates	Based on 1980 census data for non-Anchorage Alaska Natives
● Age distribution of Non-Native residents	1980 age distribution
● Maximum unemployment rate for Natives (unemployment cannot rise above this rate due to out-migration)	50 percent
● Share of newly unemployed workers who leave the North Slope	20 percent
<u>EMPLOYMENT MODEL</u>	
● Federal and state gov't employment	Historical until 1984 ; then remains at 1984 level of 178
e Support employment	.24x (resident employment)
● Borough CIP employment	2.02 x (Borough CIP spending in \$million)
● Other CIP employment	2.20 x (Borough CIP spending in \$million)
● Borough operating employment	13.09 x (Borough operations spending in \$million)
e Oil industry-related employment	Declines gradually from 7191 in 1986 to 3344 in 2000 and 1461 in 2010 ; based on ISER MAP model assumptions
● Minimum number of oil jobs reserved for natives	Constant at 30

TABLE VIII-1 (continued)

<u>Category</u>	<u>Assumption</u>
<u>INCOME MODEL</u>	
● Per capita transfer income	\$1,450 for Natives; 0 for Non-Natives
● Wage rate (all jobs)	\$37,500 per year
<u>LABOR MARKET MODEL</u>	
● Labor force participation rate	Equivalent to 74.1% for adult Natives between ages 19 and 64; 100% for adult Non-Natives. Only 10% of Natives unable to find other work are assumed to be willing to take oil industry jobs
● Share of jobs available to Natives, by type of employment	56% Borough operations jobs 83% of Borough CIP jobs 37% of other CIP jobs 55% of support jobs 32% of federal and state jobs 2% of oil industry jobs
<u>FISCAL MODEL</u>	
● Per capita nonproperty tax non-interest operating revenues (state and federal transfers)	Declines from \$6,410 in 1985 to \$4210 in 2010 due to drop in state revenues
● State-imposed per capita property tax limit for operating revenues	Constant at 1985 level of \$5009
● Property value	Rises from \$12.3 billion in 1985 to \$16.3 billion in 1990; then declines steadily to \$4 billion in 2010
● Borough CIP expenditures	Decline from \$211 million in 1985 to annual level of \$5 million after 1990.

the future would still be uncertain. Given this uncertainty, we made two simplifying assumptions. First, we assumed that North Slope Native fertility rates and death rates were the same as for all non-Anchorage Alaska Natives. Secondly, we assumed that these fertility rates and death rates would remain constant throughout the projection period.

Age distribution of non-Native residents. The model's projections of the non-Native population are much simpler than for the Native population: the non-Native population is assumed to be proportional to non-Native employment. In order to calculate the distribution of the non-Native population among different age groups, we assume that the percentage distribution among age groups remains the same as it was in 1980.

Native migration in response to unemployment. One of the most difficult tasks in projecting the North Slope Native population is to project the extent to which Native residents will leave the North Slope as village employment opportunities decline. Our assumptions about migration are also among the most significant for our model projections.

Not all Native residents will respond to declining employment opportunities in the same way. Some workers who lose their jobs and cannot find other employment might choose to remain in their village or move to another North Slope villages. Others might choose to

leave the North Slope. As we **discussed** in Chapter **II**, past migration trends are not necessarily a guide to what will happen in the future since conditions on the North **Slope** and in the rest of **Alaska** are **likely** to be quite different over the next two decades than they have been in the previous decade and before.

We project migration in the North Slope Model by assuming that each year a certain **share of** newly unemployed workers will leave the North Slope, bringing their families with them. **In** addition, we assume that out-migration of workers and their families will keep the unemployment rate from ever rising above an assumed "maximum" unemployment **rate**.

We **feel** that this model structure is a reasonable simplification of the actual migration response to unemployment. The problem is to determine what are the appropriate assumptions for the share of newly unemployed workers who leave the borough, and the maximum unemployment rate. As shown in Table **VIII-1**, in the medium base case we assume that 20 percent of any Native workers who are newly unemployed as a result of an increase in unemployment will migrate away from the North Slope Borough, taking their families with them. Further, we assume that unemployment among Native workers will not rise above **50** percent due to out-migration of Native workers and their families once unemployment reaches this level. This means that our medium base case projections of Native population are directly

tied to Native employment once employment levels fall to a level at which unemployment reaches 50 percent.

Our choice of these particular migration assumptions represents a best guess based on very little hard information about what future migration response to unemployment will actually be, and made in consultation with Minerals Management Service (MMS). We do not have sufficient data to know what it has been in the past, nor do we know if the past will necessarily be like the future. However, we feel that these assumptions are reasonable: many North Slope Natives have lived and worked outside of the North Slope Borough in the past, and it is reasonable to assume that many would be willing to do so again.

Employment multipliers. The model calculates support employment, borough CIP employment, other CIP employment, and borough operating employment using employment multipliers which assume that employment is proportional to resident employment or borough spending. We calculated these multipliers (shown in Table VII-1) using 1984 data for total resident employment and borough spending.

Native non-oil industry employment. Our North Slope model projects the number of jobs available to Natives in each employment category as a given share of the total jobs available. In our medium base case, we assume that the share of jobs available to Natives in each employment category does not rise above the share of jobs held in each category by Natives in 1980.

Native oil industry employment. The extent to which Natives **will** hold **oil** industry jobs in the future will be very important in determining the future economy of the North Slope Borough. Unfortunately, it is **also** very difficult to project.

In the past, North Slope Natives have **held** a very **small** share of total oil industry jobs in the North Slope **oil** fields. As **we** discussed in Chapter VI., this **may** have been due to a variety of factors, among them the availability of relatively abundant employment opportunities in North Slope villages. However, many oil industry jobs also require special skills which Native residents may not have, and various industry hiring practices may have limited opportunities for Natives as **well**.

In the future, as village employment opportunities decline, there will **be** fewer alternatives to **oil** industry employment for Native residents. Nevertheless, many Native residents might not choose to work in the oil industry even if they had no other alternatives because of factors such as working conditions, work schedules, and travel difficulties. **At** the same time, many oil industry jobs might not be available to Native residents because of special **skill** requirements, unfavorable hiring practices, or simply because existing jobs **will** already be held by other workers.

For our **medium** base case, we **assumed** that a minimum of **thirty oil** industry jobs will be **held** by Natives **in** the future. **Beyond** this minimum **level** of employment; however, we assume that further Native **oil industry** employment **will be limited in** two ways. **First**, we **assume** that only 2 percent of **oil** industry jobs **will be available to** Natives in the future **due** to hiring constraints and specialized **skill** requirements. Secondly, we assume that only ten percent of **Native** workers **unable to** find other jobs in the villages **will seek** work in the oil industry.

As with our migration assumptions, our choice of these particular **oil** industry employment assumptions represents a best guess based on **very little** hard information about **what oil** industry employment opportunities there **will be** for **Natives** or about what Native responses to these opportunities **will be**. **We** made our assumptions in consultation with MMS. **We** feel that **our** assumptions are reasonable **given** the very **low** levels of employment of North **Slope** Natives in the **oil** industry to date.

North Slope Borough revenues. **In** the medium **base case**, we **assume** that the borough continues the policy of the present administration **of** not letting the total tax rate **rise** above **18.37 mills**. Furthermore, we assume that the state-imposed per capita **limit** on property tax operating revenues remains constant at its **1985 level in** the future.

Reliability of Medium Base Case Assumptions and Projections

We are not **able** to justify **all** of our assumptions by reference to detailed studies or extensive data. As we have shown throughout this study, insufficient data exist to precisely describe economic and demographic conditions in the North Slope Borough at present, much less to predict them precisely for two decades into the future. Furthermore, even if we had such detailed data for past **or** present conditions, they would not necessarily be a reliable guide to what **will** happen in the future. Therefore we are uncertain about many of our assumptions, including some which significantly affect the model's projections.

Where **we** were uncertain about our assumptions, we have used our best judgment based on our familiarity with the North Slope Borough economy and other rural economies in the state. We have **also** consulted with the Minerals Management Service and have followed their instructions with respect to several of these key assumptions where their suggestions differed from our own. We have also prepared a variety of alternative projections which illustrate the effects of changing key assumptions, which we discuss **below** following our discussion of our medium base **case projections**.

Since our projections are not precise estimates, their primary value is in showing the general trends that are likely to occur in key economic and demographic variables, as opposed to their exact values. **Small** changes or differences between projections for

individual years should not be viewed as significant. For example, the model mechanistically predicts that borough employment will always be exactly proportional to borough expenditures. In fact, increases or decreases in borough employment in response to changes in expenditures are likely to occur over a period of years rather than immediately.

North Slope Model Medium Base Case Projections

In this section, we examine our medium base case projections for key variables. Tables VIII-2 through VIII-12 present projections for these variables. Additional projections for other variables are presented in Appendix C, Tables C-1.1 through C-1.15. In these tables, we have indicated values for which historical data are available by the notation "***" and values inferred indirectly from historical data by the notation "*".

TABLE VIII-2
 NORTH SLOPE MODEL PROJECTIONS "
 MEDIUM CASE

	RESIDENT POPULATION	RESIDENT NATIVE POPULATION	RESIDENT NON-NATIVE POPULATION
1980	3827*	3208**	619*
1981	4142	3268	875
1982	4301	3363	938
1983	4548	3460	1088
1984	4660	3562	1098
1985	5152	3665	1487
1986	4908	3726	1182
1987	4971	3792	1179
1988	4850	3815	1036 -
1989	4867 -	3881	987
1990	4884	3937	947
1991	4974	4022	952
1992	5068	4109	959
1993	5107	4176	931
1994	5184	4252	932
1995	"5255	4328	927
1996	5316	4403	913
1997	5380	4475	905
1998	5436	4545	891
1999	5493	4615	877
2000	5569	4694	874
2001	5673	4781	892
2002	5656	4799	857
2003	5636	4791	844
2004	5530	4720	810
2005	5418	4629	789
2006	5300	4532	768
2007	5078	4363	715
2008	4886	4198	688
2009	4705	4042	662
2010	4531	3893	638

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B61--12/20/85
 VARIABLES: PORE, PONA, AND PONN

TABLE VIII-3.
NORTH SLOPE MODEL PROJECTIONS
MEDIUM CASE

	TOTAL PROPERTY VALUE (000)	TOTAL PROPERTY TAXES (000)	TAX RATE FOR OPER- ATING REVENUES TAX RATE	TAX RATE FOR DEBT SERVICE REVENUES	LIMIT ON PROPERTY TAX OPER- ATING REVENUES PER CAPITA (000)	ACTUAL PROPERTY TAX OPER- ATING REVENUES PER CAPITA ^a (000)	
1980	5061955**	52400**	0.0103*	0.0052**	0.0051	3.196**	3.086
1981	5723582**	59100**	0.0103**	0.0051**	0.0052	3.601**	3.008
1982	6621652**	109700**	0.0167**	0.0055*	0.0112	3.914*	3.718
1983	8186986*	133700**	0.0164**	0.0041**	0.0123	4.761**	3.869
1984	9996290**	152400**	0.0153**	0.0033*	0.0120	5.119**	3.476
1985	12261420**	225300**	0.0184**	0.0033*	0.0151	5.099*	4.321
1986	13420000	246525	0.0184	0.0035	0.0149	5.099	4.753
1987	14730000	257515	0.0175	0.0033	0.0142	5.099	5.099
1988	15510000	260136	0.0168	0.0027	0.0141	5.099	5.099
1989	16100000	252632	0.0157	0.0026	0.0131	5.099	5.099
1990	16290000	225576	0.0138	0.0026	0.0112	5.099	5.099
1991	15990000	140843	0.0088	0.0026	0.0062	5.099	5.099
1992	15680000	203432	0.0130	0.0028	0.0102	5.099	5.099
1993	15340000	191791	0.0125	0.0027	0.0099	5.099	5.099
1994	14980000	181415	0.0121	0.0021	0.0094	5.099	5.099
1995	14550000	170806	0.0117	0.0028	0.0089	5.099	5.099
1996	14070000	117576	0.0084	0.0029	0.0055	5.099	5.099
1997	13550000	79092	0.0058	0.0030	0.0029	5.099	5.099
1998	12950000	71162	0.0055	0.0031	0.0024	5.099	5.099
1999	12280000	55704	0.0045	0.0032	0.0013	5.099	5.099
2000	11500000	55615	0.0048	0.0035	0.0014	5.099	5.099
2001	10720000	55262	0.0052	0.0037	0.0014	5.099	5.099
2002	9940000	52223	0.0053	0.0038	0.0015	5.099	5.099
2003	9160000	51765	0.0057	0.0041	0.0016	5.099	5.099
2004	8380000	49609	0.0059	0.0042	0.0017	5.099	5.099
2005	7600000	48664	0.0064	0.0046	0.0018	5.099	5.099
2006	6820000	42717	0.0063	0.0050	0.0012	5.099	5.099
2007	6040000	31113	0.0052	0.0052	0.0000	5.099	5.099
2008	5260000	30130	0.0057	0.0057	0.0000	5.099	5.099
2009	4480000	29209	0.0065	0.0065	0.0000	5.099	5.099
2010	3700000	28324	0.0077	0.0077	0.0000	5.099	5.099

^aBased on total population as defined by model, rather than official state figure used for calculating revenue limit.

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.861--12/20/85
VARIABLES: VATO, RVPYTO, TARA, TARAOP, TARADB, RVPYOPPC, RVOPPCFI

TABLE VIII-4.
NORTH SLOPE MODEL PROJECTIONS
MEDIUM CASE

	TOTAL POPULATION	RESIDENT POPULATION	AVERAGE NON- RESIDENT POPULATION
1980	6805*	3827**	2978*
1981	8776	4142	4633
1982	9360	4301	5058
1983	9950	4548	5402
1984	9523	4660	4863
1985	9397	5152	4245
1986	9847	4908	4940
1987	9535	4971	4564
1988	8174	4850	3324-
1989	8298	4867	3430
1990	8317	4884	3433
1991	8295	4974	3321
1992	8464	5068	3396
1993	7976	5107	2869
1994	7997	5184	2813
1995	7988	5255	2733
1996	7895	5316	2579
1997	7897	5380	2517
1998	7807	5436	2371
1999	7745	5493	2252
2000	7821	5569	2252
2001	7833	5673	2160
2002	7317	5656	1661
2003	7297	5636	1661
2004	6955	5530	1425
2005	6843	5418	1 4 2 5
2006	6725	5300	1425
2007	6102	5078	1023
2008	5909	4886	1023
2009	5728	4705	1023
2010	5555	4531	1023

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B61--12/20/85
VARIABLES: POTO, PORE, AND PONRAV

TABLE VIII-5.
NORTH SLOPE MODEL PROJECTIONS
MEDIUM CASE

	TOTAL PROPERTY VALUE (000)	TOTAL PROPERTY TAXES (0(30)	TAX RATE	TAX RATE FOR OPER- ATING REVENUES	TAX RATE FOR DEBT SERVICE REVENUES	LIMIT ON PROPERTY TAX OPER- ATING REVENUES PER CAPITA (000)	ACTUAL PROPERTY TAX OPER- ATING REVENUES PER CAPITA ^a (000)
1980	5061955**	52400**	0.0103**	0.0052**	0.0051	3.196**	3.086
1981	5723582**	59100**	0.00103**	0.0051**	0.0052	3.601**	3.008
1982	6621652**	109700**	0.0167**	0.00055**	0.0112	3.914**	3.718
1983	8186986**	133700**	0.0164**	0.0041**	0.0123	4.761**	3.869
1984	9996290**	152400**	0.0153**	0.0033**	0.0120	5.119**	3.476
1985	12261420**	225300**	0.0184**	0.0033**	0.0151	5.099**	4.321
1986	13420000	246525	0.0184	0.0035	0.0149	5.099	4.753
1987	14730000	257515	0.0175	0.0033	0.0142	5.099	5.099
1988	15510000	260136	0.0168	0.0027	0.0141	5.099	5.099
1989	16100000	252632	0.0157	0.0026	0.0131	5.099	5.099
1990	16290000	225576	0.0138	0.0026	0.0112	5.099	5.099
1991	15990000	140843	0.00088	0.0026	0.0062	5.099	5.099
1992	15680000	203432	0.0130	0.0028	0.0102	5.099	5.099
1993	15340000	191791	0.0125	0.0027	0.0099	5.099	5.099
1994	14980000	181415	0.0121	0.0027	0.0094	5.099	5.099
1995	14550000	170806	0.0117	0.0028	0.0089	5.099	5.099
1996	14070000	117576	0.0084	0.0029	0.0055	5.099	5.099
1997	13550000	79092	0.0058	0.0030	0.0029	5.099	5.099
1998	12950000	71162	0.0055	0.0031	0.0024	5.099	5.099
1999	12280000	55704	0.0045	0.0032	0.0013	5.099	5.099
2000	11500000	515615	0.0048	0.0035	0.0014	5.099	5.099
2001	10720000	55262	0.0052	0.0037	0.0014	5.099	5.099
2002	9940000	52223	0.0053	0.0038	0.0015	5.099	5.099
2003	9160000	51765	0.0057	0.0041	0.0016	5.099	5.099
2004	8380000	49609	0.0059	0.0042	0.0017	5.099	5.099
2005	7600000	48664	0.0064	0.0046	0.0018	5.099	5.099
2006	6820000	42717	0.0063	0.0050	0.0012	5.099	5.099
2007	6040000	31113	0.0052	0.0052	0.0000	5.099	5.099
2008	5260000	30130	0.0057	0.0057	0.0000	5.099	5.099
2009	4480000	29209	0.0065	0.0065	0.0000	5.099	5.099
2010	3700000	28324	0.0077	0.0077	0.0000	5.099	5.099

^aBased on total population as defined by model, rather than official state figure used for calculating revenue limit.

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B61--12/20/85
VARIABLES: VATO, RVPYTO, TARA, TARAOP, TARADB, RVPYOPPC, RVOPPCFI

TABLE VIII -6.
NORTH SLOPE MODEL PROJECTIONS
MEDIUM CASE

	TOTAL BOROUGH EXPENDI- TURES (000)	OPERATIONS EXPENDI- TURES (000)	CON- STRUCTION EXPENDI- TURES (000)	DEBT SERVICE EXPENDI - TURES (000)
1980	158765**	39685**	93000**	26080**
1981	216637**	50020**	131000**	35617**
1982	342192**	63506**	211000**	67686**
1983	466118**	68807**	302000**	95311**
1984	419494**	78544**	211000**	129950**
1985	489655**	102577**	199000**	188078**
1986	420613	96896	124000**	199717
1987	390553	100659	81000	208894
1988	343816	90360	35000	218456
1989	327073	85751	31000	210322
1990	272238	84072	5000	183166
1991	188158	84613	5000	98545
1992	250636	85364	5000	160272
1993	238745	82623	5000	151122
1994	228427	82789	5000	140638
1995	217374	82298	5000	130076
1996	163321	80999	5000	77322
1997	124015	80189	5000	38826
1998	115208	78853	5000	31355
1999	98811	77601	5000	16210
2000	98020	77285	5000	15735
2001	99459	79139	5000	15320
2002	95778	75863	5000	14915
2003	94160	74600	5000	14560
2004	90443	71298	5000	14145
2005	87931	69161	5000	13770
2006	80520	67095	5000	8425
2007	67010	62010	5000	0
2008	64282	59282	5000	0
2009	61746	56746	5000	0
2010	59300	54300	5000	0

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B61--12/20/85
VARIABLES: SPTO, SPLOGOOP, SPLOGOCT, AND CSDBTO

TABLE VIII-7.
NORTH SLOPE MODEL PROJECTIONS
MEDIUM CASE

EMPLOYMENT: ALL RACES

	TOTAL EMPLOY- MENT	FEDERAL AND STATE GOVERN- MENT EMPLOY- MENT	BOROUGH OPER- ATING EMPLOY- MENT	BOROUGH CIP EMPLOY- MENT	OTHER CIP EMPLOY- MENT	LOCAL SUPPORT EMPLOY- MENT	OIL INDUSTRY EMPLOY- MENT	NON-OIL BASIC EMPLOY- MENT	*
1980	6118**	291 **	795*	322*	71*	393*	4246*	0	
1981	8761**	260**	818*	363*	190*	427*	6703*	0	
1982	9638**	203**	828*	456*	435*	488*	7228*	0	
1983	10318**	177**	970*	457*	395*	528*	7791*	0	
1984	9581**	178**	1 028*	427*	464*	545*	6939*	0	
1985	9006	178	1343	402	438	632	6014	0	
1986	9711	178	1268	250	273	551	7191	0	
1987	9065	178	1318	164	178	531	6696	0	
1988	6881	178	1183	71	77	454	4919	0	
1989	6954	178	1123	63	68	433	5090	0	
1990	6847	178	1101	10	11	406	5141	0	
1991	6688	178	1108	10	11	408	4973	0	
1992	6814	178	1117	10	11	412	5086	0	
1993	5968	178	1082	10	11	398	4289	0	
1994	5884	178	1084	10	11	399	4203	0	
1995	5752	178	1077	10	11	396	4080	0	
1996	5492	178	1060	10	11	389	3844	0	
1997	5383	178	1050	10	11	385	3749	0	
1998	5135	178	1032	10	11	378	3526	0	
1999	4931	178	1016	10	11	372	3344	0	
2000	4925	178	1012	10	11	370	3-344	0	
2001	4815	178	1036	10	11	377	3203	0	
2002	3989	178	993	10	11	359	2438	0	
2003	3967	178	977	10	11	354	2438	0	
2004	3547	178	933	10	11	338	2077	0	
2005	3510	178	905	10	11	329	2077	0	
2006	3475	178	878	10	11	320	2077	0	
2007	2767	178	812	10	11	295	1461	0	
2008	2720	178	776	10	11	284	1461	0	
2009	2677	178	743	10	11	274	1461	0	
2010	2634	178	711	10	11	263	1461	0	

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B61--12/20/85
VARIABLES: EMTO, EMGONL, EMGOOP, EMGOCT, EMCTGO, EMSUEG,
EMBAOI, AND EMBAOT

TABLE VIII-8.
NORTH SLOPE MODEL PROJECTIONS
MEDIUM CASE

EMPLOYMENT: NATIVES

	TOTAL EMPLOY- MENT	FEDERAL AND STATE GOVERN- MENT EMPLOY- MENT	BOROUGH OPER- ATING EMPLOY- MENT	BOROUGH CIP EMPLOY- MENT	OTHER CIP EMPLOY- MENT	LOCAL SUPPORT EMPLOY- MENT	OIL INDUSTRY EMPLOY- MENT	NON-OIL BASIC EMPLOY- MENT
1980	1173*	26*	445*	267*	26*	216*	30**	0
1981	1136	26	458	301	70	235	46	0
1982	1326	26	463	378	161	268	30	0
1983	1376	25	528	369	142	282	30	0
1984	1441	25	569	350	170	296	30	0
1985	1497	23	681	302	147	315	30	0
1986	1392	26	710	208	101	303	44'	0
1987	1311	26	738	136	66	292	54	0
1988	1100	26	662	59	28	250	75	0
1989	1050	26	629	52	25	238	80	0
1990	968	26	616	8	4	223	91	0
1991	974	26	620	8	4	225	91	0
1992	982	26	626	8	4	226	92	0
1993	949	26	606	8	4	219	86	0
1994	948	26	607	8	4	219	84	0
1995	941	26	603	8	4	218	82	0
1996	923	26	594	8	4	214	77	0
1997	913	26	588	8	4	212	75	0
1998	895	26	578	8	4	208	71	0
1999	878	26	569	8	4	204	67	0
2000	875	26	567	8	4	204	67	0
2001	890	26	580	8	4	207	64	0
2002	840	26	556	8	4	197	49	0
2003	828	26	547	8	4	194	49	0
2004	788	26	523	8	4	186	42	0
2005	767	26	507	8	4	181	42	0
2006	748	26	492	8	4	176	42	0
2007	684	26	455	8	4	162	29	0
2008	658	26	435	8	4	156	29	0
2009	634	26	416	8	4	150	29	0
2010	610	26	398	8	4	145	29	0

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B61--12/20/85
VARIABLES: EMNA, EMNAGONL, EMNAGOOP, EMNAGOCT, EMNACTGO,
EMNASUEG, EMNAOI, AND EMNABAOT

TABLE VIII-9.
NORTH SLOPE MODEL PROJECTIONS
MEDIUM CASE

EMPLOYMENT: NON-NATIVE RESIDENTS

	TOTAL NON-NATIVE EMPLOYMENT	FEDERAL AND STATE GOVERNMENT EMPLOYMENT	BOROUGH OPERATING EMPLOYMENT	LOCAL SUPPORT EMPLOYMENT	NON-OIL BASIC EMPLOYMENT	BOROUGH CIP EMPLOYMENT
1980	473*	54*	350*	216*	0	55*
1981	668	54	360	192	0	62
1982	717	54	365	220	0	78
1983	831	55	442	246	0	88
1984	839	55	459	249	0	77
1985	1136	57	662	317	0	100
1986	903	54	558	248	0	43
1987	901	54	580	239	0	28
1988	791	54	520	204	0	12
1989	754	54	494	195	0	11
1990	723	54	484	183	0	2
1991	727	54	487	184	0	2
1992	733	54	492	185	0	2
1993	711	54	476	179	0	2
1994	712	54	477	179	0	2
1995	708	54	474	178	0	2
1996	698	54	467	175	0	2
1997	631	54	462	173	0	2
1998	680	54	454	170	0	2
1999	670	54	447	167	0	2
2000	668	54	445	167	0	2
2001	682	54	456	170	0	2
2002	655	54	437	161	0	2
2003	645	54	430	159	0	2
2004	619	54	411	152	0	2
2005	602	54	398	148	0	2
2006	587	54	386	144	0	2
2007	546	54	357	133	0	2
2008	525	54	341	128	0	2
2009	506	54	327	123	0	2
2010	487	54	313	119	0	2

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.861--12/20/85
VARIABLES: EMNN, EMNNGONL, EMNNGOOP, EMNNSUEG, EMNNBAOT, EMNNGOCT

TABLE VIII-10.
NORTH SLOPE MODEL PROJECTIONS
MEDIUM CASE

NATIVE OIL INDUSTRY EMPLOYMENT

	ASSUMED MINIMUM NATIVE OIL EMPLOYMENT	OIL INDUSTRY MAXIMUM DEMAND FOR NATIVE LABOR	MAXIMUM NATIVE SUPPLY OF LABOR TO OIL INDUSTRY	NATIVE OIL INDUSTRY EMPLOYMENT
1980				
1981	30	134	46	46
1982	30	145	30	30
1983	30	156	30	30
1984	30	139	30	30
1985	30	120	30	30
1986	30	144	44	44
1987	30	134	54	54
1988	30	98	75	75
1989	30	102	80	80
1990	30	103	91	91
1991	30		91	91
1992	30	111	92	92
1993	30	86	96	86
1994	30	84	97	84
1995	30	82	100	82
1996	30	77	102	77
1997	30	75	104	75
1998	30	71	108	71
1999	30	67	112	67
2000	30	67	114	67
2001	30	64	118	64
2002	30	49	124	49
2003	30	49	126	49
2004	30	42	127	42
2005	30	42	127	42
2006	30	42	126	42
2007	30	29	126	29
2008	30	29	122	29
2009	30	29	118	29
2010	30	29	115	29

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B61--12/20/85
VARIABLES: EMNAOIEX, LDNABAOI, LSNAOI, EMNAOI

TABLE VIII-11.
NORTH SLOPE MODEL PROJECTIONS
MEDIUM CASE

	ADULT NATIVE POPULATION	NATIVE LABOR SUPPLY	NATIVE EMPLOYMENT	NATIVE UNEMPLOY- MENT	NATIVE UNEMPLOY- MENT RATE BEFORE MIGRATION	NATIVE UNEMPLOY- MENT RATE AFTER MIGRATION
1980	1 667**	1235**	1173*			
1981	1725	1278	1136	142	0.111	0.107
1982	1789	1326	1326	0	0.000	0.000
1983	1857	1376	1376	0	0.000	0.000
1984	1945	1441	1441	0	0.000	0.000
1985	2020	1497	1497	0	0.000	0.000
1986	2048	1518	1392	126	0.083	0.066
1987	2054	1522	1311	212	0.139	0.124
1988	2030	1504	1100	405	0.269	0.240
1989	2027	1502	1050	452	0.301	0.289
1990	2043	1514	968	546	0.360	0.346
1991	2054	1522	974	549	0.360	0.358
1992	2074	1537	982	555	0.361	0.360
1993	2094	1551	949	603	0.389	0.383
1994	2116	1568	948	620	0.395	0.393
1995	2142	1587	941	647	0.407	0.405
1996	2151	1594	923	672	0.421	0.418
1997	2173	1610	913	697	0.433	0.430
1998	2200	1630	895	735	0.451	0.447
1999	2237	1658	878	780	0.470	0.466
2000	2272	683	875	808	0.480	0.477
2001	2338	732	890	843	0.486	0.485
2002	2372	758	840	917	0.522	0.500
2003	2383	766	828	938	0.531	0.500
2004	2363	751	788	963	0.550	0.500
2005	2336	731	767	963	0.557	0.500
2006	2293	699	748	952	0.560	0.500
2007	2214	640	684	956	0.583	0.500
2008	2134	582	658	924	0.584	0.500
2009	2049	518	634	885	0.583	0.500
2010	1971	461	610	851	0.582	0.500

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B61--12/20/85
VARIABLES: PONAAT, LSNA, EMNA, UNNA, UNRANA, UNRANAFI

TABLE VIII-12.
NORTH SLOPE MODEL PROJECTIONS
MEDIUM CASE

	NATIVE POPULATION	NATIVE MALE POPULATION	NATIVE FEMALE POPULATION	NATIVE NATURAL INCREASE	NATIVE RATE OF NATURAL INCREASE	NATIVE MIGRATION
1980	3208**	1669**	1509**			
1981	3268	722	1545	90	0.028	-36
1982	3363	764	1598	95	0.029	-0
1983	3460	808	1653	98	0.029	-0
1984	3562	853	1709	102	0.029	-0
1985	3665	899	1766	103	0.029	0
1986	3726	923	1802	105	0.029	-45
1987	3792	950	1842	106	0.028	-40
1988	3815	955	1860	103	0.027	-80
1989	3881	1982	1899	100	0.026	-34
1990	3937	2004	1933	97	0.025	-41
1991	4022	2042	1981	93	0.024	-8
1992	4109	2079	2029	89	0.022	-2
1993	4176	2107	2068	84	0.020	-17
1994	4252	2140	2112	84	0.020	-8
1995	4328	2173	2155	85	0.020	-9
1996	4403	2204	2198	85	0.020	-11
1997	4475	2235	2240	83	0.019	-10
1998	4545	2265	2280	84	0.019	-14
1999	4615	2294	2321	86	0.019	-16
2000	4694	2328	2366	89	0.019	-10
2001	4781	2365	2415	93	0.020	-6
2002	4799	2369	2430	95	0.020	-77
2003	4791	2360	2431	102	0.021	-109
2004	4720	2319	2400	104	0.022	-176
2005	4629	2270	2359	106	0.022	-196
2006	4532	2218	2314	107	0.023	-204
2007	4363	2131	2232	106	0.023	-275
2008	4198	2046	2152	104	0.024	-269
2009	4042	1967	2076	99	0.024	-255
2010	3893	1891	2003	95	0.023	-244

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B61--12/20/85
VARIABLES: PONA, PONAMA, PONAFA, NTICNA, NTICNARA, AND MGNA

Native Population. In our medium base case, we project that Native population rises from 3,208 in 1980 to a maximum of 4,799 in 2002, after which it gradually declines (Table VIII-2). The Native population grows over most of the projection period due to natural increase. However, throughout most of the projection period, Natives are leaving the North Slope due to reductions in Native employment. By 2002, out-migration due to unemployment is high enough to outweigh the effects of natural increase, causing Native population to begin to decline.

Below, in order to trace through the factors leading to Native unemployment and out-migration, we examine projected borough revenues, expenditures, employment, unemployment, and migration.

Borough revenues. Table VIII-3 shows our medium base case projections of borough revenues. Operating revenues begin to decline significantly in the late 1980s. There are several reasons for this decline. Interest earnings decline due to a decline in the borough's cash balances. Property tax operating revenues decline because the borough's total population, which includes nonresident oil field workers, is declining (Table VIII-4), so that revenues permitted under the state-imposed limit on per capita revenues decline. In effect, the decline in borough revenues is multiplied by the resulting decline in population. Intergovernmental revenues decline as state and federal transfers per capita decline. Debt service revenues are also declining as the borough's debt service is

paid off, causing the borough's total tax rate to fall (despite declining property values after 1990) (Table VIII-5).

Borough expenditures. The decline in borough revenues causes borough operating expenditures to decline steadily after 1987 at the same time that borough CIP expenditures are sharply declining as well (Table VIII-6). Total operating expenditures decline from \$100 million in 1986 to \$80 million in 1997 and \$54 million in 2010. However, the decline in borough CIP expenditures is much more rapid, falling from nearly \$200 million in 1985 to only \$5 million in 1990. The combined effect of cuts in operating and CIP expenditures is to reduce borough expenditures entering the economy by more than two-thirds in the next five years.

Employment. The decline in North Slope Borough expenditures causes a decline in employment in most sectors for both Natives and non-Natives (Tables VIII-7 through VIII-9). This decline is particularly significant for borough CIP employment. Native borough CIP employment, for example, falls from 378 in 1982 to only 8 in 1990 (Table VIII-8). Total Native employment falls from a peak of 1,497 in 1985 to only 610 in 2010.

The oil industry provides only a limited number of jobs for Natives, peaking at 92 in 1992 (Table VIII-10). Under our medium base case assumptions, in the first half of the projection period Native oil industry employment is limited primarily by the supply of Native

labor to the oil industry: since only ten percent of unemployed Native workers are assumed to seek oil industry employment, the supply of Native labor to the oil industry is less than the potential demand for Native labor.

In the second half of the projection period, Native oil industry employment is limited by oil industry demand for Native labor. Since only two percent of oil industry jobs are assumed to be available to Natives, as total oil industry employment declines, so does the demand for Native workers. At the same time, as fewer non-oil industry jobs are available, more Natives are willing to work in the oil industry, and the supply of Native labor to the oil industry begins to exceed the demand,

Native unemployment and migration. The projected decline in Native employment leads to steadily increasing unemployment rates for Natives beginning in 1986 (Table VIII-11). As unemployment rises, some Native residents migrate out of the borough each year after 1986. Nevertheless, the borough population continues to rise because of natural increase (Table VIII-12), and unemployment rates rise steadily.

Beginning in 2002, unemployment rates reach 50 percent. Because of our assumption that any higher employment rate is prevented by out-migration, the model projects that after 2002 out-migration from the borough increases sharply (Table VIII-12). This migration is

the cause of the projected decline **in** Native population which we discussed above. As residents leave, the decline in population aggravates the reduction in borough revenues since the borough's intergovernmental revenues and property tax operating revenues are proportional to population levels.

This projected pattern **of** increasing unemployment with relatively **low** migration, followed by steady unemployment with high migration, is obviously too mechanistic to exactly depict how migration might actually **occur** in response to declining employment. In fact, we would expect migration rates to increase gradually as unemployment rose. However, we do not know exactly how this adjustment **would** occur, and **to** incorporate this kind of adjustment into the model would further complicate the model without necessarily making it more "accurate." What is significant in our projections is not the precise timing of out-migration, or the exact amount of **out-**migration **likely** to take place in any year, but rather the fact that out-migration is **likely** to be substantial and that it may reach a point at which the Native population of the North Slope begins to decline.

Alternative Base Case Projections

In addition to our **medium** base case projections, we prepared **ten** alternative base case projections, **based on** alternative sets of assumptions. These alternative **base cases are** designed to examine the effects of changing **those key** assumptions **about which we are** uncertain.

Assumptions for Alternative Base Case Projections

Below, we briefly summarize how the assumptions for each of these cases differ from those **which we** used for the medium base case. We document our alternative base case assumptions **fully** in Appendix B.

LOW MIGRATION BASE CASE

This case assumes **that no Native migration occurs in** response to unemployment. Native population grows **at the rate of natural** increase resulting from **births and** deaths.

HIGH MIGRATION BASE CASE

This case assumes that Native **migration is much** more sensitive to Native unemployment than **in the medium base case**. The maximum Native unemployment rate **is 30** percent instead of **50** percent. In addition, in any given **year in** which Native unemployment **rises**, **30** percent **of** newly unemployed Native workers **leave the North Slope** with their families, instead **of 20** percent.

LOW REVENUES BASE CASE

This case assumes that the state **lowers** the per capita property tax operating revenue limit by \$100 per year after 1990 rather than keeping it constant. While the timing and extent of a possible **lowering** of the revenue limit is uncertain, such an action is possible as the result of more intense statewide competition over a dwindling revenue base. In addition, we assume that the borough earns only 8 percent interest on **its** fund balances instead of 10 percent and that future borough property values are up to 20 percent lower than their presently projected levels.

HIGH REVENUES BASE CASE

This case examines the effects of significantly higher borough revenues. **We** assume that the per capita revenue limit is raised by **\$100** per year beginning in **1990**, that the borough does not limit its total tax rate except as required by state **law**, that the borough earns 12 percent interest on its fund balances, and that future property values are up to 20 percent higher than **their** presently projected levels.

MODERATE HIGH REVENUES BASE CASE

This case varies from the medium base case only in that we assume that the borough does not restrict its total tax rate except as required by state law--that is, that the **mill** rate can rise above its current level up to the rate at which revenues are constrained by the **limit** on total property tax operating revenues.

LOW EMPLOYMENT BASE CASE

This case assumes that future CIP expenditures are lower than in the medium base case, that only 1 percent of oil industry jobs are available to Natives, and that the share of employment in other sectors available to Natives declines in the future. Thus, this case examines the effect of significantly lower employment opportunities for Natives.

HIGH EMPLOYMENT BASE CASE

This case assumes that CIP expenditures are higher than in the medium base case, that 5 percent of oil industry jobs are available to Natives (rather than only 2 percent), that the share of employment in other sectors available to Natives increases in the future, and that 25 percent of Native workers would be willing to work in the oil industry if unable to find other employment (rather than 10 percent). Thus, this case examines the effect of significantly higher employment opportunities for Natives.

EXTREME LOW BASE CASE

This case combines all of the assumptions of the high migration base case, the low revenues base case, and the low employment base case. Thus, it represents a combination of worst-case assumptions for factors affecting employment and population on the North Slope.

EXTREME HIGH BASE CASE

This case combines all of the assumptions of the low migration base case, the high revenues base case, and the high employment base case. Thus, it represents a combination of best-case assumptions for factors affecting employment and population on the North **Slope**.

HIGH IMPACT BASE CASE

This case combines those assumptions which **would** lead to a high projected impact of OCS development on the North Slope. It assumes that 25 percent of Native workers would be willing-to work in the **oil** industry if unable to find other employment, and that 5 percent of oil industry jobs are available to Natives. Thus, an increase in oil industry employment associated with OCS development **would** provide a significant number of new job opportunities for Natives. At the same time, this case assumes that other employment opportunities for Natives are low, due to a declining share of employment in other sectors available to Natives as **well** as lower borough **CIP** spending and a lower interest rate on borough fund balances. **It** also assumes the same migration assumptions as the high migration base case--that Native population declines rapidly due to out-migration as employment increases.

Comparison of Medium Base Case Projections
with Alternative Base Case Projections

Comparison of **our** medium base case projections **with** the alternative **base** cases reveals that **our** projections **are highly sensitive to** the key variables **which** we **discussed** above. As shown in **Table VIII-13**, **borough** operating revenues are fairly similar among cases until **the mid-1990s**. Subsequently, however, the projections begin to diverge sharply. **After 2005**, operating revenues **in the** extreme **low** base case are **less** than half those in the extreme high base **case**. The reason for this divergence **is** that borough operating revenues are strongly affected **by** population since **both** property tax revenues and state and federal transfers are proportional **to** population.

In all cases, the borough's **total** tax rate declines steadily **until** **the** last few years **of** the projection **period** (Table VIII-14). This decline is due **to** the decline **in** projected **debt** service revenue requirements, **which** is more rapid than the decline in projected property values. **In** no case is **the** borough projected **to** have any difficulty in meeting future debt service requirements.

TABLE VIII-13.
 North **Slope** Borough Operating Revenues -
 Comparison of Extreme Low Base Case, Low Revenues Base Case,
 Medium Base Case, Moderate High Revenues Base Case,
 and Extreme High Base Case

	Base Case Levels (000)					
	Extreme Low	Low Revenues	Med i urn	Moderate Hi gh Revenues	Hi gh Revenues	Extreme _ @ i ! ! -
1981	57200	57200	57200	57200	57200	57200
1982	114100	114100	114100	114100	114100	114100
1983	120200	120200	120200	120200	120200	120200
1984	132500	732500	132500	132500	132500	132500
1985	117700	117700	117700	117700	117700	117700
1986	99985	98442	107324	110726	117156	115161
1987	97652	95091	100659	100659	107346	103022
1988	88410	85550	90360	90360	97110	92607
1989	85010	81687	85751	85751	92753	87772
1990	82348	80141	84072	84072	91919	86682
1991	80784	79847	84613	84613	93343	87357
1992	79482	79718	85364	85364	95066	88213
1993	74330	76268	82623	82623	92861	85296
1994	71967	75613	82789	82789	93906	85528
1995	69069	74329	82298	82298	94252	85073
1996	65542	72307	80999	80999	93678	83743
1997	62572	70728	80189	80189	93693	82992
1998	59195	68682	78853	78853	93050	81672
1999	55972	66138	77601	77601	92508	80483
2000	53657	64068	77285	77285	93120	80355
2001	52529	63889	79139	79139	95920	83261
2002	48207	59138	75863	75863	93160	81461
2003	46183	56053	74600	74600	93862	82916
2004	43221	51689	71298	712138	92683	82768
2005	41513	48382	69161	69161	93508	84467
2006	40068	45318	67095	67095	93687	85546
2007	37361	41056	62010	62010	89379	83643
2008	36451	38579	59282	59282	87964	84817
2009	35733	36382	56746	56746	86411	86088
2010	35122	34368	54300	54300	84655	87369

Source: North Slope model projections, variable RVOPTO, Dsets NSLP.B69, NSLP.B64, NSLP.B61, NSLP.B66, NSLP.B65, NSLP.B70

TABLE VIII-14.
North Slope Borough Tax Rate
 Comparison of Extreme Low Base Case, Low Revenues Base Case,
 Medium Base Case, Moderate High Revenues Base Case,
 and Extreme High Base Case

Base Case Levels

	<u>Extreme Low</u>	<u>Low Revenues</u>	<u>Medium</u>	<u>Moderate High Revenues</u>	<u>High Revenues</u>	<u>Extreme High</u>
1981	0.0103	0.0103	0.0103	0.0103	0.0103	0.0103
1982	0.0167	0.0167	0.0167	0.0167	0.0167	0.0167
1983	0.0164	0.0164	0.0164	0.0164	0.0164	0.0164
1984	0.0153	0.0153	0.0153	0.0153	0.0153	0.0153
1985	0.0184	0.0184	0.0184	0.0184	0.0184	0.0184
1986	0.0184	0.0184	0.0184	0.0186	0.0184	0.0185
1987	0.0179	0.0179	0.0175	0.0175	0.0172	0.0172
1988	0.0172	0.0173	0.0168	0.0168	0.0164	0.0164
1989	0.0163	0.0163	0.0157	0.0157	0.0153	0.0153
1990	0.0145	0.0146	0.0138	0.0138	0.0134	0.0135
1991	0.0092	0.0093	0.0088	0.0088	0.0086	0.0086
1992	0.0136	0.0138	0.0130	0.0130	0.0125	0.0125
1993	0.0131	0.0134	0.0125	0.0125	0.0120	0.0120
1994	0.0126	0.0129	0.0121	0.0121	0.0117	0.0117
1995	0.0123	0.0127	0.0117	0.0117	0.0112	0.0112
1996	0.0085	0.0090	0.0084	0.0084	0.0081	0.0081
1997	0.0055	0.0061	0.0058	0.0058	0.0059	0.0059
1998	0.0050	0.0057	0.0055	0.0055	0.0056	0.0056
1999	0.0037	0.0045	0.0045	0.0045	0.0048	0.0048
2000	0.0039	0.0047	0.0048	0.0048	0.0051	0.0051
2001	0.0040	0.0050	0.0052	0.0052	0.0055	0.0056
2002	0.0039	0.0050	0.0053	0.0053	0.0057	0.0059
2003	0.0041	0.0052	0.0057	0.0057	0.0062	0.0066
2004	0.0042	0.0054	0.0059	0.0059	0.0066	0.0072
2005	0.0045	0.0057	0.0064	0.0064	0.0074	0.0082
2006	0.0039	0.0051	0.0063	0.0063	0.0077	0.0088
2007	0.00273	0.0036	0.0052	0.0052	0.0071	0.0088
2008	0.0026	0.0039	0.0057	0.0057	0.0081	0.0105
2009	0.0029	0.0044	0.0065	0.0065	0.0085	0.0128
2010	0.0035	0.0051	0.0077	0.0077	0.0113	0.0161

Source: North Slope model projections, variable TARA, Dsets NSLP.B69, NSLP.B64, NSLP.B61, NSLP.B66, NSLP.B65, NSLP.B70

Projected Native employment differs significantly among cases (Table VIII-15). **In** the extreme low case, Native employment **falls** to barely one-fifth of its 1985 peak value by the year **2010**, while in the extreme high base case employment only falls by about one-third. Perhaps the most significant result of our model projections, however, is that even in the extreme **high** base case, Native employment is projected to decline significantly, even **while** the Native population is **growing** rapidly.

Native oil industry employment "never exceeds more than about one-fifth of total Native employment for any of our base case assumptions (Tables **VIII-15** and **VIII-16**). This is **due** to our assumption, even in the high case, that only a relatively **small** share of oil industry jobs are available to Natives.

Differences in Native migration (Table VIII-17) explain projected differences in Native population levels (**Table VIII-18**). The earlier migration begins and the higher migration in the early years of the projection period, the lower the end of period projected population. In the extreme **low** base case, projected Native population falls to 1,404 by 2010--the result of significant out-migration resulting from and contributing to (through its effect on borough revenues) **high** unemployment levels. In contrast, in the extreme high base case, projected Native population **nearly** doubles over the next quarter-century due to rapid natural increase without any negative influence from out-migration.

TABLE VIII-15.

Native Employment:

Comparison of Extreme Low Base Case, Low Employment Base Case,
Medium Base Case, High Employment Base Case,
and Extreme High Base Case

Base Case Levels

	<u>Extreme LOW</u>	<u>Low Employment</u>	<u>Medium</u>	<u>High Employment</u>	<u>Extreme High</u>
1981	1136	1136	1136	1160	1161
1982	1324	1326	1326	1328	1328
1983	1374	1376	1376	1379	1380
1984	1439	1441	1441	1445	1446
1985	1495	1497	1497	1501	1502
1986	1324	1325	1392	1472	1475
1987	1238	1304	1311	1361	1413
1988	1030	1099	1100	1160	1227
1989	990	1055	1050	1112	1187
1990	894	973	968	1043	1129
1991	862	965	974	1055	1149
1992	836	962	982	1070	1172
1993	765	917	949	1061	1169
1994	729	906	948	1073	1189
1995	688	889	941	1076	1204
1996	642	863	923	1055	1196
1997	604	844	913	1047	1199
1998	561	818	895	1025	1187
1999	522	791	878	1006	1178
2000	493	770	875	1008	1192
2001	482	780	890	1019	1217
2002	440	741	840	946	1150
2003	424	728	828	948	1167
2004	396	699	788	910	1143
2005	383	684	767	906	1162
2006	371	671	748	902	1175
2007	343	629	684	821	1116
2008	336	614	658	803	1129
2009	330	601	634	786	1144
2010	325	589	610	770	1158

Source: North Slope model projections, variable EMNA, Dsets
NSLP.B69, NSLP.B67, NSLP.B61, NSLP.B68, NSLP.B70

TABLE VIII-16.
Native Oil Industry Employment
 Comparison of Extreme Low Base Case, Low Employment Base Case,
 Medium Base Case, High Employment Base Case,
 and Extreme High Base Case

Base Case Levels

	Extreme Low	Low Employment	Medium	High Employment	Extreme High
1981	46	46	46	70	71
1982	30	30	30	31	31
1983	30	30	30	30	30
1984	30	30	30	30	30
1985	30	30	30	30	30
1986	49	50	44	50	52
1987	58	54	54	88	80
1988	49	49	75	149	147
1989	51	51	80	164	165
1990	51	51	91	192	194
1991	50	50	91	191	191
-1992	51	51	92	191	189
1993	43	43	86	200	197
1994	42	42	84	203	198
1995	41	41	82	204	201
1996	38	38	77	192	192
1997	37	37	75	187	187
1998	35	35	71	176	176
1999	33	33	67	167	167
2000	33	33	67	167	167
2001	32	32	64	160	160
2002	24	24	49	122	122
2003	24	24	49	122	122
2004	21	21	42	104	104
2005	21	21	42	104	104
2006	21	21	42	104	104
2007	15	15	29	73	73
2008	15	15	29	73	73
2009	15	15	29	73	73
2010	15	15	29	73	73

Source: North Slope model projections, variable EMNAOI, Dsets
 NSLP.B69, NSLP.B67, NSLP.B61, NSLP.B68, NSLP.B70

TABLE VIII-17.
 Native Migration:
 Comparison of Extreme Low Base Case, High Migration Base Case,
 Medium Base Case, Low Migration Base Case,
 and Extreme High Base Case

	Base Case Levels				
	Extreme Low	High Migration	Medium	Low Migration	Extreme High
1981	-41	-41	-36	-26	-26
1982	0	0	0	0	0
1983	0	0	0	0	0
1984	0	0	0	0	0
1985	0	0	0	0	0
1986	-92	-63	-45	0	0
1987	-70	-64	-40	0	0
1988	-122	-124	-80	0	0
1989	-42	-62	-34	0	0
1990	-174	-122	-41	0	0
1991	-166	-101	-8	0	0
1992	-156	-85	-2	0	0
1993	-215	-124	-17	0	0
1994	-203	-114	-8	0	0
1995	-203	-118	-9	0	0
1996	-204	-125	-11	0	0
1997	-199	-129	-10	0	0
1998	-204	-148	-14	0	0
1999	-206	-165	-16	0	0
2000	-189	-153	-10	0	0
2001	-158	-143	-6	0	0
2002	-186	-221	-77	0	0
2003	-160	-202	-109	0	0
2004	-161	-224	-176	0	0
2005	-140	-202	-196	0	0
2006	-121	-180	-204	0	0
2007	-133	-224	-275	0	0
2008	-109	-193	-269	0	0
2009	-90	-165	-255	0	0
2010	-77	-145	-244	0	0

SOURCE: North Slope Mode Projections, Variable MGNA, DSETS
 NSLP.B69 NSLP.B63 NSLP.B61 NSLP.B62 NSLP.B70

TABLE VIII-18.
 Native Population:
 Comparison of Extreme Low Base Case, High Migration Base Case,
 Medium Base Case, Low Migration Base Case,
 and Extreme High Base Case

Base Case Levels

	Extreme Low	High Migration	Medium	Low Migration	Extreme High
1981	3263	3263	3268	3278	3278
1982	3358	3358	3363	3373	3373
1983	3456	3456	3460	3471	3471
1984	3557	3557	3562	3573	3573
1985	3660	3660	3665	3676	3676
1986	3673	3702	3726	3782	3782
1987	3707	3744	3792	3890	3890
1988	3686	3722	3815	3995	3995
1989	3740	3758	3881	4101	4101
1990	3660	3730	3937	4204	4204
1991	3580	3717	4022	4304	4304
1992	3503	3713	4109	4399	4399
1993	3359	3664	4176	4489	4489
1994	3222	3623	4252	4579	4579
1995	3083	3577	4328	4671	4671
1996	2939	3522	4403	4763	4763
1997	2794	3458	4475	4853	4853
1998	2641	3374	4545	4944	4944
1999	2484	3273	4615	5037	5037
2000	2342	3182	4694	5135	5135
2001	2229	3101	4781	5236	5236
2002	2087	2941	4799	5341	5341
2003	1970	2801	4791	5454	5454
2004	1851	2637	4720	5573	5573
2005	1752	2493	4629	5698	5698
2006	1670	2369	4532	5830	5830
2007	1575	2200	4363	5968	5968
2008	1502	2059	4198	6110	6110
2009	1448	1942	4042	6256	6256
2010	1404	1843	3893	6404	6404

Source: North Slope Model Projections, Variable PONA, DSETS
 NSLP.B69, NSLP.B63, NSLP.B61, NSLP.B62, and NSLP.B70.

Conclusions

The wide variation between our model base case projections resulting from changing key model assumptions illustrates the high sensitivity of the projections to these assumptions and serves to remind us that we cannot predict the future of the North Slope Borough with a high degree of accuracy. However, the model projections provide a wealth of information about interrelationships among different factors affecting the North Slope Borough economy and the possible future ranges of key population and employment variables. The most significant result of the projections is that even under the most optimistic assumptions, due to declining borough revenues and expenditures, North Slope Borough Native employment is likely to decline substantially, leading to either increased unemployment or increased migration out of the borough.

CHAPTER IX
NORTH SLOPE MODEL OCS SALE 97 AND SALE 109 IMPACT PROJECTIONS

In this chapter, we use our North Slope Model to examine the impacts of the proposed OCS **Beaufort** Sea Lease Sale 97 and the **Chukchi** Sea Lease Sale **109** on the **North** Slope Borough's economy and population.

Medium Impact Projections

In order to examine these impacts, we prepared two sets of projections using identical assumptions to our medium base case, except that we assumed that development associated with these sales would take place. We refer to these sets of projections as our "Sale 97 medium impact case" and our "**Sale 109** medium impact case."

In this chapter, we refer to the differences between our medium base case projections and our medium impact projections as our "medium impact projections." These represent our "best guess" as to the impacts of the lease sales--or the difference between conditions with the lease sales and conditions without the lease sales.

High Impact Projections

Since we were uncertain about several of the key assumptions used in our projections, as we **discussed** in Chapter **VIII**, we also were interested in estimating the maximum impacts which these sales might have if we used different but still plausible assumptions for our model. The key areas of uncertainty in our assumptions did not have to do with the nature of the direct impacts of the OCS development themselves, but rather in the nature of what would occur in the

absence of the OCS sales. In general, the worse we assumed that the economy of the borough would be in the absence of the OCS lease sales and the more willing and able Native residents were to take oil industry jobs, the greater would be the impact of these sales. Therefore, in order to estimate these maximum impacts, we prepared two additional cases for each sale, based on assumptions which resulted in poor economic conditions in the absence of the lease sale as well as relatively higher Native participation in the oil industry. We refer to these cases as our "high impact base cases" and "high impact cases." We refer to the differences between them as our "high impact projections." Thus our "medium impact projections" represent our best guess as to the Impacts of the lease sales, while our "high impact projections" suggest an upper range for the impacts of the lease sales.

OCS Sale 97 and 109 Assumptions

The impacts which we project for OCS lease sales on the North Slope Borough occur entirely as a result of two "direct impacts," which are reflected as changes in model assumptions between our base and impact cases. These factors are changes in North Slope Borough property values (due to construction of shore-based facilities and pipelines] and changes in oil-industry employment. Our assumptions about the direct impacts of Sales 97 and 109 are based on assumptions provided to us by the Minerals Management Service (MMS), which are in turn based on scenarios developed by MMS about how exploration and development on these sales would proceed. Below we

describe these assumptions briefly: we describe them in greater detail in Appendixes M and O.

Sale 97 Assumptions

Based upon instructions from the Minerals Management Service, we assumed that exploration activity associated with this sale **will begin in 1988** and that production **will** begin in **1996**. Construction of shore-base additions valued at \$50 million **would** take **place** in 1987 and **1995**, and construction of onshore pipelines valued **at** \$320 million would take place beginning in 1994, adding to borough property values.

We assumed that the new pipelines and shore bases would add a maximum of \$400 million to borough property values in 1995, with this value depreciating by about 5 percent annually in subsequent years. We assumed that total oil industry employment would increase by a maximum of 2,010 during the peak construction year of **1995**, **while** the increase in operating employment would be between 600 and 700 **after 1997**.

Sale 109 Assumptions

We assumed that exploration activity associated with this sale **will** begin **in** 1989 and that production **will** begin in 1999. Construction of an exploration shore base valued at **\$40 million will** take **place** in 1988, and construction **of** a development shore base valued at \$100 million will take place in 1996, 1997, and 1998. Construction

of ,400 miles of onshore pipeline valued at \$1.4 billion will take place between 1995 and 1998, adding to borough property values.

We assumed that the new pipelines and shore bases would add a maximum of \$1,428 million to borough property values in 1998, with this value depreciating by about 5 percent annually in subsequent years. We assumed that total oil industry employment would increase by a maximum of 4,887 during the peak construction year of 1998, and annual oil industry operating employment would increase by about 2,000 jobs after the turn of the century.

The scale of the projected direct impacts of OCS Sale 109 are considerably larger than for OCS Sale 97. We summarize these differences in Table IX-1.

TABLE IX-1
COMPARISON OF DIRECT IMPACTS OF OCS SALES 97 AND 109

	<u>SALE 97</u>	<u>SALE 109</u>
First year of exploration	1988	1989
First year of development	1994	1995
First year of production	1996	1999
Maximum development employment	2120	4887
Annual operating employment	649	2192
Maximum increase in property value (millions of dollars)	399	1428

SOURCE : Appendices M and O

Medium Impact Projections for the Lease Sales

Appendix C presents detailed projections of our impact case projections, and Appendixes N and P present detailed tables showing the projected “impacts” of these sales, or the differences between our base case and impact projections. For most of this chapter, we will discuss our medium impact projections in detail. Because the scale of OCS Sale 109 would be larger, we will focus our discussion on the impacts of this sale, which are larger than for Sale 97. At the end of the chapter, we will briefly discuss our high impact projections for the two sales.

We will organize our discussion of the impacts and the reasons for them as follows. We will begin by summarizing the projected impacts of the lease sales on the borough’s Native population, which we consider to be of key interest. Next, we will examine the reasons for these impacts, which are fairly complicated. First, we will discuss the nature and timing of the “direct” impacts of the sales upon North Slope Borough property values and oil industry employment. We will then discuss how these direct impacts affect borough revenues and expenditures. We will then discuss how the changes in borough expenditures would affect employment and the consequences for borough employment, Native migration, and population. Finally, we will show how effects of the lease sales on borough population are “multiplied” because of the strong relationship between population and borough revenues.

Impacts of the Lease Sales on North Slope Borough Population

According to our projections, OCS Sale 109 would have a substantial impact on the Native population of the North Slope. In the Sale 109 medium impact case, the Native population twenty-five years from now would be 4,983, compared with only 3,893 in the medium base case--an impact of more than 1,000 (Table IX-2).

As we saw in Chapter VIII, in the absence of Sale 109 and Sale 97, the North Slope Borough Native population is projected to grow only gradually because of continual out-migration of Native workers and their families due to unemployment. After the turn of the century, this out-migration is strong enough to cause Native population to begin to decline absolutely.

With the OCS lease sale, migration out of the North Slope Borough is slowed. With fewer people leaving, the population is higher. The beginning of a decline in population is delayed from 2001 to 2009.

The impact of Sale 97 is similar to that of Sale 109, but it is less significant. Sale 97 does less to slow the economic decline of the North Slope Borough, delaying the beginning of a decline in population by only two years.

In sum, the OCS lease sales delay but do not reverse the eventual decline in the North Slope Borough Native population.

"TABLE IX-2
SALE 109 MEDIUM IMPACT PROJECTIONS

Native Population

Year	Base Case	Impact Case	Sale 109 Impact	Percent Impact
1981	3268	3268	0	0
1982	3363	3363	0	0
1983	3460	3460	0	0
1984	3562	3562	0	0
1985	3665	3665	0	0
1986	3726	3726	0	0
1987	3792	3792	0	0
1988	3815	3816	2	0
1989	3881	3883	2	0
1990	3937	3940	3	0
1991	4022	4029	7	0
1992	4109	4118	9	0
1993	4176	4189	14	0
1994	4252	4268	16	0
1995	4328	4345	17	0
1996	4403	4431	28	1
1997	4495	4514	38	1
1998	4545	4598	53	1
1999	4615	4630	15	0
2000	4694	4711	17	0
2001	4781	4797	16	0
2002	4799	4866	68	1
2003	4791	4955	164	3
2004	4720	5041	321	7
2005	4629	5130	500	11
2006	4532	5187	655	14
2007	4363	5154	791	18
2008	4198	5105	907	22
2009	4042	5048	1006	25
2010	3893	4983	1089	28

SOURCE: North Slope **Model** Projections, Variable PONA, Medium Base Case and Sale **109** Medium Impact Case (**DSETS NSLP.B61** and **NSLP.181**).

TABLE IX-3
 SALE 97 MEDIUM IMPACT PROJECTIONS

Native Population

Year	Base Case	Impact Case	Sale 97 Impact	Percent Impact
1981	3268	3268	0	0
1982	3363	3363	0	0
1983	3460	3460	0	0
1984	3562	3562	0	0
1985	3665	3665	0	0
1986	3726	3726	0	0
1987	3792	3792	0	0
1988	3815	3819	5	0
1989	3881	3888	7	0
1990	3937	3943	5	0
1991	4022	4027	5	0
1992	4109	4113	4	0
1993	4176	4181	5	0
1994	4252	4261	10	0
1995	4328	4347	19	0
1996	4403	4420	17	0
1997	4475	4476	1	0
1998	4545	4542	-3	0
1999	4615	4612	-4	0
2000	4694	4690	-4	0
2001	4781	4777	-4	0
2002	4799	4861	63	1
2003	4791	4912	121	3
2004	4720	4892	173	4
2005	4629	4846	217	5
2006	4532	4787	255	6
2007	4363	4651	288	7
2008	4198	4513	316	8
2009	4042	4382	339	8
2010	3893	4252	359	9

SOURCE: North Slope Model Projections, Variable PONA, Medium Base Case and Sale 97 Medium Impact Case (DSETS NSLP.B61 and NSLP.I61).

Impacts of the Lease Sales on North Slope Borough Property Values

In order to examine the reasons for the effects of the lease sales in delaying but not stopping the eventual decline of North Slope Borough Native population, we may begin by examining the impacts of the sales on property values (Table IX-4).

In the base case, property values begin to decline in 1990, as depreciation of existing oil developments begins to exceed the value of new developments which are brought on line. The effect of Sale 109 is to slow but not to reverse this decline in property values. Even though Sale 109 increases borough property values by a maximum of \$1.4 billion (in 1998), borough property values decline overall throughout the period of development of Sale 109. The decline in property values to any given level is delayed by only one or two years. The effects of Sale 97 on borough property values are similar to those of Sale 109, but considerably smaller (Table IX-5).

In sum, the OCS lease sales delay but do not reverse a decline in North Slope Borough property values which begins in the early 1990s.

TABLE IX-4
 SALE 109 MEDIUM IMPACT PROJECTIONS
 North Slope Borough Property Values
 (thousands of dollars)

Year	Base Case	Impact Case	Sale 109 Impact	Percent Impact
1981	5723582	5723582	0	0
1982	6621652	6621652	0	0
1983	8186986	8186986	0	0
1984	9996289	9996289	0	0
1985	12261421	12261421	0	0
1986	13420000	13420000	0	0
1987	14730000	14730000	0	0
1988	15510000	15550000	40000	0
1989	16100000	1638667	38667	0
1990	16290000	16327333	37333	0
1991	15990000	16026000	36000	0
1992	15680000	15714667	34667	0
1993	15340000	15373333	33333	0
1994	14980000	15012000	32000	0
1995	14550000	14930667	380667	3
1996	14070000	14814116	744116	5
1997	13550000	14640292	1090292	8
1998	12950000	1437374	1428374	11
1999	12280000	13636955	1356955	11
2000	11500000	12785536	1285536	11
2001	10720000	1133418	1214118	11
2002	9940000	11082699	1142699	11
2003	9160000	102280	1071280	12
2004	8380000	9379862	999862	12
2005	7600000	828443	928443	12
2006	6820000	7677024	857024	13
-2007	6040000	6825606	785606	13
2008	5260000	5974187	714187	14
2009	4480000	522766	642768	14
2010	3700000	427350	571350	15

SOURCE: North Slope Model Projections, Variable VATO, Medium Base Case and Sale 109 Medium Impact Case (DSETS NSLP.26 and NSLP.181).

TABLE IX-5
SALE 97 MEDIUM IMPACT PROJECTIONS

North Slope Borough Property Values
(thousands of dollars)

Year	Base Case	Impact Case	Sale 97 Impact	Percent Impact
1981	5723582	5723582	0	0
1982	6621652	6621652	0	0
1983	8186986	8186986	0	0
1984	9996289	9996289	0	0
1985	12261421	12261421	0	0
1986	13420000	13420000	0	0
1987	" 14730000	14730000	0	0
1988	15510000	15560000	-50000	0
1989	16100000	16148148	48148	0
1990	16290000	16336296	46296	0
1991	15990000	16034444	44444	0
1992	15680000	15722593	42593	0
1993-	15340000	15380241	40241	0
1994	14980000	15178889	198889	1
1995	14550000	14949418	39941 8	3
1996	14070000	14449447	379447	3
1997	13550000	13909476	359476	3
1998	12950000	13289505	339505	3
1999	12280000	12599534	319534	3
2000	11500000	11799563	299563	3
2001	10720000	10999593	279593	3
2002	9940000	10199622	259622	3
2003	9160000	9399651	239651	3
2004	8380000	8599680	219680	3
2005	7600000	7799709	199709	3
2006	6820000	6999738	179738	3
2007	6040000	6199767	159767	3
2008	5260000	5399796	139796	3
2009	4480000	4599825	119825	3
2010	3700000	3799854	99854	3

SOURCE: North Slope Model Projections, Variable VATO, Medium Base Case and Sale 97 Medium Impact Case (DSETS NSLP.B61 and NSLP.I61).

Impacts of the Lease Sales on Total North Slope
Oil Industry Employment

In contrast to their effects on property values, the lease sales have substantial impacts on total oil industry employment. In the absence of the lease sales, oil industry employment is projected to decline steadily from current levels of more than seven thousand to less than two thousand by the end of the projection period (Table IX-6). Sale 109 brings a very large number of new oil industry workers to the North Slope and substantially changes this trend. During the exploration phase (prior to 1995), several hundred additional workers are employed. Then follows a four-year period of very high construction employment associated with pipeline construction. Sale 109 brings more than 3,500 workers to the North Slope in 1997 and more than 4,800 workers in 1998--more than doubling oil industry employment over the base case. In the subsequent production years, Sale 109 employment is somewhat lower--just over 2,000. However, given the fact that other oil industry employment is declining, Sale 109 continues to have an extremely large impact. Although total oil industry employment continues to show a pattern of decline after the turn of the century, this decline is from 5,300 to 3,600 workers, instead of from 3,300 to 1,400 workers.

The number of workers associated with Sale 97 is much lower (Table IX-7). However, in this sale also there is a sharp peak in lease sale employment during the construction period in the mid-1990s.

TABLE IX-6
SALE 109 MEDIUM IMPACT PROJECTIONS

Total Oil Industry Employment

Year	Base Case	Impact Case	Sale 109 Impact	Percent Impact
1981	6703	6703	0	0
1982	722a	7228	0	0
1983	7791	7791	0	0
1984	6939	6939	0	0
1985	6014	6014	0	0
1986	7191	7191	0	0
1987	6696	6696	0	0
1988	4919	5052	133	3
1989	5090	5279	189	4
1990	5141	5330	189	4
1991	4973	5522	549	11
1992	5086	5735	649	13
1993	4289	4938	649	15
1994	4203	4852	649	15
1995	4080	4700	620	15
1996	3844	5271	1427	37
1997	3749	-7399	3650	97
1998	3526	8413	4887	139
1999	3344	4949	1605	48
2000	3344	5386	2042	61
2001	3203	5245	2042	64
2002	2438	4597	2159	89
2003	2438	4630	2192	90
2004	2077	4269	2192	106
2005	2077	4269	2192	106
2006	2077	4269	2192	106
2007	1461	3653	2192	150
2008	1461	3653	2192	150
2009	1461	3653	2192	150
2010	1461	3653	2192	150

SOURCE : North Slope Model Projections, Variable EMBAOI, Medium Base Case and Sale 109 Medium Impact Case (DSETS NSLP. B61 and NSLP.181).

TABLE IX-7
 SALE 97 MEDIUM IMPACT PROJECT ONS
 Total Oil Industry Employment

Year	Base Case	Impact Case	Sale 97 Impact	Percent Impact
1981	6703	6703	0	0
1982	7228	7228	0	0
1983	7791	7791	0	0
1984	6939	6939	0	0
1985	6014	6014	0	0
1986	7191	7191	0	0
1987	6696	6696	0	0
1988	4919	5318	399	8
1989	5090	5609	519	10
1990	5141	5497	356	7
1991	4973	5274	301	6
1992	5086	5351	265	5
1993	4289	4478	189	4
1994	4203	4602	399	9
1995	4080	6200	2120	52
1996	3844	5384	1540	40
1997	3749	4365	616	16
1998	3526	4142	616	17
1999	3344	3973	629	19
2000	3344	3973	629	19
2001	3203	3852	649	20
2002	2438	3087	649	27
2003	2438	3087	649	27
2004	2077	2726	649	31
2005	2077	2726	649	31
2006	2077	2726	649	31
2007	1461	2110	649	44
2008	1461	2110	649	44
2009	1461	2110	649	44
2010	1461	2110	649	44

SOURCE: North S Model Projections, Variable EMBAOI, Medium Base Case and Sale 97 Medium Impact Case (DSETS NSLP.861 and NSL> I6).

In sum, the lease sales substantially slow the long-term decline in North Slope oil industry employment and sharply increase overall oil industry employment during the peak construction years in the mid-1990s.

Impacts of the Lease Sales on North Slope Borough Revenues

In the absence of the lease sales, North Slope Borough operating revenues decline steadily throughout the projection period, falling to less than half their current levels by 2010 (Table IX-8). As we discussed in Chapter VIII, there are a variety of reasons for this decline in revenues. These include a decline in interest income, a decline in federal and state revenue sharing due partly to federal and state spending reductions and partly due to declining borough population, and a decline in property tax operating revenues due to the declining borough population and the per capita limit on these revenues.

Sale 109 slows this decline in revenues substantially and reverses it sharply for the years 1997 and 1998. The primary reason for this is the increase in North Slope oil industry employment caused by the sale, especially for these two peak construction years. These workers are included in the borough "population" for the purpose of calculating revenues permitted under the per capita operating revenue limit. Under our model assumptions, for each additional "resident," the borough is allowed to increase its property tax collections by \$5 thousand (Table B-8). Thus, for every thousand

TABLE IX-8
SALE 109 MEDIUM IMPACT PROJECTIONS

Total North Slope Borough Operating Revenues
(thousands of dollars)

Year	Base Case	Impact Case	Sale 109 Impact	Percent Impact.
1981	57200	57200	0	0
1982	114100	114100	0	0
1983	120200	120200	0	0
1984	132500	132500	0	0
1985	117700	117700	0	0
1986	107324	107324	0	0
1987	100659	100659	0	0
1988	90360	90886	526	1
1989	85751	86498	748	1
1990	84072	84818	746	1
1991	8-4613	86775	2163	3
1992	85364	87929	2565	3
1993	82623	85226	2602	3
1994	82789	85416	2627	3
1995	82298	84819	2521	3
1996	80999	86667	5669	7
1997	80189	94358	14169	18
1998	78853	97812	18960	24
1999	77601	83747	6147	8
2000	77285	85068	7782	10
2001	79139	86955	7816	10
2002	75863	84684	8821	12
2003	74600	84575	9975	13
2004	71298	82957	11659	16
2005	69161	82691	13530	20
2006	67095	82212	15118	23
2007	62010	78483	16474	27
2008	59282	76881	17599	30
2009	56746	75284	18538	33
-2010	54300	73606	19305	36

SOURCE : North Slope Model Projections, Variable RVOPTO, Medium Base Case and Sale 109 Medium Impact Case (DSETS NSLP.B61 and NSLP.181).

additional oil workers the borough receives \$.5 million in increased revenues. With several thousand more oil workers on the North Slope during these two years, the borough is permitted to receive significantly higher revenues.

The real world is vastly **more** complicated than **we** could hope to capture in a workable model, and it is quite possible that changing political circumstances **could** cause the rules of the game to change with respect to whether or not oil workers could be counted as part of the borough's population. If these rules did change, then the effects of the lease sale on borough revenues **could** be much more limited, especially in 1997 and 1998.

Borough revenues are also affected by the slowing of Native out-migration. For each additional North Slope resident, we assume that the borough receives approximately \$4 thousand more per year in state and federal revenue sharing (Table B-8). Thus, in total, each resident who leaves costs the borough more than \$9 thousand; and in contrast, borough revenues increase by more than \$9 thousand for each resident who stays. However, the projected effects on revenues due to the increased nonresident oil worker population are considerably greater than those due to the increased resident population (compare Tables C-1 .11 and C-14.11).

Sale 97 is projected to have a considerably less dramatic effect on North Slope Borough revenues (Table **IX-9**). Since Sale 97 employs

TABLE IX-9
SALE 97 MEDIUM IMPACT PROJECTIONS

Total North Slope Borough Operating Revenues
(thousands of dollars)

- Year	Base Case	Impact Case	Sale 97 Impact	Percent Impact
1981	57200	57200	0	0
1982	114100	114100	0	0
1983	120200	120200	0	0
1984	132500	132500	0	0
1985	117700	117700	0	0
1986	107324	107324	0	0
1987	100659	100659	0	0
1988	90360	91937	1577	2
1989	85751	87802	2051	2
1990	84072	85480	1409	2
1991	84613	85810	1197	1
1992	85364	86416	1052	1
1993	82623	83390	766	1
1994	82789	84400	1611	2
1995	82298	90513	8216	10
1996	80999	86978	5979	7
1997	80189	82500	2311	3
1998	78853	81121	2268	3
1999	77601	79907	2306	3
2000	77285	79584	2299	3
2001	79139	81520	2380	3
2002	75863	78984	3121	4
2003	74600	78350	3751	5
2004	71298	75587	4289	6
2005	69161	73911	4750	7
2006	67095	72216	5122	8
2007	62010	67451	5442	9
2008	59282	64984	5702	10
2009	56746	62663	5917	10
2010	54300	60389	6089	11

SOURCE: North Slope Model Projections, Variable RVOPTO, Medium Base Case and Sale 97 Medium Impact Case (DSETS NSLP. B61 and NSLP. I61).

fewer oil industry workers, revenues increase during the peak construction years by only \$6 million (compared with \$18 million for Sale 109), and the decline in borough revenues toward the end of the projection period is not reduced as much as for Sale 109.

In sum, assuming that the politically determined operating revenue limit is not changed, the lease sales substantially slow the decline in North Slope Borough operating revenues since the Borough is able to collect more than \$5 million in additional revenues for each additional oil worker.

Impacts of the Lease Sales on Native Employment

In the absence of the lease sales, Native employment was projected to decline steadily and dramatically to less than half of current levels by 2010. This decline is directly attributable to the decline initially in CIP expenditures and subsequently in operating expenditures.

With Lease Sale 109, the decline in employment is halted for a ten-year period beginning in 1992 (Table IX-10). During the peak construction year, employment rises to as high as 1,100, or its 1988 level. After 2002, employment begins to decline again but remains substantially higher than in the base case.

TABLE IX-10
 SALE 109 MEDIUM IMPACT PROJECTIONS

Native Employment

Year	Base Case	Impact Case	Sale 109 Impact	Percent Impact
1981	1160	1160	0	0
1982	1328	1328	0	0
1983	1379	1319	0	0
1984	1444	1444	0	0
1985	1500	1500	0	0
1986	1359	1359	0	0
1987	1292	1232	0	0
1988	1146	1150	4	0
1989	1114	1119	6	0
1990	056	1062	6	1
1991	053	1069	16	2
1992	053	1072	19	2
1993	026	1049	23	2
1994	014	1041	27	3
1995	994	1023	29	3
1996	961	1019	58	6
1997	926	1063	137	15
1998	877	1081	204	23
1999	828	970	142	17
2000	799	950	150	19
2001	790	950	160	20
2002	704	923	219	31
2003	685	907	222	32
2004	634	881	248	39
2005	617	864	248	40
2006	603	848	245	41
2007	531	805	273	51
2008	517	792	276	53
2009	505	778	273	54
2010	496	764	267	54

SOURCE : North Slope Model Projections, Variable EMNA, High Base Case and Sale 109 High Impact Case (DSETS NSLP.B71 and NSLP.182).

These employment effects of the **lease sale** are primarily attributable to the increase in North Slope Borough revenues, which results in higher operating expenditures and higher Native operating employment. There is a much smaller effect on Native oil industry employment: **at** a maximum, oil-industry jobs account for only about one-fifth of the increase in **Native** employment (Table IX-11). One potentially confusing projection is the **small** decline in Native **oil** industry employment in the years 1989-1992. This decline occurs as a result of the increase in Native employment for the borough, which causes several fewer Natives to seek **oil** industry employment in those years.

The projected impacts of Sale 97 on Native employment are much lower than for Sale **109**, due **to** the smaller effects of Sale 97 on borough revenues and the number of oil jobs (Tables **IX-12** and IX-13).

In sum, the lease sales **briefly** reverse the decline in Native employment **during** the **1990s** and **delay** the decline in Native employment after the turn of the century. This impact is due **primarily** to the **sales'** impacts on **borough** revenues, expenditures, and employment, as opposed to direct employment of Native workers.

TABLE IX-11
 "SALE 109 MEDIUM IMPACT PROJECTIONS

Native Oil Industry Employment

Year	Base Case	Impact Case	Sale 109 Impact	Per-cent Impact
1981	46	46	0	0
1982	30	30	0	0
1983	30	30	0	0
1984	30	30	0	0
1985	30	30	0	0
1986	44	44	0	0
1987	54	54	0	0
1988	75	75	0	-1
1989	80	80	-1	-1
1990	91	90	-1	-1
1991	91	89	-2	-2
1992	92	90	-2	-2
1993	86	94	8	9
1994	84	95	11	13
1995	82	94	12	15
1996	77	97	20	26
1997	75	92	17	22
1998	71	91	20	29
1999	67	99	32	48
2000	67	107	40	60
2001	64	105	41	64
2002	49	92	43	89
2003	49	93	44	90
2004	42	85	44	106
2005	42	85	44	106
2006	42	85	44	106
2007	29	73	44	150
2008	29	73	44	150
2009	29	73	44	150
2010	29	73	44	150

SOURCE: North Slope Model Projections, Variable EMNAOI, Medium Base Case and Sale 109 Medium Impact Case (DSETS NSLP.B61 and NSLP.181).

TABLE IX-12
 SALE 97 MEDIUM IMPACT PROJECTIONS

Native Employment

Year	Base Case	Impact Case	Sale 97 Impact	Percent Impact
1981	1136	1136	0	0
1982	1326	1326	0	0
1983	1376	1376	0	0
1984	1441	1441	0	0
1985	1497	1497	0	0
1986	1392	1392	0	0
1987	1311	1311	0	0
1988	1100	1113	14	1
1989	1050	1068	18	2
1990	968	980	12	1
1991	974	984	10	1
1992	982	991	9	1
1993	949	960	12	1
1994	948	973	25	3
1995	941	1032	91	10
1996	923	1003	80	9
1997	913	949	37	4
1998	895	931	36	4
1999	878	915	37	4
2000	875	912	37	4
2001	890	928	38	4
2002	840	885	45	5
2003	828	879	51	6
2004	788	844	56	7
2005	767	828	61	8
2006	748	812	64	9
2007	684	752	67	10
2008	658	728	70	11
2009	634	706	72	11
2010	610	684	74	12

SOURCE : North Slope Model Projections, Variable EMNA, Medium Base Case and Sale 97 Medium Impact Case (DSETS NSLP.B61 and NSLP.I61).

TABLE IX-13
 SALE 97 MEDIUM IMPACT PROJECTIONS

Native Oil Industry Employment

Year	Base Case	Impact Case	Sale 97 Impact	Percent Impact
1981	70	70	0	0
1982	30	30	0	0
1983	30	30	0	0
1984	30	30	0	0
1985	30	30	0	0
1986	79	79	0	0
1987	100	100	0	0
1988	142	139	-3	-2
1989	151	147	-4	-3
1990	173	170	-3	-2
1991	175	173	-2	-1
1992	179	177	-2	-1
1993	188	188	-1	0
1994	191	189	-1	-1
1995	193	184	-10	-5
1996	192	192	0	0
1997	187	199	12	6
1998	176	200	23	13
1999	167	199	31	19
2000	167	196	29	17
2001	160	191	31	19
2002	122	154	32	27
2003	122	154	32	27
2004	104	136	32	31
2005	104	136	32	31
2006	104	136	32	31
2007	73	106	32	44
2008	73	106	32	44
2009	73	106	32	44
2010	73	106	32	44

SOURCE : North Slope Model Projections, Variable EMNAOI, High Impact. Base Case and Sale 97 High Impact Case (C)SETS NSLP.B71 and NSLP.I62.)

Impacts of the Lease Sales on Native Migration

In the absence of the **lease** sales, Native out-migration from the North Slope Borough is projected to occur throughout the projection period in response to increasing unemployment. However, after the turn of the century when the "maximum" unemployment rate of 50 percent is reached, out-migration increases substantially to several hundred persons per year, outweighing natural increase and causing the Native population to begin to decline.

Sale **109** delays but does not reverse this pattern of Native migration (Table IX-14). Out-migration is reduced for about **a ten-** year period but, nevertheless, begins to increase sharply at the very end of the projection period, causing Native population to begin to decline, as we discussed earlier **in** this chapter. Sale 97 has a much smaller effect on migration, delaying and reducing migration only slightly (Table IX-15).

As we discussed in Chapter VIII, our assumptions about Native migration patterns are uncertain, and out-migration may **well** not occur precisely as suggested by our projections." Nevertheless, we feel that the basic pattern suggested by these projections will occur: increasing out-migration which eventually outweighs natural growth. Similarly, the lease sales are unlikely to do more than delay this pattern.

TABLE IX-14
SALE 109 MEDIUM IMPACT PROJECTIONS

Native Migration

Year	Base Case	Impact Case	Sale 109 Impact	Percent Impact
1981	-36	-36	0	0
1982	0	0	0	0
1983	0	0	0	0
1984	0	0	0	0
1985	0	0	0	0
1986	-45	-45	0	0
1987	-40	-40	0	0
1988	-80	-79	2	-2
1989	-34	-33	1	-3
1990	-41	-41	0	0
1991	-8	-4	4	-52
1992	-2	0	2	-92
1993	-17	-12	5	-27
1994	-8	-5	2	-29
1995	-9	-9	0	-4
1996	-11	0	11	-100
1997	-10	0	10	-100
1998	-14	0	14	-100
1999	-16	-55	-39	252
2000	-10	-8	1	-15
2001	-6	-7	-1	9
2002	-77	-26	51	-66
2003	-109	-15	94	-86
2004	-176	-22	154	-88
2005	-196	-25	171	-87
2006	-204	-62	143	-70
2007	-275	-155	120	-44
2008	-269	-173	96	-36
2009	-255	-178	77	-30
2010	-244	-185	59	-24

SOURCE: North Slope Model Projections, Variable MGNA, Medium Base Case and Sale 109 Medium Impact Case (DSETS NSLP.B61 and NSLP.181).

TABLE IX-15
SALE 97 MEDIUM IMPACT PROJECTIONS

Native Migration

Year	Base Case	Impact Case	Sale 97 Impact	Percent Impact
1981	-36	-36	0	0
1982	0	0	0	0
1983	0	0	0	0
1984	0	0	0	0
1985	0	0	0	0
1986	-45	-45	0	0
1987	-40	-40	0	0
1988	-80	-76	5	-6
1989	-34	-32	2	-7
1990	-41	-42	-2	4
1991	-8	-9	-1	11
1992	-2	-3	-1	32
1993	-17	-16	1	-5
1994	-8	-3	5	-62
1995	-9	0	9	-100
1996	-11	-13	-3	24
1997	-10	-27	-17	171
1998	-14	-17	-3	25
1999	-16	-16	-1	4
2000	-10	-10	0	4
2001	-6	-6	0	0
2002	-77	-10	67	-87
2003	-109	-52	57	-52
2004	-176	-127	49	-28
2005	-196	-156	41	-21
2006	-204	-172	32	-16
2007	-275	-248	27	-10
2008	-269	-248	21	-8
2009	-255	-239	16	-6
2010	-244	-233	12	-5

SOURCE: North Slope Model Projections, Variable **MGNA**, Medium Base Case and **Sale 97** Medium Impact Case (**DSETS NSLP.B61** and **NSLP.I61**).

In sum, the lease sales temporarily reverse and then slow the out-migration of North Slope Natives" during the next two decades. However, they are not sufficient to eliminate eventual substantial out-migration, leading to a decline in the Native population.

High Impact Projections for the Lease Sales

Our high impact projections for the lease sales are shown in Tables N-2.1 through N-2.10 (Appendix N) and P-2.1 through P-2.10 (Appendix P). The projected impacts for these sales are larger than for the medium case. However, this is primarily because the base case conditions are assumed to be worse, with greater Native unemployment, out-migration, and population decline. Under these circumstances, the relative increase in borough revenues, expenditures, and Native employment resulting from the lease sales would be greater. Nevertheless, the lease sales would not prevent the eventual decline in Native employment leading to out-migration.

Summary of Projected Impacts of the Lease Sales

Exploration, construction, and development for Lease Sales 97 and 109 would occur over a twenty-year period during which the North Slope Borough is likely to be facing significant economic decline due to a decline in North Slope Borough CIP and operating expenditures. CIP expenditures cannot continue to be financed at past levels by borrowing against future revenues. Operating expenditures will fall as operating revenues from interest income, federal and state revenue sharing, and property taxes decline, with

the decline **in** the latter two categories accelerated by declining borough resident population and oil industry employment. With increasing unemployment, significant numbers of Native and non-Native residents **will** leave the borough. After the turn of the century, **out-migration** is likely to exceed natural growth, causing the total population to decline.

OCS Lease Sales 97 and 109 would delay **but** not reverse the eventual decline **in** North Slope Borough revenues, expenditures, employment, and population. The lease **sales** would have a relatively small effect upon the borough's already enormous tax base. **The** more significant effect would result from the presence of additional oil industry workers required to build and subsequently operate the OCS facilities. Since the borough is permitted under state law to collect more than \$5 thousand dollars in additional property tax revenues for each additional oil worker, the thousands of oil workers associated with the **lease** sales during the peak years would permit borough revenues **to** increase substantially. (However, if the state were to discontinue the counting of non-resident oil workers in the borough population, this effect would be greatly reduced).

Nevertheless, the OCS lease sales would not be sufficient to reverse the long-term decline in North Slope oil industry employment and borough revenues. The lease sales would only briefly delay a long-term decline in Native employment (assuming that North Slope Native employment in the oil industry continues **to** be low). Our

projections suggest that even with the lease sales, Native out-migration would continue and would eventually exceed Native natural growth, leading to an overall decline in the North Slope Native population.

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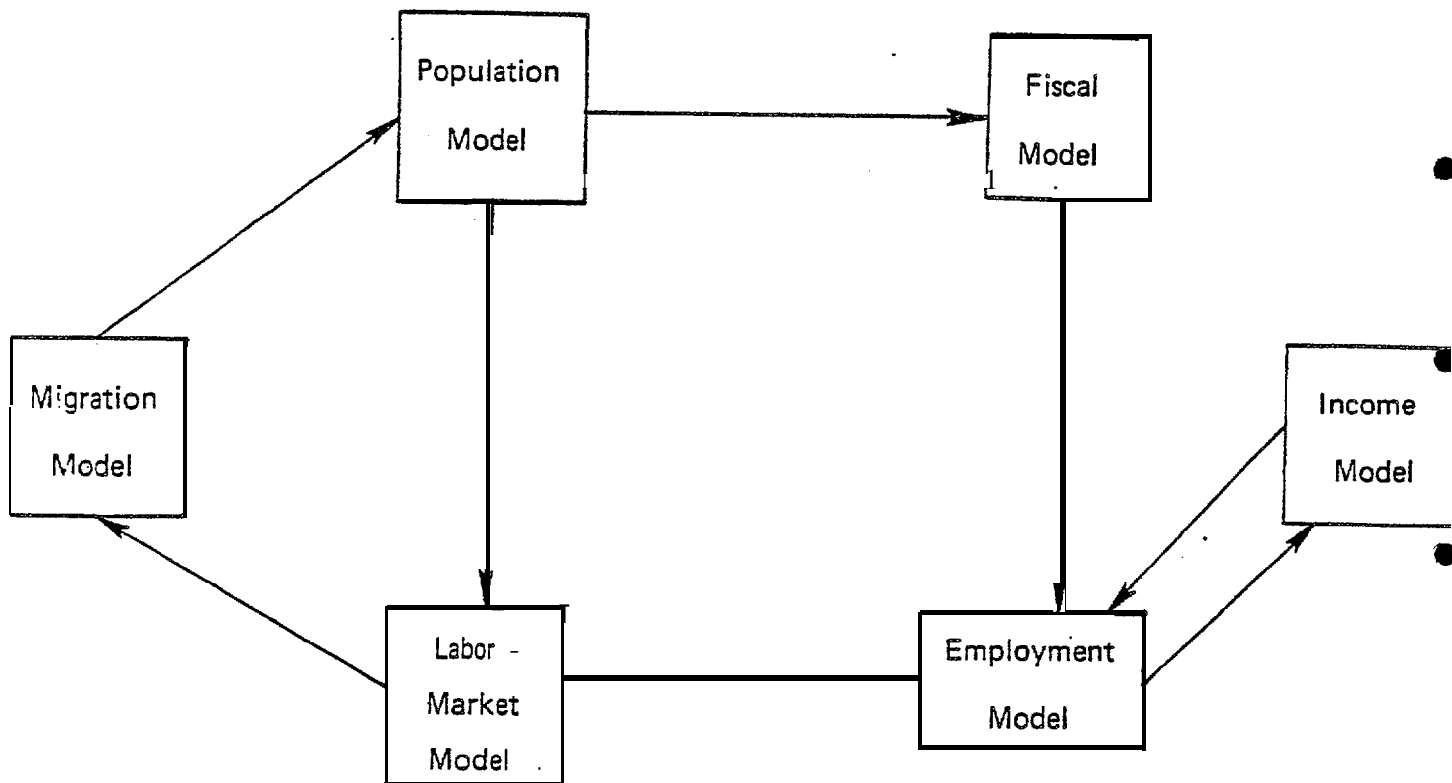
APPENDIX A: THE NORTH SLOPE MODEL

In this appendix, we describe a model of the population and economy of the North Slope Borough. We refer to this model as the "North Slope Model." The model is a computer model which projects population, employment, revenues, expenditures, and a variety of other variables based on a number of assumptions. Our principal purpose in developing the model was to be able to examine the effects of different assumptions about factors such as CIP expenditures, state limits on Borough revenues, or Native labor force participation on Native employment, income, and population.

We describe the model using several figures which diagram the interrelationships between different variables. At the end of this appendix, we provide a complete listing of the equations of the model which should be examined by anyone wishing to trace through exactly how the model calculates different variables.

Figure A-1 shows the overall structure of the model. There are six submodels: the population model, the fiscal model, the income model, the employment model, the labor market model, and the migration model. Below, we describe each of the submodels.

Figure A-1
The North Slope Model



The Fiscal Model

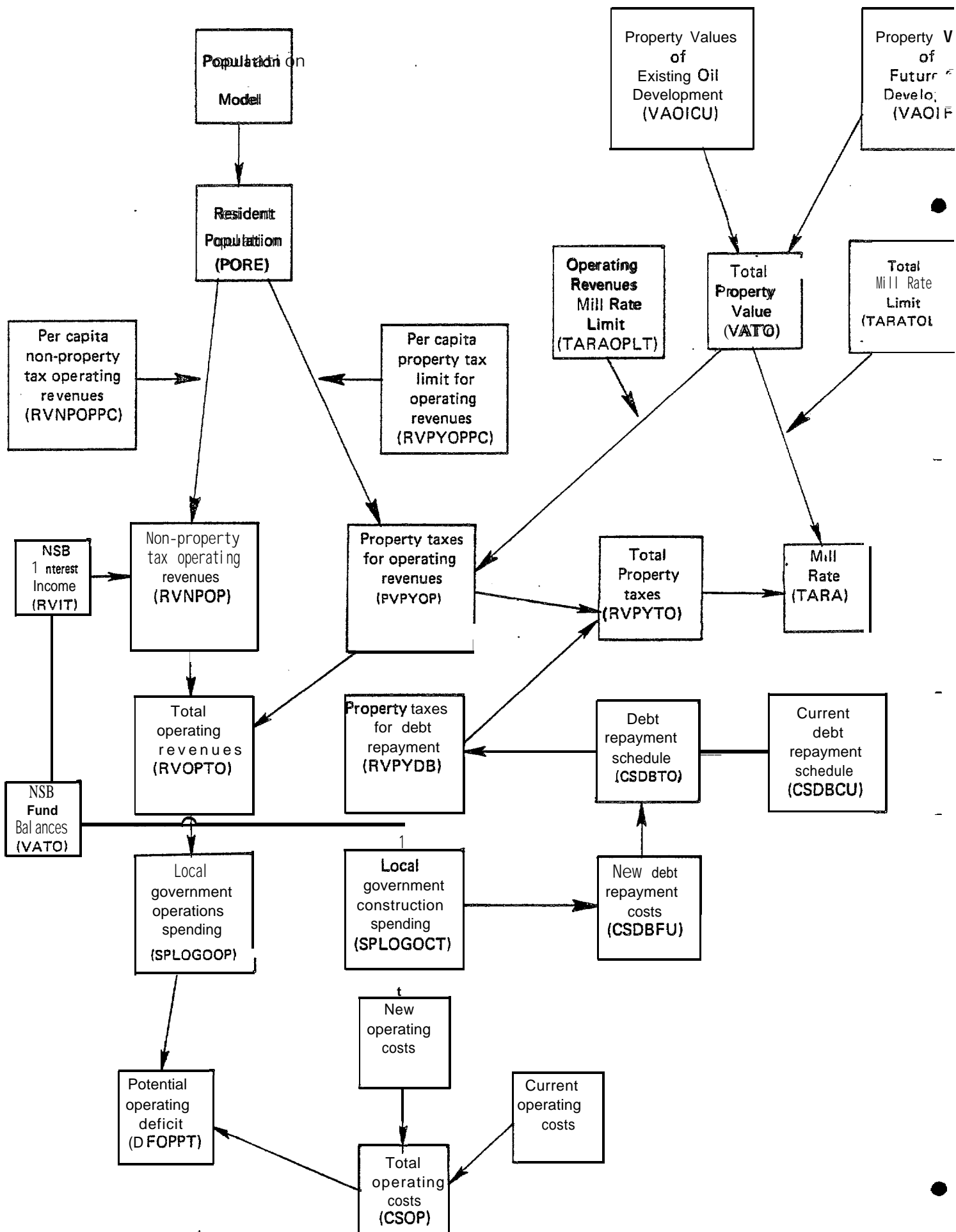
Figure A-2 illustrates the fiscal model, which calculates North Slope Borough revenues, debt repayment costs, and tax rates based on assumptions about state revenue limits, mill rate limits, population, property values, and **CIP** construction spending.

Operating revenues include property tax operating revenues, interest earnings, and other operating revenues. Property tax operating revenues are calculated as the maximum permitted under state restrictions on per-capita operating revenues, or the maximum possible without raising the Borough's total **mill** rate above a borough-imposed maximum rate--whichever is lower. Interest earnings are determined by multiplying the borough's total fund balances by an assumed rate of interest earnings. Other operating revenues **are** calculated by multiplying borough population by a per capita figure which is assumed to decline over time due to lower state and federal revenue sharing. All operating revenues are spent as operating expenditures.

Borough construction spending is assumed. Construction spending determines the Borough's fund balances and new borough debt repayment costs. The borough is assumed to fund a certain fraction of construction spending from current fund balances, and the remainder through new bond issues. Thus, projected fund balances decline over time, which causes interest earnings to decline over time as well.

Figure A-2

The North Slope Fiscal Model



New debt repayment costs are added to existing debt repayment requirements to determine total debt repayment costs. These funds are raised through property taxes. Together, property taxes for operations and property taxes for debt repayment determine total property taxes, which are combined with assumptions about total property value to calculate tax rates. The fiscal model also calculates an estimate of total borough operating costs by adding a fraction of the cost of new construction each year to operating costs of current facilities.

The Employment Model

Figure A-3 depicts the employment model. There are seven categories of employment. Borough operations employment is proportional to Borough operations spending. Similarly, borough CIP employment and other CIP employment are proportional to borough CIP spending. Oil industry-related employment, other basic employment, and federal and state government employment are assumed **exogenously**. Support employment is assumed to be proportional to total resident employment (resident and nonresident shares of each type of employment are determined by the labor market model).

The Income Model

Figure A-4 depicts the income model. Wage income is calculated by multiplying resident employment by a single wage rate. **Nonwage** income is calculated by multiplying resident population by assumed per capita nonwage income levels which differ by race.

Figure A-3
The North Slope Employment Model

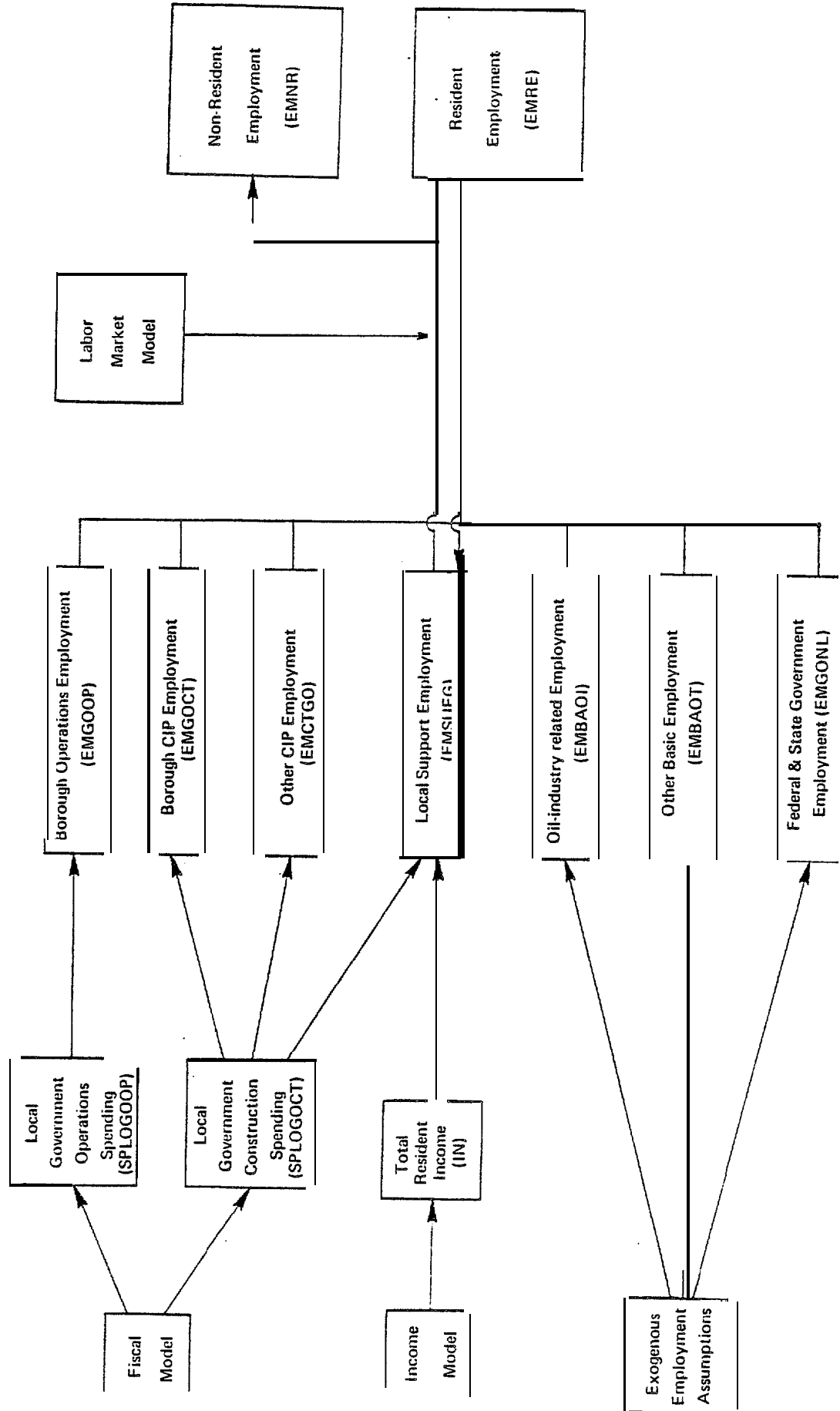
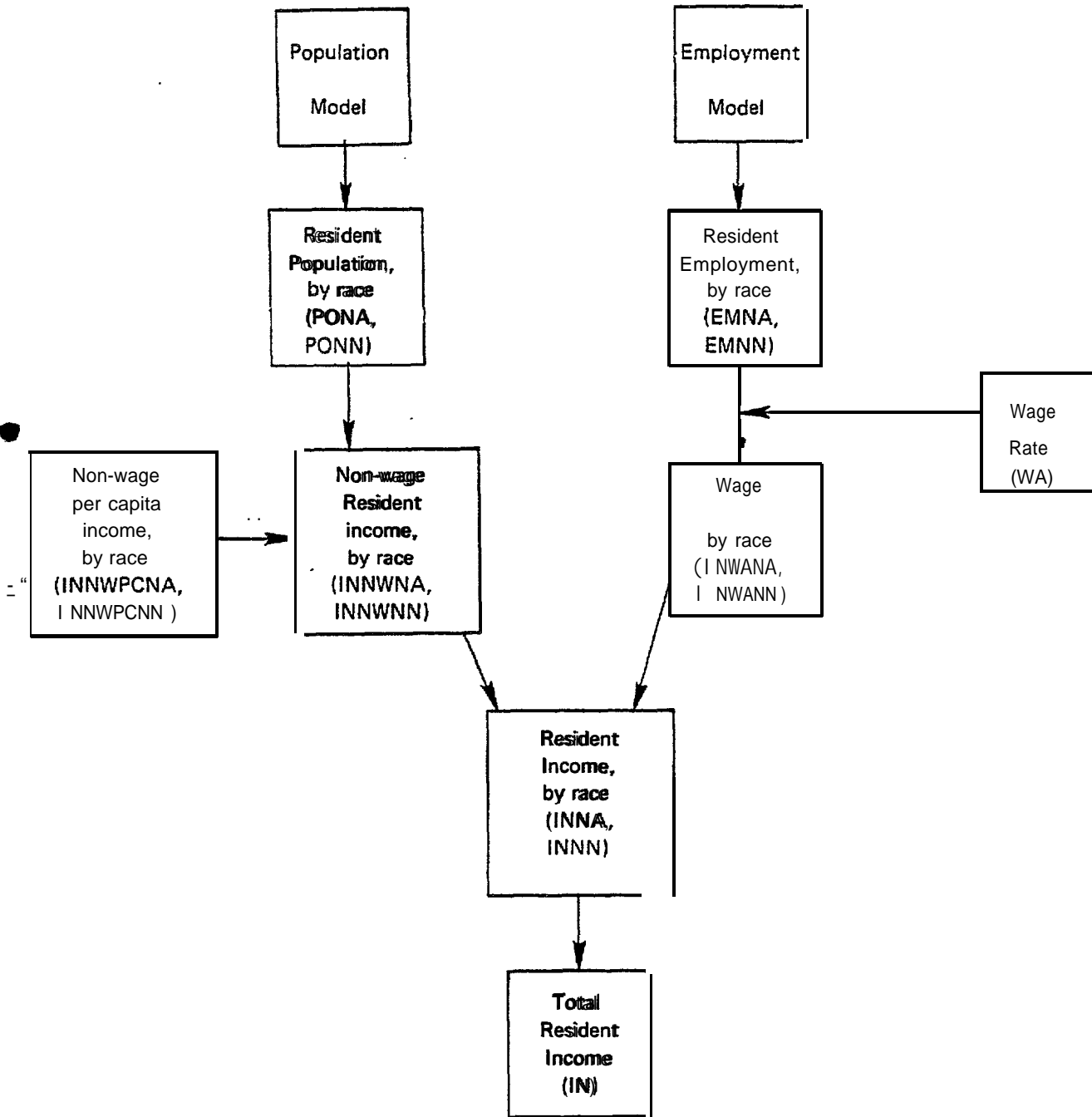


Figure A-4

The North Slope Income Model



The Labor Market Model

Figure A-5 depicts the **labor market model**. A total Native labor force is calculated by multiplying the adult Native population by a **labor force participation rate**. These workers are then allocated to **jobs** in different industries in a **series of steps**. **First**, employment of each type **is divided** between those jobs which are available to Natives and those jobs **which** are not. Native workers are allocated first to **non-oil jobs**. Subsequently, if not enough non-oil jobs are available to employ **all** Native workers, a share of the remaining workers are assumed to seek work in the oil industry. Of jobs not taken by Natives, borough operations jobs, **borough CIP** jobs, federal and state government **jobs**, and support sector jobs **are** assumed **to** be taken by non-Natives who become residents of the borough. Other jobs are taken by nonresidents, who live **in** work camps rather than in North Slope Borough villages. **In** particular, this **is** the case for oil industry workers and private **CIP** construction workers.

The Population and Migration Models

Figure A-6 depicts the population and migration models. Native population is divided into 66 **age** groups (ages 0 through 64, and age 65 or above). Population change occurs both as a **result** of natural increase and as a **result of** migration. **In** each year, population in each age group is the population the previous year multiplied by an assumed survival rate. Population in the youngest

Figure A-5

North Slope Labor Market Model

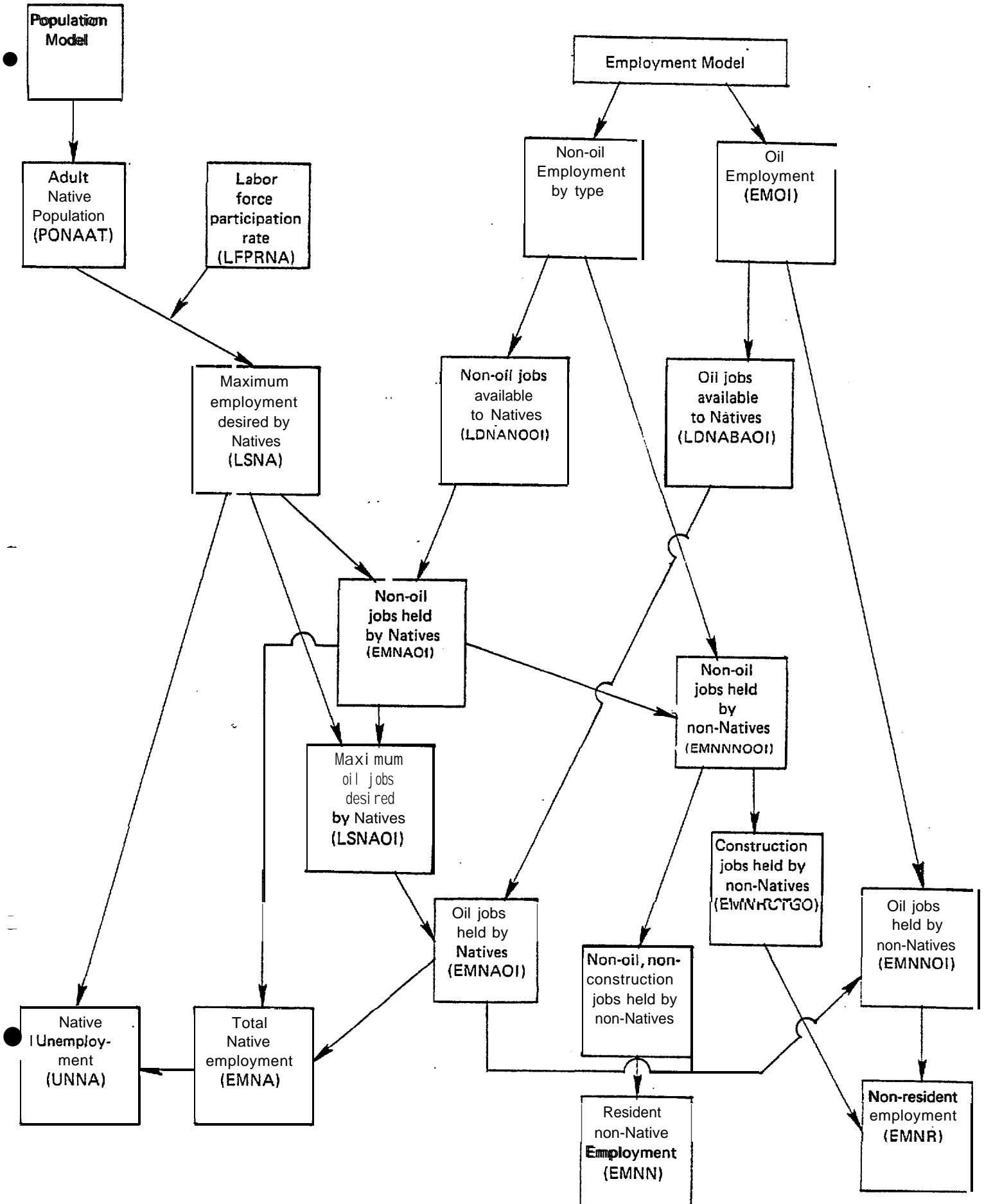
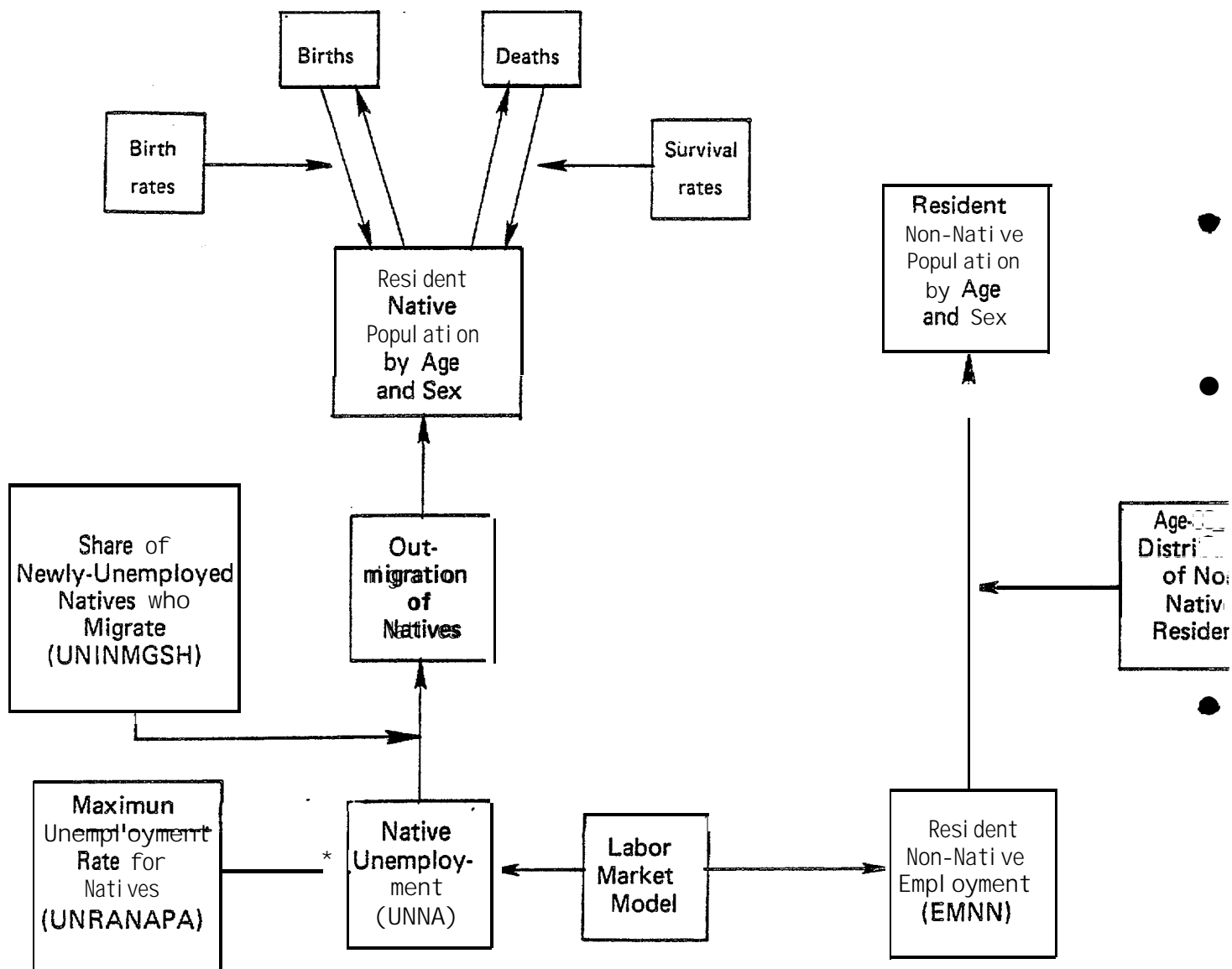


Figure A-6

The North Slope Population and Migration Models



age group (age 0) is calculated by multiplying population in all other age groups by assumed fertility rates. Migration levels are a function of increases in unemployment as well as the total unemployment level. In any year in which the unemployment rate rises, a certain percentage of newly unemployed workers are assumed to migrate out of the Borough. In addition, above a maximum unemployment rate, all additional unemployed workers are assumed to migrate out of the Borough. In each age group, population is assumed to migrate out of the Borough in the same proportion as migrating workers represent in the adult Native population.

The non-Native population is calculated as a function of non-Native employment, with a constant assumed age-sex distribution.

Calculation of Population Model Assumptions

The survival and fertility rate assumptions are key components of the population model. We derived these survival and fertility rates from vital statistics data for 1980 statewide population excluding Anchorage. Calculating these rates for smaller population groups, such as the North Slope Borough, would be unreliable because small changes between years could produce very large variations in survival or fertility rates. In addition, the available data for 1980 permitted calculation of survival and fertility rates for five-year age groups, by race. The figures on which we based our calculations are shown in Tables A-1 through A-4.

TABLE A-1.
NON-ANCHORAGE ALASKA RESIDENT POPULATION
1980

<u>Age</u>	<u>Native Population</u>		<u>Non-Native Population</u>	
	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
Less than 1	724	697	1,924	1 *666
1 - 4	2,532	2,369	6,079	5,915
5 - 9	3,333	3,172	5,817	5,380
10 - 14	3,295	3,086	5,779	5,421
15 - 19	3,110	2,729	7,373	6,462
20 - 24	2,717	2,319	3,606	8,154
25 - 29	2,874	2,570	10,795	10,192
30 - 34	2,543	2,158	9,165	7,257
35 - 39	1,860	-1,504	7,069	5,448
40 - 44	1,454	1,200	4,283	3,594
45 - 49	1,153	931	3,826	3,064
50 - 54	944	799	3,912	3,332
55 - 59	771	654	3,183	2,516
60 - 64	495	436	2,160	1,883
65 +	1,355	1,339	2,833	2,476
TOTAL	29,160	25,963	77,804	72,760

SOURCE: Institute of Social and Economic Research, Municipality of Anchorage Economic Modeling Project, **Model Documentation** (Anchorage: University of Alaska), Vol. I of XII, pages 111-32, 33 (June 1982).

TABLE A-2.
NUMBER OF DEATHS, NON-ANCHORAGE ALASKA RESIDENTS
1980

<u>Age</u>	<u>Native Population</u>		<u>Non-Native Population</u>	
	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
Less than 1	23	16	24	14
1 - 4	4	2	5	5
5 - 9	3	2	2	0
10 - 14	4	1	3	0
15 - 19	23	10	13	0
20 - 24	28	5	26	" 5
25 - 29	27	10	33	7
30 - 34	13	8	25	8
35 - 39	14	3	17	6
40 - 44	13	7	29	9
45 - 49	6	2	28	11
50 - 54	11	9	35	8
55 - 59	19	6	43	19
60 - 64	16	6	34	17
65 +	88	36	171	84
TOTAL	292	123	488	193

SOURCE : Institute of Social and Economic Research, Municipality of Anchorage Economic Modeling Project, Model Documentation (Anchorage: University of Alaska), Vol. I of XII, pages 111-29, 30 (June 1982).

TABLE A-3.
NON-ANCHORAGE ALASKA FERTILITY RATES
1980

Age of Mother	Births		Female Population		Fertility Rates*	
	Native	Non-Native	Native	Non-Native	Native	Non-Native
10 - 14	0	2	3,086	5,421	NA	.0004
15 - 19	373	332	2,729	6,462	.1367	.0514
20 - 24	672	1,242	2,319	8,154	.2898	.1523
25 - 29	415	1,318	2,570	10,192	.1615	.1293
30 - 34	198	568	2,158	7,257	.0918	.0783
35 - 39	66	134	1,504	5,448	.0439	.0246
40 - 44	16	23	1,200	3,594	.0133	.0064
TOTAL	1,740	3,619	15,566	46,528	.1118	.0778

*Equal to the ratio of births to female population in each age cohort.

SOURCE: Institute of Social and Economic Research, Municipality of Anchorage Economic Modeling Project, Model Documentation (Anchorage: University of Alaska), Vol. I of XII, page III-28 (June 1982).

TABLE A-4.
NON-ANCHORAGE ALASKA SURVIVAL RATES*
1980

<u>Age</u>	<u>Native Population</u>		<u>Non-Native Population</u>	
	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
Less than 1	0.9682	0.9770	0.9875	0.9916
1 - 4	0.9984	0.9992	0.9992	0.9992
5 - 9	0.9991	0.9994	0.9997	1.0000
10 - 14	0.9988	0.9997	0.9995	1.0000
15 - 19	0.9926	0.9963	0.9982	1.0000
20 - 24	0.9897	0.9978	0.9928	0.9994
25 - 29	0.9906	0.9961	0.9969	0.9993
30 - 34	0.9949	0.9963	0.9973	0.9989
35 - 39	0.9925	0.9980	0.9976	0.9989
40 - 44	0.9911	0.9942	0.9932	0.9975
45 - 49	0.9948	0.9979	0.9927	0.9964
50 - 54	0.9883	0.9887	0.9911	0.9976
55 - 59	0.9754	0.9908	0.9865	0.9924
60 - 64	0.9677	0.9862	0.9843	0.9910
65 +	0.9351	0.9731	0.9396	0.9661
TOTAL	0.9900	0.9953	0.9937	0.9973

*Equal to one minus the number of deaths divided by population in each age cohort.

SOURCE : Tables 1 and 2.

We derived the survival rates from the ratio of the number of surviving people in a given age, sex, and race cohort divided by total population in the same sex and race cohort. Similarly, we calculated fertility rates as the ratio of number of births among women in a given age cohort to the total number of women in that cohort. Fertility rates are limited to women aged 15 to 45.

North Slope Model Variable Definitions

All North Slope model variable names are constructed out of combinations of two-letter groups. Table A-5 lists these two-letter groups, along with their definitions, in alphabetical order.

For example, the variable INNOWAPC may be divided into IN-NO-WA-PC. By referring to Table A-5, we can determine that this means "income"- "non"- "wage"- "per capita," or per capita nonwage income. Similarly, SPLOGOCT can be divided into 5P-LO-GO-CT, which means "spending"- "local "- "government"- "construction," or local government construction expenditures.

TABLE A-5
 NORTH SLOPE (RURAL ALASKA MODEL) NOTATION CODE

An	age group n
AT	adult
AV	average
8A	basic
BE	before adjustment for migration or training
BT	births
CH	change in
Cn	coefficient in equation used to define a variable
CR	crude
Cs	costs
CT	construction
Cu	current
DB	debt
DE	dependent
DF	deficit
DT	deaths
EG	endogenous
EM	employment
FE	female
Fn	female, age group n
FN	fund
FR	fertility rate
FU	future
GE	geriatric or senior
GO	government

GR growth
IC increase
IN income; increase
IT interest
KD preschool age children or "kids"
LA labor
LF labor force
LI limit
LO local
LR long run
LS labor supply
MA male
MG endogenous migration
MI migration
Mn male, age group n
NA native
NE net
NL nonlocal
NN Non-Native
NO non-
NP nonproperty tax
NR nonresident
NW nonwage
O1 oil industry
OP operations
OT other
PA parameter used in defining a variable

PC per capita
PE peak
PN percent
Po populati on
PR parti cipation rate .
PT potenti al
Pt property taxes
RA rate
RE resi dent
RT rati o
RV revenues
SA share of jobs accessi bl e
SF cohort shi ft
SH share
SL school aged
SP spendi ng
Ss sponsored
SU support
SV survi val
TA taxes
TF transfer
TL tax l i mi t
TO total
UN unempl oymen t
VA property val ue
WA wage

North Slope Model Equations

Below, we provide a complete listing of the equations in the North Slope model. The model is programmed in TROLL on the MIT computer. In order to run the model, we access the MIT computer using a telenet telephone connection. TROLL is a powerful modeling language which was developed especially for modeling simultaneous systems of equations such as those in the North Slope Model.

The North Slope Model

MODEL VERSION: NSLP85.2

Endogenous Variables (variables calculated by the model which affect the values of other variables):

BDSA BTNA CHPONN CSOP EMCTGO EMGOCT UMGOOP EMNA EMNN EMNR EMRE
EMSUEG GOFN IN INNWNA INNWN INWANA INWANN LSNA OUMGLANA OUMGSHNA
PONAFE01 PONAFE02 PONAFE03 PONAFE04 PONAFE05 PONAFE06
PONAFE07 PONAFE08 PONAFE09 PONAFE10 PONAFE11 PONAFE12 PONAFE13
PONAFE14 PONAFE15 PONAFE16 PONAFE17 PONAFE18 PONAFE19 PONAFE20
PONAFE21 PONAFE22 PONAFE23 PONAFE24 PONAFE25 PCNAFE26 PONAFE27
PONAFE28 PONAFE29 PONAFE30 PONAFE31 PONAFE32 PONAFE33 PONAFE34
PONAFE35 PONAFE36 PONAFE37 PONAFE38 PONAFE39 PONAFE40 PONAFE41
PONAFE42 PONAFE43 PONAFE44 PONAFE45 PONAFE46 PONAFE47 PONAFE48
PONAFE49 PONAFE50 PONAFE51 PONAFE52 PONAFE53 PONAFE54 PONAFE55
PONAFE56 PONAFE57 PONAFE58 PONAFE59 PONAFE60 PONAFE61 PONAFE62
PONAFE63 PONAFE64 PONAMAGE PONAMA01 PONAMA02 PONAMA03 PONAMA04
PONAMA05 PONAMA06 PONAMA07 PONAMA08 PONAMA09 PONAMA10 PONAMA11
PONAMA12 PONAMA13 PONAMA14 PONAMA15 PONAMA16 PONAMA17 PONAMA18
PONAMA19 PONAMA20 PONAMA21 PONAMA22 PONAMA23 PONAMA24 PONAMA25
PONAMA26 PONAMA27 PONAMA28 PONAMA29 PONAMA30 PONAMA31 PONAMA32
PONAMA33 PONAMA34 PONAMA35 PONAMA36 PONAMA37 PONAMA38 PONAMA39
PONAMA40 PONAMA41 PONAMA42 PONAMA43 PONAMA44 PONAMA45 PONAMA46
PONAMA47 PONAMA48 PONAMA49 PONAMA50 PONAMA51 PONAMA52 PONAMA53
PONAMA54 PONAMA55 PONAMA56 PONAMA57 PONAMA58 PONAMA59 PONAMA60
PONAMA61 PONAMA62 PONAMA63 PONAMA64 PONNGE PONNKD PONNMD PONNSL
PONNYA PONRAV PONRTO POTO RVIT RVNPOP RVPYOP SPLOGOOP UNRANAFI

Definition Variables (variables calculated by the model which do not affect the values of other variables):

BT BTNN CHPONA CHPONAFE CHPONAMA CHPONARA CHPONNRA CHPORA CHPORE
CSDBFU CSDBTO DFOPPT DT DTNA DTNAFE DTNAMA DTNN EMANPA EMATKA
EMBARR EMCT EMKAKT EMNABAOT EMNACTGO EMNAGOCT EMNAGONL EMNAGOOP
EMNANOOI EMNAOI EMNASUEG EMNBAOT EMNNGOCT EMNNGONL EMNNGOOP EMNNSUEG
EMNOOI EMNRBAOI EMNRCTGO EMNROI EMNUIQ EMPOHO EMPOLA EMTO EMWAIN
INNA INNN INPC INPCNA INPCNN LDNABAOI LDNABAOT LDNACTGO LDNAGOOT
LDNAGONL LDNAGOOP LDNANOOI LDNASUEG LSNAOI MG MGNA MGNARA MGNN
MGNNRA MGRA NTIC NTICNA NTICNARA NTICNN NTICRA NTICRANN POANPA
POATKA POBARR POGE POKAKT POKD POMD PONA PONAAT PONAFA PONAFAAT
PONAFAEKD PONAFAEMD PONAFAESL PONAFAEYA PONAFAE00 PONAGE PONA01 PONA02
PONA03 PONA04 PONA05 PONA06 PONA07 PONA08 PONA09 PONA10 PONA11 PONA12
PONA13 PONA14 PONA15 PONA16 PONA17 PONA18 PONA19 PONA20 PONA21 PONA22
PONA23 PONA24 PONA25

PONA26 PONA27 PONA28 PONA29 PONA30 PONA31 PONA32 PONA33 PONA34
PONA35 PONA36 PDNA37 PONA38 PONA39 PONA40 PONA41 PONA42 PONA43
PONA44 PONA45 PONA46 PONA47 PONA48 PONA49 PONA50 PONA51 PONA52
PONA53 PONA54 PONA55 PONA56 PONA57 PONA58 PONA59 PONA60 PONA61
PONA62 PONA63 PONA64 PONN PONUIQ POPOHO POPOLA PORE POSL POWAIN
POYA RVOPPCFI RVOPTO RVPYDB RVPYTO RVTO SPTO TARA TARADB TARAOP
UNNA UNRANA VATO Z.00 Z.01 Z.02 Z.03 Z.05

Exogenous Variables (variables whose values are assumed fixed throughout the projection period):

BDSAX CSDBCU CSOPX EMBAOI EMBAOT EMCTGOX EMGOCTX EMGONL EMGOOPX
EMNAOIEX EMNRGONL EMSUEGX EMTOX GOFNX LFPRNA RVITX RVNPOPPC RVNPOPX
RVOPTOX RVPYDBX RVPYOPPC RVPYOPX RVPYTOX SANABAOI SANABAOT SANACTGO
SANAGOCT SANAGONL SANAGOOP SANASUEG SPLOGOCT SPLOGPX TARADBX TARAOPX
TARATOLI TARAX VAOICU VAOIFU YR

Coefficients (variables whose values are assumed fixed throughout the projection period):

CSDBFUC0 CSDBFUC1 CSDBFUC2 CSDBFUC3 CSDBFUC4 CSDBFUC5 CSDBFUC6
CSDBFUC7 CSDBFUC8 CSDBFUC9 CSOPC0 CSOPC1 CSOPC2 CSOPC3 EMANPAC1
EMAKKAC1 EMBARRC1 EMCTGOC1 EMGOCTC1 EMGOOPC1 EMKAKTC1 EMNUIQC1
EMPOHOC1 EMPOLAC1 EMSUEGC1 EMWAINC1 POANPAC1 POATKAC1 POBARRC1
POKAKTC1 PONRAVC1 PONUIQC1 POPOHOC1 POPOLAC1 POWAINC1

Parameters (variables whose values are assumed fixed throughout the projection period):

EMSUEGPA FRNA15 FRNA16 FRNA17 FRNA18 FRNA19 FRNA20 FRNA21 FRNA22
FRNA23 FRNA24 FRNA25 FRNA26 FRNA27 FRNA28 FRNA29 FRNA30 FRNA31
FRNA32 FRNA33 FRNA34 FRNA35 FRNA36 FRNA37 FRNA38 FRNA39 FRNA40
FRNA41 FRNA42 FRNA43 FRNA44 FRNA45 GOFNPA INNWPCNA INNWPCNN ITRA
LSNAOIPA PONNGEPA PONNKDPA PONNMDPA PONNSLPA PONNYAPA SVNAFEGE
SVNAFE00 SVNAFE01 SVNAFE02 SVNAFE03 SVNAFE04 SVNAFE05 SVNAFE06
SVNAFE07 SVNAFE08 SVNAFE09 SVNAFE10 SVNAFE11 SVNAFE12 SVNAFE13
SVNAFE14 SVNAFE15 SVNAFE16 SVNAFE17 SVNAFE18 SVNAFE19 SVNAFE20
SVNAFE21 SVNAFE22 SVNAFE23 SVNAFE24 SVNAFE25 SVNAFE26 SVNAFE27
SVNAFE28 SVNAFE29 SVNAFE30 SVNAFE31 SVNAFE32 SVNAFE33 SVNAFE34
SVNAFE35 SVNAFE36 SVNAFE37 SVNAFE38 SVNAFE39 SVNAFE40 SVNAFE41
SVNAFE42 SVNAFE43 SVNAFE44 SVNAFE45 SVNAFE46 SVNAFE47 SVNAFE48
SVNAFE49 SVNAFE50 SVNAFE51 SVNAFE52 SVNAFE53 SVNAFE54 SVNAFE55
SVNAFE56 SVNAFE57 SVNAFE58 SVNAFE59 SVNAFE60 SVNAFE61 SVNAFE62
SVNAFE63 SVNAFE64 SVNAMAGE SVNAMA00 SVNAMA01 SVNAMA02 SVNAMA03
SVNAMA04 SVNAMA05 SVNAMA06 SVNAMA07 SVNAMA08 SVNAMA09 SVNAMA10
SVNAMA11 SVNAMA12 SVNAMA13 SVNAMA14 SVNAMA15 SVNAMA16 SVNAMA17
SVNAMA18 SVNAMA19 SVNAMA20 SVNAMA21 SVNAMA22 SVNAMA23 SVNAMA24
SVNAMA25 SVNAMA26 SVNAMA27 SVNAMA28 SVNAMA29 SVNAMA30 SVNAMA31
SVNAMA32 SVNAMA33 SVNAMA34 SVNAMA35 SVNAMA36 SVNAMA37 SVNAMA38
SVNAMA39 SVNAMA40 SVNAMA41 SVNAMA42 SVNAMA43 SVNAMA44 SVNAMA45
SVNAMA46 SVNAMA47 SVNAMA48 SVNAMA49 SVNAMA50 SVNAMA51 SVNAMA52
SVNAMA53 SVNAMA54 SVNAMA55 SVNAMA56 SVNAMA57 SVNAMA58 SVNAMA59
SVNAMA60 SVNAMA61 SVNAMA62 SVNAMA63 SVNAMA64 SXDVNA TARAOPLI UNINMGSH
UNRANAPA WA

MODEL EQUATIONS

POPULATION MODEL

Native Population by Age and Sex

- 1: PONA00 == BTNA
- 2: PONA00 == IF YR LE 1981 THEN 42 ELSE PONA00*(1-SXDVNA)
- 3: PONAMA00 = IF YR LE 1981 THEN 46 ELSE PONA00*SXDVNA
- 4: PONA01 = PONA00(-1)*SVNA00*(1-OUMGSHNA)
- 5: PONAMA01 = PONAMA00(-1)*SVNAMA00*(1-OUMGSHNA)
- 6: PONA01 == PONA01+PONAMA01
- 7: PONA02 = PONA01(-1)*SVNA01*(1-OUMGSHNA)
- 8: PONAMA02 = PONAMA01(-1)*SVNAMA01*(1-OUMGSHNA)
- 9: PONA02 == PONA02+PONAMA02
- 10: PONA03 = PONA02(-1)*SVNA02*(1-OUMGSHNA)
- 11: PONAMA03 = PONAMA02(-1)*SVNAMA02*(1-OUMGSHNA)
- 12: PONA03 == PONA03+PONAMA03
- 13: PONA04 = PONA03(-1)*SVNA03*(1-OUMGSHNA)
- 14: PONAMA04 = PONAMA03(-1)*SVNAMA03*(1-OUMGSHNA)
- 15: PONA04 == PONA04+PONAMA04
- 16: PONA05 = PONA04(-1)*SVNA04*(1-OUMGSHNA)
- 17: PONAMA05 = PONAMA04(-1)*SVNAMA04*(1-OUMGSHNA)
- 18: PONA05 == PONA05+PONAMA05
- 19: PONA06 = PONA05(-1)*SVNA05*(1-OUMGSHNA)
- 20: PONAMA06 = PONAMA05(-1)*SVNAMA05*(1-OUMGSHNA)
- 21: PONA06 == PONA06+PONAMA06
- 22: PONA07 = PONA06(-1)*SVNA06*(1-OUMGSHNA)
- 23: PONAMA07 = PONAMA06(-1)*SVNAMA06*(1-OUMGSHNA)
- 24: PONA07 == PONA07+PONAMA07

25: $PONAFE08 = PONAFE07(-1)*SVNAFE07*(1-OUMGSHNA)$

26: $PONAMA08 = PONAMA07(-1)*SVNAMA07*(1-OUMGSHNA)$

27: $PONA08 == PONAFE08+PONAMA08$

28: $PONAFE09 = PONAFE08(-1)*SVNAFE08*(1-OUMGSHNA)$

29: $PONAMA09 = PONAMA08(-1)*SVNAMA08*(1-OUMGSHNA)$

30: $PONA09 == PONAFE09+PONAMA09$

31: $PONAFE10 = PONAFE09(-1)*SVNAFE09*(1-OUMGSHNA)$

32: $PONAMA10 = PONAMA09(-1)*SVNAMA09*(1-OUMGSHNA)$

33: $PONA10 == PONAFE10+PONAMA10$

34: $PONAFE11 = PONAFE10(-1)*SVNAFE10*(1-OUMGSHNA)$

35: $PONAMA11 = PONAMA10(-1)*SVNAMA10*(1-OUMGSHNA)$

36: $PONA11 == PONAFE11+PONAMA11$

37: $PONAFE12 = PONAFE11(-1)*SVNAFE11*(1-OUMGSHNA)$

38: $PONAMA12 = PONAMA11(-1)*SVNAMA11*(1-OUMGSHNA)$

39: $PONA12 == PONAFE12+PONAMA12$

40: $PONAFE13 = PONAFE12(-1)*SVNAFE12*(1-OUMGSHNA)$

41: $PONAMA13 = PONAMA12(-1)*SVNAMA12*(1-OUMGSHNA)$

42: $PONA13 = PONAFE13+PONAMA13$

43: $PONAFE14 = PONAFE13(-1)*SVNAFE13*(1-OUMGSHNA)$

44: $PONAMA14 = PONAMA13(-1)*SVNAMA13*(1-OUMGSHNA)$

45: $PONA14 = PONAFE14+PONAMA14$

46: $PONAFE15 = PONAFE14(-1)*SVNAFE14*(1-OUMGSHNA)$

47: $PONAMA15 = PONAMA14(-1)*SVNAMA14*(1-OUMGSHNA)$

48: $PONA15 == PONAFE15+PONAMA15$

49: $PONAFE16 = PONAFE15(-1)*SVNAFE15*(1-OUMGSHNA)$

50: $PONAMA16 = PONAMA15(-1)*SVNAMA15*(1-OUMGSHNA)$

51: $PONA16 == PONA16 + PONA16$

52: $PONA17 = PONA16(-1) * SVNA16 * (1 - OUMGSHNA)$

53: $PONAMA17 = PONA16(-1) * SVNA16 * (1 - OUMGSHNA)$

54: $PONA17 == PONA17 + PONA17$

55: " $PONA18 = PONA17(-1) * SVNA17 * (1 - OUMGSHNA)$

56: $PONAMA18 = PONA17(-1) * SVNA17 * (1 - OUMGSHNA)$

57: $PONA18 == PONA18 + PONA18$

58: $PONA19 = PONA18(-1) * SVNA18 * (1 - OUMGSHNA)$

59: $PONAMA19 = PONA18(-1) * SVNA18 * (1 - OUMGSHNA)$

60: $PONA19 == PONA19 + PONA19$

61: $PONA20 = PONA19(-1) * SVNA19 * (1 - OUMGSHNA)$

62: $PONAMA20 = PONA19(-1) * SVNA19 * (1 - OUMGSHNA)$

63: $PONA20 == PONA20 + PONA20$

64: $PONA21 = PONA20(-1) * SVNA20 * (1 - OUMGSHNA)$

65: $PONAMA21 = PONA20(-1) * SVNA20 * (1 - OUMGSHNA)$

66: $PONA21 == PONA21 + PONA21$

67: $PONA22 = PONA21(-1) * SVNA21 * (1 - OUMGSHNA)$

68: $PONAMA22 = PONA21(-1) * SVNA21 * (1 - OUMGSHNA)$

69: $PONA22 == PONA22 + PONA22$

70: $PONA23 = PONA22(-1) * SVNA22 * (1 - OUMGSHNA)$

71: $PONAMA23 = PONA22(-1) * SVNA22 * (1 - OUMGSHNA)$

72: $PONA23 == PONA23 + PONA23$

73: $PONA24 = PONA23(-1) * SVNA23 * (1 - OUMGSHNA)$

74: $PONAMA24 = PONA23(-1) * SVNA23 * (1 - OUMGSHNA)$

75: $PONA24 == PONA24 + PONA24$

76: $PONA25 = PONA24(-1) * SVNA24 * (1 - OUMGSHNA)$

77: $PONAMA25 = PONAMA24 (-1) *SVNAMA24*(1 -OUMGSHNA)$

78: $PONA25 == PONAFE25+PONAMA25$

79: $PONAFE26 = PONAFE25(-1)*SVNAFE25*(1-OUMGSHNA)$

80: $PONAMA26 = PONAMA25 (-1)*SVNAMA25*(1-OUMGSHNA)$

81: $PONA26 == PONAFE26+PONAMA26$

82: $PONAFE27 = PONAFE26(-1)*SVNAFE26*(1-OUMGSHNA)$

83: $PONAMA27 = PONAMA26(-1)*SVNAMA26*(1-OUMGSHNA)$

84: $PONA27 == PONAFE27+PONAMA27$

85: $PONAFE28 = PONAFE27(-1)*SVNAFE27*(1-OUMGSHNA)$

86: $PONAMA28 = PONAMA27(-1)*SVNAMA27*(1-OUMGSHNA)$

87: $PONA28 == PONAFE28+PONAMA28$

88: $PONAFE29 = PONAFE28(-1)*SVNAFE28*(1-OUMGSHNA)$

89: $PONAMA29 = PONAMA28(-1)*SVNAMA28*(1-OUMGSHNA)$

90: $PONA29 = PONAFE29+PONAMA29$

91: $PONAFE30 = PONAFE29(-1)*SVNAFE29*(1-OUMGSHNA)$

92: $PONAMA30 = PONAMA29 (-1)*SVNAMA29*(1-OUMGSHNA)$

93: $PONA30 == PONAFE30+PONAMA30$

94: $PONAFE31 = PONAFE30(-1)*SVNAFE30*(1-OUMGSHNA)$

95: $PONAMA31 = PONAMA30(-1)*SVNAMA30*(1-OUMGSHNA)$

96: $PONA31 == PONAFE31+PONAMA31$

97: $PONAFE32 = PONAFE31(-1)*SVNAFE31*(1-OUMGSHNA)$

98: $PONAMA32 = PONAMA31(-1)*SVNAMA31*(1-OUMGSHNA)$

99: $PONA32 == PONAFE32+PONAMA32$

100: $PONAFE33 = PONAFE32(-1)*SVNAFE32*(1-OUMGSHNA)$

101: $PONAMA33 = PONAMA32(-1)*SVNAMA32*(1-OUMGSHNA)$

102: $PONA33 == PONAFE33+PONAMA33$

103: $PONAFE34 = PONAFE33(-1)*SVNAFE33*(1-OUMGSHNA)$

104: $PONAMA34 = PONAMA33(-1)*SVNAMA33*(1-OUMGSHNA)$

105: $PONA34 == PONAFE34+PONAMA34$

106: $PONAFE35 = PONAFE34(-1)*SVNAFE34*(1-OUMGSHNA)$

107: $PONAMA35 = PONAMA34(-1)*SVNAMA34*(1-OUMGSHNA)$

108: $PONA35 == PONAFE35+PONAMA35$

109: $PONAFE36 = PONAFE35(-1)*SVNAFE35*(1-OUMGSHNA)$

110: $PONAMA36 = PONAMA35(-1)*SVNAMA35*(1-OUMGSHNA)$

111: $PONA36 == PONAFE36+PONAMA36$

112: $PONAFE37 = PONAFE36(-1)*SVNAFE36*(1-OUMGSHNA)$

113: $PONAMA37 = PONAMA36(-1)*SVNAMA36*(1-OUMGSHNA)$

114: $PONA37 == PONAFE37+PONAMA37$

115: $PONAFE38 = PONAFE37(-1)*SVNAFE37*(1-OUMGSHNA)$

116: $PONAMA38 = PONAMA37(-1)*SVNAMA37*(1-OUMGSHNA)$

117: $PONA38 == PONAFE38+PONAMA38$

118: $PONAFE39 = PONAFE38(-1)*SVNAFE38*(1-OUMGSHNA)$

119: $PONAMA39 = PONAMA38(-1)*SVNAMA38*(1-OUMGSHNA)$

120: $PONA39 = PONAFE39+PONAMA39$

121: $PONAFE40 = PONAFE39(-1)*SVNAFE39*(1-OUMGSHNA)$

122: $PONAMA40 = PONAMA39(-1)*SVNAMA39*(1-OUMGSHNA)$

123: $PONA40 == PONAFE40+PONAMA40$

124: $PONAFE41 = PONAFE40(-1)*SVNAFE40*(1-OUMGSHNA)$

125: $PONAMA41 = PONAMA40(-1)*SVNAMA40*(1-OUMGSHNA)$

126: $PONA41 == PONAFE41+PONAMA41$

127: $PONAFE42 = PONAFE41(-1)*SVNAFE41*(1-OUMGSHNA)$

128: $PONAMA42 = PONAMA41(-1)*SVNAMA41*(1-OUMGSHNA)$

129: $PONA42 == PONAFE42+PONAMA42$

130: $PONAFE43 = PONAFE42(-1)*SVNAFE42*(1-OUMGSHNA)$

131: PONAMA43 = PONAMA42(-1)*SVNAMA42*(1-OUMGSHNA)
 132: PONA43 == PONAFE43+PONAMA43
 133: PONAFE44 = PONAFE43(-1)*SVNAFE43*(1-OUMGSHNA)
 134: PONAMA44 = PONAMA43(-1)*SVNAMA43*(1-OUMGSHNA)
 135: PONA44 == PONAFE44+PONAMA44
 136: PONAFE45 = PONAFE44(-1)*SVNAFE44*(1-OUMGSHNA)
 137: PONAMA45 = PONAMA44(-1)*SVNAMA44*(1-OUMGSHNA)
 138: PONA45 == PONAFE45+PONAMA45
 139: PONAFE46 = PONAFE45(-1)*SVNAFE45*(1-OUMGSHNA)
 140: PONAMA46 = PONAMA45(-1)*SVNAMA45*(1-OUMGSHNA)
 141: PONA46 == PONAFE46+PONAMA46
 142: PONAFE47 = PONAFE46(-1)*SVNAFE46*(1-OUMGSHNA)
 143: PONAMA47 = PONAMA46(-1)*SVNAMA46*(1-OUMGSHNA)
 144: PONA47 = PONAFE47+PONAMA47
 145: PONAFE48 = PONAFE47(-1)*SVNAFE47*(1-OUMGSHNA)
 146: PONAMA48 = PONAMA47(-1)*SVNAMA47*(1-OUMGSHNA)
 147: PONA48 == PONAFE48+PONAMA48
 148: PONAFE49=PONAFE48 (-1)*SVNAFE48*(1-OUMGSHNA)
 149: PONAMA49 = PONAMA48(-1)*SVNAMA48*(1-OUMGSHNA)
 150: PONA49 == PONAFE49+PONAMA49
 151: PONAFE50 = PONAFE49(-1)*SVNAFE49*(1-OUMGSHNA)
 152: PONAMA50 = PONAMA49(-1)*SVNAMA49*(1-OUMGSHNA)
 153: PONA50 == PONAFE50+PONAMA50
 154: PONAFE51 = PONAFE50(-1)*SVNAFE50*(1-OUMGSHNA)
 155: PONAMA51 = PONAMA50(-1)*SVNAMA50*(1-OUMGSHNA)
 156: PONA51 = PONAFE51+PONAMA51

157: $PONAFE52 = PONAFE51(-1)*SVNAFE51*(1-OUMGSHNA)$

158: $PONAMA52 = PONAMA51(-1)*SVNAMA51*(1-OUMGSHNA)$

159: $PONA52 == PONAFE52+PONAMA52$

160: $PONAFE53 = PONAFE52(-1)*SVNAFE52*(1-OUMGSHNA)$

161: $PONAMA53 = PONAMA52(-1)*SVNAMA52*(1-OUMGSHNA)$

162: $PONA53 == PONAFE53+PONAMA53$

163: $PONAFE54 = PONAFE53(-1)*SVNAFE53*(1-OUMGSHNA)$

164: $PONAMA54 = PONAMA53(-1)*SVNAMA53*(1-OUMGSHNA)$

165: $PONA54 == PONAFE54+PONAMA54$

166: $PONAFE55 = PONAFE54(-1)*SVNAFE54*(1-OUMGSHNA)$

167: $PONAMA55 = PONAMA54(-1)*SVNAMA54*(1-OUMGSHNA)$

168: $PONA55 == PONAFE55+PONAMA55$

169: $PONAFE56 = PONAFE55(-1)*SVNAFE55*(1-OUMGSHNA)$

170: $PONAMA56 = PONAMA55(-1)*SVNAMA55*(1-OUMGSHNA)$

171: $PONA56 == PONAFE56+PONAMA56$

172: $PONAFE57 = PONAFE56(-1)*SVNAFE56*(1-OUMGSHNA)$

173: $PONAMA57 = PONAMA56(-1)*SVNAMA56*(1-OUMGSHNA)$

174: $PONA57 == PONAFE57+PONAMA57$

175: $PONAFE58 = PONAFE57(-1)*SVNAFE57*(1-OUMGSHNA)$

176: $PONAMA58 = PONAMA57(-1)*SVNAMA57*(1-OUMGSHNA)$

177: $PONA58 == PONAFE58+PONAMA58$

178: $PONAFE59 = PONAFE58(-1)*SVNAFE58*(1-OUMGSHNA)$

179: $PONAMA59 = PONAMA58(-1)*SVNAMA58*(1-OUMGSHNA)$

180: $PONA59 == PONAFE59+PONAMA59$

181: $PONAFE60 = PONAFE59(-1)*SVNAFE59*(1-OUMGSHNA)$

182: $PONAMA60 = PONAMA59(-1)*SVNAMA59*(1-OUMGSHNA)$

183: PONA60 == PONA60+PONA60

184: PONA61 = PONA60(-1)*SVNA60*(1-OUMGSHNA)

185: PONA61 = PONA60(-1)*SVNA60*(1-OUMGSHNA)

186: PONA61 == PONA61+PONA61

187: PONA62 = PONA61(-1)*SVNA61*(1-OUMGSHNA)

188: PONA62 = PONA61(-1)*SVNA61*(1-OUMGSHNA)

189: PONA62 = PONA62+PONA62

190: PONA63 = PONA62(-1)*SVNA62*(1-OUMGSHNA)

191: PONA63 = PONA62(-1)*SVNA62*(1-OUMGSHNA)

192: PONA63 == PONA63+PONA63

193: PONA64 = PONA63(-1)*SVNA63*(1-OUMGSHNA)

194: PONA64 = PONA63(-1)*SVNA63*(1-OUMGSHNA)

195: PONA64 == PONA64+PONA64

196: PONA64 = (PONA63(-1)*SVNA63+PONA64(-1)*SVNA64)*(1-OUMGSHNA)

197: PONA64 = (PONA63(-1)*SVNA63+PONA64(-1)*SVNA64)*(1-OUMGSHNA)

198: PONA64 == PONA64+PONA64

199: BTNA = PONA61(-1)*FRNA61+PONA62(-1)*FRNA62+PONA63(-1)*FRNA63+PONA64(-1)*FRNA64+PONA65(-1)*FRNA65+PONA66(-1)*FRNA66+PONA67(-1)*FRNA67+PONA68(-1)*FRNA68+PONA69(-1)*FRNA69+PONA70(-1)*FRNA70+PONA71(-1)*FRNA71+PONA72(-1)*FRNA72+PONA73(-1)*FRNA73+PONA74(-1)*FRNA74+PONA75(-1)*FRNA75+PONA76(-1)*FRNA76+PONA77(-1)*FRNA77+PONA78(-1)*FRNA78+PONA79(-1)*FRNA79+PONA80(-1)*FRNA80+PONA81(-1)*FRNA81+PONA82(-1)*FRNA82+PONA83(-1)*FRNA83+PONA84(-1)*FRNA84+PONA85(-1)*FRNA85+PONA86(-1)*FRNA86+PONA87(-1)*FRNA87+PONA88(-1)*FRNA88+PONA89(-1)*FRNA89+PONA90(-1)*FRNA90+PONA91(-1)*FRNA91+PONA92(-1)*FRNA92+PONA93(-1)*FRNA93+PONA94(-1)*FRNA94+PONA95(-1)*FRNA95+PONA96(-1)*FRNA96+PONA97(-1)*FRNA97+PONA98(-1)*FRNA98+PONA99(-1)*FRNA99+PONA100(-1)*FRNA100

200:

$$\begin{aligned}
DTNAMA = & PONAMA00(-1)*(1-SVNAMA00) + PONAMA01(-1)*(1-SVNAMA01) + \\
& PONAMA02(-1)*(1-SVNAMA02) + PONAMA03(-1)*(1-SVNAMA03) + PONAMA04(-1)*(\\
& 1-SVNAMA04) + PONAMA05(-1)*(1-SVNAMA05) + PONAMA06(-1)*(1-SVNAMA06) + \\
& PONAMA07(-1)*(1-SVNAMA07) + PONAMA08(-1)*(1-SVNAMA08) + PONAMA09(-1)*(\\
& 1-SVNAMA09) + PONAMA10(-1)*(1-SVNAMA10) + PONAMA11(-1)*(1-SVNAMA11) + \\
& PONAMA12(-1)*(1-SVNAMA12) + PONAMA13(-1)*(1-SVNAMA13) + PONAMA14(-1)*(\\
& 1-SVNAMA14) + PONAMA15(-1)*(1-SVNAMA15) + PONAMA16(-1)*(1-SVNAMA16) + \\
& PONAMA17(-1)*(1-SVNAMA17) + PONAMA18(-1)*(1-SVNAMA18) + PONAMA19(-1)*(\\
& 1-SVNAMA19) + PONAMA20(-1)*(1-SVNAMA20) + PONAMA21(-1)*(1-SVNAMA21) + \\
& PONAMA22(-1)*(1-SVNAMA22) + PONAMA23(-1)*(1-SVNAMA23) + PONAMA24(-1)*(\\
& 1-SVNAMA24) + PONAMA25(-1)*(1-SVNAMA25) + PONAMA26(-1)*(1-SVNAMA26) + \\
& PONAMA27(-1)*(1-SVNAMA27) + PONAMA28(-1)*(1-SVNAMA28) + PONAMA29(-1)*(\\
& 1-SVNAMA29) + PONAMA30(-1)*(1-SVNAMA30) + PONAMA31(-1)*(1-SVNAMA31) + \\
& PONAMA32(-1)*(1-SVNAMA32) + PONAMA33(-1)*(1-SVNAMA33) + PONAMA34(-1)*(\\
& 1-SVNAMA34) + PONAMA35(-1)*(1-SVNAMA35) + PONAMA36(-1)*(1-SVNAMA36) + \\
& PONAMA37(-1)*(1-SVNAMA37) + PONAMA38(-1)*(1-SVNAMA38) + PONAMA39(-1)*(\\
& 1-SVNAMA39) + PONAMA40(-1)*(1-SVNAMA40) + PONAMA41(-1)*(1-SVNAMA41) + \\
& PONAMA42(-1)*(1-SVNAMA42) + PONAMA43(-1)*(1-SVNAMA43) + PONAMA44(-1)*(\\
& 1-SVNAMA44) + PONAMA45(-1)*(1-SVNAMA45) + PONAMA46(-1)*(1-SVNAMA46) + \\
& PONAMA47(-1)*(1-SVNAMA47) + PONAMA48(-1)*(1-SVNAMA48) + PONAMA49(-1)*(\\
& 1-SVNAMA49) + PONAMA50(-1)*(1-SVNAMA50) + PONAMA51(-1)*(1-SVNAMA51) + \\
& PONAMA52(-1)*(1-SVNAMA52) + PONAMA53(-1)*(1-SVNAMA53) + PONAMA54(-1)*(\\
& 1-SVNAMA54) + PONAMA55(-1)*(1-SVNAMA55) + PONAMA56(-1)*(1-SVNAMA56) + \\
& PONAMA57(-1)*(1-SVNAMA57) + PONAMA58(-1)*(1-SVNAMA58) + PONAMA59(-1)*(\\
& 1-SVNAMA59) + PONAMA60(-1)*(1-SVNAMA60) + PONAMA61(-1)*(1-SVNAMA61) + \\
& PONAMA62(-1)*(1-SVNAMA62) + PONAMA63(-1)*(1-SVNAMA63) + PONAMA64(-1)*(\\
& 1-SVNAMA64) + PONAMAGE(-1)*(1-SVNAMAGE)
\end{aligned}$$

201:

$$\begin{aligned}
DTNAFE = & PONAFE00(-1)*(1-SVNAFE00) + PONAFE01(-1)*(1-SVNAFE01) + \\
& PONAFE02(-1)*(1-SVNAFE02) + PONAFE03(-1)*(1-SVNAFE03) + PONAFE04(-1)*(\\
& 1-SVNAFE04) + PONAFE05(-1)*(1-SVNAFE05) + PONAFE06(-1)*(1-SVNAFE06) + \\
& PONAFE07(-1)*(1-SVNAFE07) + PONAFE08(-1)*(1-SVNAFE08) + PONAFE09(-1)*(\\
& 1-SVNAFE09) + PONAFE10(-1)*(1-SVNAFE10) + PONAFE11(-1)*(1-SVNAFE11) + \\
& PONAFE12(-1)*(1-SVNAFE12) + PONAFE13(-1)*(1-SVNAFE13) + PONAFE14(-1)*(\\
& 1-SVNAFE14) + PONAFE15(-1)*(1-SVNAFE15) + PONAFE16(-1)*(1-SVNAFE16) + \\
& PONAFE17(-1)*(1-SVNAFE17) + PONAFE18(-1)*(1-SVNAFE18) + PONAFE19(-1)*(\\
& 1-SVNAFE19) + PONAFE20(-1)*(1-SVNAFE20) + PONAFE21(-1)*(1-SVNAFE21) + \\
& PONAFE22(-1)*(1-SVNAFE22) + PONAFE23(-1)*(1-SVNAFE23) + PONAFE24(-1)*(\\
& 1-SVNAFE24) + PONAFE25(-1)*(1-SVNAFE25) + PONAFE26(-1)*(1-SVNAFE26) + \\
& PONAFE27(-1)*(1-SVNAFE27) + PONAFE28(-1)*(1-SVNAFE28) + PONAFE29(-1)*(\\
& 1-SVNAFE29) + PONAFE30(-1)*(1-SVNAFE30) + PONAFE31(-1)*(1-SVNAFE31) + \\
& PONAFE32(-1)*(1-SVNAFE32) + PONAFE33(-1)*(1-SVNAFE33) + PONAFE34(-1)*(\\
& 1-SVNAFE34) + PONAFE35(-1)*(1-SVNAFE35) + PONAFE36(-1)*(1-SVNAFE36) + \\
& PONAFE37(-1)*(1-SVNAFE37) + PONAFE38(-1)*(1-SVNAFE38) + PONAFE39(-1)*(\\
& 1-SVNAFE39) + PONAFE40(-1)*(1-SVNAFE40) + PONAFE41(-1)*(1-SVNAFE41) + \\
& PONAFE42(-1)*(1-SVNAFE42) + PONAFE43(-1)*(1-SVNAFE43) + PONAFE44(-1)*(\\
& 1-SVNAFE44) + PONAFE45(-1)*(1-SVNAFE45) + PONAFE46(-1)*(1-SVNAFE46) + \\
& PONAFE47(-1)*(1-SVNAFE47) + PONAFE48(-1)*(1-SVNAFE48) + PONAFE49(-1)*(\\
& 1-SVNAFE49) + PONAFE50(-1)*(1-SVNAFE50) + PONAFE51(-1)*(1-SVNAFE51) + \\
& PONAFE52(-1)*(1-SVNAFE52) + PONAFE53(-1)*(1-SVNAFE53) + PONAFE54(-1)*(\\
& 1-SVNAFE54) + PONAFE55(-1)*(1-SVNAFE55) + PONAFE56(-1)*(1-SVNAFE56) + \\
& PONAFE57(-1)*(1-SVNAFE57) + PONAFE58(-1)*(1-SVNAFE58) + PONAFE59(-1)*(\\
& 1-SVNAFE59) + PONAFE60(-1)*(1-SVNAFE60) + PONAFE61(-1)*(1-SVNAFE61) + \\
& PONAFE62(-1)*(1-SVNAFE62) + PONAFE63(-1)*(1-SVNAFE63) + PONAFE64(-1)*(\\
& 1-SVNAFE64) + PONAFEGE(-1)*(1-SVNAFEGE)
\end{aligned}$$

202:

$$DTNA = DTNAFE + DTNAMA$$

Native Population By Aae Groups

- 203: PONAFEKD == PONAFE00+PONAFE01+PONAFE02+PONAFE03+PONAFE04
- 204: PONAMAKD = PONAMA00+PONAMA01+PONAMA02+PONAMA03+PONAMA04
- 205: PONAKD == PONAFEKD+PONAMAKD
- 206: PONAFESL == PONAFE05+PONAFE06+PONAFE07+PONAFE08+PONAFE09+PONAFE10+
PONAFE11+PONAFE 12+PONAFE13+PONAFE 14+PONAFE15+PONAFE 16+PONAFE17+
PONAFE18
- 207: PONAMASL == PONAMA05+PONAMA06+PONAMA07+PONAMA08+PONAMA09+PONAMA10+
PONAMA11+PONAMA 12+PONAMA13+PONAMA 14+PONAMA15+PONAMA 16+PONAMA17+
PONAMA 18
- 208: PONASL == PONAFESL+PONAMASL
- 209: PONAFEYA == PONAFE19+PONAFE20+PONAFE21+PONAFE22+PONAFE23+PONAFE24+
PONAFE25+PONAFE26+PONAFE27+PONAFE28+PONAFE29+PONAFE30
- 210: PONAMAYA == PONAMA19+PONAMA20+PONAMA21+PONAMA22+PONAMA23+PONAMA24+
PONAMA25+PONAMA26+PONAMA2 7+PONAMA28+PONAMA29+PONAMA30
- 211: PONAYA = PONAFEYA+PONAMAYA
- 212: PONAFEMD == PONAFE31+PONAFE32+PONAFE33+PONAFE34+PONAFE35+PONAFE36+
PONAFE37+PONAFE38+PONAFE39+PONAFE40+PONAFE4 1+PONAFE42+PONAFE43+
PONAFE44+PONAFE45+PONAFE46+6+PONAFE47+PONAFE48+PONAFE49+PONAFE50+
PONAFE51+PONAFE52+PONAFE53+PONAFE54+PONAFE55+PONAFE56+PONAFE5 7+
PONAFE58+PONAFE59+PONAFE60+PONAFE6 1+PONAFE62+PONAFE63+PONAFE64
- 213: PONAMAMD == PONAMA31+PONAMA32+PONAMA33+PONAMA34+PONAMA35+PONAMA36+
PONAMA37+PONAMA38+PONAMA39+PONAMA40+PONAMA4 1+PONAMA42+PONAMA43+
PONAMA44+PONAMA45+PONAMA46+PONAMA47+PONAMA48+PONAMA49+PONAMA50+
PONAMA51+PONAMA52+PONAMA53+PONAMA54+PONAMA55+PONAMA56+PONAMAS 7+
PONAMA58+PONAMA59+PONAMA60+PONAMA6 1+PONAMA62+PONAMA63+PONAMA64
- 214: PONAMD == PONAFEMD+PONAMAMD
- 215: PONAFEAT == PONAFEYA+PONAFEMD
- 216: PONAMAAT = PONAMAYA+PONAMAMD
- 217: PONAAT == PONAFEAT+PONAMAAT

Native Population Summary Variables

218: PONA FE == PONA FEKD+PONA FESL+PONA FEYA+PONA FEMD+PONA FEGE
219: PONA MA == PONA MAKD+PONA MAS L+PONA MAYA+PONA MAMD+PONA MAGE
220: PONA == PONA FE+PONA MA
221: CHPONA FE == PONA FE-PONA FE(-1)
222: CHPONA MA = PONA MA-PONA MA (-1)
223: CHPONA == CHPONA FE+CHPONA MA
224: CHPONA RA == CHPONA/PONA(-1)
225: NTICNA == BTNA-DTNA
226: NTICNARA == NTICNA/PONA(-1)
227: MGNA == CHPONA-NTICNA
228: MGNARA == MGNA/PONA(-1)

Non-Native Population

229: PONNKD = PONNKDPA*EMNN
230: PONNSL = PONNSLPA*EMNN
231: PONNYA = PONNYAPA*EMNN
232: PONNMD = PONNMDPA*EMNN
233: PONNGE = PONNGEPA*EMNN
234: PONN = PONNKD+PONNSL+PONNYA+PONNMD+PONNGE
235: CHPONN = PONN-PONN(-1)
236: CHPONNRA == CHPONN/PONN(-1)
237: MGNN == CHPONN
23a : MGNRA == CHPONNRA
239: BTNN == 0
240: DTNN = 0
241: NTICNN == 0
242: NTICRANN == 0
243: PORE == PONA+PONN

244: CHPORE == PORE-PORE(-1)
245: CHPORA == CHPORE/PORE (-1)
246: PONRTO = EMNR
247: PONRAV = PONRAVC1*PONRTO

Population Totals

248: POTO = PORE+PONRAV
249: POKD == PONAkd+PONNKD
250: POSL == PONASL+PONNSL
251: POYA == PONAYA+PONNYA
252: POMD == PONAMD+PONNMD
253: POGE == PONAGE+PONNGE
254: MG == MGNA+MGNN
255: NTIC == NTICNA+NTICNN
256: BT = BTNA+BTNN
257: DT == DTNA+DTNN
258: NTICRA = NTIC/PORE (-1)
259: MGRA = MG/PORE(-1)

EMPLOYMENT MODEL

260: EMGOCT = IF YR LE 1984 THEN EMGOCTX ELSE EMGOCTC1*SPLOGOCT
261: EMCTGO = IF YR LE 1984 THEN EMCTGOX ELSE EMCTGOC1*SPLOGOCT
262: EMGOOP = IF YR LE 1984 THEN EMGOOPX ELSE EMGOOPC1*SPLOGOOP
263: EMSUEG = IF YR LE 1984 THEN EMSUEGX ELSE EMSUEGC1*EMRE
264: Z.03 = 0
265: Z.05 == 0
266: EMT0 == IF YR LE 1984 THEN EMT0X ELSE EMGOOP+EMGOCT+EMCTGO+EMSUEG+
EMBAOI+EMBAOT+EMGONL
267: EMNOOI == EMGOOP+EMGOCT+EMCTGO+EMSUEG+EMBAOT+EMGONL
268: EMCT == EMGOCT+EMCTGO

INCOME MODEL

269: $INN\dot{w}NA = INN\dot{w}PCNA * PONA$

270: $INN\dot{w}NN = INN\dot{w}PCNN * PONN$

271: $INWANA = EMNA * WA$

272: $INWANN = EMNN * WA$

273: $INNA = INN\dot{w}NA + INWANA$

274: $INNN = INN\dot{w}NN + INWANN$

275: $IN = INNA + INNN$

276: $INPC = IN / PORE$

277: $INPCNA = INNA / PONA$

278: $INPCNN = INNN / PONN$

LABOR MARKET MODEL

279: LSNA = PONAAT*LFPRNA
280: LDNAGOOP == SANAGOOP*EMGOOP
281: LDNAGOCT == SANAGOCT*EMGOCT
282: LDNACTGO == SANACTGO*EMCTGO
283: LDNASUEG == SANASUEG*EMSUEG
284: LDNABAOI == SANABAOI*EMBAOI
285: LDNABAOT == SANABAOT*EMBAOT
286: LDNAGONL == SANAGONL*(EMGONL-EMNRGONL)
287: LDNANOOI = LDNAGOOP+LDNAGOCT+LDNACTGO+LDNASUEG+LDNABAOT+LDNAGON L
288: EMNANOOI == IF LDNANOOI GT LSNA-EMNAOIEX THEN LSNA-EMNAOIEX ELSE
LDNANOOI
289: LSNAOI == IF LDNANOOI GT LSNA-EMNAOIEX THEN EMNAOIEX ELSE (LSNA-
EMNAOIEX-LDNANOOI)*LSNAOIPA+EMNAOI EX
290: EMNAOI = IF LDNABAOI GT LSNAOI THEN LSNAOI ELSE LDNABAOI
291: EMNA = EMNANOOI+EMNAOI
292: UNNA == IF EMNA GE LSNA THEN OELSE LSNA-EMNA
293: UNRANA == UNNA/LSNA
294: EMNAGOOP == LDNAGOOP/LDNANOOI*EMNANOOI
295: EMNAGOCT == LDNAGOCT/LDNANOOI*EMNANOOI
296: EMNACTGO == LDNACTGO/LDNANOOI*EMNANOOI
297: EMNASUEG == LDNASUEG/LDNANOOI*EMNANOOI
298: EMNABAOT == LDNABAOT/LDNANOOI*EMNANOOI
299: EMNAGONL = LDNAGONL/LDNANOOI*EMNANOOI
300: EMNNGONL == EMGONL-EMNAGONL-EMNRGONL
301: EMNNGOOP == EMGOOP-EMNAGOOP
302: EMNNSUEG == EMSUEG-EMNASUEG

303: EMNNBAOT == EMBAOT-EMNABAOT
304: EMNNGOCT == EMGOCT-EMNAGOCT
305: EMNRCTGO == EMCTGO-EMNACTGO
306: EMNRBAOI = EMBAOI-EMNAOI
307 : EMNROI == EMNRBAOI
308: EMNR = EMNRGONL+EMNRBAOI+EMNRCTGO
309: EMNN = EMNNGONL+EMNNSUEG+EMNNBAOT+EMNNGOOP+EMNNGOCT
310: EMRE = EMNA+EMNN
311: UNRANAFI = UNRANA-OUMGLANA/LSNA

M IGRATION MODEL

312: OUMGLANA = IF UNRANA GT UNRANAPA THEN (UNRANA-UNRANAPA)*LSNA ELSE
(IF UNRANA GT UNRANAFI(-1) THEN UNINMGSH*(UNRANA-UNRANAFI(-1))*
LSNA ELSE 0)

313: OUMGSHNA = OUMGLANA/PONAAT

FISCAL MODEL

314: CSDBFU == CSDBFUC0*BDSA+CSDBFUC1*BDSA(-1)+CSDBFUC2*BDSA(-2)+
CSDBFUC3*BDSA(-3) +CSDBFUC4*BDSA(-4) +CSDBFUC5*BDSA(-5) +CSDBFUC6*
BDSA(-6)+CSDBFUC7*BDSA (-7)+CSDBFUC8*BDSA (-8)+CSDBFUC9*BDSA (-9)

315: CSDBTO == CSDBCU+CSDBFU

316: RVPYDB == IF YR LE 1985 THEN RVPYDBX ELSE CSDBTO

317: RVNPOP = IF YR LE 1985 THEN RVNPOPX ELSE PORE*RVNPOPPC

318: GOFN = IF YR LE 1985 THEN GOFNX ELSE (IF GOFN(-1)+BDSA-SPLOGOCT
GE 0 THEN GOFN(-1)+BDSA-SPLOGOCT ELSE 0)

319: BDSA = IF YR LE 1985 THEN BDSAX ELSE (IF SPLOGOCT LT GOFNPA*GOFN(
-1) THEN 0 ELSE SPLOGOCT-GOFNPA*GOFN (-1))

320: RVIT = IF YR LE 1985 THEN RVITX ELSE ITRA*GOFN

321: VATO == VAOICU+VAOIFU

322: TARADB == IF YR LE 1985 THEN TARADBX ELSE RVPYDB/VATO

323: RVPYOP = IF YR LE 1985 THEN RVPYOPX ELSE (IF POTO*RVPYOPPC LT (
TARATOLI-TARADB)*VATO AND POTO*RVPYOPPC LT TARAOPLI*VATO THEN POTO
*RVPYOPPC ELSE (IF (TARATOLI-TARADB)*VATO LT TARAOPLI*VATO THEN (
TARATOLI-TARADB) *VATO ELSE TARAOPLI*VATO))

324: RVOPCFI == RVPYOP/POTO

325: RVOPTO == IF YR LE 1985 THEN RVOPTOX ELSE RVNPOP+RVPYOP+RVIT

326: SPLOGOOP = IF YR LE 1986 THEN SPLOGPX ELSE RVOPTO

327: CSOP = IF YR LE 1986 THEN CSOPX ELSE CSOP(-1)+CSOPC0*SPLOGOCT+
CSOPC1*SPLOGOCT(-1)+CSOPC2*SPLOGOCT (-2)+CSOPC3*SPLOGOCT (-3)

328: DFOPPT = RVOPTO-CSOP

329: RVPYTO == IF YR LE 1985 THEN RVPYTOX ELSE RVPYOP+RVPYDB

330: RVTO == RVOPTO+RVPYDB

331: SPTO = SPLOGOOP+SPLOGOCT+CSDBTO

332: TARAOP == IF YR LE 1985 THEN TARAOPX ELSE RVPYOP/VATO

333: TARA = IF YR LE 1985 THEN TARAX ELSE RVPYTO/VATO

VILLAGE ALLOCATION EQUATIONS

- 334: POANPA == POANPAC1*PORE
335: POATKA == POATKAC1*PORE
336: POBARR == POBARRC1*PORE
337: POKAKT == POKAKTC1*PORE
338: PONUIQ == PONUIQC1*PORE
339: POPOHO = POPOHOC1*PORE
340: POPOLA == POPOLAC1*PORE
341: POWAIN == POWAINC1*PORE
342: EMANPA == EMANPAC1*EMRE
343: EMATKA == EMATKAC1*EMRE
344: EMBARR == EMBARRC1*EMRE
345: EMKAKT == EMKAKTC1*EMRE
346: EMNUIQ == EMNUIQC1*EMRE
347: EMPOHO == EMPOHOC1*EMRE
348: EMPOLA == EMPOLAC1*EMRE
349: EMWAIN == EMWAINC1*EMRE

APPENDIX B

ASSUMPTIONS FOR NORTH SLOPE MODEL BASE CASE PROJECTIONS

For this study, we have prepared fifteen different North Slope Model "cases," or sets of projections. The names of the cases are as follows:

Medium Base Case

Low Migration Base Case

High Migration Base Case

Low Revenues Base Case

High Revenues Base Case

Moderate **High** Revenues Base Case

Low Employment Base Case

High Employment Base **Case**

Extreme **Low** Base Case

Extreme High Base Case

High Impact Base Case

Sale 97 Medium Impact Case

Sale 97 High **Impact** Case

Sale **109** **Medium Impact** Case

Sale **109** High **Impact** Case

In this appendix, we fully document the assumptions used for these cases. We begin **by** documenting **all of** the assumptions used for the medium base case. Table B-1 provides a summary of these assumptions **while** Tables B-2 through B-21 provide detailed documentation. **Following** Table B-21, we document how the assumptions used for the other cases differ from those **of** the medium base case. **We** discuss **our** key assumptions and their implications in detail in Chapters **VIII** and **IX**.

TABLE B-1.
SUMMARY OF ASSUMPTIONS USED FOR NORTH SLOPE
MODEL MEDIUM EASE CASE "PROJECTIONS"

<u>Category</u>	<u>Assumption</u>
<u>POPULATION MODEL</u>	
● Native birth rates and survival rates	Based on 1980 census data for non-Anchorage Alaska Natives
● Age distribution of Non-Native residents	1990 age distribution
● Maximum unemployment rate for Natives (unemployment cannot rise above this rate due to out-migration)	50 percent
● Share of newly unemployed workers who leave the North Slope	20 percent
<u>EMPLOYMENT MODEL</u>	
● Federal and state gov't employment	Historical until 1984; then remains at 1984 level of 178 .
● Support employment	.24 x (resident employment)
● Borough CIP employment	2.02 x (Borough CIP spending in \$million)
● Other CIP employment	2.20 x (Borough CIP spending in \$million)
● Borough operating employment	13.09 x (Borough operations spending in \$million)
● Oil industry-related employment	Declines gradually from 7191 in 1986 to 3344 in 2000 and 1461 in 2010 ; based on ISER MAP model assumptions
● Minimum number of oil jobs reserved for natives	Constant at 30
<u>INCOME MODEL</u>	
● Per capita transfer income	\$1,450 for Natives; 0 for Non-Natives
● Wage rate (all jobs)	\$37,500 per year

<u>Category</u>	<u>Assumption</u>
<u>LABOR MARKET MODEL</u>	
● Labor force participation rate	Equivalent to 74.1% for adult Natives between ages 19 and 64; 100% for adult Non-Natives . Only 10% of Natives unable to find other work are assumed to be willing to take oil industry jobs
● Share of jobs available to Natives, by type of employment	56% Borough operations jobs 83% of Borough CIP jobs 37% of other CIP jobs 55% of support jobs 32% of federal and state jobs 2% of oil industry jobs
<u>FISCAL MODEL</u>	
● Per capita nonproperty tax non-interest operating revenues (state and federal transfers)	Declines from \$6,410 in 1985 to \$4210 in 2010 due to drop in state revenues
● State-imposed per capita property tax limit for operating revenues	Constant at 1985 level of \$5009
● Property value	Rises from \$12.3 billion in 1985 to \$16.3 billion in 1990; then declines steadily to \$4 billion in 2010
e Borough CIP expenditures	Decline from \$211 million in 1985 to annual level of \$5 million after 1990.

TABLE B-2
 NATIVE RESIDENT POPULATION ASSUMPTIONS FOR 1980
 (PONAFO01-PONAFEGE, PONAMA01-PONAMAGE)

<u>Age</u>	<u>Male</u>	<u>Female</u>	<u>Age</u>	<u>Male</u>	<u>Female</u>
Less than 1	46*	42*	34	20	21
1	44*	41	35	11	16*
2	27	41*	36	30*	16*
3	32	20	37	17	10
4	38	31	38	16	16*
5	35	29	39	24*	16
6	25	39	40	11	13
7	28	36	41	15	14
8	32	21	42	20	16
9	39	36	43	13	10
10	19	28	44	14	11
11	30	21	45	17	12
12	20	35	46	13	8
13	51	38	47	21*	?6
14	47	59	48	19	8
15	65	49	49	13	10
16	45	46	50	8	13
17	44	46	51	9	12
18	36	43	52	15	5
19	46	45*	53	18	12
20	34	35	54	14	9
21	37	39	55	11	10
22	42*	28	56	5	1?
23	36	34	57	11	5
24	45*	35*	58	6	5
25	38	22	59	13	8
26	37	22	60	6	9
27	34	26	61	7	3
28	30	26	62	4	5
29	34	31	63	4	8
30	20	29	64	7	2
31	30	13	65+	75**	62*
32	22	17			
33	24	14			

*Cohort population reduced by 1 from figure shown in Table F-60 to make population figures consistent with those in Table II-2.

**Cohort population reduced by 2 from Table F-60 to make population figures consistent with those in Table II-2.

Table B-2 (Continued)

Subtotals

<u>Age</u>	<u>Variable Name</u>	<u>Male</u>	<u>Variable Name</u>	<u>Female</u>	<u>Variable Name</u>	<u>Total</u>
Children (0-4)	PONAMAKD	187	PONAFEKD	175	PONAKD	362
School-Age (5-18)	PONAMASL	516	PONAFESL	526	PONASL	1,042
Young Adult (19-30)	PONAMAYA	433	PONAFEYA	372	PONAYA	805
Middle-Age (31-64)	PONAMAM	488	PONAFEMD	394	PONAMD	882
Aged (65 +)	PONAMAGE	75	PONAFEGE	62	PONAGE	137
TOTAL	PONAFE	1,699	PONAMA	1,509	PONA	3,208

SOURCE: U.S. Census Data. See Appendix Table F-60. Also see the discussion in Chapter II.

TABLE B-3
NON-NATIVE POPULATION ASSUMPTIONS

<u>Age Group</u>	<u>Parameter</u>	<u>Ratio of Non-Native Employment to Non-Native Population</u>
<u>1980 Non-Native Population</u>		
Preschool (0-4)	PONNKD	47
School-aged (5-18)	PONNSL	93
Young adult (19-30)	PONNYA	228
Middle-aged (30-64)	PONNMD	245
Aged (65 +)	PONNGE	6
<u>1980 Total Non-Native Population</u>	PONN	<u>619</u>

SOURCE: Extrapolated from Table F-8.

1980 Non-Native Employment (In Villages)

EMNN	<u>473</u>
------	------------

NOTE : We assume that **all** non-Native adults are employed.

Non-Native Population Parameters

Preschool (0-4)	PONNKDPA	<u>.099</u>
School-aged (5-18)	PONNSLPA	<u>.197</u>
Young adult (19-30)	PONNYAPA	<u>.482</u>
Middle-aged (30-64)	PONNMDPA	<u>.518</u>
Aged (65 +)	PONNGEPA	<u>.013</u>

Nonresident Population (PONR)

1980	2,978
1981	4,644
1982	5,058
1983	5,399
1984	4,861

SOURCE : Calculated as $.666 * EMNR$. Figures for **EMNR** are from Table D-1.

TABLE B-4
NATIVE SURVIVAL RATE ASSUMPTIONS FOR POPULATION MODEL

(Share of Cohort which does not die each year)

<u>Age Group</u>	<u>Native Male Survival Rates</u>		<u>Native Female Survival Rates</u>	
	<u>Coefficient Name</u>	<u>Rate</u>	<u>Coefficient Name</u>	<u>Rate</u>
Less than 1	SVNAMA00	.9682	SVNAFE00	.9770
1	SVNAMA01	.9984	SVNAFE01	.9992
2	SVNAMA02	.9984	SVNAFE02	.9992
3	SVNAMA03	.9984	SVNAFE03	.9992
4	SVNAMA04	.9984	SVNAFE04	.9992
5	SVNAMA05	.9991	SVNAFE05	.9994
6	SVNAMA06	.9991	SVNAFE06	.9994
7	SVNAMA07	.9991	SVNAFE07	.9994
8	SVNAMA08	.9991	SVNAFE08	.9994
9	SVNAMA09	.9991	SVNAFE09	.9994
10	SVNAMA10	.9988	SVNAFE10	.9997
11	SVNAMA11	.9988	SVNAFE11	.9997
12	SVNAMA12	.9988	SVNAFE12	.9997
13	SVNAMA13	.9988	SVNAFE13	.9997
14	SVNAMA14	.9988	SVNAFE14	.9997
15	SVNAMA15	.9926	SVNAFE15	.9963
16	SVNAMA16	.9926	SVNAFE16	.9963
17	SVNAMA17	.9926	SVNAFE17	.9963
18	SVNAMA18	.9926	SVNAFE18	.9963
19	SVNAMA19	.9926	SVNAFE19	.9963
20	SVNAMA20	.9897	SVNAFE20	.9978
21	SVNAMA21	.9897	SVNAFE21	.9978
22	SVNAMA20	.9897	SVNAFE22	.9978
23	SVNAMA23	.9897	SVNAFE23	.9978
24	SVNAMA24	.9897	SVNAFE24	.9978
25	SVNAMA25	.9906	SVNAFE25	.9961
26	SVNAMA26	.9906	SVNAFE26	.9961
27	sVm&5. A27	.9906	SVNAFE27	.9961
28	SVNAMA28	.9906	SVNAFE28	.9961
29	SVNAMA29	.9906	SVNAFE29	.9961
30	SVNAMA30	.9949	SVNAFE30	.9963
31	SWAMA31	.9949	SVNAFE31	.9963
32	SWAMA32	.9949	SVNAFE32	.9963
33	SVNAMA33	.9949	SVNAFE33	.9963
34	SVNAMA34	.9949	SVNAFE34	.9963
35	SVNAMA35	.9925	SVNAFE35	.9980
36	SVNAMA36	.9925	SVNAFE36	.9980
37	SWAMA37	.9925	SVNAFE37	.9980
38	SVNAMA38	.9925	SVNAFE38	.9980
39	SWAMA39	.9925	SVNAFE39	.9980
40	SVNAMA40	.9911	SVNAFE40	.9942

TABLE B-4. (Continued)

<u>Age Group</u>	<u>Native Male Survival Rates</u>		<u>Native Female Survival Rates</u>	
	<u>Coefficient</u>	<u>Rate</u>	<u>Coefficient Name</u>	<u>Rate</u>
41	SVNAMA41	.9911	SVNAFE41	.9942
42	SVNAMA42	.9911	SVNAFE42	.9942
43	SVNAMA43	.9911	SVNAFE43	.9942
44	SVNAMA44	.9911	SVNAFE44	.9942
45	SVNAMA45	.9948	SVNAFE45	.9979
46	SVNAMA46	.9948	SVNAFE46	.9979
47	SVNAMA47	.9948	SVNAFE47	.9979
48	SVNAMA48	.9948	SVNAFE48	.9979
49	SVNAMA49	.9948	SVNAFE49	.9979
50	SVNAMA50	.9883	SVNAFE50	.9887
51	SVNAMA51	.9883	SVNAFE51	.9887
52	SVNAMA52	.9883	SVNAFE52	.9887
53	SVNAMA53	.9883	SVNAFE53	.9887
54	SVNAMA54	.9883	SVNAFE54	.9887
55	SVNAMA55	.9754	SVNAFE55	.9908
56	SVNAMA56	.9754	SVNAFE56	.9908
57	SVNAMA57	.9754	SVNAFE57	.9908
58	SVNAMA58	.9754	SVNAFE58	.9908
59	SVNAMA59	.9754	SVNAFE59	.9908
60	SVNAMA60	.9677	SVNAFE60	.9862
61	SVNAMA61	.9677	SVNAFE61	.9862
62	SVNAMA62	.9677	SVNAFE62	.9862
63	SVNAMA63	.9677	SVNAFE63	.9862
64	SVNAMA64	.9677	SVNAFE64	.9862
65+	SVNAMAGE	.9351	SVNAFE6E	.9351

SOURCE: Alaska vital statistics data. See discussion in Appendix A.

TABLE B-5
NATIVE FERTILITY RATE ASSUMPTIONS

<u>Age Group</u>	<u>Coefficient</u>	<u>Fertility Rate</u>
15	FRNA15	.1367
16	FRNA16	.1367
17	FRNA17	.1367
18	FRNA18	.1367
19	FRNA19	.1367
20	FRNA20	.2898
21	FRNA21	.2898
22	FRNA22	.2898
23	FRNA23	.2898
24	FRNA24	.2898
25	FRNA25	.1615
26	FRNA26	.1615
27	FRNA27	.1615
28	FRNA28	.1615
29	FRNA29	.1615
30	FRNA30	.0914
31	FRNA31	.0914
32	FRNA32	.0914
33	FRNA33	.0914
34	FRNA34	.0914
35	FRNA35	.0439
36	FRNA36	.0439
37	FRNA37	.0439
38	FRNA38	.0439
39	FRNA39	.0439
40	FRNA40	.0133
41	FRNA41	.0133
42	FRNA42	.0133
43	FRNA43	.0133
44	FRNA44	.0133
45	FRNA45	.0133

SOURCE : Alaska vital statistics data. See discussion in Appendix A.

Share of Male Infants (assumed) **SXDVNA** .5

TABLE B-6.
NONRESIDENT POPULATION PARAMETERS

Ratio of peak number of nonresident
persons present at any given time to
nonresident employment (**PONRPEC1**) 1

Ratio of year-round average of the
number of nonresident workers present
to annual average nonresident employment
(**PONRAVC1**) .666

NOTE : The assumption for **PONRAVC1** assumes that nonresident workers
work a "two-week-on/one-week-off" schedule, on average. The
ratio for **PONRPEC1** assumes that peak nonresident employment
is 50 percent higher than average nonresident employment.

TABLE B-7.
BOROUGH PROPERTY VALUE ASSUMPTIONS

<u>Year</u>	<u>Property Value Including Currently Existing or Scheduled Facilities (VAOICU) (\$000)(a)</u>	<u>Property Value of Future Oil Facilities (VAOIFU) (\$000)</u>
1980	5,061,955	0
1981	5,723,582	0
1982	6,621,652	0
1983	8,186,986	0
1984	9,996,289	0
1985	12,261,421	0
1986	13,420,000	0
1987	14,730,000	0
1988	15,510,000	0
1989	16,100,000	0
1990	16,290,000	0
1991	15,990,000	0
1992	15,680,000	0
1993	15,340,000	0
1994	14,980,000	0
1995	14,550,000	0
1996	14,070,000	0
1997	13,550,000	0
1998	12,950,000	0
1999	12,280,000	0
2000	11,500,000	0
2001	70,720,000	0
2002	9,940,000	0
2003	9,160,000	0
2004	8,380,000	0
2005	7,600,000	0
2006	6,820,000	0
2007	5,040,000	0
2008	5,260,000	0
2009	4,480,000	0
2010	3,700,000	0

(a) Fiscal years 1980-1985 are from **Table K-1**. Figures for 1986-2000 are from **Table K-3**. Figures for 2001-2010 calculated by reducing property values by \$780 million per year, or the amount by which they are projected to fall between 1999 and 2000.

TABLE B-8.
BOROUGH REVENUE ASSUMPTIONS

<u>Year</u>	<u>Nonproperty Tax Noninterest Operating Revenues Per Capita (RVNPOPPC) (\$000) (a)</u>	<u>Property Tax Operating Revenue Limit per Capita (RVPYOPPC) (\$000) (b)</u>
1980	4 . 7 5	3.195
1981	5.22	3.601
1982	8.29	3.914
1983	8.40	4.761
1984	7.20	5.119
1985	6.41	5.099
1986	5.79	5.099
1987	5.64	5.099
1988	5 . 8 1	5 . 0 9 9
1989	5.35	5.099
1990	5.07	5.099
1991	5.21	5.099
1992	5.19	5 . 0 9 9
1993	5.20	5.099
1994	5.23	5.099
1995	5.17	5.099
1996	5.05	5.099
1997	4.93	5.099
1998	4.81	5.099
1999	4.68	5.099
2000	4.58	5.099
2001	4.90	5.099
2002	4.89	5.099
2003	4.79	5.099
2004	4.69	5.099
2005	4.59	5.099
2006	4.51	5.099
2007	4.43	5.099
2008	4.35	5.099
2009	4.28	5.099
2010	4.21	5 . 0 9 9

Please see notes on following page.

**Table B-8.
(Continued)**

(a) Per capita nonproperty tax/noninterest operating revenues assumptions (RVNPOPPC): Values for 1980-1984 were calculated by dividing the figures for RVNPOP in Table B-11 by resident population estimates from a preliminary North Slope Model run. Since these values for RVNPOP are assumed for these years in any case, the assumptions for RVNPOPPC do not affect the projections. Values for the years 1985-2010 were calculated as follows:

Assumed 1985 resident population (based on preliminary North Slope model run) = 5,068

	<u>Total</u>	<u>Per Capita</u>
1985 NSB Intergovernmental Revenues =	21.3 million	4.20
1985 Sales Tax/Service Charge Revenues =	11.2 million	2.21

We assume that per capita sales tax and service charge revenues will remain constant. We assume that intergovernmental revenues per capita will decline in proportion to the decline in real per capita state government expenditures projected in Berman et al., "Alaska Statewide and Regional Economic and Demographic Systems: Effects of OCS Exploration and Development, 1985," SESP Technical Report No. 115 (Anchorage, Minerals Management Service, June 1985), page G-11, as shown in Table B-8a.

(b) Values for 1980-1985 from Table G-4. Assumed to remain constant at 1985 level in future years.

Maximum legal tax rate for operating expenditures (TARAOPLI) : .03

TABLE B-8a.

CALCULATION OF PER CAPITA NONPROPERTY-TAX
NONINTEREST OPERATING REVENUES ASSUMPTIONS

Year	1985 population	5068	Per capita State Expenditures in 1984 \$	Index of Per capita State Expenditures in 1984 \$	Assumed per capita intergovernmental revenues	Assumed per capita sales tax and service charges revenues	Assumed per capita non-property tax non-interest operating revenues (1985=100)
1985	6938	1.000			4.20	2.21	6.41
1986	5910	0.852			3.88	2.21	5.79
1987	5657	0.814			3.62	2.21	5.64
1988	5448	0.757			3.50	2.21	5.81
1989	5188	0.748			3.14	2.21	5.35
1990	4717	0.680			2.86	2.21	5.07
1991	4952	0.714			3.00	2.21	5.21
1992	4916	0.709			2.99	2.21	5.19
1993	4941	0.712			2.99	2.21	5.20
1994	4983	0.718			3.00	2.21	5.23
1995	4882	0.704			2.96	2.21	5.17
1996	4685	0.675			2.84	2.21	5.05
1997	4484	0.646			2.72	2.21	4.93
1998	4292	0.619			2.60	2.21	4.81
1999	4081	0.588			2.47	2.21	4.68
2000	3906	0.563			2.37	2.21	4.58
2001	4437	0.640			2.69	2.21	4.90
2002	4418	0.637			2.68	2.21	4.89
2003	4254	0.613			2.58	2.21	4.79
2004	4095	0.590			2.48	2.21	4.69
2005	3937	0.567			2.38	2.21	4.59
2006	3795	0.547			2.30	2.21	4.51
2007	3664	0.528			2.22	2.21	4.43
2008	3533	0.509			2.14	2.21	4.35
2009	3413	0.492			2.07	2.21	4.28
2010	3304	0.476			2.00	2.21	4.21

TABLE 2-9
CIP EXPENDITURE ASSUMPTIONS

<u>Year</u>	<u>Borough CIP Expenditures (SPLLOGCT) (\$000) (a)</u>
1980	93,000
1981	131,000
1982	211,000
1983	302,000
1984	211,000
1985	199,000
1986	124,000
1987	81,000
1988	35,000
1989	31,000
1990	5,000
1991	5,000
1992	5,000
1993	5,000
1994	5,000
1995	5,000
1996	5,000
1997	5,000
1998	5,000
1999	5,000
2000	5,000
2001	5,000
2002	5,000
2003	5,000
2004	5,000
2005	5,000
2006	5,000
2007	5,000
2008	5,000
2009	5,000
2010	5,000

SOURCE: CIP expenditures through 1989 are from Table J-2. Subsequent expenditures of \$5 million are assumed.

TABLE B-10.
DEBT REPAYMENT ASSUMPTIONS

<u>Year</u>	<u>Current Debt Repayment Schedule (CSOBCU) (\$000)(a)</u>
1980	26,080
1981	35,617
1982	67,686
1983	95,311
1984	129,950
1985	188,078
1986	199,717
1987	208,894
1988	218,456
1989	210,322
1990	183,166
1991	98,545
1992	160,272
1993	151,122
1994	140,638
1995	130,076
1996	77,322
1997	38,826
1998	31,355
1999	16,210
2000	15,735
2001	15,320
2002	14,915
2003	14,560
2004	14,145
2005	13,770
2006	8,425
2007	0
2008	0
2009	0
2010	0

(a) Fiscal years; source is Table IV-3.

TABLE B-11.
ASSUMED VALUES FOR ENDOGENOUS FISCAL VARIABLES
 1980- 1985

<u>Variable</u>	<u>Definition</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>
RVPYOP	Property tax operating revenues in \$000	26,100 III-2	26,400 III-2	34,800 III-2	38,500 III-2	33,100 III-2	40,600 III-2	
RVPYDB	Property tax debt svc. revenues in \$000	26,300 III-2	32,800 III-2	75,000 III-2	95,200 III-2	118,900 III-2	184,600 III-2	
RVNPOP	Nonproperty tax, non-interest. operating income	18,200 (a)	22,000 (a)	34,900 (a)	37,300 (a)	40,200 (a)	32,600 (a)	
RVOPTO	Total operating revenues	51,900 III-2	57,200 III-2	114,100 III-2	120,200 III-2	132,500 III-2	117,700 III-2	
RVPYTO	Total property tax revenues	52,400 III-2	59,100 III-2	109,700 III-2	133,700 III-2	152,400 III-2	225,300 III-2	
RVIT	Interest income	7,400 III-2	8,800 III-2	44,400 III-2	44,400 III-2	59,200 III-2	44,500 III-2	
GOFN	North Slope Borough average cash balance	24,000 (b)	88,000 (b)	444,000 (b)	444,000 (b)	592,000 (b)	445,000 (b)	
SPLOGOOP or SPLOGPX	Local government operations spending	39,685 J-1	50,020 J-1	63,506 J-1	68,807 J-1	78,544 J-1	102,577 J-3	96,896 J-3
CSOP	Operating costs	39,685 J-1	50,020 J-1	63,506 J-1	68,807 J-1	18,544 J-1	102,577 J-3	96,896 J-3
TARA	Total tax rate	.01035 G-3	.01033 G-3	.01670 G-3	.01642 G-3	.01531 G-3	.01837 G-3	
TARAOP	Tax rate for operations	.00521 G-3	.00507 G-3	.00547 G-3	.00414 G-3	.00334 G-3	.00331 G-3	
TARA0B	Tax rate for debt service	.00514 G-3	.00520 G-3	.01123 G-3	.01228 G-3	.01197 G-3	.01506 G-3	

(a) Calculated as RVOPTO-RVPYOP-RVPYIT.

(b) Assumed to be 10 * RVIT.

NOTE : Source tables or pages are shown below each value.

TABLE B-12.
MARGINAL INCREASE IN CURRENT YEAR OPERATING COSTS
AS SHARE OF CONSTRUCTION EXPENDITURES IN
CURRENT AND PREVIOUS YEARS

Share of current year construction expenditures (CSOPC0)	.025
Share of previous year construction expenditures (CSOPC1)	.025
Share of construction expenditures 2 years ago (CSOPC2)	.025
Share of construction expenditures 3 years ago (CSOPC3)	.025

NOTE: Based on assumptions that annual operating costs are 10 percent of construction costs, and that capital projects are completed over a four-year period.

*

MARGINAL INCREASE IN CURRENT YEAR DEBT SERVICE
AS SHARE OF BOND SALES IN
CURRENT AND PREVIOUS YEARS

Share of current year bond sales (CSDBFUC0)	.16
Share of previous year bond sales (CSDBFUC1)	.16
Share of bond sales 2 years ago (CSDBFUC2)	.16
Share of bond sales 3 years ago (CSDBFUC3)	.16
Share of bond sales 4 years ago (CSDBFUC4)	.16
Share of bond sales 5 years ago (CSDBFUC5)	.16
Share of bond sales 6 years ago (CSDBFUC6)	.16
Share of bond sales 7 years ago (CSDBFUC7)	.16
Share of bond sales 8 years ago (CSDBFUC8)	.16
Share of bond sales 9 years ago (CSDBFUC9)	.16

Assumes an interest rate of 10 percent and repayment in ten years with a constant **annual** payment.

TABLE B.13.
STARTUP VALUES FOR BOROUGH CIP SPENDING
AND FUTURE BOND SALES, FOR PURPOSES OF CALCULATING
FUTURE OPERATING COSTS AND FUTURE DEBT SERVICE

SPLOGOCT (Borough **CIP** Spending): zero for 1970-1980.

BDSAFU (Future Bond Sales): zero for 1980-1985.

TABLE B-14.
OTHER FISCAL MODEL PARAMETER ASSUMPTIONS

<u>Parameter</u>	<u>Definition</u>	<u>Value</u>
GOFNPA	"Government fund parameter"; assumed maximum share of current holdings from past bond sales used to fund NSB CIP spending in any one year.	.5
ITRA	"Interest rate"; assumed rate of Interest earned on NSB cash holdings.	.1
TARATOLI	Assumed maximum total property tax rate at which the NSB can tax, based on NSB administration policy decision (based on FY 1985 value given in Table G-3).	.01837

TABLE B-15.
EXOGENOUS EMPLOYMENT ASSUMPTIONS

	Minimum or Exog. Native Oil Industry Employment ^a (EMNAOIEX)	Total Oil Industry Employment ^b (EMBAOI)	Other Basic Industry Employment ^c (EMBAOT)	Total State and Federal Gov't Employment ^d (EMGONL)	Nonresident State and Fed Gov't Employment ^d (EMNRGONL)
1980	30	4.246	0	291	211
1981	30	6.703	0	260	180
1982	30	7.228	0	203	123
1983	30	7.791	0	177	97
1984	30	6.939	0	178	98
1985	30	6.014	0	178	98
1986	30	7.191	0	178	98
1987	30	6.696	0	178	98
1988	30	4.919	0	178	98
1989	30	5.090	0	178	98
1990	30	5.141	0	178	98
1991	30	4.973	0	178	98
1992	30	5.086	0	178	98
1993	30	4.289	0	178	98
1994	30	4.203	0	178	98
1995	30	4.080	0	178	98
1996	30	3.844	0	178	98
1997	30	3.749	0	178	98
1998	30	3.526	0	178	98
1999	30	3.344	0	178	98
2000	30	3.344	0	178	98
2001	30	3.203	0	178	98
2002	30	2.438	0	178	98
2003	30	2.438	0	178	98
2004	30	2.077	0	178	98
2005	30	2.077	0	178	98
2006	30	2.077	0	178	98
2007	30	1.461	0	178	98
2008	30	1.461	0	178	98
2009	30	1.461	0	178	98
2010	30	1.461	0	178	98

^aMinimum or exogenous native oil industry employment.: assumed to be thirty (see Table 0-1).

^bOil industry employment: Figures for 1980-1984 from Table D-1. Figures for 1985-2010 are current MAP model assumptions used in Case NS0.84B, variable B.04 (total basic employment), in Berman et al., Alaska Statewide and Regional Economic and Demographic Systems: Effects of OCS Exploration and Development, 1985, Social and Economic Studies Program Technical Report No. 115 (Anchorage Minerals Management Service, June 1985), page D-3.

^cOther basic industry employment assumed to be zero (see Table D-1).

^dState and federal government employment: 1980-1984 from Table D-1; 1985-2010 assumed to be constant at 1984 levels.

TABLE-B-16.
 ASSUMED VALUES FOR ENDOGENOUS EMPLOYMENT VARIABLES
 1980- 1984

<u>Variable</u>	<u>Definition</u>	<u>1980</u>	<u>1981</u>	1982	1903	<u>1984</u>
EMGOOP	Borough operating employment	795	818	828	970	1,028
EMGOCT	Borough CIP employment	322	363	456	457	427
EMCTGO	Non-Borough CIP employment	71	190	435	395	464
EMSUEG	Support employment	393	427	488	528	545
EMTO	Total employment	6,118	8,761	9,638	10,318	9,581

SOURCE : See Table 0-1.

TABLE B-17.
CALCULATION OF ENDOGENOUS EMPLOYMENT PARAMETERS

<u>Parameter</u>	<u>Ass umed Value</u>	<u>Defined as</u>	<u>Cal cul ated as</u>	<u>Year</u>	<u>Source Tables</u>
EMGOCTC1	.00202	$\frac{\text{EMGOCT}}{\text{SPLOGOCT}}$	$\frac{427}{211,000}$	1984	D-1, J-2
EMCTGOC1	.00220	$\frac{\text{EMKTGO}}{\text{SPLOGOCT}}$	$\frac{464}{211,000}$	1982	D-1, J-2
EMGOOPC1	.01309	$\frac{\text{EMGOOP}}{\text{SPLOGOOP}}$	$\frac{1,028}{78,544}$	1984	D-1, J-1
EMSUEG1	.24	$\frac{\text{EMSUEG}}{\text{EMRE}}$	$\frac{545}{2,282}$	1985	D-1

TABLE B.18
LABOR DEMAND ASSUMPTIONS

Share of Employment Available to Natives,
By Employment Category

Year	Borough Operating Employment (SANAGOOP)	Borough CIP Employment (SANAGOCT)	Borough Sponsored Private CIP Employment (SANACTGO)	Local Support Employment (SANASUEG)	Oil Industry Employment (SANABAOI)	Other Basic Employment (SANABAOT)	State and Fed. Gov't Employment (SANAGONL)
1980	.56	.83	.37	.55	.02	0	.32
1981	.56	.83	.37	.55	.02	0	.32
1982	.56	.83	.37	.55	.02	0	.32
1983	.56	.83	.31	.55	.02	0	.32
1984	.56	.83	.31	.55	.02	0	.32
1985	.56	.83	.37	.55	.02	0	.32
1986	.56	.83	.37	.55	.02	0	.32
1987	.56	.83	.37	.55	.02	0	.32
1988	.56	.83	.37	.55	.02	0	.32
1989	.56	.83	.37	.55	.02	0	.32
1990	.56	.83	.37	.55	.02	0	.32
1991	.56	.83	.37	.55	.02	0	.32
1992	.56	.83	.37	.55	.02	0	.32
1993	.56	.83	.37	.55	.02	0	.32
1994	.56	.83	.37	.55	.02	0	.32
1995	.56	.83	.31	.55	.02	0	.32
1996	.56	.83	.37	.55	.02	0	.32
1997	.56	.83	.37	.55	.02	0	.32
1998	.56	.83	.37	.55	.02	0	.32
1999	.56	.83	.37	.55	.02	0	.32
2000	.56	.83	.37	.55	.02	0	.32
2001	.56	.83	.37	.55	.02	0	.32
2002	.56	.83	.37	.55	.02	0	.32
2003	.56	.83	.37	.55	.02	0	.32
2004	.56	.83	.37	.55	.02	0	.32
2005	.56	.83	.37	.55	.02	0	.32
2006	.56	.83	.37	.55	.02	0	.32
2007	.56	.83	.37	.55	.02	0	.32
2008	.56	.83	.37	.55	.02	0	.32
2009	.56	.83	.37	.55	.02	0	.32
2010	.56	.83	.37	.55	.02	0	.32

SOURCES: Oil industry and other basic employment shares assumed. Other figures based on 1980 values from Table E-133.

TABLE B-19.
LABOR SUPPLY ASSUMPTIONS

Year	Annual Average Labor Force Participation Rate for Adult Natives (LFPRNA)
1980	.741
1981	.741
1982	.741
1983	.741
1984	.741
1985	.741
1986	.741
1987	.741
1988	.741
1989	.741
1990	.741
1991	.741
1992	.741
1993	.741
1994	.741
1995	.741
1996	.741
1997	.741
1998	.741
1999	.741
2000	.741
2001	.741
2002	.741
2003	.741
2004	.741
2005	.741
2006	.741
2007	.741
2008	.741
2009	.741
2010	.741

SOURCE : Based on 1980 value, calculated as (total Natives employed and unemployed / (adult Native population) = 1235/1667, See Tables E-169 and 13-2.

Native labor supply parameter for oil industry jobs: assumed share of Natives desiring non-oil employment but not finding it who would take oil industry jobs (LSNAOIPA)

.1

Assumed maximum unemployment rate for Natives after which all additional unemployed workers leave (UNRANAPA)

.5

Assumed share of newly-employed workers who would leave the North Slope (UNINMGSH)

.2

TABLE B-20
INCOME MODEL ASSUMPTIONS

Native nonwage income per capita in thousands of dollars (INNWPCNA)	1.45
--	------

Based on the assumption that total 1980 transfer payments of \$4,661,000 (see Table L-5) were received entirely by Natives. This is supported by the relatively high proportion of transfer payments accounted for by transfers such as **BIA** payments and retirement payments (see Table L-6). Given a total 1980 Native population of 3208, we have per capita transfers to Natives of 1453.

Native population, 1980. See Table B-2.	3,208
---	-------

Non-Native nonwage income per capita in thousands of dollars (INNWPCNN)	0
--	---

Assumed Native population annual wage, in thousands of dollars (WA)	37.5
---	------

Figure for total employment excluding mining, as calculated in Table E.20 from Statistical Quarterly data.

Resident employment, 1980. See Table D-1.	1,646
---	-------

1980 Total Resident Income	66,377
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Calculated as (Native population) x (Native transfer payments per capita) + (Total resident employment) x (wage)
= (3208 x **1.45**) + (1646 x 37.5) = 4652 + 61,725 = 66,377.

TABLE B-21.
VILLAGE POPULATION AND EMPLOYMENT ALLOCATION ASSUMPTIONS

	<u>Share of Resident Population</u>	<u>Share of Resident Employment</u>
Anaktuvuk Pass	POANPAC1 <u>.053</u>	EMANPAC1 <u>.029</u>
Atkasook	POATKAC1 <u>.028</u>	EMATKAC1 <u>.022</u>
Barrow	POBARRC1 <u>.597</u>	EMBARRC1 <u>.647</u>
Kaktovik	POKAKTC1 <u>.043</u>	EMKAKTC1 <u>.055</u>
Nuiqsut	PONUIQC1 <u>.054</u>	EMNUIQC1 <u>.042</u>
Point Hope	POPOHOC1 <u>.121</u>	EMPOHOC1 <u>.102</u>
Point Lay	POPOLAC1 <u>.018</u>	EMPOLAC1 <u>.010</u>
Kaktovik	POWAINC1 <u>.106</u>	EMWAINC1 <u>.091</u>

SOURCES: Resident population shares based on census data for resident population, shown in Table II.2. Resident employment shares based on census data for village employment, shown in Table E.34.

Assumptions for Other Cases

The preceding tables show the assumptions which were used for our North Slope Model "medium base case." In addition to the medium base case, we prepared ten other cases which illustrate the sensitivity of the model projections to different assumptions. Below, we summarize how the assumptions for these cases differ from the medium base case. All assumptions which we do not specifically discuss remain the same as for the medium base case.

Low Migration Base Case

UNRAPANA = 1

UNINMGSH = 0

For this case, we assume that no native migration occurs in response to native unemployment.

High Migration Base Case

UNRANAPA = .3

UNINMGSH = .3

For this case, we assume that Native migration is much more sensitive to Native unemployment. The maximum Native unemployment rate is 30 percent instead of 50 percent. In addition, in any given year in which Native unemployment rises, 30 percent of newly unemployed Native workers leave the North Slope, instead of 20 percent.

Low Revenues Base Case

ITRA = .08

We assume that the Borough earns interest of only 8 percent on its cash holdings instead of 10 percent.

RVPYOPPC is lower beginning in 1991 (see Table B-22)

We assume that the state-imposed limit on property tax operating revenues per capita remains unchanged until 1990. Subsequently, it declines by \$100 per year until it reaches a value of \$3500 in 2006. Afterwards, it remains constant at this level as shown in Table B-22.

VAOIFU is negative beginning in 1986 (see Table B-22)

We assume that oil property values are 1 percent lower than the medium case in 1986, 2 percent lower than the medium case in 1987, and so forth, down to 20 percent lower in 1995, after which they remain 20 percent lower. The resulting changes in North Slope Borough assessed values are shown in Table B-22.

High Revenues Base Case

ITRA = .12

We assume that the Borough earns interest of 12 percent on its cash holdings instead of 10 percent.

RVPYOPPC is higher beginning in 1986 (see Table B-23)

We assume that the state-imposed limit on property tax operating revenues per capita rises by \$100 per year until it reaches a maximum value of \$7000 in 2005, as shown in Table B-23.

VAOIFU is positive beginning in 1986 (see Table B-23)

We assume that oil property values are 1 percent higher than the medium case in 1986, 2 percent higher than the medium case in 1987, and so forth, down to 20 percent higher in 1995, after which they remain 20 percent higher. The resulting changes in North Slope Borough assessed values are shown in Table B-23.

TARATOLI = 1

We assume that the Borough no longer voluntarily holds its total mill rate at current levels. Instead, it taxes at the level allowed by the state-imposed limit on per-capita operations revenues.

Moderate High Revenues Base Case

TARATOLI = 1

We assume that the Borough no longer voluntarily holds its total mill rate at current levels. Instead, it taxes at the level allowed by the state-imposed limit on per-capita operations revenues.

Low Employment Base Case

SPLOGOCT is lower (see Table B-24)

CIP expenditures from 1986 through 1989 are assumed to be 80 percent of the **medium** case (see Table B-9), and \$1 million beginning in 1990.

SANAGOOP, **SANASUEG**, and **SANAGONL** are lower (see Table B-24)

The share of employment available to Natives in Borough government operations, support employment, and state and federal government is reduced by 1 percent per year beginning in 1991, and continuing until 2000, after which the shares remain constant at their reduced levels.

SANABAOI = .01 (see Table B-24)

Only one percent of oil industry jobs are assumed to be available to Natives.

High Employment Base Case

SPLOGOCT is higher (see Table B-25)

CIP expenditures from 1986 through 1989 are assumed to be 120 percent of the medium case (see Table B-9), and \$10 million beginning in 1990.

SANAGOOP, **SANASUEG**, and **SANAGONL** are higher (see Table B-25)

The share of employment available to Natives in Borough government operations, support employment, and state and federal government is increased by 1 percent per year beginning in 1991, and continuing until 2000, after which the shares remain constant at their increased levels.

SANABAOI = .05 (see Table B-25)

Five percent of oil industry jobs are assumed to be available to Natives.

LSNAOIPA = .25

Twenty-five percent of Natives desiring non-oil employment but not finding it would take oil industry jobs.

Extreme Low Base Case

UNRANAPA = .3

UNINMGSH = .3

ITRA = .08

RVPYOPPC is lower beginning in 1991 (see Table B-22)

VAOIFU is negative beginning in 1986 (see Table B-22)

SPLOGOCT is lower (see Table B-24)

SANAGOOP, SANASUEG, and SANAGONL are lower (see Table B-24)

SANABAOI = .01 (see Table B-24)

This case combines **all** of the assumptions of the **high migration base case**, the low revenues base case, and the low employment base case.

Extreme High Base Case

UNRANAPA = 1

UNINMGSH = 0

ITRA = .12

RVPYOPPC is higher beginning in 1986 (see Table B-23)

VAOIFU is positive beginning in 1986 (see Table B-23)

TARATOLI = 1

SPLOGOCT is higher (see Table B-25)

SANAGOOP, SANASUEG, and SANAGONL are higher (see Table B-25)

LSNAOIPA = .25

SANABAOI = .05 (see Table B-25)

This case combines **all of** the assumptions of the low migration base case, the high revenues base case, **and** the high employment base case.

High Impact Base Case

UNRPANA = .3

UNINMGSH = .3

ITRA = .08

SPLOGOCT is lower (see Table B-24).

SANAGOOP, SANASUEG, and SANAGONL are lower (see Table B-24)

SANABAOI = .05

LSNAOIPA = .25

Sale 97 Medium Impact Case

VAOIFU is higher (see Tables B-26 and M-3)

EMBAOI is higher (see Tables B-26 and M-6).

We describe our calculations of the assumptions for the Sale 97 impact case in Appendix M.

Sale 97 High Impact Case

UNRANAPA = .3

UNINMGSH = .3

ITRA = .08

SPLOGOCT is lower (see Table B-24)

SANAGOOP, SANASUEG, and SANAGONL are lower (see Table B-24)

SANABAOI = .05

LSNAOIPA = .25

VAOIFU is higher (see Tables B-26 and M-3)

EMBAOI is higher (see Tables B-26 and M-6)

Sale 109 Medium Impact Case

VAOIFU is higher (see Tables B-26 and 0-5)

EMBAOI is higher (see Tables B-26 and 0-7)

We describe our calculations of the assumptions for the Sale 109 impact case in Appendix 0.

Sale 109 High Impact Case

UNRANAPA = .3

UNINMGSH = .3

ITRA = .08

SPLOGOCT is lower (see Table B-24)

SANAGOOP, SANASUEG, and SANAGONL are lower (see Table B-24)

SANABAOI = .05

LSNAOIPA = .25

VAOIFU is higher (see Tables B-26 and 0-5)

EMBAOI is higher (see Tables B-26 and 0-7)

TABLE B-22
SUMMARY OF ASSUMPTIONS FOR THE LOW REVENUES CASE

<u>Year</u>	<u>State-Imposed Limit on Per Capita Property Tax Revenues for Operations (RVPOPPC) (Thousands of Dollars)</u>	<u>Changes to Property Values From the Medium Base Case (VAOIFU) (Thousands of Dollars)</u>
1980	3.195	0
1981	3.601	0
1982	3.914	0
1983	4.761	0
1984	5.119	0
1985	5.099	0
1986	5.099	-134,000
1987	5.099	-354,600
1988	5.099	-465,300
1989	5.099	-644,000
1990	5.099	-814,500
1991	5.000	-959,400
1992	4.900	-1,097,600
1993	4.800	-1,227,200
1994	4.700	-1,198,400
1995	4.600	-1,455,000
1996	4.500	-1,547,700
1997	4.400	-1,626,000
1998	4.300	-1,683,500
1999	4.200	-1,719,200
2000	4.100	-1,725,000
2001	4.000	-1,715,200
2002	3.900	-1,689,800
2003	3.800	-1,648,800
2004	3.700	-1,592,200
2005	3.600	-1,520,000
2006	3.500	-1,364,000
2007	3.500	-1,208,000
2008	3.500	-1,052,000
2009	3.500	-896,000
2010	3.500	-740,000

I TRA = .08

TABLE B-23
SUMMARY OF ASSUMPTIONS FOR THE HIGH REVENUES CASE

<u>Year</u>	<u>State-Imposed Limit on Per Capita Property Tax Revenues for Operations (RVPYOPPC) (Thousands of Dollars)</u>	<u>Changes to Property Values From the Medium Base Case (VAOIFU) (Thousands of Dollars)</u>
1980	3.195	0
1981	3.601	0
1982	3.914	0
1983	4.761	0
1984	5.119	0
1985	5.099	0
1986	5.100	134,000
1987	5.200	354,600
1988	5.300	465,300
1989	5.400	644,000
1990	5.500	814,500
1991	5.600	959,400
1992	5.700	1,097,600
1993	5.800	1,227,200
1994	5.900	1,198,400
1995	6.000	1,455,000
1996	6.100	1,547,700
1997	6.200	1,626,000
1998	6.300	1,683,500
1999	6.400	1,719,200
2000	6.500	1,725,000
2001	6.6(XI)	1,715,200
2002	6.700	1,689,800
2003	6.800	7,648,800
2004	6.900	1,592,200
2005	7.000	1,520,000
2006	7.000	1,364,000
2007	7.000	1,208,000
2008	7.000	1,052,000
2009	7.000	896,000
2010	7.000	740,000

ITRA = .12
TARATOLI = 1

TABLE B-24
SUMMARY OF ASSUMPTIONS FOR THE LOW EMPLOYMENT CASE

Year	Share of Employment Available to Natives, By Employment Category				
	Borough CIP Expenditures (SPLOGOCT)	Borough Operating Employment (SANAGOOP)	Local Support Employment (SANASUEG)	011 Industry Employment (SANABAOI)	State and Fed. Gov't Employment (SANAGONL)
1980	93,000	.56	.55	.01	.32
1981	131,000	.56	.55	.01	.32
1982	211,000	.56	.55	.01	.32
1983	302,000	.56	.55	.01	.32
1984	211,000	.56	.55	.01	.32
1985	199,000	.56	.55	.01	.32
1986	99,200	.56	.55	.01	.32
1987	64,800	.56	.55	.01	.32
1988	28,000	.56	.55	.01	.32
1989	24,800	.56	.55	.01	.32
1990	1,000	.56	.55	.01	.32
1991	1,000	.55	.54	.01	.31
1992	1,000	.54	.53	.01	.30
1993	1,000	.53	.52	.01	.29
1994	1,000	.52	.51	.01	.28
1995	1,000	.51	.50	.01	.27
1996	1,000	.50	.49	.01	.26
1997	1,000	.49	.48	.01	.25
1998	1,000	.48	.47	.01	.24
1999	1,000	.47	.46	.01	.23
2000	1,000	.46	.45	.01	.22
2001	1,000	.46	.45	.01	.22
2002	1,000	.46	.45	.01	.22
2003	1,000	.46	.45	.01	.22
2004	1,000	.46	.45	.01	.22
2005	1,000	.46	.45	.01	.22
2006	1,000	.46	.45	.01	.22
2007	1,000	.46	.45	.01	.22
2008	1,000	.46	.45	.01	.22
2009	1,000	.46	.45	.01	.22
2010	1,000	.46	.45	.01	.22

TABLE B-25
SUMMARY OF ASSUMPTIONS FOR THE HIGH EMPLOYMENT CASE

Year	Share of Employment Available to Natives, By Employment Category				
	Borough CIP Expenditures (SPLOGOCT)	Borough Operating Employment (SANAGOOP)	Local Support Employment (SANASUEG)	Oil Industry Employment (SANABAOI)	State and Fed. Gov't Employment (SANAGONL)
1980	93,000	.56	.55	.05	.32
1981	131,000	.56	.55	.05	.32
1982	211,000	.56	.55	.05	.32
1983	302,000	.56	.55	.05	.32
1984	211,000	.56	.55	.05	.32
1985	199,000	.56	.55	.05	.32
1986	148,800	.56	.55	.05	.32
1987	97,200	.56	.55	.05	.32
1988	42,000	.56	.55	.05	.32
1989	37,200	.56	.55	.05	.32
1990	10,000	.56	.55	.05	.32
1991	10,000	.57	.56	.05	.33
1992	10,000	.58	.57	.05	.34
1993	10,000	.59	.58	.05	.35
1994	-60,000	.60	.59	.05	.36
1995	10,000	.61	.60	.05	.37
1996	10,000	.62	.61	.05	.38
1997	10,000	.63	.62	.05	.39
1998	10,000	.64	.63	.05	.40
1999	10,000	.65	.64	.05	.41
2000	10,000	.66	.65	.05	.42
2001	10,000	.66	.65	.05	.42
2002	10,000	.66	.65	.05	.42
2003	10,000	.66	.65	.05	.42
2004	10,000	.66	.65	.05	.42
2005	10,000	.66	.65	.05	.42
2006	10,000	.66	.65	.05	.42
2007	10,000	.66	.65	.05	.42
2008	10,000	.66	.65	.05	.42
2009	10,000	.66	.65	.05	.42
2010	10,000	.66	.65	.05	.42

LSNAOIPA = .25

Table B-26

Assumptions for Sale 97 and Sale 109 Impact Cases

	Increase in North Slope Borough Property Values (VAOIFU) (000)	Total Oil Industry Employment (EMBAOI)
1980	0	4246
1981	0	6703
1982	0	7228
1983	0	7791
1984	0	6939
1985	0	6014
1986	0	7191
1987	0	6696
1988	50,000	5318
1989	48,148	5609
1990	46,296	5497
1991	44,444	5274
1992	42,593	5351
1993	40,241	4478
1994	198,889	4602
1995	399,418	6200
1996	379,447	5384
1997	359,476	4365
1998	339,505	4142
1999	319,534	3973
2000	299,563	3973
2001	279,593	3852
2 0 0 2	259,622	3087
2003	239,651	3087
2004	219,680	2726
2005	199,709	2726
2006	179,738	2726
2007	159,767	2710
2008	139,796	2110
2009	119,825	2110
2010	99,854	2110

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APPENDIX C: NORTH SLOPE MODEL PROJECTIONS

This appendix presents tables of projections for our North Slope Model. There are fifteen sets of tables corresponding to the fifteen "cases" for which we prepared projections. For each case, there are fifteen tables with different variables. The organization of these tables is shown below. Each table is numbered first according to its case number and then according to the variables it contains. For example, Table C-8.3 shows projections for the "High Employment Base Case" of "Native Population by Age Group."

Model Cases (first part of table number)

1. Medium Base Case	Tables C-1.1 through C-1.15
2. Low Migration Base Case	Tables C-2.1 through C-2.15
3. High Migration Base Case	Tables C-3.1 through C-3.15
4. Low Revenues Base Case	Tables C-4.1 through C-4.15
5. High Revenues Base Case	Tables C-5.1 through C-5.15
6. Moderate High Revenues Base Case	Tables C-6.1 through C-6.15
7. Low Employment Base Case	Tables C-7.1 through C-7.15
8. High Employment Base Case	Tables C-8.1 through C-8.15
9. Extreme Low Base Case	Tables C-9.1 through C-9.15
10. Extreme High Base Case	Tables C-10.1 through C-10.15
11. High Impact Base Case	Tables C-11.1 through C-11.15
12. Sale 97 Medium Impact Case	Tables C-12.1 through C-12.15
13. Sale 97 High Impact Case	Tables C-13.1 through C-13.15
14. Sale 109 Medium Impact Case	Tables C-14.1 through C-14.15
15. Sale 109 High Impact Case	Tables C-15.1 through C-15.15

Model Variables (second part of table number)

1. Population: Resident and Average Non-Resident
2. Population: Resident Native and Non-Native
3. Native Population by Age Group
4. Native Population by Sex: Native Natural Increase and Migration
5. Employment: Native, Non-native Resident, and Non-Resident
6. Employment by Sector, All Races
7. Employment by Sector, Natives
8. Native Oil Industry Employment
9. Employment by Sector, Non-Native Residents
10. Employment by Sector, Non-Residents
11. Borough Revenues, by Source
12. Borough Expenditures: Operations, Construction, and Debt
13. Borough Property Values, Property Taxes, and Tax Rates
14. Income: Total and Per Capita
15. Native Labor Supply, Employment, and Unemployment

For the period 1980-1985, we have indicated those figures based on actual data by the symbol **. We have indicated those figures calculated indirectly using historical data by the symbol *. All other figures are based on North Slope model projections.

Comparison of Base Case Projections

In addition to the model projections in the thirteen sets of tables listed above, we have included nine tables which compare our base case projections for several key variables. These tables are listed below:

- 16.1 Native Population: Comparison of Extreme Low Base Case, High Migration Base Case, Medium Base Case, Low Migration Base Case, and Extreme High Base Case
- 16.2 Resident Population: Comparison of Extreme Low Base Case, High Migration Base Case, Medium Base Case, Low Migration Base Case, and Extreme High Base Case
- 16.3 Native Migration: Comparison of Extreme Low Base Case, High Migration Base Case, Medium Base Case, Low Migration Base Case, and Extreme High Base Case
- 16.4 Total North Slope Borough Revenues: Comparison of Extreme Low Base Case, Low Revenues Base Case, Medium Base Case, Moderate High Revenues Base Case, High Revenues Base Case, and Extreme High Base Case
- 16.5 North Slope Borough Operating Revenues: Comparison of Extreme Low Base Case, Low Revenues Base Case, Medium Base Case, Moderate High Revenues Base Case, and High Revenues Base Case, and Extreme High Base Case
- 16.6 North Slope Borough Tax Rate: Comparison of Extreme Low Base Case, Low Revenues Base Case, Medium Base Case, Moderate High Revenues Base Case, High Revenues Base Case, and Extreme High Base Case
- 16.7 Native Employment: Comparison of Extreme Low Base Case, Low Employment Base Case, Medium Base Case, High Employment Base Case, and Extreme High Base Case
- 16.8 Non-Native Resident Employment: Comparison of Extreme Low Base Case, Low Employment Base Case, Medium Base Case, High Employment Base Case, and Extreme High Base Case
- 16.9 Native Oil-Industry Employment: Comparison of Extreme Low Base Case, Low Employment Base Case, Medium Base Case, High Employment Base Case, and Extreme High Base Case

TABLE C-1.1
NORTH SLOPE MODEL PROJECTIONS
MEDIUM BASE CASE

	TOTAL POPULATION	RESIDENT POPULATION	AVERAGE NON- RESIDENT POPULATION
1980	6805*	3827**	2978*
1981	8776	4142	4633
1982	9360	4301	5058
1983	9950	4548	5402
1984	9523	4660	4863
1985	9397	5152	4245
1986	9847	4908	4940
1987	9535	4971	4564
1988	8174	4850	3324
1989	8298	4867	3430
1990	8317	4884	3433
1991	8295	4974	3321
1992	8464	5068	3396
1993	7976	5107	2869
1994	7997	5184	2813
1995	7988	5255	2733
1996	7895	5316	2579
1997	7897	5380	2517
1998	7807	5436	2371
1999	7745	5493	2252
2000	7821	5569	2252
2001	7833	5673	2160
2002	7317	5656	1661
2003	7297	5636	1661
2004	6955	5530	1425
2005	6843	5418	1425
2006	6725	5300	1425
2007	6102	5078	1023
2008	5909	4886	1023
2009	5728	4705"	1023
2010	5555	4531	1023

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.861--12/20/85
VARIABLES: POTO, PORE, AND PONRAV

TABLE C-1.2
NORTH SLOPE MODEL PROJECTIONS
MEDIUM BASE CASE

	RESIDENT POPULATION	RESIDENT NATIVE POPULATION	RESIDENT NON-NATIVE POPULATION
1980	3827*	3208**	619*
1981	4142	3268	875
1982	4301	3363	938
1983	4548	3460	1088
1984	4660	3562	1098
1985	5152	3665	1487
1986	4908	3726	1182
1987	4971	3792	1179
1988	4850	3815	1036
1989	4867	3881	987
1990	4884	3937	947
1991	4974	4022	952
1992	5068	4109	959
1993	5107	4176	931
1994	5184	4252	932
1995	5255	4328	927
1996	5316	4403	913
1997	5380	4475	905
1998	5436	4545	891
1999	5493	4615	877
2000	5569	4694	874
2001	5673	4781	892
2002	5656	4799	857
2003	5636	4791	844
2004	5530	4720	810
2005	5418	4629	789
2006	5300	4532	768
2007	5078	4363	715
2008	4886	4198	688
2009	4705	4042	662
2010	4531	3893	638

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B61--12/20/85
VARIABLES: PORE, PONA, AND PONN

TABLE C-103
 NORTH SLOPE MODEL PROJECTIONS
 MEDIUM BASE CASE

	NATIVE POPULATION	PRE-SCHOOL NATIVE POPULATION	SCHOOL-AGE NATIVE POPULATION	ADULT NATIVE POPULATION	AGED NATIVE POPULATION
1980	3208**	362**	1042**	1667**	137**
1981	3268	377	1027	1725	139
1982	3363	443	987	1789	144
1983	3460	496	962	1857	145
1984	3562	536	933	1945	148
1985	3665	578	913	2020	154
1986	3726	616	898	2048	163
1987	3792	626	948	2054	163
1988	3815	625	994	2030	165
1989	3881	627	1058	2027	169
1990	3937	624	1095	2043	176
1991	4022	618	1165	2054	185
1992	4109	608	1229	2074	199
1993	4176	591	1288	2094	203
1994	4252	578	1348	2116	209
1995	4328	569	1402	2242	215
1996	4403	563	1467	2151	221
1997	4475	559	1514	2173	229
1998	4545	561	1540	2200	244
1999	4615	566	1565	2237	247
2000	4694	573	1594	2272	256
2001	4781	585	1597	2338	261
2002	4799	595	1571	2372	261
2003	4791	608	1532	2383	267
2004	4720	617	1475	2363	264
2005	4629	624	1413	2336	257
2006	4532	630	1352	2293	257
2007	4363	627	1275	2214	248
2008	4198	618	1210	2134	235
2009	4042	605	1157	2049	232
2010	3893	589	1113	1971	220

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B61--12/20/85
 VARIABLES: PONA, PONAkd, PONAsl, PONAAT, AND PONAge

TABLE C-1.4
NORTH SLOPE MODEL PROJECTIONS
MEDIUM BASE CASE

	NATIVE POPULATION	NATIVE MALE POPULATION	NATIVE FEMALE POPULATION	NATIVE NATURAL INCREASE	NATIVE RATE OF NATURAL INCREASE	NATIVE MIGRATION
1980	3208**	1669**	1509**			
1981	3268	1722	1545	90	0.028	-36
1982	3363	1764	1598	95	0.029	-0
1983	3460	1808	1653	98	0.029	-0
1984	3562	1853	1709	02	0.029	-0
1985	3665	1899	1766	03	0.029	0
1986	3726	1923	1802	05	0.029	-45
1987	3792	1950	1842	06	0.028	-40
1988	3815	1955	1860	03	0.027	-80
1989	3881	1982	1899	00	0.026	-34
1990	3937	2004	1933	97	0.025	-41
1991	4022	2042	1981	93	0.024	-8
1992	4109	2079	2029	89	0.022	-2
1993	4176	2107	2068	84	0.020	-17
1994	4252	2140	2112	84	0.020	-8
1995	4328	2173	2155	85	0.020	-9
1996	4403	2204	2198	85	0.020	-11
1997	4475	2235	2240	83	0.019	-10
1998	4545	2265	2280	84	0.019	-14
1999	4615	2294	2321	86	0.019	-16
2000	4694	2328	2366	89	0.019	-10
2001	4781	2365	2415	93	0.020	-6
2002	4799	2369	2430	95	0.020	-77
2003	4791	2360	2431	102	0.021	-109
2004	4720	2319	2400	104	0.022	-176
2005	4629	2270	2359	106	0.022	-196
2006	4532	2218	2314	107	0.023	-204
2007	4363	2131	2232	106	0.023	-275
2008	4198	2046	2152	104	0.024	-269
2009	4042	1967	2076	99	0.024	-255
2010	3893	1891	2003	95	0.023	-244

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B61--12/20/85
VARIABLES: PONA, PONAMA, PONAFA, NTICNA, NTICNARA, AND MGNA

TABLE C-1.5
NORTH SLOPE MODEL PROJECTIONS
MEDIUM BASE CASE

	TOTAL EMPLOYMENT	TOTAL NATIVE EMPLOYMENT	TOTAL NON-NATIVE RESIDENT EMPLOYMENT	TOTAL NON- RESIDENT EMPLOYMENT
1980	6118**	1173*	473*	4472*
1981	8761**	1136	668	6957
1982	9638**	1326	717	7595
1983	10318**	1376	831	8111
1984	9581**	1441	839	7301
1985	9006	1497	1136	6373
1986	9711	1392	903	7417
1987	9065	1311	901"	6853
1988	6881	1100	791	4991
1989	6954	1050	754	5151
1990	6847	968	723	5155
1991	6688	974	727	4987
1992	6814	982	733	5099
1993	5968	949	711	4308
1994	5884	948	712	4224
1995	5752	941	708	4103
1996	5492	923	698	3872
1997	5383	913	691	3779
1998	5135	895	680	3560
1999	4931	878	670	3382
2000	4925	875	668	3382
2001	4815	890	682	3244
2002	3989	840	655	2494
2003	3967	828	645	2494
2004	3547	788	619	2140
2005	3510	767	602	2140
2006	3475	748	587	2140
2007	2767	684	546	1537
2008	2720	658	525	1537
2009	2677	634	506	1537
2010	2634	610	487	1537

SOURCE: NORTH SLOPE MODEL SIMULATION **NSLP.B61--12/20/85**
 VARIABLES: EMTO, EMNA, **EMNN**, AND EMNR

TABLE C-1.6
NORTH SLOPE MODEL PROJECTIONS
MEDIUM BASE CASE

EMPLOYMENT: ALL RACES

	TOTAL EMPLOY- MENT	FEDERAL AND STATE GOVERN- MENT EMPLOY- MENT	BOROUGH OPER- ATING EMPLOY- MENT	" BOROUGH CIP EMPLOY- MENT	OTHER CIP EMPLOY- MENT	LOCAL SUPPORT EMPLOY- MENT	OIL INDUSTRY EMPLOY- MENT	NON-OIL BASIC EMPLOY- MENT
1980	61 18**	291**	795*	322*	71*	393*	4246*	0
1981	8761**	260**	818*	363*	190*	427*	6703*	0
1982	9638**	203**	828*	456*	435*	488*	7228*	0
1983	10318**	177**	970*	457*	395*	528*	7791*	0
1984	9581**	178**	1028*	427*	464*	545*	6939*	0
1985	9006	178	1343	402	438	632	6014	0
1986	9711	178	1268	250	273	551	7191	0
1987	9065	178	1318	164	178	531	6696	0
1988	6881	178	1183	71	77	454	4919	0
1989	6954	178	1123	63	68	433	5090	0
1990	6847	178	1101	10	11	406	5141	0
1991	6688	178	1108	10	11	408	4973	0
1992	6814	178	1117	10	11	412	5086	0
1993	5968	178	1082	10	11	398	4289	0
1994	5884	178	1084	10	11	399	4203-	0
1995	5752	178	1077	10	11	396	4080	0
1996	5492	178	1060	10	11	389	3844	0
1997	5383	178	1050	10	11	385	3749	0
1998	5135	178	1032	10	11	378	3526	0
1999	4931	178	1016	10	11	372	3344	0
2000	4925	178	1012	10	11	370	3344	0
2001	4815	178	1036	10	11	377	3203	0
2002	3989	178	993	10	11	359	2438	0
2003	3967	178	977	10	11	354	2438	0
2004	3547	178	933	10	11	338	2077	0
2005	3510	178	905	10	11	329	2077	0
2006	3475	178	878	10	11	320	2077	0
2007	2767	178	812	10	11	295	1461	0
2008	2720	178	776	10	11	284	1461	0
2009	2677	178	743	10	11	274	1461	0
2010	2634	178	711	10	11	263	1461	0

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.861--12/20/85
VARIABLES: EMTO, EMGONL, EMGOOP, EMGOCT, EMCTGO, EMSUEG,
EMBAOI, AND EMBAOT

TABLE C-1.7
 NORTH SLOPE MODEL PROJECTIONS
 MEDIUM BASE CASE

EMPLOYMENT: NATIVES

	TOTAL EMPLOY- MENT	FEDERAL AND STATE GOVERN- MENT EMPLOY- MENT	BOROUGH OPER- ATING EMPLOY- MENT	BOROUGH CIP EMPLOY- MENT	OTHER CIP EMPLOY- MENT	LOCAL SUPPORT EMPLOY- MENT	OIL INDUSTRY EMPLOY- MENT	NON-OIL BASIC EMPLOY- MENT
1980	1173*	26*	445*	267*	26*	216*	30**	0
1981	1136	26	458	301	70	235 "	46	0
1982	1326	26	463	378	161	268	30	0
1983	1376	25	528	369	142	282	"30	0
1984	1441	25	569	350	170	296	30	0
1985	1497	23	681	302	147	315	30	0
1986	1392	26	710	208	101	303	44	0
1987	1311	26	738	136	66	292	54	0
1988	1100	26	662	59	28	250	75	0
1989	1050	26	629	52	25	238	80	0
1990	968	26	616	8	4	223	91	0
1991	974	26	620	8	4	225	91	0
1992	982	26	626	8	4	226	92	0
1993	949	26	606	8	4	219	86	0
1994	948	26	607	8	4	219	84	0
1995	941	26	603	8	4	218	82	0
1996	923	26	594	8	4	214	77	0
1997	913	26	588	8	4	212	75	0
1998	895	26	578	8	4	208	71	0
1999	878	26	569	8	4	204	67	0
2000	875	26	567	8	4	204	67	0
2001	890	26	580	8	4	207	64	0
2002	840-	26	556	8	4	197	49	0
2003	828	26	547	8	4	194	49	0
2004	788	26	523	8	4	186	42	0
2005	767	26	507	8	4	181	42	0
2006	748	26	492	8	4	176	42	0
2007	684	26	455	8	4	162	29	0
2008	658	26	435	8	4	156	29	0
2009	634	26	416	8	4	150	29	0
2010	610	26	398	8	4	145	29	0

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.861--12/20/85
 VARIABLES: EMNA, EMNAGONL, EMNAGOOP, EMNAGOCT, EMNACTGO,
 EMNASUEG, EMNAOI, AND EMNABAOT

TABLE C-1.8
 NORTH SLOPE MODEL PROJECTIONS
 MEDIUM BASE CASE

NATIVE OIL INDUSTRY EMPLOYMENT

	ASSUMED MINIMUM NATIVE OIL EMPLOYMENT	OIL INDUSTRY% MAXIMUM DEMAND FOR NATIVE LABOR	MAXIMUM NATIVE SUPPLY OF NATIVE OIL LABOR TO OIL INDUSTRY	INDUSTRY EMPLOYMENT
1980				
1981	30	134	46	46
1982	30	145	30	30
1983	30	156	30	30
1984	30	139	30	30
1985	30	120	30	30
1986	30	144	44	44
1987	30	134	54	54
1988	30	98	75	75
1989	30	102	80	80
1990	30	103	91	91
1991	30	99	91	91
1992	30	102	92	92
1993	30	86	96	86
1994	30	84	97	84
1995	30	82	100	82
1996	30	77	102	77
1997	30	75	104	75
1998	30	71	108	71
1999	30	67	112	67
2000	30	67	114	67
2001	30	64	118	64
2002	30	49	124	49
2003	30	49	126	49
2004	30	42	127	42
2005	30	42	127	42
2006	30	42	126	42
2007	30	29	126	29
2008	30	29	122	29
2009	30	29	118	29
2010	30	29	115	29

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B61--12/20/85
 VARIABLES: EMNAOIEX, LDNABAOI, LSNAOI, EMNAOI

TABLE C-1.9
NORTH SLOPE MODEL PROJECTIONS
MEDIUM BASE CASE

EMPLOYMENT: NON-NATIVE RESIDENTS

	TOTAL NON-NATIVE EMPLOYMENT	FEDERAL AND STATE GOVERNMENT EMPLOYMENT	BOROUGH OPERATING EMPLOYMENT	LOCAL SUPPORT EMPLOYMENT	NON-OIL BASIC EMPLOYMENT	BOROUGH CIP EMPLOYMENT
1980	473*	54*	350*	216*	0	55*
1981	668	54	360	192	0	62
1982	717	54	365	220	0	78
1983	831	55	442	246	0	88
1984	839	55	459	249	0	77
1985	1136	57	662	317	0	100
1986	903	54	558	248	0	43
1987	901	54	580	239	0	28
1988	791	54	520	204	0	12
1989	754	54	494	195	0	11
1990	723	54	484	183	0	2
1991	927	54	487	184	0	2
1992	733	54	492	185	0	2
1993	711	54	476	179	0	2
1994	712	54	477	179	0	2
1995	708	54	474	178	0	2
1996	698	54	467	175	0	2
1997	691	54	462	173	0	2
1998	680	54	454	170	0	2
1999	670	54	447	167	0	2
2000	668	54	445	167	0	2
2001	682	54	456	170	0	2
2002	655	54	437	161	0	2
2003	645	54	430	159	0	2
2004	619	54	411	152	0	2
2005	602	54	398	148	0	2
2006	587	54	386	144	0	2
2007	546	54	357	133	0	2
2008	525	54	341	128	0	2
2009	506	54	327	123	0	2
2010	487	54	313	119	0	2

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B61--12/20/85
VARIABLES: EMNN, EMNNGONL, EMNNGOOP, EMNNSUEG, EMNNBAOT, EMNNGOCT

TABLE C-1.10
NORTH SLOPE MODEL PROJECTIONS
MEDIUM BASE CASE

EMPLOYMENT: NON-RESIDENTS

	TOTAL NON- RESIDENT EMPLOYMENT	FEDERAL A N D STATE GOVERNMENT EMPLOYMENT	AND OTHER CIP EMPLOYMENT	OIL INDUSTRY EMPLOYMENT
1980	4472*	211*	45*	4217*
1981	6957	180	120	6657
1982	7595	123	274	7198
1983	8111	97	253	7761
1984	7301	98	294	6909
1985	6373	98	291	5984
1986	7417	98	172	7147
1987	6853	98	112	6642
1988	4991	98	49	4844
1989	5151	98	43	5010
1990	5155	98	7	5050
1991	4987	98	7	4882
1992	5099	98	7	4994
1993	4305	98	7	4203
1994	4224	98	7	4119
1995	4103	98	7	3998
1996	3872	98	7	3767
1997	3779	98	7	3674
1998	3560	98	7	3455
1999	3382	98	7	3277
2000	3382	98	7	3277
2001	3244	98	7	3139
2002	2494	98	7	2389
2003	2494	98	7	2389
2004	2140	98	7	2035
2005	2140	98	7	2035
2006	2140	98	7	2035
2007	1537	98	7	1432
2008	1537	98	7	1432
2009	1537	98	7	1432
2010	1537	98	7	1432

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B61--12/20/85
 VARIABLES: EMNR, EMNRGONL, EMNRCTGO, AND EMNRBAOI

TABLE C-1.11
NORTH SLOPE MODEL PROJECTIONS
MEDIUM BASE CASE

	TOTAL BOROUGH REVENUES (000)	NON- PROPERTY TAX NON- INTEREST REVENUES (000)	PROPERTY TAX REVENUES FOR OPERATIONS (000)	PROPERTY TAX REVENUES FOR DEBT SERVICE (000)	INTEREST EARNINGS (000)
1980	72900**	18200**	21 000**	26300**	7400**
1981	90000**	22000**	26400**	32800**	8800**
1982	189100**	34900**	34800**	75000**	44400**
1983	215400**	37300**	38500**	95200**	44400**
1984	251400**	40200**	331 00**	118900**	59200**
1985	302300**	32600**	40600**	184600**	44500**
1986	307041	28415	46808	199717	32100
1987	309553	28039	48621	208894	24000
1988	308816	28181	41680	218456	20500
1989	296073	26040	42310	210322	17400
1990	267238	24761	42410	183166	16900
1991	183158	25915	42298	98545	16400
1992	245636	26304	43160	160272	15900
1993	233745	26554	40669	151122	15400
1994	223427	27112	40777	140638	14900
1995	212374	27168	40730	130076	14400
1996	158321	26844	40254	77322	13900
1997	119015	26523	40266	38826	13400
1998	110208	26146	39807	31355	12900
1999	93811	25707	39494	16210	12400
2000	93020	25505	39880	15735	11900
2001	94459	27797	39942	15320	11400
2002	90778	27656	37308	14915	10900
2003	89160	26994	37205	14560	10400
2004	85443	25934	35464	14145	9900
2005	82931	24868	34894	13770	9400
2006	75520	23902	34292	8425	8900
2007	62010	22497	31113	0	8400
2008	59282	21252	30130	0	7900
2009	56746	20137	29209	0	7400
2010	54300	19077	28324	0	6900

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.861--12/20/85
VARIABLES: RVTO, RVNPOP, RVPYOP, RVPYDB, RVIT

TABLE C-1.12
NORTH SLOPE MODEL PROJECTIONS
MEDIUM BASE CASE

	TOTAL BOROUGH EXPENDI- TURES (000)	OPERATI ONS EXPENDI- TURES (000)	CON- STRUC- TION EXPENDI- TURES (000)	DEBT SERVI CE EXPENDI - TURES (000)
1980	158765**	39685**	93000**	26080**
1981	216637**	50020**	131000**	35617**
1982	342192**	63506**	211000**	67686**
1983	466118**	68807**	302000**	95311**
1984	419494**	78544**	211000**	129950**
1985	489655**	102577**	199000**	188078**
1986	420613	96896	124000	199717
1987	390553	100659	81000	208894
1988	343816	90360	35000	218456
1989	327073	85751	31000	210322
1990	272238	84072	5000	183166
1991	188158	84613	5000	98545
1992	250636	85364	5000	160272
1993	238745	82623	5000	151122
1994	228427	82789	5000	140638
1995	217374	82298	5000	130076
1996	363321	80999	5000	77322
1997	124015	80189	5000	38826
1998	115208	78853	5000	31355
1999	98811	77601	5000	16210
2000	98020	77285	5000	15735
2001	99459	79139	5000	15320
2002	95778	75863	5000	14915
2003	94160	74600	5000	14560
2004	90443	71298	5000	14145
2005	87931	69161	5000	13770
2006	80520	67095	5000	8425
2007	67010	62010	5000	0
2008	64282	59282	5000	0
2009	61746	56746	5000	0
2010	59300	54300	5000	0

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B61--12/20/85
VARIABLES: SPTO, SPLOGOOP, SPLOGOCT, AND CSDBTO

TABLE C-1.13
NORTH SLOPE MODEL PROJECTIONS
MEDIUM BASE CASE

	TOTAL PROPERTY VALUE (000)	TOTAL PROPERTY TAXES (000)	TAX RATE	TAX RATE FOR OPER- ATING REVENUES	TAX RATE FOR DEBT SERVICE REVENUES	LIMIT ON PROPERTY TAX OPER- ATING REVENUES PER CAPITA (000)	ACTUAL PROPERTY TAX OPER- ATING REVENUES PER CAPITA ^a (000)
1980	5061955**	52400**	0.0103**	0.0052**	0.0051	3.196**	3.086
1981	5723582**	59100**	0.0103**	0.0051**	0.0052	3.601**	3.008
1982	6621652**	109700**	0.0167**	0.00055**	0.0112	3.914**	3.718
1983	8186986**	133700**	0.0164**	0.0041**	0.0123	4.761**	3.869
1984	9996290**	152400**	0.0153**	0.0033**	0.0120	5.119**	3.476
1985	12261420**	225300**	0.0184**	0.00033**	0.0151	5.099**	4.321
1986	13420000	246525	0.0184	0.0035	0.0149	5.099	4.753
1987	14730000	257515	0.0175	0.0033	0.0142	5.099	5.099
1988	15510000	260136	0.0168	0.0027	0.0141	5.099	5.099
1989	16100000	252632	0.0157	0.0026	0.0131	5.099	5.099
1990	16290000	225576	0.0138	0.0026	0.0112	5.099	5.099
1991	15990000	140843	0.0088	0.0026	0.0062	5.099	5.099
1992	15680000	203432	0.0130	0.0028	0.0102	5.099	5.099
1993	15340000	191791	0.0125	0.0027	0.0099	5.099	5.099
1994	14980000	181415	0.0121	0.0027	0.0094	5.099	5.099
1995	14550000	170806	0.0117	0.0028	0.0089	5.099	5.099
1996	14070000	117576	0.0084	0.0029	0.0055	5.099	5.099
1997	13550000	79092	0.0058	0.0030	0.0029	5.099	5.099
1998	12950000	71162	0.0055	0.0031	0.0024	5.099	5.099
1999	12280000	55704	0.0045	0.0032	0.0013	5.099	5.099
2000	11500000	55615	0.0048	0.0035	0.0014	5.099	5.099
2001	10720000	55262	0.0052	0.0037	0.0014	5.099	5.099
2002	9940000	52223	0.0053	0.0038	0.0015	5.099	5.099
2003	9160000	51765	0.0057	0.0041	0.0016	5.099	5.099
2004	8380000	49609	0.0059	0.0042	0.0017	5.099	5.099
2005	7600000	48664	0.0064	0.0046	0.0018	5.099	5.099
2006	6820000	42717	0.0063	0.0050	0.0012	5.099	5.099
2007	6040000	31113	0.0052	0.0052	0.0000	5.099	5.099
2008	5260000	30130	0.0057	0.0057	0.0000	5.099	5.099
2009	4480000	29209	0.0065	0.0065	0.0000	5.099	5.099
2010	3700000	28324	0.0077	0.0077	0.0000	5.099	5.099

^aBased on total population as defined by model, rather than official state figure used for calculating revenue limit.

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B61--12/20/85
VARIABLES: VATO, RVPYTO, TARA, TARAOP, TARADB, RVPYOPPC, RVOPPCFI

TABLE C-1.14
NORTH SLOPE MODEL PROJECTIONS
MEDIUM BASE CASE

	TOTAL RESIDENT' INCOME (000)	TOTAL NATIVE INCOME (000)	TOTAL NON-NATIVE RESIDENT INCOME (000)	PER CAPITA RESIDENT INCOME (000)	PER CAPITA NATIVE INCOME (000)	PER CAPITA NON-NATIVE RESIDENT INCOME (000)
1980	66377**					
1981	72392	47335	25057	17.477	14.486	28.648
1982	81481	54595	26886	18.944	16.235	28.648
1983	87782	56609	31173	19.299	16.360	28.648
1984	90655	59203	31452	19.454	16.621	28.648
1985	104061	61446	42615	20.197	16.766	28.652
1986	91448	57588	33859	18.634	15.458	28.643
1987	88439	54653	33786	17.790	14.413	28.645
1988	76442	46774	29668	15.760	12.262	28.643
1989	73258	44993	28265	15.051	11.594	28.646
1990	69133	42019	27114	14.155	10.672	28.644
1991	69614	42347	27267	13.995	10.528	28.649
1992	70262	42776	27487	13.863	10.411	28.648
1993	68301	41628	26673	13.375	9.970	28.646
1994	68433	41722	26711	13.201	9.813	" 28.647
1995	68104	41547	26557	12.960	9.600	28.647
1996	67140	40980	26161	12.630	9.308	28.647
1997	66629	40710	25919	12.385	9.097	28.647
1998	65648	40134	25514	12.077	8.830	28.646
1999	64762	39625	25137	11.790	8.585	" 28.647
2000	64672	39625	25047	11.613	8.441	28.647
2001	65853	40293	25560	11.608	8.428	28.649
2002	63011	38467	24544	11.142	8.016	28.648
2003	62186	38002	24184	11.035	7.932	28.645
2004	59598	36394	23204	10.778	7.711	28.644
2005	58081	35490	22591	10.721	7.667	28.647
2006	56606	34605	22000	10.681	7.636	28.648
2007	52477	31991	20485	10.334	7.332	28.640
2008	50468	30765	19703	10.330	7.329	28.648
2009	48604 "	29626	18978	10.331	7.329	28.648
2010	46808	28529	18279	10.330	7.328	28.648

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B61--12/20/85
VARIABLES: IN, INNA, INNN, INPC, INPCNA, AND INPCNN

TABLE C-1.15
NORTH SLOPE MODEL PROJECTIONS
MEDIUM BASE CASE

	ADULT NATIVE POPULATION	NATIVE LABOR SUPPLY	NATIVE EMPLOYMENT	NATIVE UNEMPLOY- MENT	NATIVE UNEMPLOY- MENT RATE BEFORE MI GRATION	NATIVE UNEMPLOY- MENT RATE AFTER MI GRATION
1980	1667**	1235**	1173*			
1981	1725	1278	1136	142	0.111	0.107
1982	1789	1326	1326	0	0.000	0.000
1983	1857	1376	1376	0	0.000	0.000
1984	1945	1441	1441	0	0.000	0.000
1985	2020	1497	1497	0	0.000	0.000
1986	2048	1518	1392	126	0.083	0.066
1987	2054	1522	1311	212	0.139	0.124
1988	2030	1504	1100	405	0.269	0.240
1989	2027	1502	1050	452	0.301	0.289
1990	2043	1514	968	546	0.360	0.346
1991	2054	1522	974	549	0.360	0.358
1992	2074	1537	982	555	0.361	0.360
1993	2094	1551	949	603	0.389	0.383
1994	2116	1568	948	620	0.395	0.393
1995	2142	1587	941	647	0.407	0.405
1996	2151	1594	923	672	0.421	0.418
1997	2173	1610	913	697	0.433	0.430
1998	2200	1630	895	735	0.451	0.447
1999	2237	1658	878	780	0.470	0.466
2000	2272	683	875	808	0.480	0.477
2001	2338	732	890	843	0.486	0.485
2002	2372	758	840	917	0.522	0.500
2003	2383	766	828	938	0.531	0.500
2004	2363	751	788	963	0.550	0.500
2005	2336	731	767	963	0.557	0.500
2006	2293	699	748	952	0.560	0.500
2007	2214	1640	684	956	0.583	0.500
2008	2134	1582	658	924	0.584	0.500
2009	2049	1518	634	885	0.583	0.500
2010	1971	1461	610	851	0.582	0.500

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B61--12/20/85
VARIABLES: PONAAT, LSNA, EMNA, UNNA, UNRANA, UNRANAFI

TABLE C-2.1
 NORTH SLOPE MODEL PROJECTIONS
 LOW MIGRATION BASE CASE

	TOTAL POPULATION	RESIDENT POPULATION	AVERAGE NON- RESIDENT POPULATION
1980	6805*	3827**	2978*
1981	8785	4152	4633
1982	9368	4310	5058
1983	9956	4554	5402
1984	9528	4666	4 8 6 2
1985	9402	5158	4244
1986	9902	4964	4 9 3 8
1987	9643	5081	4562
1988	8375	5054	3320
1989	8541	5114	3426
1990	8611	5182	3428
1991	8605	5289	3316
1992	8783	5392	3391
1993	8325	5456	2869
1994	8362	5549	2813
1995	8371	5638	2733
1996	8296	5718	2579
1997	8317	5800	2517
1998	8250	5879	2371
1999	8213	5961	2252
2000	8309	6056-	2252
2001	8339	6178	2160
2002	7919	6258	1661
2003	8032	6371	1661
2004	7901	6476	1425
2005	8027	6601	1425
2006	8161	6735	1425
2007	7875	6852	1023
2008	8020	6997	1023
2009	8170	7146	1023
2010	8322	7299	1023

SOURCE : NORTH SLOPE MODEL SIMULATION NSLP.B62--12/20/85
 VARIABLES: POTO, PORE, AND PONRAV

TABLE C-2.2
 NORTH SLOPE MODEL PROJECTIONS
 LOW MIGRATION BASE CASE

	RESIDENT POPULATION	RESIDENT NATIVE POPULATION	RESIDENT NON-NATIVE POPULATION
1980	3827*	3208**	619*
1981	4152	≥278	875
1982	4310	≥373	937
1983	4554	3471	1083
1984	4666	3573	1093
1985	5158	3676	1482
1986	4964	3782	1183
1987	5081	3890	1192
1988	5054	3995	1059
1989	5114	4101	1014
1990	5182	4304	978
1991	5289	4304	986
1992	5392	4399	994
1993	5456	4489	967
1994	5549	45 9	970
1995	5638	467	967
1996	5718	4763	954
1997	5800	4853	947
1998	5879	4944	935
1999	5961	5037	924
2000	6056	5 35	922
2001	6178	5236	942
2002	6258	534	917
2003	6371	54 4	917
2004	6476	5573	903
2005	6601	5698	903
2006	6735	5830	905
2007	6852	5968	884
2008	6997	6110	886
2009	7146	6256	890
2010	7299	6404	894

SOURCE: NORTH SLOPE MODEL SIMULATION NSL, B62--12/20/85
 VARIABLES: PORE, PONA, AND PONN

TABLE C-2 .3
 NORTH SLOPE MODEL PROJECTIONS
 LOW MIGRATION BASE CASE

	NATIVE POPULATION	PRE-SCHOOL NATIVE POPULATION	SCHOOL-AGE NATIVE POPULATION	ADULT NATIVE POPULATION	AGED NATIVE POPULATION
1980	3208**	362**	1042**	7667**	137**
1981	3278	378	1030	1730	139
1982	3373	444	990	1795	144
1983	3471	497	966	1862	146
1984	3573	538	936	1951	148
1985	3676	580	916	2026	155
1986	3782	624	912	2080	166 "
1987	3890	640	973	2109	168
1988	3995	650	1042	2130	173
1989	4101	656	1119	2146	179
1990	4204	659	1171	2186	188
1991	4304	656	1247	2203	198
1992	4399	646	1315	2225	213
1993	4489	633	1381	2255	219
1994	4579	621	1448	2284	226
1995	4671	614	1508	2317	232
1996	4763	609	1582	2332	240
1997	4853	606	1636	2361	249
1998	4944	610	1669	2398	266
1999	5037	618	1703	2447	270
2000	5135	626	1738	2490	280
2001	5236	640	1743	2566	287
2002	5341	660	1743	2646	291
2003	5454	688	1740	2721	305
2004	5573	718	1739	2803	313
2005	5698	751	1740	2889	318
2006	5830	787	1744	2967	333
2007	5968	826	1752	3048	342
2008	6110	861	1771	3132	346
2009	6256	893	1798	3201	364
2010	6404	922	1835	3280	368

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B62--12/20/85
 VARIABLES: PONA, PONAKD, PONASL, PONAAT, AND PONAGE

TABLE C-2.4
NORTH SLOPE MODEL PROJECTIONS "
LOW MIGRATION BASE CASE

	NATIVE POPULATION	NATIVE MALE POPULATION	NATIVE FEMALE POPULATION	NATIVE NATURAL INCREASE	NATIVE RATE OF NATURAL INCREASE	NATIVE MIGRATION
1980	3208**	1669**	1509**			
1981	3278	1728	1550	90	0.028	-26
1982	3373	1770	1603	95	0.029	-0
1983	3471	1813	1658	98	0.029	-0
1984	3573	1859	1714	102	0.029	-0
1985	3676	1905	1771	103	0.029	-0
1986	3782	1952	1830	106	0.029	-0
1987	3890	2000	1889	108	0.029	-0
1988	3995	2048	1948	106	0.027	-0
1989	4101	2095	2006	105	0.026	0
1990	4204	2140	2064	103	0.025	-0
1991	4304	2185	2119	100	0.024	-0
1992	4399	2226	2172	95	0.022	-0
1993	4489	2266	2223	90	0.020	-0
1994	4579	2305	2274	90	0.020	-0
1995	4671	2345	2326	92	0.020	0
1996	4763	2385	2378	92	0.020	-0
1997	4853	2424	2429	89	0.019	-0
1998	4944	2464	2480	91	0.019	-0
1999	5037	2504	2533	94	0.019	-0
2000	5135	2546	2588	97	0.019	-0
2001	5236	2591	2645	102	0.020	-0
2002	5341	2637	2704	105	0.020	-0
2003	5454	2687	2768	114	0.021	-0
2004	5573	2739	2834	119	0.022	-0
2005	5698	2795	2903	125	0.022	0
2006	5830	2854	2976	132	0.023	-0
2007	5968	2915	3052	137	0.024	-0
2008	6110	2979	3131	143	0.024	0
2009	6256	3045	3211	146	0.024	-0
2010	6404	3111	3293	148	0.024	-0

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.862--12/20/85
VARIABLES: PONA, PONAMA, PONAFA, NTICNA, NTICNARA, AND MGNA

TABLE C-2. 5
NORTH SLOPE MODEL PROJECTIONS
LOW MIGRATION BASE CASE

	TOTAL EMPLOYMENT	TOTAL NATIVE EMPLOYMENT	TOTAL NON-NATIVE RESIDENT EMPLOYMENT	TOTAL NON- RESIDENT EMPLOYMENT
1980	6118**	1173*	473	4472*
1981	8761**	1136	668	6956
1982	9638**	327	716	7595
1983	10318**	380	827	8110
1984	9581**	446	835	7301
1985	9007	502	1132	6373
1986	9712	394	903	7415
1987	9085	325	910	6850
1988	6921	- 127	809	4985
" 1989	7000	082	774	5144
1990	6901	006	747	5148
1991	6746	014	753	4979
1992	6873	023	759	5091
1993	6030	983	739	4308
1994	5949	984	741	4224
1995	5820	979	738	4103
1996	5563	962	729	3872
1997	5456	953	723	3779
1998	5211	937	714	3560
1999	5010	922	705	3382
2000	5006	921	704	3382
2001	4902	938	720	3244
2002	4093	898	700	2494
2003	4092	898	700	2494
2004	3707	877	689	2140
2005	3708	877	690	2140
2006	3712	880	692	2140
2007	3058	847	675	1537
2008	3063	849	677	1537
2009	3070	853	680	1537
2010	3078	857	684	1537

SOURCE : NORTH SLOPE MODEL SIMULATION NSLP.B62--12/20/85
VARIABLES: EMTO, EMNA, EMNN, AND EMNR

TABLE C-2.6
 NORTH SLOPE MODEL PROJECTIONS
 LOW MIGRATION BASE CASE - "

EMPLOYMENT: ALL RACES

	TOTAL EMPLOY- MENT	FEDERAL AND STATE GOVERN- MENT EMPLOY- MENT	BOROUGH " " OPER- ATING EMPLOY- MENT	BOROUGH CIP EMPLOY- MENT	OTHER CIP EMPLOY- MENT	LOCAL SUPPORT EMPLOY- MENT	OIL INDUSTRY EMPLOY- MENT	NON-OIL BASIC EMPLOY- MENT	
1980	6118**	291 **	795*	322*	71*	393*	4246*	0	
1981	8761**	260**	818*	363*	190*	427*	6703*	0	
982	9638**	203**	828*	456*	435*	488*	7228*	0	
983	1031 8**	177**	970*	457*	395*	528*	7791*	0	-
984	9581**	178**	1028*	427*	464*	545*	6939*	0	-1
985	9007	178	1343	402	438	632	6014	0	
986	9712	178	1268	250	273	551	7191	0	
987	9085	178	1333	164	178	537	6696	0	
988	6921	178	1212	71	77	465	4919	0	
1989	7000	178	1156	63	68	446	5090	0	
1990	6901	178	1140	10	11	421	5141	0	
1991	6746	178	1150	10	11	424	4973	0	
1992	6873	178	1161	10	11	428	5086	0	
1993	6030	178	1129	10	11	413	4289	0	
1994	5949	178	1133	10	11	414	4203	0	
1995	5820	178	1129	10	11	412	4080	0	
1996	5563	178	1114	10	11	406	3844	0	
1997	5456	178	1105	10	11	403	3749	0	
1998	5211	178	1090	10	11	396	3526	0	
1999	5010	178	1076	10	11	391	3344	0	
2000	5006	178	1073	10	11	390	3344	0	
2001	4902	178	1102	10	11	398	3203	0	
2002	4093	178	1072	10	11	384	2438	0	
2003	4092	178	1072	10	11	384	2438	0	
2004	3707	178	1055	10	11	376	2077	0	
2005	3708	178	1055	10	11	376	2077	0	
2006	3712	178	1059	10	11	377	2077	0	
2007	3058	178	1033	10	11	365	1461	0	
2008	3063	178	1037	10	11	366	1461	0	
2009	3070	178	1042	10	11	368	1461	0	
2010	3078	178	1048	10	11	370	1461	0	

SOURCE : NORTH SLOPE MODEL SIMULATION NSLP.B62--12/20/85
 VARIABLES: EMTO, EMGONL, EMGOOP, EMGOCT, EMCTGO, EMSLEG, EMBAOI, AND EMBAOT

TABLE C-2.7
 NORTH SLOPE MODEL PROJECTIONS
 LOW MIGRATION BASE CASE

EMPLOYMENT: NATIVES

	TOTAL EMPLOY- MENT	FEDERAL AND STATE GOVERN- MENT EMPLOY- MENT	BOROUGH OPER- ATING EMPLOY- MENT	BOROUGH CIP EMPLOY- MENT	OTHER CIP EMPLOY- MENT	LOCAL SUPPORT EMPLOY- MENT	OIL INDUSTRY EMPLOY- MENT	NON-OIL BASIC EMPLOY- MENT
1980	1173*	26*	445*	267*	26*	216*	30**	0
1981	1136	26	458	301	70	235	46	0
1982	1327	26	464	378	161	268	30	0
1983	1380	25	530	370	143	283	30	0
1984	1446	25	571	352	170	297	30	0
1985	1502	23	683	303	147	316	30	0
1986	1394	26	710	208	101	303	46	0
1987	1325	26	746	136	66	295	56	0
1988	1127	26	679	59	28	256	80	0
1989	1082	26	647	52	25	245	86	0
1990	1006	26	638	8	4	232	98	0
1991	1014	26	644	8	4	233	99	0
1992	1023	26	650	8	4	235	100	0
1993	983	26	632	8	4	227	86	0
1994	984	26	634	8	4	228	84	0
1995	979	26	632	8	4	227	82	0
1996	962	26	624	8	4	223	77	0
1997	953	26	619	8	4	221	75	0
1998	937	26	610	8	4	218	71	0
1999	922	26	602	8	4	215	67	0
2000	921	26	601	8	4	214	67	0
2001	938	26	617	8	4	219	64	0
2002	898	26	600	8	4	211	49	0
2003	898	26	600	8	4	211	49	0
2004	877	26	591	8	4	207	42	0
2005	877	26	591	8	4	207	42	0
2006	880	26	593	8	4	207	42	0
2007	847	26	578	8	4	201	29	0
2008	849	26	581	8	4	201	29	0
2009	853	26	584	8	4	202	29	0
2010	857	26	587	8	4	203	29	0

SOURCE : NORTH SLOPE MODEL SIMULATION NSLP.B62--12/20/85
 VARIABLES: EMNA, EMNAGONL, EMNAGOOP, EMNAGOCT, EMNACTGO, EMNASUEG, EMNAOI,
 AND EMNABAOT

TABLE C-2.8
 NORTH SLOPE MODEL PROJECTIONS
 LOW MIGRATION BASE CASE

NATIVE OIL INDUSTRY% EMPLOYMENT

	ASSUMED MINIMUM NATIVE OIL EMPLOYMENT	OIL INDUSTRY" MAXIMUM DEMAND FOR NATIVE LABOR	MAXIMUM NATIVE SUPPLY OF LABOR TO OIL INDUSTRY%	NATIVE OIL INDUSTRY EMPLOYMENT
1980				
1981	30	134	46	46
1982	30	145	30	30
1983	30	156	30	30
1984	30	139	30	30
1985	30	120	30	30
1986	30	144	46	46
1987	30	134	56	56
1988	30	98	80	80
1989	30	102	86	86
1990	30	103	98	98
1991	30	99	99	99
1992	30	102	100	100
1993	30	86	104	86
1994	30	84	106	84
1995	30	82	109	82
1996	30	77	111	77
1997	30	75	114	75
1998	30	71	118	71
1999	30	67	123	69
2000	30	67	126	69
2001	30	64	130	64
2002	30	49	138	49
2003	30	49	144	49
2004	30	42	151	42
2005	30	42	157	42
2006	30	42	163	42
2007	30	29	171	29
2008	30	29	177	29
2009	30	29	182	29
2010	30	29	187	29

SOURCE : NORTH SLOPE MODEL SIMULATION NSLP.B62--12/20/85
 VARIABLES: EMNAOIEX, LDNABAOI, LSNAOI, EMNAOI

TABLE C-2. 9
 NORTH SLOPE MODEL PROJECTIONS
 LOW. MIGRATION BASE CASE

EMPLOYMENT: NON-NATIVE RESIDENTS

	TOTAL NON-NATIVE EMPLOYMENT	FEDERAL AND STATE GOVERNMENT EMPLOYMENT	BOROUGH OPERATING EMPLOYMENT	LOCAL SUPPORT EMPLOYMENT	NON-OIL BASIC EMPLOYMENT	BOROUGH CIP EMPLOYMENT
1980	473*	54*	350*	216*	0	55*
1981	668	54	360	192	0	62
1982	716	54	364	220	0	78
1983	827	55	440	245	0	87
1984	835	55	457	248	0	75
1985	1132	57	660	316	0	99
1986	903	54	558	248	0	43
1987	910	54	586	241	0	28
1988	809	54	533	209	0	12
1989	774	54	509	200	0	11
1990	747	54	502	189	0	2
1991	753	54	506	191	0	2
1992	759	54	511	192	0	2
1993	739	54	497	186	0	2
1994	741	54	499	186	0	2
1995	738	54	497	185	0	2
1996	729	54	490	183	0	2
1997	723	54	486	181	0	2
1998	714	54	479	178	0	2
1999	705	54	473	176	0	2
2000	704	54	472	175	0	2
2001	720	54	485	179	0	2
2002	700	54	472	173	0	2
2003	700	54	472	173	0	2
2004	689	54	464	169	0	2
2005	690	54	464	169	0	2
2006	692	54	466	170	0	2
2007	675	54	455	164	0	2
2008	677	54	456	165	0	2
2009	680	54	459	166	0	2
2010	684	54	461	166	0	2

SOURCE : NORTH SLOPE MODEL SIMULATION NSLP.B62--12/20/85
 VARIABLES: EMNN, EMNNGONL, EMNNGOOP, EMNNSUEG, EMNBAOT, EMNNGOCT

TABLE C-2. 10
NORTH SLOPE MODEL PROJECTIONS
LOW MIGRATION BASE CASE

EMPLOYMENT: NONRESIDENTS

	TOTAL NON- RESIDENT EMPLOYMENT	FEDERAL AND STATE GOVERNMENT EMPLOYMENT	AND OTHER CIP EMPLOYMENT	OIL INDUSTRY EMPLOYMENT
1980	4472*	211*	45*	4217*
1981	6956	180	120	6657
1982	7595	123	274	7198
1983	8110	97	252	7761
1984	7301	98	294	6909
1985	6373	98	291	5984
1986	7415	98	172	7145
1987	6850	98	112	6640
1988	4985	98	49	4839
1989	5144	98	43	5004
1990	5148	98	7	5043
1991	4979	98	7	4874
1992	5091	98	7	4986
1993	4308	98	7	4203
1994	4224	98	7	4119
1995	4103	98	7	3998
1996	3872	98	7	3767
1997	3779	98	7	3674
1998	3560	98	7	3455
1999	3382	98	7	3277
2000	3382	98	7	3277
2001	3244	98	7	3139
2002	2494	98	7	2389
2003	2494	98	7	2389
2004	2140	98	7	2035
2005	2140	98	7	2035
2006	2140	98	7	2035
2007	1537	98	7	1432
2008	1537	98	7	1432
2009	1537	98	7	1432
2010	1537	98	7	1432

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B62--12/20/85
VARIABLES: EMNR, EMNRGONL, EMNRCTGO, AND EMNRBAOI

TABLE C-2.11
NORTH SLOPE MODEL PROJECTIONS
LOW MIGRATION BASE CASE

	TOTAL BOROUGH REVENUES (000)	NON- PROPERTY TAX NON- INTEREST REVENUES (000)	PROPERTY TAX REVENUES FOR OPERATIONS (000)	PROPERTY TAX REVENUES FOR DEBT SERVICE (000)	INTEREST EARNINGS (000)
1980	72900**	18200**	21 000**	26300**	7400**
1981	90000**	22000**	26400**	32800**	8800**
1982	189100**	34900**	34800**	75000**	44400**
1983	215400**	37300**	38500**	95200**	44400**
1984	251400**	40200**	331 00**	118900**	59200**
1985	302300**	32600**	40600**	184600**	44500**
1986	307369	28743	46808	199717	32100
1987	310725	28659	49172	208894	24000
1988	311024	29366	42702	218456	20500
1989	298633	27362	43549	210322	17400
1990	270246	26274	43906	183166	16900
1991	186380	27557	43879	98545	16400
1992	248944	27986	44786	160272	15900
1993	237340	28370	42449	151122	15400
1994	227195	29020	42637	140638	14900
1995	216305	29147	42682	130076	14400
1996	162400	28874	42303	77322	13900
1997	123229	28595	42408	38826	13400
1998	114596	28276	42065	31355	12900
1999	98387	27897	41880	16210	12400
2000	97737	27737	42365	15735	11900
2001	99514	30274	42520	15320	11400
2002	96792	30599	40377	14915	10900
2003	96431	30516	40955	14560	10400
2004	94704	30371	40288	14145	9900
2005	94396	30299	40927	13770	9400
2006	89315	30377	41613	8425	8900
2007	78908	30353	40155	0	8400
2008	79230	30435	40894	0	7900
2009	79643	30586	41657	0	7400
2010	80062	30727	42434	0	6900

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B62--12/20/85
 VARIABLES: RVTO, RVNPOP, RVPYOP, RVPYDB, RVIT

TABLE C-2.12
NORTH SLOPE MODEL PROJECTIONS
LOW MIGRATION BASE CASE

	TOTAL BOROUGH EXPENDI- TURES (000)	OPERATIONS EXPENDI- TURES (000)	CON- STRUCTION EXPENDI- TURES (000)	DEBT SERVICE EXPENDI- TURES (000)
1980	158765**	39685**	93000**	26080**
1981	216637**	50020**	131000**	35617**
1982	342192**	63506**	211000**	67686**
1983	466118**	68807**	302000**	95311**
1984	419494**	78544**	211000**	129950**
1985	489655**	102577**	199000**	188078**
1986	420613	96896	124000	199717
1987	391725	101831	81000	208894
1988	346024	92568	35000	218456
1989	329633	88311	31000	210322
1990	275246	87080	5000	183166
1991	191380	87835	5000	98545
1992	253944	88672	5000	160272
1993	242340	86218	5000	151122
1994	232195	86557	5000	140638
1995	221305	86229	5000	130076
1996	167400	85078	5000	77322
1997	128229	84403	5000	38826
1998	119596	83241	5000	31355
1999	103387	82177	5000	16210
2000	102737	82002	5000	15735
2001	104514	84194	5000	15320
2002	101792	81877	5000	14915
2003	101431	81871	5000	14560
2004	99704	80559	5000	14145
2005	99396	80626	5000	13770
2006	94315	80890	5000	8425
2007	83908	78908	5000	0
2008	84230	79230	5000	0
2009	84643	79643	5000	0
2010	85062	80062	5000	0

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B62--12/20/85
VARIABLES: SPTO, SPLOGOOP, SPLOGOCT, AND CSDBTO

TABLE C-2.13
NORTH SLOPE MODEL PROJECTIONS
LOW MIGRATION BASE CASE

	TOTAL PROPERTY VALUE (000)	TOTAL PROPERTY TAXES (000)	TAX RATE	TAX RATE FOR OPER- ATING REVENUES	TAX RATE FOR DEBT SERVICE REVENUES	LIMIT ON PROPERTY TAX OPER- ATING REVENUES PER CAPITA (000)	ACTUAL PROPERTY TAX OPER- ATING REVENUES PER CAPITA ^a (000)
1980	5061955**	52400**	0.0103**	0.0052**	0.0051	3.196**	3.086
1981	5723582**	59100**	0.0103**	0.0051**	0.0052	3.601**	3.005
1982	6621652**	109700**	0.0167**	0.0055**	0.0112	3.914**	3.715
1983	8186986**	133700**	0.0164**	0.0041**	0.0123	4.761**	3.867
1984	9996290**	152400**	0.0153**	0.0033**	0.0120	5.119**	3.474
1985	12261420**	225300**	0.0184**	0.0033**	0.0151	5.099**	4.318
1986	13420000	246525	0.0184	0.0035	0.0149	5.099	4.727
1987	14730000	258066	0.0175	0.0033	0.0142	5.099	5.099
1988	15510000	261158	0.0168	0.0028	0.0141	5.099	5.099
1989	16100000	253871	0.0158	0.0027	0.0131	5.099	5.099
1990	16290000	227072	0.0139	0.0027	0.0112	5.099	5.099
1991	15990000	142424	0.0089	0.0027	0.0062	5.099	5.099
1992	15680000	205058	0.0131	0.0029	0.0102	5.099	5.099
1993	15340000	193571	0.0126	0.0028	0.0099	5.099	5.099
1994	14980000	183275	0.0122	0.0028	0.0094	5.099	5.099
1995	14550000	172758	0.0119	0.0029	0.0089	5.099	5.099
1996	14070000	119625	0.0085	0.0030	0.0055	5.099	5.099
1997	13550000	81234	0.0060	0.0031	0.0029	5.099	5.099
1998	12950000	73420	0.0057	0.0032	0.0024	5.099	5.099
1999	12280000	58090	0.0047	0.0034	0.0013	5.099	5.099
2000	11500000	58100	0.0051	0.0037	0.0014	5.099	5.099
2001	10720000	57840	0.0054	0.0040	0.0014	5.099	5.099
2002	9940000	55292	0.0056	0.0041	0.0015	5.099	5.099
2003	9160000	55515	0.0061	0.0045	0.0016	5.099	5.099
2004	8380000	54433	0.0065	0.0048	0.0017	5.099	5.099
2005	7600000	54697	0.0072	0.0054	0.0018	5.099	5.099
2006	6820000	50038	0.0073	0.0061	0.0012	5.099	5.099
2007	6040000	40155	0.0066	0.0066	0.0000	5.099	5.099
2008	5260000	40894	0.0078	0.0078	0.0000	5.099	5.099
2009	4480000	41657	0.0093	0.0093	0.0000	5.099	5.099
2010	3700000	42434	0.0115	0.0115	0.0000	5.099	5.099

aBased on total population as defined by model, rather than official state figure used for calculating revenue limit.

SOURCE : NORTH SLOPE MODEL SIMULATION NSLP.B62--12/20/85
VARIABLES: VATO, RVPYTO, TARA, TARAOP, TARADB, RVPYOPPC, RVOPPCFI

TABLE C-2.14
NORTH SLOPE MODEL PROJECTIONS
LOW MIGRATION BASE CASE

	TOTAL RESIDENT INCOME (000)	TOTAL NATIVE INCOME (000)	TOTAL NON-NATIVE RESIDENT INCOME (000)	PER CAPITA RESIDENT INCOME (000)	PER CAPITA NATIVE INCOME (000)	PER CAPITA NON-NATIVE RESIDENT INCOME (000)
1980	66377**					
1981	72422	47365	25057	17.441	14.451	28.648
1982	81512	54668	26844	18.912	16.207	28.648
1983	87814	56787	31027	19.283	16.361	28.648
1984	90692	59390	31302	19.438	16.622	28.648
1985	104101	61640	42461	20.782	16.767	28.652
1986	91644	57772	33871	18.461	15.277	28.643
1987	89467	55337	34130	17.607	14.227	28.639
1988	78386	48059	30327	15.509	12.028	28.641
1989	75544	46511	29032	14.771	11.342	28.642
1990	71843	43826	28018	13.863	10.425	28.637
1991	72489	44258	28230	13.705	10.284	28.645
1992	73200	44730	28470	13.575	10.169	28.654
1993	71082	43379	27702	13.029	9.664	28.642
1994	71340	43553	27787	12.857	9.512	28.646
1995	71153	43467	27686	12.621	9.306	28.636
1996	70311	42979	27332	12.297	9.023	28.637
1997	69913	42783	27130	12.054	8.816	28.634
1998	69072	42298	26773	11.750	8.556	28.637
1999	68338	41890	26449	11.465	8.316	28.639
2000	68361	41965	26396	11.288	8.173	28.643
2001	69772	42770	27002	11.293	8.168	28.655
2002	67686	41421	26264	10.817	7.756	28.642
2003	67841	41581	26260	10.649	7.624	28.647
2004	66816	40967	25850	10.318	7.351	28.641
2005	67029	41166	25864	10.154	7.224	28.651
2006	67388	41450	25938	10.005	7.109	28.655
2007	65718	40404	25314	9.592	6.770	28.637
2008	66113	40716	25397	9.449	6.663	28.657
2009	66588	41074	25514	9.318	6.566	28.660
2010	67073	41440	25633	9.190	6.471	28.660

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B62--12/20/85
VARIABLES: IN, INNA, INNN, INPC, INPCNA, AND INPCNN

TABLE C-2. 15
NORTH SLOPE MODEL PROJECTIONS
LOW MIGRATION BASE CASE

	ADULT NATIVE POPULATION	NATIVE LABOR SUPPLY	NATIVE EMPLOYMENT	NATIVE UNEMPLOY- MENT	NATIVE UNEMPLOY- MENT RATE BEFORE MIGRATION	NATIVE UNEMPLOY- MENT RATE AFTER MIGRATION
1980	1667**	1235**	1173**			
1981	1730	1282	1136	146	0.114	0.114
1982	1795	1330	1327	3	0.002	0.002
1983	1862	1380	1380	0	0.000	0.000
1984	1951	1446	1446	0	0.000	0.000
1985	2026	1502	1502	0	0.000	0.000
1986	2080	1541	1394	147	0.095	0.095
1987	2109	1563	1325	238	0.152	0.152
1988	2130	1578	1127	451	0.286	0.286
1989	2146	1590	1082	508	0.320	0.320
1990	2186	1620	1006	614	0.379	0.379
1991	2203	1632	1014	618	0.379	0.379
1992	2225	1648	1023	626	0.380	0.380
1993	2255	1671	983	688	0.412	0.412
1994	2284	1692	984	708	0.418	0.418
1995	2317	1717	979	738	0.430	0.430
1996	2332	1728	962	766	0.443	0.443
1997	2361	1749	953	796	0.455	0.455
1998	2398	1777	937	840	0.473	0.473
1999	2447	1813	922	891	0.491	0.491
2000	2490	1845	921	924	0.501	0.501
2001	2566	1901	938	963	0.507	0.507
2002	2646	1961	898	1063	0.542	0.542
2003	2721	2017	898	1119	0.555	0.555
2004	2803	2077	877	1200	0.578	0.578
2005	2889	2141	877	1263	0.590	0.590
2006	2967	2198	880	1318	0.600	0.600
2007	3048	2258	847	1412	0.625	0.625
2008	3132	2321	849	1472	0.634	0.634
2009	3201	2372	853	1519	0.640	0.640
2010	3280	2430	857	1573	0.647	0.647

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B62--12/20/85
VARIABLES: PONAAT, LSNA, EMNA, UNNA, UNRANA, UNRANAFI

TABLE C-3.1
 NORTH SLOPE MODEL PROJECTIONS
 HIGH MIGRATION BASE CASE

	TOTAL POPULATION	RESIDENT POPULATION	AVERAGE NON- RESIDENT POPULATION
1980	6805*	3827**	2978*
1981	8771	4138	4633
1982	9357	4299	5059
1983	9948	4546	5402
1984	9520	4657	4863
1985	9394	5150	4245
1986	9825	4884	4940
1987	9483	4918	4565
1988	8072	4746	3325
1989	8162	4730	3433
1990	8089	4652	3437
1991	7959	4632	3327
1992	8028	4625	3403
1993	7408	4536	2872
1994	7298	4482	2815
1995	7152	4418	2734
1996	6915	4336	2579
1997	6767	4250	2517
1998	6508	4136	2371
1999	6257	4005	2252
2000	6147	3895	2252
2001	5967	3807	2160
2002	5253	3592	1661
2003	5088	3427	1661
2004	4647	3222	1425
2005	4478	3053	1425
2006	4334	2908	1425
2007	3711	2688	1023
2008	3548	2524	1023
2009	3411	2388	1023
2010	3294	2271	1023

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B63--12/20/85
 VARIABLES: POTO, PORE, AND PONRAV

TABLE C-3.2
 NORTH SLOPE MODEL PROJECTIONS
 HIGH MIGRATION BASE CASE

	RESIDENT POPULATION	RESIDENT NATIVE POPULATION	RESIDENT NON-NATIVE POPULATION
1980	3827*	3208**	619*
1981	4138	3263	875
1982	4299	3358	941
1983	4546	3455	1090
1984	4657	3557	1100
1985	5150	3660	1490
1986	4884	3702	1182
1987	4918	3744	1173
1988	4746	3722	1024
1989	4730	3758	972
1990	4652	3730	922
1991	4632	3717	915
1992	4625	3713	912
1993	4536	3664	872
1994	4482	3623	860
1995	4418	3577	841
1996	4336	3522	814
1997	4250	3458	792
1998	4136	3374	762
1999	4005	3273	732
2000	3895	3182	713
2001	3807	3101	706
2002	3592	2941	651
2003	3427	2801	626
2004	3222	2637	585
2005	3053	2473	560
2006	2908	2369	539
2007	2688	2200	488
2008	2524	2059	465
2009	2388	1942	446
2010	2271	1843	428

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B63--12/20/85
 VARIABLES: PORE, PONA, AND PONN

TABLE C-3.3
 NORTH SLOPE MOREL PROJECTIONS
 HIGH MIGRATION BASE CASE

	NATIVE POPULATION	PRE-SCHOOL NATIVE POPULATION	SCHOOL-AGE NATIVE POPULATION	A D U L T NATIVE POPULATION	AGED NATIVE POPULATION
1980	3208**	362**	1042**	1667**	137**
1981	3263	377	1025	1723	139
1982	3358	443	985	1787	143
1983	3456	495	961	1854	145
1984	3557	536	932	1942	147
1985	3660	577	912	2017	154
1986	3702	613	893	2035	162
1987	3744	619	936	2028	161
1988	3722	613	969	1979	161
1989	3758	610	1023	1961	164
1990	3730	596	1035	1932	166
1991	3717	579	1074	1894	170
1992	3713	557	1108	1868	179
1993	3664	528	1128	1831	177
1994	3623-	503	1147	1795	177
1995	3577	481	1158	1762	176
1996	3522	461	1174	1711	176
1997	3458	443	1171	1668	176
1998	3374	428	1145	1621	180
1999	3273	413	1113	1573	174
2000	3182	400	1084	1526	171
2001	3101	391	1041	1501	167
2002	2941	378	968	1437	158
2003	2801	368	902	1376	154
2004	2637	356	832	1303	145
2005	0493	347	770	1241	136
2006	2369	339	717	1182	132
2007	2200	324	654	1100	123
2008	2059	309	605	1032	113
2009	1942	295	567	971	109
2010	1843	282	538	921	102

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B63--12/20/85
 VARIABLES: PONA, PONA KD, PONA SL, PONA AT, ANO PONA GE

TABLE C-3.4
NORTH SLOPE MODEL PROJECTIONS
HIGH MIGRATION BASE CASE

	NATIVE POPULATION	NATIVE MALE POPULATION	NATIVE FEMALE POPULATION	NATIVE NATURAL INCREASE	NATIVE RATE OF NATURAL INCREASE	NATIVE MIGRATION
1980	3208**	1669**	1509**			
1981	3263	1720	1543	90	0.028	-41
1982	3358	1762	1596	95	0.029	-41
1983	3456	1805	1650	97	0.029	-0
1984	3557	1851	1707	102	0.029	-0
1985	3660	1897	1764	103	0.029	-0
1986	3702	1911	1791	105	0.029	-63
1987	3744	1926	1819	105	0.028	-64
1988	3722	1907	1815	102	0.027	-124
1989	3758	1919	1839	98	0.026	-62
1990	3730	1899	1831	94	0.025	-122
1991	3717	1886	1831	88	0.024	-101
1992	3713	1879	1834	82	0.022	-85
1993	3664	1849	1815	75	0.020	-124
1994	3623	1823	1800	73	0.020	-114
1995	3577	1795	782	72	0.020	-118
1996	3522	1763	759	70	0.020	-125
1997	3458	1727	732	65	0.019	-129
1998	3374	1681	694	64	0.019	-148
1999	3273	1626	647	63	0.019	-165
2000	3182	1577	605	62	0.019	-153
2001	3101	1533	568	62	0.019	-143
2002	2941	1451	1490	61	0.020	-221
2003	2801	1378	1422	62	0.021	-202
2004	2637	1295	1342	60	0.021	-224
2005	2493	1221	1272	58	0.022	-202
2006	2369	1158	1211	57	0.023	-180
2007	2200	1073	1127	55	0.023	-224
2008	2059	1002	1056	52	0.023	-193
2009	1942	944	999	48	0.023	-165
2010	1843	894	949	45	0.023	-145

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B63--12/20/85
VARIABLES: PONA, PONAMA, PONAFA, NTICNA, NTICNARA, AND MGNA

TABLE C-3.5
 NORTH SLOPE MODEL PROJECTIONS
 HIGH MIGRATION BASE CASE

	TOTAL EMPLOYMENT	TOTAL NATIVE EMPLOYMENT	TOTAL Nonnative RESIDENT EMPLOYMENT	TOTAL NON- RESIDENT EMPLOYMENT
1980	6118**	1173*	473*	4472*
1981	8761**	1136	668	6957
1982	9638**	1324	719	7595
1983	10318**	1374	833	8111
1984	9581**	1439	840	7301
1985	9006	1495	" 1138	6373
1986	9711	1391	903	7418
1987	9054	1304	896	6854
1988	6861	1086	782	4993
1989	6929	1032	742	5154
1990	6804	939	704	5161
1991	6625	930	699	4995
1992	6733	926	697	5110
1993	5866	888	666	4312
1994	5759	875	657	4227
1995	5604	856	643	4105
1996	5321	827	622	3872
1997	5187	804	605	3779
1998	4913	771	582	3560
1999	4680	738	559	3382
2000	4646	720	544	3382
2001	4494	710	539	3244
2002	3634	642	497	2494
2003	3591	618	478	2494
2004	3158	571	447	2140
2005	3116	547	428	2140
2006	3079	527	412	2140
2007	2375	466	373	1537
2008	2336	444	355	1537
2009	2302	425	340	1537
2010	2272	408	327	1537

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B63--12/20/85
 VARIABLES: EMTO, EMNA, EMNN, AND EMNR

TABLE C-3.6
NORTH SLOPE MODEL PROJECTIONS
HIGH MIGRATION BASE CASE

EMPLOYMENT: ALL RACES

	TOTAL EMPLOY- MENT	FEDERAL AND STATE GOVERN- MENT EMPLOY- MENT	BOROUGH OPER- ATING EMPLOY- MENT	BOROUGH CIP EMPLOY- MENT	OTHER CIP EMPLOY- MENT	LOCAL SUPPORT EMPLOY- MENT	OIL INDUSTRY EMPLOY- MENT	NON-OIL BASIC EMPLOY- MENT
1980	6118**	291**	795*	322*	71*	393*	4246*	0
1981	8761**	260**	818*	363*	190*	427*	6703*	0
1982	9638**	203**	828*	456*	435*	488*	7228*	0
1983	10318**	177**	970*	457*	395*	528*	7791*	0
1984	9581**	178**	1028*	427*	464*	545*	6939*	0
1985	9006	178	1343	402	438	632	6014	0
1986	9711	178	1268	250	273	550	7191	0
1987	9054	178	1310	164	178	528	6696	0
1988	6861	178	1168	71	77	448	4919	0
1989	6929	178	1104	63	68	426	5090	0
1990	6804	178	1070	10	11	394	5141	0
1991	6625	178	1062	10	11	391	4973	0
1992	6733	178	1058	10	11	389	5086	0
1993	5866	178	1005	10	11	373	4289	0
1994	5759	178	989	10	11	368	4203	0
1995	5604	178	965	10	11	360	4080	0
1996	5321	178	930	10	11	348	3844	0
1997	5187	178	901	10	11	338	3749	0
1998	4913	178	864	10	11	325	3526	0
1999	4680	178	825	10	11	311	3344	0
2000	4646	178	800	10	11	303	3344	0
2001	4494	178	792	10	11	300	3203	0
2002	3634	178	723	10	11	274	2438	0
2003	3591	178	691	10	11	263	2438	0
2004	3158	178	638	10	11	244	2077	0
2005	3116	178	605	10	11	234	2077	0
2006	3079	178	577	10	11	225	2077	0
2007	2375	178	514	10	11	201	1461	0
2008	2336	178	484	10	11	192	1461	0
2009	2302	178	458	10	11	184	1461	0
2010	2272	178	435	10	11	176	1461	0

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B63--12/20/85
VARIABLES: EMTO, EMGNL, EMGOOP, EMGOCT, EMCTGO, EMSUEG, EMBAOI, AND EMBAOT

TABLE C-3.7
NORTH SLOPE MODEL PROJECTIONS
HIGH MIGRATION BASE CASE

EMPLOYMENT: NATIVES

	TOTAL EMPLOY- MENT	FEDERAL AND STATE GOVERN- MENT EMPLOY- MENT	BOROUGH OPER- ATING EMPLOY- MENT	BOROUGH CIP EMPLOY- MENT	OTHER CIP EMPLOY- MENT	LOCAL SUPPORT EMPLOY- MENT	OIL INDUSTRY EMPLOY- MENT	NON-OIL BASIC EMPLOY- MENT
1980	1173*	26*	445*	267*	26*	216*	30**	0
1981	1136	26	458	301	70	235	46	0
1982	1324	26	463	378	161	268	30	0
1983	1374	25	527	368	142	282	30	0
1984	1439	25	568	350	170	296	30	0
1985	1495	23	680	302	146	314	30	0
1986	1391	26	710	208	101	303	43	0
1987	1304	26	734	136	66	290	52	0
1988	1086	26	654	59	28	247	72	0
1989	1032	26	618	52	25	234	77	0
1990	939	26	599	8	4	217	85	0
1991	930	26	595	8	4	215	83	0
1992	926	26	593	8	4	214	81	0
1993	888	26	563	8	4	205	82	0
1994	875	26	554	8	4	202	81	0
1995	856	26	540	8	4	198	80	0
1996	827	26	521	8	4	191	77	0
1997	804	26	505	8	4	186	75	0
1998	771	26	484	8	4	179	71	0
1999	738	26	462	8	4	171	67	0
2000	720	26	448	8	4	167	67	0
2001	710	26	443	8	4	165	64	0
2002	6 4 2	26	405	8	4	150	49	0
2003	618	26	387	8	4	145	49	0
2004	571	26	357	8	4	134	42	0
2005	547	26	339	8	4	129	42	0
2006	527	26	323	8	4	124	42	0
2007	466	26	288	8	4	111	2 9	0
2008	444	26	271	8	4	105	29	0
2009	425	26	257	8	4	101	29	0
2010	408	26	244	8	4	97	29	0

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B63--12/20/85
VARIABLES: EMNA, EMNAGONL, EMNAGOOP, EMNAGOCT, EMNACTGO, EMNASUEG, EMNAOI,
AND EMNABAOT

TABLE C-3.8
 NORTH SLOPE MODEL PROJECTIONS
 HIGH MIGRATION BASE CASE

		NATIVE OIL INDUSTRY EMPLOYMENT			
		OIL	MAXIMUM		
	ASSUMED	INDUSTRY	NATIVE	SUPPLY OF	NATIVE OIL
	MINIMUM	MAXIMUM	INDUSTRY	LABOR TO	INDUSTRY
	NATIVE OIL	DEMAND FOR	LABOR	OIL	EMPLOYMENT
	EMPLOYMENT	NATIVE	INDUSTRY	INDUSTRY	
		LABOR			
1980	30	134	46	46	
1981	30	145	30	30	
1982	30	156	30	30	
1983	30	139	30	30	
1984	30	120	30	30	
1985	30	144	43	43	
1986	30	134	52	52	
1987	30	98	72	72	
1988	30	102	77	77	
1989	30	103	85	85	
1990	30	99	83	83	
1991	30	102	81	81	
1992	30	86	82	82	
1993	30	84	81	81	
1994	30	82	80	80	
1995	30	77	79	77	
1996	30	75	78	75	
1997	30	71	77	71	
1998	30	67	76	67	
1999	30	67	75	67	
2000	30	64	74	64	
2001	30	49	74	49	
2002	30	49	72	49	
2003	30	42	71	42	
2004	30	42	68	42	
2005	30	42	66	42	
2006	30	29	65	29	
2007	30	29	62	29	
2008	30	29	59	29	
2009	30	29	57	29	
2010	30	29	57	29	

SOURCE: NORTH SLOPE MODEL SIMULATION NWLP.863--12/2. '85
 VARIABLES: EMNAOIEIX, LDNABAQI, LSNAQI, EMNAQI

TABLE C-3.9
 NORTH SLOPE MODEL PROJECTIONS
 HIGH MIGRATION BASE CASE

EMPLOYMENT: NON-NATIVE RESIDENTS

	TOTAL NON-NATIVE EMPLOYMENT	FEDERAL AND STATE GOVERNMENT EMPLOYMENT	BOROUGH OPERATING EMPLOYMENT	LOCAL SUPPORT EMPLOYMENT	NON-OIL BASIC EMPLOYMENT	BOROUGH CIP EMPLOYMENT
1980	473*	54*	350*	216*	0	55*
1981	668	54	360	192	0	62
1982	719	54	365	220	0	78
1983	833	55	443	246	0	89
1984	840	55	460	249	0	77
1985	1138	57	663	318	0	100
1986	903	54	558	248	0	43
1987	896	54	576	238	0	28
1988	782	54	514	202	0	12
1989	742	54	486	192	0	11
1990	704	54	471	177	0	2
1991	699	54	467	176	0	2
1992	697	54	466	175	0	2
1993	666	54	442	168	0	2
1994	657	54	435	165	0	2
1995	643	54	425	162	0	2
1996	622	54	409	156	0	2
1997	605	54	397	152	0	2
1998	582	54	380	146	0	2
1999	559	54	363	140	0	2
2000	544	54	352	137	0	2
2001	539	54	348	135	0	2
2002	497	54	318	123	0	2
2003	478	54	304	118	0	2
2004	447	54	281	110	0	2
2005	428	54	266	105	0	2
2006	412	54	254	101	0	2
2007	373	54	226	91	0	2
2008	355	54	213	86	0	2
2009	340	54	202	83	0	2
2010	327	54	192	79	0	2

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B63--12/20/85
 VARIABLES: EMNN, EMNNGONL, EMNNGOOP, EMNNSUEG, EMNNBAOT, EMNNGOCT

TABLE C-3.10
 NORTH SLOPE MODEL PROJECTIONS
 HIGH MIGRATION BASE CASE

EMPLOYMENT: NON-RESIDENTS

	TOTAL NON- RESIDENT EMPLOYMENT	FEDERAL AND STATE GOVERNMENT EMPLOYMENT	OTHER CIP EMPLOYMENT	OIL INDUSTRY EMPLOYMENT
1980	4472*	211*	45*	4217*
1981	6957	180	120	6657
1982	7595	123	274	7198
1983	8111	97	253	7761
1984	7301	98	294	6909
1985	6373	98	291	5984
1986	7418	98	172	7148
1987	6854	98	112	6644
1988	4993	98	49	4847
1989	5154	98	43	5013
1990	5161	98	7	5056
1991	4995	98	7	4890
1992	5110	98	7	5005
1993	4312	98	7	4207
1994	4227	98	7	4122
1995	4105	98	7	4000
1996	3872	98	7	3767
1997	3779	98	7	3674
1998	3560	98	7	3455
1999	3382	98	7	3277
2000	3382	98	7	3277
2001	3244	98	7	3139
2002	2494	98	7	2389
2003	2494	98	7	2389
2004	2140	98	7	2035
2005	2140	98	7	2035
2006	2140	98	7	2035
2007	1537	98	7	1432
2008	1537	98	7	1432
2009	1537	98	7	1432
2010	1537	98	7	1432

SOURCE: NORTH SLOPE MODEL SIMULATION NS-863--12/20/85
 VARIABLES: EMNR, EMNRGNL, EMNRCTGO, AND EMNRBAOI

TABLE C-3.11
NORTH SLOPE MODEL PROJECTIONS
HIGH MIGRATION BASE CASE

	TOTAL BOROUGH REVENUES (000)	NON- PROPERTY TAX NON- INTEREST REVENUES (000)	PROPERTY TAX REVENUES FOR OPERATIONS (000)	PROPERTY TAX REVENUES FOR DEBT SERVICE (000)	INTEREST EARNINGS (000)
1980	72900**	18200**	21 000**	26300**	7400**
1981	90000**	22000**	26400**	32800**	8800**
1982	189100**	34900**	34800**	75000**	44400**
1983	215400**	37300**	38500**	95200**	44400**
1984	251400**	40200**	331 00**	118900**	59200**
1985	302300**	32600**	40600**	184600**	44500**
1986	306906	28281	46808	199717	32100
1987	308981	27736	48351	208894	24000
1988	307687	27574	41157	218456	20500
1989	294647	25304	41620	210322	17400
1990	264899	23586	41248	183166	16900
1991	179659	24132	40582	98545	16400
1992	241112	24004	40936	160272	15900
1993	227881	23587	37772	151122	15400
1994	216190	23442	37210	140638	14900
1995	203789	22843	36470	130076	14400
1996	148375	21896	35257	77322	13900
1997	107682	20953	34504	38826	13400
1998	97334	19896	33183	31355	12900
1999	79259	18743	31906	16210	12400
2000	76816	17837	31344	15735	11900
2001	75801	18654	30427	15320	11400
2002	70168	17566	26787	14915	10900
2003	67318	16415	25944	14560	10400
2004	62850	15110	23696	14145	9900
2005	60019	14013	22836	13770	9400
2006	52537	13115	22097	8425	8900
2007	39233	11908	18925	0	8400
2008	36969	10980	18089	0	7900
2009	35016	10221	17395	0	7400
2010	33258	9560	16797	0	6900

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.863--12/20/85
VARIABLES: RVTO, RVNPOP, RVPYOP, RVPYDB, RVIT

TABLE C-3.12
 NORTH SLOPE MODEL PROJECTIONS
 HIGH MIGRATION BASE CASE

	TOTAL BOROUGH EXPENDI- TURES (000)	OPERATIONS EXPENDI- TURES (000)	CON- STRUCTION EXPENDI- TURES (000)	DEBT SERVICE EXPENDI- TURES (000)
1980	158765**	39685**	93000**	26080**
1981	216637**	50020**	131000**	35617**
1982	342192**	63506**	211000**	67686**
1983	466118**	68807**	302000**	95311**
1984	419494**	78544**	211000**	129950**
1985	489655**	102577**	199000**	188078**
1986	420613	96896	124000	199717
1987	389981	100087	81000	208894
1988	342687	89231	35000	218456
1989	325647	84325	31000	210322
1990	269899	81733	5000	183166
1991	184659	81114	5000	98545
1992	246112	80840	5000	160272
1993	232881	76759	5000	151122
1994	221190	75552	5000	140638
1995	208789	73713	5000	130076
1996	153375	71053	5000	77322
1997	112682	68856	5000	38826
1998	102334	65979	5000	31355
1999	84259	63049	5000	16210
2000	81816	61081	5000	15735
2001	80801	60481	5000	15320
2002	75168	55253	5000	14915
2003	72318	52758	5000	14560
2004	67850	48705	5000	14145
2005	65019	46249	5000	13770
2006	57537	44112	5000	8425
2007	44233	39233	5000	0
2008	41969	36969	5000	0
2009	40016	35016	5000	0
2010	38258	33258	5000	0

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B63--12/20/85
 VARIABLES: SPTO, SPLOGOOP, SPLOGOCT, AND CSDBTO

TABLE C-3. 13
NORTH SLOPE MODEL PROJECTIONS
HIGH MIGRATION BASE CASE

	TOTAL PROPERTY VALUE (000)	TOTAL PROPERTY TAXES (000)	TAX RATE	TAX RATE FOR OPER- ATING REVENUES	TAX RATE FOR DEBT SERVICE REVENUES	LIMIT ON PROPERTY TAX OPER- ATING REVENUES PER CAPITA (000)	ACTUAL PROPERTY TAX OPER- ATING REVENUES PER CAPITA ^a (000)
1980	5061955**	52400**	0.0103**	0.0052**	0.0051	3.196**	3.086
1981	5723582**	59100**	0.0103**	0.0051**	0.0052	3.601**	3.008
1982	6621652**	109700**	0.0167**	0.0055**	0.0112	3.914**	3.718
1983	8186986**	133700**	0.0164**	0.0041**	0.0123	4.761**	3.859
1984	9996290**	152400**	0.0153**	0.0033**	0.0120	5.119**	3.476
1985	12261420**	225300**	0.0184**	0.0033**	0.0151	5.099**	4.321
1986	13420000	246525	0.0184	0.0035	0.0149	5.099	4.764
1987	14730000	257245	0.0175	0.0033	0.0142	5.099	5.099
1988	15510000	259613	0.0167	0.0027	0.0141	5.099	5.099
1989	16100000	251942	0.0156	0.0026	0.0131	5.099	5.099
1990	16290000	224414	0.0138	0.0025	0.0112	5.099	5.099
1991	15990000	139127	0.0087	0.0025	0.0062	5.099	5.099
1992	15680000	201208	0.0128	0.0026	0.0102	5.099	5.099
1993	15340000	188894	0.0123	0.0025	0.0099	5.099	5.099
1994	14980000	177848	0.0119	0.0025	0.0094	5.099	5.099
1995	14550000	166546	0.0114	0.0025	0.0089	5.099	5.099
1996	14070000	112579	0.0080	0.0025	0.0055	5.099	5.099
1997	13550000	73330	0.0054	0.0025	0.0029	5.099	5.099
1998	12950000	64538	0.0050	0.0026	0.0024	5.099	5.099
1999	12280000	48116	0.0039	0.0026	0.0013	5.099	5.099
2000	11500000	47079	0.0041	0.0027	0.0014	5.099	5.099
2001	10720000	45747	0.0043	0.0028	0.0014	5.099	5.099
2002	9940000	41702	0.0042	0.0027	0.0015	5.099	5.099
2003	9160000	40504	0.0044	0.0028	0.0016	5.099	5.099
2004	8380000	37841	0.0045	0.0028	0.0017	5.099	5.099
2005	7600000	36606	0.0048	0.0030	0.0018	5.099	5.099
2006	6820000	30522	0.0045	0.0032	0.0012	5.099	5.099
2007	6040000	18925	0.0031	0.0031	0.0000	5.099	5.099
2008	5260000	18089	0.0034	0.0034	0.0000	5.099	5.099
2009	4480000	17395	0.0039	0.0039	0.0000	5.099	5.099
2010	3700000	16797	0.0045	0.0045	0.0000	5.099	5.099

^aBased on total population as defined by model, rather than official state figure used for calculating revenue limit.

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B63--12/20/85
VARIABLES: VATO, RVPYTO, TARA, TARAOP, TARADB, RVPYOPPC, RVOPPCFI

TABLE C-3. 4
NORTH SLOPE MODEL PROJECTIONS
HIGH MIGRATION BASE CASE

Year	TOTAL RESIDENT INCOME		TOTAL NATIVE INCOME		TOTAL NON-NATIVE INCOME		PER CAPITA INCOME		PER CAPITA INCOME	
	(000)	(000)	(000)	(000)	(000)	(000)	(000)	(000)	(000)	(000)
1980	66377**									
1981	72379	67322	25057	17.491	14.501	28.648				
1982	81466	84522	26944	18.951	16.235	28.648				
1983	87768	56533	31235	19.306	16.359	28.648				
1984	90640	59124	31516	19.461	16.620	28.648				
1985	104045	61364	42681	20.204	16.766	28.652				
1986	91367	57513	33854	18.706	15.534	28.643				
1987	87924	54313	33611	17.879	14.505	28.646				
1988	75450	46117	29332	15.897	12.391	28.641				
1989	71988	44149	27839	15.220	11.748	28.646				
1990	67031	40617	26414	14.409	10.889	28.647				
1991	66500	40276	26224	14.357	10.837	28.648				
1992	66239	40102	26137	14.322	10.801	28.648				
1993	63587	38610	24977	14.018	10.537	28.648				
1994	62676	38052	24624	13.983	10.504	28.647				
1995	61389	37294	24096	13.894	10.425	28.648				
1996	59439	36121	23319	13.709	10.256	28.648				
1997	57835	35154	22681	13.608	10.165	28.648				
1998	55633	33799	21835	13.449	10.017	28.647				
1999	53413	32436	20978	13.337	9.911	28.647				
2000	52013	31597	20417	13.355	9.930	28.649				
2001	51368	31138	20230	13.494	10.042	28.648				
2002	47003	28350	18654	13.085	9.639	28.646				
2003	45190	27249	17942	13.187	9.730	28.649				
2004	41980	25234	16745	13.030	9.569	28.648				
2005	40183	24140	16043	13.162	9.683	28.649				
2006	38624	23192	15433	13.282	9.788	28.649				
2007	34623	20649	13974	12.880	9.385	28.643				
2008	32950	19625	13325	13.054	9.532	28.646				
2009	31520	18753	12767	13.199	9.655	28.647				
2010	30240	17975	12265	13.317	9.755	28.647				

SOURCE: NORTH SLOPE MODEL SIMULATION NS.F.863--12/20/85
VARIABLES: IN, INNA, INNN, INPC, INPCNA, AND INPCNN

TABLE C-3.15
NORTH SLOPE MODEL PROJECTIONS
HIGH MIGRATION BASE CASE

	ADULT NATIVE POPULATION	NATIVE LABOR SUPPLY	NATIVE EMPLOYMENT	NATIVE UNEMPLOY- MENT	NATIVE UNEMPLOY- MENT RATE BEFORE MIGRATION	NATIVE UNEMPLOY- MENT RATE AFTER MIGRATION
1980	1667**	1235**	1173*			
1981	1723	1276	1136	141	0*110	0.104
1982	1787	1324	1324	0	0.000	0.000
1983	1854	1374	1374	0	0.000	0.000
1984	1942	1439	1439	0	0.000	0.000
1985	2017	1495	1495	0	0.000	0.000
1986	2035	1508	1391	117	0.078	0.054
987	2028	1503	1304	199	0.132	0.109
988	1979	1467	1086	381	0.260"	0.214
989	1961	1453	1032	421	0.290	0.267
990	1932	1432	939	493	0.344	0.300
991 "	1894	1403	930	473	0.337	0.300
992	1868	1384	926	459	0.331	0.300
993	1831	1356	888	468	0.345	0.300
994	1795	1330	875	456	0.343	0.300
995	1762	1306	856	449	0.344	0.300
996	1711	1268	827	441	0.348	0.300
997	1668	1236	804	432	0.350	0.300
998	1621	1201	771	430	0.358	0.300
999	1573	1166	738	427	0.367	0.300
000	1526	1131	720	411	0.364	0.300
2001	1501	1112	710	402	0.361	0.300
2002	1437	1065	642	423	0.397	0.300
2003	1376	1020	618	401	0.394	0.300
2004	1303	966	571	395	0.409	0.300
2005	1241	919	547	372	0.405	0.300
2006	1182	876	527	349	0.399	0.300
2007 -	1100	815	466	350	0.429	0.300
2008	1032	765	444	321	0.420	0.300
2009	971	719	425	294	0.409	0.300
2010	921	682	408	274	0.402	0.300

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B63--12/20/85
VARIABLES: PONAAT, LSNA, EMNA, UNNA, UNRANA, UNRANAFI



TABLE C-4.1
 NORTH SLOPE MODEL "PROJECTIONS
 LOW REVENUES BASE CASE

	TOTAL POPULATION	RESIDENT POPULATION	AVERAGE NON- RESIDENT POPULATION
1980	6805*	3827**	2978*
1981	8776	4142	4633
1982	9360	4301	5058
1983	9950	4548	5402
1984	9523	4660	4863
1985	9397	5152	4245
1986	9847	4908	4940
1987	9462	4901	4561
1988	8108	4787	3321
1989	8241	4813	3428
1990	8262	4831	3431
1991	8229	4910	3319
1992	8385	4992	3393
1993	7887	5018	2869
1994	7896	5053	2813
1995	7875	5 1 4 2	2733
1996	7771	5192	2579
1997	7762	5245	2517
1998	7658	5287	2371
1999	7518	5266	2252
2000	7473	5220	2252
2001	7343	5183	2160
2002	6660	4999	1661
2003	6483	4822	1661
2004	6014	4588	1425
2005	578B	4363	1425
2006	5571	4146	1425
2007	4902	3878	1023
2008	4677	3653	1023
2009	4478	3455	1023
2010	4300	3277	1023

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.864--12/20/85
 VARIABLES: POTO, PORE, AND PONRAV

TABLE C-4.2
 NORTH SLOPE MODEL PROJECTIONS
 LOW REVENUES BASE CASE

	RESIDENT POPULATION	RESIDENT NATIVE POPULATION	RESIDENT NON-NATIVE POPULATION
1980	3827*	3208**	619*
1981	4142	3268	875
1982	4301	3363	938
1983	4548	3460	1088
1984	4660	3562	1098
1985	5152	3665	1487
1986	4908	3726	1182
1987	4901	3777	1125
1988	4787	3798	989
1989	4813	3866	947
1990	4831	3923	908
1991	4910	4005	905
1992	4992	4088	904
1993	5018	4150	868
1994	5083	4222	861
1995	5142	4294	848
1996	5192	4365	827
1997	5245	4434	810
1998	5287	4498	789
1999	5266	4502	764
2000	5220	4478	742
2001	5183	4443	740
2002	4999	4309	690
2003	4822	4163	659
2004	4588	3974	615
2005	4363	3781	581
2006	4146	3595	551
2007	3878	3372	506
2008	3653	3172	481
2009	3455	2996	459
2010	3277	2838	439

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.864--12/20/85
 VARIABLES: PORE, PONA, AND PONN

TABLE C-4.3
 NORTH SLOPE MODEL PROJECTIONS
 LOW REVENUES BASE CASE

	NATIVE POPULATION	PRE-SCHOOL NATIVE POPULATION	SCHOOL-AGE NATIVE POPULATION	ADULT NATIVE POPULATION	AGED NATIVE POPULATION
1980	3208**	362**	1042**	1667**	137**
1981	3268	377	1027	1725	139
1982	3363	443	987	1789	144
1983	3460	496	962	1857	145
1984	3562	536	933	1945	148
1985	3665	578	913	2020	154
1986	3726	616	898	2048	163
1987	3777	624	944	2046	163
1988	3798	623	989	2021	164
1989	3866	625	1053	2019	168
1990	3923	622	1090	2035	175
1991	4005	616	1160	2045	184
1992	4088	605	1223	2063	198
1993	4150	588	1280	2080	202
1994	4222	574	1339	2101	208
1995	4294	565	1392	2125	213
1996	4365	559	1455	2133	219
1997	4434	555	1500	2152	227
1998	4498	556	1524	2176	242
1999	4502	554	1526	2181	241
2000	4478	550	1520	2164	244
2001	4443	550	1482	2169	242
2002	4309	544	1407	2124	234
2003	4163	541	1327	2063	231
2004	3974	533	123a	1981	221
2005	3781	523	1152	1898	208
2006	3595	513	1071	1809	202
2007	3372	496	986	1700	190
2008	3172	477	917	1602	176
2009	2996	456	862	1507	170
2010	2838	436	817	1426	159

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.864--12/20/85
 VARIABLES: PONA, PONAkd, PONAsl, PONAAT, AND PONAGE

TABLE C-4.4
NORTH SLOPE MODEL PROJECTIONS
LOW REVENUES BASE CASE

	NATIVE POPULATION	NATIVE MALE POPULATION	NATIVE FEMALE POPULATION	NATIVE NATURAL INCREASE	NATIVE RATE OF NATURAL INCREASE	NATIVE MIGRATION
1980	3208**	1669**	1501**			
1981	3268	1722	1545	90	0.028	-36
1982	3363	764	1598	95	0.029	-0
1983	3460	808	1653	98	0.029	-0
1984	3562	853	1703	102	0.029	-0
1985	3665	899	1766	103	0.029	0
1986	3726	923	1802	105	0.029	-45
1987	3777	942	1834	106	0.028	-55
1988	3798	946	1852	103	0.027	-81
1989	3866	1974	1892	100	0.026	-32
1990	3923	1997	1926	97	0.025	-40
1991	4005	2033	1972	93	0.024	-10
1992	4088	2069	2019	88	0.022	-5
1993	4150	2094	2056	83	0.020	-22
1994	4222	2125	2097	83	0.020	-11
1995	4294	2156	2139	85	0.020	-12
1996	4365	2186	2180	85	0.020	-14
1997	4434	2215	2219	82	0.019	-13
1998	4498	2241	2257	83	0.019	-19
1999	4502	2238	2264	85	0.019	-81
2000	4478	2220	2257	87	0.019	-111
2001	4443	2198	2245	88	0.020	-123
2002	4309	2127	2182	88	0.020	-222
2003	4163	2050	2113	91	0.021	-237
2004	3974	1952	2021	90	0.022	-279
2005	3781	1854	1927	89	0.022	-281
2006	3595	1759	1836	87	0.023	-273
2007	3372	1646	1726	84	0.023	-307
2008	3172	1546	1626	79	0.024	-280
2009	2996	1457	1539	74	0.023	-251
2010	2838	1377	1460	70	0.023	-228

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B64--12/20/85
VARIABLES: PONA, PONAMA, PONAFA, NTICNA, NTICNARA, AND MGNA

TABLE C-4.5
 NORTH SLOPE MODEL PROJECTIONS
 LOW REVENUES BASE CASE

	TOTAL EMPLOYMENT	TOTAL NATIVE EMPLOYMENT	TOTAL NON-NATIVE RESIDENT EMPLOYMENT	TOTAL NON- RESIDENT EMPLOYMENT
1980	6118**	1173*	473*	4472*
1981	8761	1136	668	6957
1982	9638	1326	717	7595
1983	10318	1376	831	8111
1984	9581	1441	839	7301
1985	9006	1497	1136	6373
1986	9711	1392	903	7417
1987	8970	1263	859	6848
1988	6800	1058	755	4987
1989	6885	1015	723	5147
1990	6780	934	694	5152
1991	6607	933	691	4983
1992	6718	933	691	5095
1993	5859	888	663	4308
1994	5761	873	658	4224
1995	5615	864	647	4103
1996	5343	839	631	3872
1997	5220	822	619	3779
1998	4960	797	603	3560
1999	4733	768	583	3382
2000	4697	748	567	3382
2001	4553	743	565	3244
2002	3701	680	527	2494
2003	3648	650	504	2494
2004	3210	600	469	2140
2005	3152	568	444	2140
2006	3100	538	421	2140
2007	2406	483	387	1537
2008	2364	459	368	1537
2009	2326	438	351	1537
2010-	2291	419	336	1537

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B64--12/20/85
 VARIABLES: EMT0, EMNA, EMNN, ANO EMNR

TABLE C-4.6
NORTH SLOPE MODEL PROJECTIONS
LOW REVENUES BASE CASE

EMPLOYMENT: ALL RACES

	TOTAL EMPLOY- MENT	FEDERAL AND STATE GOVERN- MENT EMPLOY- MENT	BOROUGH OPER- ATING EMPLOY- MENT	BOROUGH CIP EMPLOY- MENT	OTHER CIP EMPLOY- MENT	LOCAL SUPPORT EMPLOY- MENT	OIL INDUSTRY EMPLOY- MENT	NON-OIL BASIC EMPLOY- MENT
1980	6118**	291**	795*	322*	71*	393*	4246*	0
1981	8761 **	260**	818*	363*	190*	427*	6703*	0
1982	9638**	203**	828*	456*	435*	488*	7228*	0
1983	10318**	177**	970*	457*	395*	528*	7791*	0
1984	9581**	178**	1028*	427*	464*	545*	6939*	0
1985	9006	178	1343	402	438	632	6014	0
1986	9711	178	1268	250	273	551	7191	0
1987	8970	178	1245	164	178	509	6696	0
1988	6800	178	1120	71	77	435	4919	0
1989	6885	178	1069	63	68	417	5090	0
1990	6780	178	1049	10	11	391	5141	0
1991	6607	178	1045	10	11	390	4973	0
1992	6718	178	1044	10	11	390	5086	0
1993	5859	178	998	10	11	372	4289	0
1994	5761	178	990	10	11	369	4203	0
1995	5615	178	973	10	11	363	4080	0
1996	5343	178	947	10	11	353	3844	0
1997	5220	178	926	10	11	346	3749	0
1998	4960	178	899	10	11	336	3526	0
1999	4733	178	866	10	11	324	3344	0
2000	4697	178	839	10	11	316	3344	0
2001	4553	178	836	10	11	314	3203	0
2002	3701	178	774	10	11	290	2438	0
2003	3648	178	734	10	11	277	2438	0
2004	3210	178	677	10	11	257	2077	0
2005	3152	178	633	10	11	243	2077	0
2006	3100	178	593	10	11	230	2077	0
2007	2406	178	538	10	11	209	1461	0
2008	2364	178	505	10	11	198	1461	0
2009	2326	178	476	10	11	189	1461	0
2010	2291	178	450	10	11	181	1461	0

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B64--12/20/85
VARIABLES: EMTO, EMGONL, EMGOOP, EMGOCT, EMCTGO, EMSUEG, EMBAOI, AND EMBAOT

TABLE C-4.7
NORTH SLOPE MODEL PROJECTIONS
LOW REVENUES BASE CASE

EMPLOYMENT: NATIVES

	TOTAL EMPLOY- MENT	FEDERAL AND STATE GOVERN- MENT EMPLOY- MENT	BOROUGH OPER-- ATING EMPLOY- MENT	" BOROUGH CIP EMPLOY- MENT	OTHER CIP EMPLOY- MENT	LOCAL SUPPORT EMPLOY- MENT	OIL INDUSTRY EMPLOY- MENT	NON-OIL BASIC EMPLOY- MENT
1980	1173*	26*	445*	267*	26*	216*	30**	0
1981	1136	26	458	301	70	235	46	0
1982	1326	26	463	378	161	268	30	0
1983	1376	25	528	369	142	282	30	0
1984	1441	25	569	350	170	296	30	0
1985	1497	23	681	302	147	315	30	0
1986	1392	26	710	208	101	303	44	0
1987	1263	26	697	136	66	280	58	0
1988	1058	26	627	59	28	239	79	0
1989	1015	26	599	52	25	229	84	0
1990	934	26	587	8	4	215	94	0
1991	933	26	585	8	4	214	95	0
1992	933	26	584	8	4	214	96	0
1993	888	26	559	8	4	205	86	0
1994	879	26	554	8	4	203	84	0
1995	864	26	545	8	4	200	82	0
1996	839	26	530	8	4	194	77	0
1997	822	26	518	8	4	190	75	0
1998	797	26	503	8	4	185	71	0
1999	768	26	485	8	4	178	67	0
2000	748	26	470	8	4	174	67	0
2001	743	26	468	8	4	173	64	0
2002	680	26	434	8	4	159	49	0
2003	650	26	411	8	4	152	49	0
2004	600	26	-379	8	4	141	42	0
2005	568	26	355	8	4	134	42	0
2006	538	26	332	8	4	127	42	0
2007	483	26	331	8	4	115	29	0
2008	459	26	283	8	4	109	29	0
2009	438	26	267	8	4	104	29	0
2010	419	26	252	8	4	100	29	0

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B64--12/20/85
 VARIABLES: EMNA, EMNAGONL, EMNAGOOP, EMNAGOCT, EMNACTGO, EMNASUEG, EMNAOI,
 AND EMNABAOT

TABLE C-4.8
NORTH SLOPE MODEL PROJECTIONS
LOW REVENUES BASE CASE

NATIVE OIL INDUSTRY EMPLOYMENT

	ASSUMED MINIMUM NATIVE OIL EMPLOYMENT	OIL INDUSTRY MAXIMUM DEMAND FOR NATIVE LABOR	MAXIMUM NATIVE SUPPLY OF LABOR TO OIL INDUSTRY	NATIVE OIL INDUSTRY EMPLOYMENT
1980				
1981	30	134	46	46
1982	30	145	30	30
1983	30	156	30	30
1984	3(1	139	30	30
1985	3(1	120	30	30
1986	30	144	44	44
1987	30	134	58	58
1988	30	98	79	79
1989	30	102	84	84
1990	30	103	94	94
1991	30	99	95	95
1992	30	102	96	96
1993	30	86	101	86
1994	30	84	103	84
1995	30	82	106	82
1996	3(9	77	109	77
1997	30	75	112	75
1998	30	71	116	71
1999	30	67	118	67
2000	30	67	119	67
2001	30	64	120	64
2002	30	49	121	49
2003	30	49	120	49
2004	30	42	118	42
2005	30	42	115	42
2006	30	42	111	42
2007	30	29	108	29
2008	30	29	103	29
2009	30	29	98	29
2010	30	29	94	29

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B64--12/20/85
 VARIABLES: EMNAOIEIX, LDNABAOI, LSNAOI, EMNADI

TABLE C-4.9
NORTH SLOPE MODEL PROJECTIONS
LOW REVENUES BASE CASE

EMPLOYMENT: NON-NATIVE RESIDENTS

	TOTAL NON-NATIVE EMPLOYMENT	FEDERAL AND STATE GOVERNMENT EMPLOYMENT	BOROUGH OPERATING EMPLOYMENT	LOCAL SUPPORT EMPLOYMENT	NON-OIL BASIC EMPLOYMENT	BOROUGH CIP EMPLOYMENT
1980	473*	54*	350*	216*	0	55*
1981	668	54	360	192	0	62
1982	717	54	365	220	0	78
1983	831	55	442	246	0	88
1984	839	55	459	249	0	77
1985	1136	57	662	317	0	100
1986	903	54	558	248	0	43
1987	859	54	548	229	0	28
1988	755	54	493	196	0	12
1989	723	54	470	188	0	11
1990	694	54	462	176	0	2
1991	691	54	460	175	0	2
1992	691	54	459	175	0	2
1993	663	54	439	167	0	2
1994	658	54	436	166	0	2
1995	647	54	428	163	0	2
1996	631	54	416	159	0	2
1997	619	54	407	156	0	2
1998	603	54	396	151	0	2
1999	583	54	381	146	0	2
2000	567	54	369	142	0	2
2001	565	54	368	141	0	2
2002	527	54	341	130	0	2
2003	504	54	323	125	0	2
2004	469	54	298	116	0	2
2005	444	54	279	109	0	2
2006	421	54	261	104	0	2
2007	387	54	237	-94	0	2
2008	368	54	222	89	0	2
2009	351	54	210	85	0	2
2010	336	54	198	81	0	2

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.864--12/20/85
VARIABLES: EMNN, EMNNGONL, EMNNGOOP, EMNNSUEG, EMNNBAOT, EMNNGOCT

TABLE C-4. 10
 NORTH SLOPE MODEL PROJECTIONS
 LOW REVENUES BASE CASE

EMPLOYMENT: NON-RESIDENTS

	TOTAL NON- RESIDENT EMPLOYMENT	FEDERAL AND AND STATE GOVERNMENT EMPLOYMENT	OTHER CIP EMPLOYMENT	OIL INDUSTRY EMPLOYMENT
1980	4472*	211*	45*	4217*
1981	6957	180	120	6657
1982	7595	123	274	7198
1983	8111	97	253	7761
1984	7301	98	294	6909
1985	6373	98	291	5984
1986	7417	98	172	7147
1987	6848	98	112	6638
1988	4987	98	49	4840
1989	5147	98	43	5006
1990	5152	98	7	5047
1991	4983	98	7	4878
1992	5095	98	7	4990
1993	4308	98	7	4203
1994	4224	98	7	4119
1995	4103	98	7	3998
1996	3872	98	7	3767
1997	3779	98	7	3674
1998	3560	98	7	3455
1999	3382	98	7	3277
2000	3382	98	7	3277
2001	3244	98	7	3139
20(92	2494	98	7	2389
2003	2494	98	7	2389
2004	2140	98	7	2035
2005	2140	98	7	2035
2006	2140	98	7	2035
2007	1537	98	7	1432
2008	1537	98	7	1432
2009	1537	98	7	1432
2010	1537	98	7	1432

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B64--12/20/85
 VARIABLES: EMNR, EMNRGONL, EMNRCTGO, AND EMNRBAOI

TABLE C-4.11
 NORTH SLOPE MODEL PROJECTIONS
 LOW REVENUES BASE CASE

	TOTAL BOROUGH REVENUES (000)	NON- PROPERTY TAX INTEREST REVENUES (000)	PROPERTY TAX REVENUES FOR OPERATIONS (000)	PROPERTY TAX REVENUES FOR DEBT SERVICE (000)	INTEREST EARNINGS (000)
1980	72900**	18200**	21 000**	26300**	7400**
1981	90000**	22000**	26400**	32800**	8800**
1982	189100**	34900**	34800**	75000**	44400**
1983	215400**	37300**	38500**	95200**	44400**
1984	251400**	40200**	331 00**	118900**	59200**
1985	302300**	32600**	40600**	184600**	44500**
1986	298159	28415	44347	199717	25680
1987	303985	27643	48247	208894	19200
1988	304006	27810	41341	218456	16400
1989	292009	25747	42020	210322	13920
1990	263307	24492	42129	183166	13520
1991	178392	25582	41145	98545	13120
1992	239990	25910	41088	160272	12720
1993	227390	26091	37857	151122	12320
1994	216251	26582	37110	140638	11920
1995	204405	26584	36224	130076	11520
1996	149629	26219	34968	77322	11120
1997	109554	25857	34151	38826	10720
1998	100037	25431	32931	31355	10320
1999	82348	24643	31575	16210	9920
2000	79803	23909	30639	15735	9520
2001	79209	25396	29373	15320	9120
2002	74053	24444	25974	14915	8720
2003	70613	23097	24636	14560	8320
2004	65834	21519	22251	14145	7920
2005	62152	20024	20837	13770	7520
2006	53743	18698	19500	8425	7120
2007	41056	17180	17156	0	6720
2008	38579	15891	16368	0	6320
2009	36382	14788	15675	0	5920
2010	34368	13796	15052	0	5520

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B64--12/20/85
 VARIABLES: RVTO, RVNPOP, RVPYOP, RVPYDB, RVIT

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TABLE C-4.12
 NORTH SLOPE MODEL PROJECTIONS
 LOW REVENUES BASE CASE

	TOTAL BOROUGH EXPENDI- TURES (000)	OPERATIONS EXPENDI- TURES (000)	CON- STRUCTION EXPENDI- TURES (000)	DEBT SERVI CE EXPENDI- TURES (000)
1980	158765**	39685**	93000**	26080**
1981	216637**	50020**	131000**	35617**
1982	342192**	63506**	211000**	67686**
1983	466118**	68807**	302000**	95311**
1984	419494**	78544**	211000**	129950**
1985	489655**	102577**	199000**	188078**
1986	420613	96896	124000	199717
1987	384985	95091	81000	" 208894
1988	339006	85550	35000	218456
1989	323009	81687	31000	210322
1990	268307	80141	5000	183166
1991	183392	79847	5000	98545
1992	244990	79718	5000	160272
1993	232390	76268	5000	151122
1994	221251	75613	5000	140638
1995	209405	74329	5000	130076
1996	154629	72307	5000	77322
1997	114554	70728	5000	38826
1998	105037	68682	5000	31355
1999	87348	66138	5000	16210
2000	84803	64068	5000	15735
2001	84209	63889	5000	15320
2002	79053	59138	5000	14915
2003	75613	56053	5000	14560
2004	70834	51689	5000	14145
2005	67152	48382	5000	13770
2006	58743	45318	5000	8425
2007	46056	41056	5000	0
2008	43579	38579	5000	0
2009	41382	36382	5000	0
2010	39368	34368	5000	0

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B64--12/20/85
 VARIABLES: SPTO, SPLOGOOP, SPLOGOCT, AND CSDBTO

TABLE C-4.13
NORTH SLOPE MODEL PROJECTIONS
LOW REVENUES BASE CASE

	TOTAL PROPERTY VALUE (000)	TOTAL PROPERTY TAXES (000")	TAX RATE	TAX RATE FOR OPER- ATING REVENUES	TAX RATE FOR DEBT SERVICE REVENUES	LIMIT ON PROPERTY TAX OPER- ATING REVENUES PER CAPITA (000)	ACTUAL PROPERTY TAX OPER- ATING REVENUES PER CAPITA^a (000)
1980	5061955**	52400**	0.0103**	0.0052**	0.0051	3.196**	3.086
1981	5723582**	59100**	0.0103**	0.0051**	0.0052	3.601**	3.008
1982	6621652**	109700**	0.0167**	0.0055**	0.0112	3.914**	3.718
1983	8186986**	133700**	0.0164**	0.0047**	0.0123	4.761**	3.869
1984	9996290**	152400**	0.0153**	0.0033**	0.0120	5.119**	3.476
1985	12261420**	225300**	0.0184**	0.0033**	0.0151	5.099**	4.321
1986	13286000	244064	0.0184	0.0033	0.0150	5.099	4.503
1987	14375400	257141	0.0179	0.0034	0.0145	5.099	5.099
1988	15044700	259797	0.0173	0.0027	0.0145	5.099	5.099
1989	15456000	252342	0.0163	0.0027	0.0136	5.099	5.099
1990	15475500	225295	0.0146	0.0027	0.0118	5.099	5.099
1991	15030600	139690	0.0093	0.0027	0.0066	5.000	5.000
1992	14582400	201360	0.0138	0.0028	0.0110	4.900	4.900
1993	14112800	188979	0.0134	0.0027	0.0107	4.800	4.800
1994	13781600	177748	0.0129	0.0027	0.0102	4.700	4.700
1995	13095000	166300	0.0127	0.0028	0.0099	4.600	4.600
1996	12522300	112290	0.0090	0.0028	0.0062	4.500	4.500
1997	11924000	72977	0.0061	0.0029	0.0033	4.400	4.400
1998	11266500	64286	0.0057	0.0029	0.0028	4.300	4.300
1999	10560800	47785	0.0045	0.0030	0.0015	4.200	4.200
2000	9775000	46374	0.0047	0.0031	0.0016	4.100	4.100
2001	9004800	44693	0.0050	0.0033	0.0017	4.000	4.000
2002	8250200	40889	0.0050	0.0031	0.0018	3.900	3.900
2003	7511200	39196	0.0052	0.0033	0.0019	3.800	3.800
2004	6787800	36396	0.0054	0.0033	0.0021	3.700	3.700
2005	6080000	34607	0.0057	0.0034	0.0023	3.600	3.600
2006	5456000	27925	0.0051	0.0036	0.0015	3.500	3.500
2007	4832000	17156	0.0036	0.0036	0.0000	3.500	3.500
2008	4208000	16368	0.0039	0.0039	0.0000	3.500	3.500
2009	3584000	15675	0.0044	0.0044	0.0000	3.500	3.500
2010	2960000	15052	0.0051	0.0051	0.0000	3.500	3.500

^aBased on total population as defined by model, rather than official state figure used for calculating revenue limit.

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.864--12/20/85
VARIABLES: VATO, RVPYTO, TARA, TARAOP, TARADB, RVPYOPPC, RVOPPCFI

TABLE C-4. 14
 NORTH SLOPE MODEL PROJECTIONS
 LOW REVENUES BASE CASE

	TOTAL RESIDENT INCOME (000)	TOTAL NATIVE INCOME (000)	TOTAL NON-NATIVE RESIDENT INCOME (000)	PER CAPITA RESIDENT INCOME (000)	PER CAPITA NATIVE INCOME (000)	PER CAPITA NON-NATIVE RESIDENT INCOME (000)
1980	66377**					
1981	72392	47335	25057	17.477	14.486	28.648
1982	81481	54595	26886	18.944	16.235	28.648
1983	87782	56609	31173	19.299	16.360	28.648-
1984	90655	59203	37452	19.454	16.621	28.648
1985	104061	61446	42615	20.197	16.766	28.652
1986	91448	57588	33859	18.634	15.458	28.643
1987	85042	52826	32216	17.351	13.988	28.645
1988	73502	45188	28314	15.356	11.898	28.642
1989	70773	43651	27122	14.706	11.292	28.645
1990	66728	40720	26007	13.813	10.380	28.644
1991	66704	40777	25927	13.585	10.181	28.647
1992	66810	40913	25897	13.383	10.007	28.648
1993	64159	39302	24857	12.787	9.471	28.646
1994	63755	39094	24660	12.543	9.260	28.647
1995	62909	38629	24280	12.234	8.995	28.647
1996	61473	37796	23678	11.840	8.658	28.647
1997	60459	37243	23216	11.528	8.399	28.647
1998	59010	36402	22607	11.161	8.093	28.648
1999	57207	35339	21867	10.864	7.850	28.639
2000	55822	34552	21270	10.693	7.716	28.647
2001	55516	34312	21204	10.712	7.723	28.648
2002	51506	31738	19768	10.304	7.366	28.642
2003	49295	30411	18884	10.223	7.305	28.647
2004	45855	28252	17602	9.994	7.110	28.639
2005	43430	26777	16653	9.955	7.082	28.647
2006	41181	25404	15778	9.933	7.066	28.648
2007	37505	23007	14498	9.671	6.823	28.636
2008	35605	21820	13786	9.747	6.879	28.643
2009	33931	20773	13158	9.821	6.934	28.644
2010	32401	19819	12582	9.887	6.984	28.644

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B64--12/20/85
 VARIABLES: IN, INNA, INNN, INPC, INPCNA, AND INPCNN

TABLE C-4, 15
 NORTH SLOPE MODEL PROJECTIONS
 LOW REVENUES BASE CASE

	ADULT NATIVE POPULATION	NATIVE LABOR SUPPLY	NATIVE EMPLOYMENT	NATIVE UNEMPLOY- MENT	NATIVE UNEMPLOY- MENT RATE BEFORE MI GRATION	NATIVE UNEMPLOY- MENT RATE AFTER MI GRATION"
1980	1667**	1235**	1173*			
1981	1725	1278	1136	142	0.111	0.107
1982	1789	1326	1326	0	0.000	0.000
1983	1757	1376	1376	0	0.000	0.000
1984	1945	1441	1441	0	0.000	0.000
1985	2020	1497	1497	0	0.000	0.000
1986	2048	1518	1392	126	0.083	0.066
1987	2046	1516	1263	253	0.167	0.147
1988	2021	1498	1058	440	0.293	0.264
1989	2019	1496	1015	482	0.322	0.310
1990	2035	1508	934	574	0.381	0.367
1991	2045	1516	933	583	0.385	0.381
1992	2063	1529	933	596	0.390	0.388
1993	2080	1542	888	654	0.424	0.417
-1994	2101	1557	879	678	0.435	0.432
1995	2125	1575	864	711	0.451	0.447
1996	2133	1580	839	741	0.469	0.465
1997	2152	1595	822	773	0.485	0.481
1998	2176	1613	797	816	0.506	0.500
1999	2181	1616	768	848	0.525	0.500
2000	2164	1604	748	855	0.533	0.500
2001	2169	1607	743	864	0.537	0.500
2002	2124	1574	680	894	0.568	0.500
2003	2063	1529	650	879	0.575	0.500
2004	1981	1468	600	868	0.591	0.500
2005	1898	1406	568	839	0.596	0.500
2006	1809	1340	538	802	0.598	0.500
2007	1700	1260	483	776	0.616	0.500
2008	1602	1187	459	728	0.613	0.500
2009	1507	1117	438	679	0.608	0.500
2010	1426	1057	419	638	0.604	0.500

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B64--12/20/85
 VARIABLES: PONAAT, LSNA, EMNA, UNNA, UNRANA, UNRANAFI

TABLE C-5.1
 NORTH SLOPE MODEL PROJECTIONS
 HIGH REVENUES BASE CASE

	TOTAL POPULATION	RESIDENT POPULATION	AVERAGE NON- RESIDENT POPULATION
1980	6805*	3827**	2978*
1981	8776	4142	4633
1982	9360	4301	5058
1983	9950	4548	5402
1984	9523	4660	4863
1985	9397	5152	4245
1986	9847	4908	4940
1987	9622	5055	4568
1988	8267	4939	3327
1989	8395	4961	3434
1990	8426	4989	3438
1991	8417	5091	3326
1992	8599	5197	3401
1993	8118	5249	2869-
1994	8153	5339	2813
1995	8156	5 4 2 3	2733
1996	8074	5495	2579
1997	8088	5571	2517
1998	8009	5637	2371
1999	7957	5705	2252
2000	8047	5794	2252
2001	8072	5911	2160
2002	7610	5949	1661
2003	7708	6047	1661
2004	7549	6123	1425
2005	7659	6234	1425
2006	7770	6345	1425
2007	7334	6311	1023
2008	7307	6284	1023
2009	7262	6238	1023
2010	7197	6174	1023

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B65--12/20/85
 VARIABLES: POTO, PORE, AND PONRAV

TABLE C-5.2
NORTH SLOPE MODEL PROJECTIONS
HIGH REVENUES BASE CASE

	RESIDENT POPULATION	RESIDENT NATIVE POPULATION	RESIDENT NON-NATIVE POPULATION
1980	3827*	3208**	619*
1981	4142	3268	875
1982	4301	3363	938
1983	4548	3460	1088
1984	4660	3562	1098
1985	5152	3665	1487
1986	4908	3726	1182
1987	5055	3810	1245
1988	4939	3837	1102
1989	4961	3905	1055
1990	4989	3965	1024
1991	5091	4054	1038
1992	5197	4143	1054
1993	5249	4216	1033
1994	5339	4296	1043
1995	5423	4377	1046
1996	5495	4455	1040
1997	5571	4532	1039
1998	5637	4605	1032
1999	5705	4679	1026
2000	5794	4762	1032
2001	5911	4852	1060
2002	5949	4920	1029
2003	6047	5011	1036
2004	6123	5100	1023
2005	6234	5202	1031
2006	6345	5312	1033
2007	6311	5323	988
2008	6284	5309	974
2009	6238	5280	958
2010	6174	5233	941

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B65--12/20/85
 VARIABLES: PORE, PONA, AND PONN

TABLE C-5.3
 NORTH SLOPE MODEL PROJECTIONS
 HIGH REVENUES BASE CASE

	NATIVE POPULATION	PRE-SCHOOL NATIVE POPULATION	SCHOOL-AGE NATIVE POPULATION	ADULT NATIVE POPULATION	AGED NATIVE POPULATION
1980	3208**	362**	1042**	1667**	137**
1981	3268	377	1027	1725	139
1982	3363	443	987	1789	144
1983	3460	496	962	1857	145
1984	3562	536	933	1945	148
1985	3665	578	913	2020	154
1986	3726	616	898	2048	163
1987	3810	629	953	2065	164
1988	3837	629	1000	2043	166
1989	3905	630	1065	2041	170
1990	3965	627	1103	2058	177
1991	4054	622	1174	207?	186
1992	4143	613	1 2 3 9	2092	200
1993	4216	597	1300	2114	205
1994	4296	584	1362	2139	211
1995	4377	575	1418	2167	217
1996	4455	570	1484	2178	224
1997	4532	566	1532	2201	232
1998	4605	569	1560	2229	248
1999	4679	574	1586	2269	251
2000	4762	581	1616	2305	259
2001	4852	593	1620	2373	2 6 5
2002	4920	609	1610	2433	268
2003	5011	633	1603	2495	280
2004	5100	658	1596	2559	286
2005	5202	688	1 5 9 2	2633	289
2006	5312	719	1591	2699	302
2007	5323	741	1563	2715	304
2008	5309	756	1537	2717	300
2009	5280	766	1513	2695	305
2010	5233	770	1494	2670	299

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B65--12/20/85
 VARIABLES: PONA, PONAkd, PONAsl, PONAAT, AND PONAge

TABLE C-5.4
NORTH SLOPE MODEL PROJECTIONS
HIGH REVENUES BASE CASE

	NATIVE POPULATION	NATIVE MALE POPULATION	NATIVE FEMALE POPULATION	NATIVE NATURAL INCREASE	NATIVE RATE OF NATURAL INCREASE	NATIVE MIGRATION
1980	3208**	1669**	1509**			
1981	3268	1722	1545	90	0.028	-36
1982	3363	1764	1598	95	0.029	-0
1983	3460	1808	1653	98	0.029	-0
1984	3562	1853	1709	102	0.029	-0
1985	3665	1899	1766	103	0.029	0
1986	3726	1923	1802	105	0.029	-45
1987	3810	1960	1851	106	0.028	-21
1988	3837	1966	1871	104	0.027	-77
1989	3905	1994	1911	101	0.026	-33
1990	3965	2019	1947	98	0.025	-38
1991	4054	2058	1996	94	0.024	-5
1992	4143	2097	2046	89	0.022	-0
1993	4216	2128	2088	84	0.020	-12
1994	4296	2162	2134	84	0.020	-4
1995	4377	2197	2180	86	0.020	-6
1996	4455	2231	2224	86	0.020	-8
1997	4532	2264	2268	84	0.019	-7
1998	4605	2295	2310	85	0.019	-11
1999	4679	2326	2353	87	0.019	-13
2000	4762	2361	2400	90	0.019	-9
2001	4852	2400	2451	94	0.020	-4
2002	4920	2429	2491	97	0.020	-29
2003	5011	2468	2543	105	0.021	-13
2004	5100	2507	2593	109	0.022	-20
2005	5202	2552	2651	115	0.022	-12
2006	5312	2600	2712	121	0.023	-11
2007	5323	2600	2723	125	0.024	-114
2008	5309	2589	2721	127	0.024	-141
2009	5280	2569	2711	127	0.024	-156
2010	5233	2542	2691	125	0.024	-172

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B65--12/20/85
VARIABLES: PONA, PONAMA, PONAFA, NTICNA, NTICNARA, AND MGNA

TABLE C-5.5
 NORTH SLOPE MODEL PROJECTIONS
 HIGH REVENUES BASE CASE

	TOTAL EMPLOYMENT	TOTAL NATIVE EMPLOYMENT	TOTAL NON-NATIVE RESIDENT EMPLOYMENT	TOTAL NON- RESIDENT EMPLOYMENT
1980	6118**	1173*	473*	4472*
1981	8761 **	1136	668	6957
1982	9638**	1326	717	7595
1983	10318**	1376	831	8111
1984	9581**	1441	839	7301
1985	9006	1497	1136	6373
1986	9711	1392	903	7417
1987	9177	1368	951	6858
1988	6996	1158	842	4996
1989	7073	1110	806	5156
1990	6980	1036	782	5162
1991	6836	1049	793	4994
1992	6978	1066	806	5107
1993	6144	1047	789	4308
1994	6076	1055	797	4224
1995	5958	1055	799	4103
1996	5711	1044	794	3872
1997	5615	1042	794	3779
1998	5380	1031	789	3560
1999	5187	1021	784	3382
2000	5198	1027	789	3382
2001	5104	1051	809	3244
2002	4287	1006	786	2494
2003	4299	1013	792	2494
2004	3915	993	782	2140
2005	3929	1001	788	2140
2006	3933	1003	789	2140
2007	3239	947	755	1537
2008	3215	934	744	1537
2009	3187	919	732	1537
2010	3157	902	719	1537

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.865--12/20/85
 VARIABLES: EMTO, EMNA, EMNN, AND EMNR

TABLE C-5.6
NORTH SLOPE MODEL PROJECTIONS
HIGH REVENUES BASE CASE

EMPLOYMENT: ALL RACES

	TOTAL EMPLOY- MENT	FEDERAL AND STATE GOVERN- MENT EMPLOY- MENT	BOROUGH OPER- ATING EMPLOY- MENT	BOROUGH CIP EMPLOY- MENT	OTHER CIP EMPLOY- MENT	LOCAL SUPPORT EMPLOY- MENT	OIL INDUSTRY EMPLOY- MENT	NON-OIL BASIC EMPLOY- MENT
1980	6118**	291 **	795*	322*	71*	393*	4246*	0
1981	8761 **	260**	818*	363*	190*	427*	6703*	0
1982	9638**	203**	828*	456*	435*	488*	7228*	0
1983	10318**	177**	970*	457*	395*	528*	7791*	0
1984	9581**	178**	1028*	427*	464*	545*	6939*	0
1985	9006	178	1343	402	438	632	6014	0
1986	9711	178	1268	250	273	551	7191	0
1987	9177	178	1405	164	178	557	6696	0
1988	6996	178	1271	71	77	480	4919	0
1989	7073	178	1214	63	68	460	5090	0
1990	6980	178	1203	10	11	436	5141	0
1991	6836	178	1222	10	11	442	4973	0
1992	6978	178	1244	10	11	449	5086	0
1993	6144	178	1216	10	11	441	4289	0
1994	6076	178	1229	10	11	444	4203	0
1995	5958	78	1234	10	11	445	4080	0
1996	5711	78	1226	10	11	441	3844	0
1997	5615	78	1226	10	11	441	3749	0
1998	5380	78	1218	10	11	437	3526	0
1999	5187	78	1211	10	11	433	3344	0
2000	5198	78	1219	10	11	436	3344	0
2001	5104	78	1256	10	11	446	3203	0
2002	4287	78	1220	10	11	430	2438	0
2003	4299	178	1229	10	11	433	2438	0
2004	3915	178	1213	10	11	426	2077	0
2005	3929	178	1224	10	11	429	2077	0
2006	3933	178	1226	10	11	430	2077	0
2007	3239	178	1170	10	11	408	1461	0
2008	3215	178	1152	10	11	403	1461	0
2009	3187	178	1131	10	11	396	1461	0
2010	3157	178	1108	10	11	389	1461	0

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B65--12/20/85
 VARIABLES: EMTO, EMGONL, EMGOOP, EMGOCT, EMCTGO, EMSUEG, EMBAOI, AND EMBAOT

TABLE C-5.7
NORTH SLOPE MODEL PROJECTIONS
HIGH REVENUES BASE CASE

EMPLOYMENT: NATIVES

	TOTAL EMPLOY- MENT	FEDERAL AND STATE GOVERN- MENT EMPLOY- MENT	BOROUGH OPER- ATING EMPLOY- MENT	BOROUGH CIP EMPLOY- MENT	OTHER CIP EMPLOY- MENT	LOCAL SUPPORT EMPLOY- MENT	OIL INDUSTRY EMPLOY- MENT	NON-OIL BASIC EMPLOY- MENT
1980	1173*	26*	445*	267*	26*	216*	30**	0
1981	1136	26	458	301	70	235	46	0
1982	1326	26	463	378	161	268	30	0
1983	1376	25	528	369	142	282	30	0
1984	1441	25	569	350	170	296	30	0
1985	1497	23	681	302	147	315	30	0
1986	1392	26	710	208	101	303	44	0
1987	1368	26	787	136	66	306	48	0
1988	1158	26	712	59	28	264	69	0
1989	1110	26	680	52	25	253	75	0
1990	1036	26	674	8	4	240	84	0
1991	1049	26	684	8	4	243	84	0
1992	1066	26	697	8	4	247	84	0
1993	1047	26	681	8	4	242	86	0
1994	1055	26	688	8	4	244	84	0
1995	1055	26	691	8	4	245	82	0
1996	1044	26	687	8	4	243	77	0
1997	1042	26	687	8	4	242	75	0
1998	1031	26	682	8	4	240	71	0
1999	1021	26	678	8	4	238	67	0
2000	1027	26	683	8	4	240	67	0
2001	1051	26	703	8	4	246	64	0
2002	1006	26	683	8	4	237	49	0
2003	1013	26	688	8	4	238	49	0
2004	993	26	679	8	4	234	42	0
2005	1001	26	685	8	4	236	42	0
2006	1003	26	687	8	4	237	42	0
2007	947	26	655	8	4	225	29	0
2008	934	26	645	8	4	222	29	0
2009	919	26	633	8	4	218	29	0
2010	902	26	621	8	4	214	29	0

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP. B65--12/20/85
VARIABLES: EMNA, EMNAGONL, EMNAGOOP, EMNAGOCT, EMNACTGO,
EMNASUEG, EMNAOI, AND EMNABAOT

TABLE C-5.8
 NORTH SLOPE MODEL PROJECTIONS
 HIGH REVENUES BASE CASE

NATIVE OIL INDUSTRY EMPLOYMENT

	ASSUMED MINIMUM NATIVE OIL EMPLOYMENT	OIL INDUSTRY MAXIMUM DEMAND FOR NATIVE LABOR	MAXIMUM NATIVE SUPPLY OF LABOR TO OIL INDUSTRY	NATIVE OIL INDUSTRY EMPLOYMENT
1980				
1981	30	134	46	46
1982	30	145	30	30
1983	30	156	30	30
1984	30	139	30	30
1985	30	120	30	30
1986	30	144	44	44
1987	30	134	48	48
1988	-30	98	69	69
1989	30	102	75	75
1990	30	103	84	84
1991	30	99	84	84
1992	30	102	84	84
1993	30	86	88	86
1994	30	84	88	84
1995	30	82	90	82
1996	30	77	92	77
1997	30	75	93	75
1998	30	71	96	71
1999	30	67	100	67
2000	30	67	102	67
2001	30	64	104	64
2002	30	49	112	49
2003	30	49	115	49
2004	30	42	121	42
2005	30	42	126	42
2006	30	42	131	42
2007	30	29	136	29
2008	30	29	138	29
2009	30	29	138	29
2010	30	29	138	29

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B65--12/20/85
 VARIABLES: EMNAOIEX, LNABAOI, LSNAOI, EMNAOI

TABLE C-5.9
NORTH SLOPE MODEL PROJECTIONS
HIGH REVENUES BASE CASE

EMPLOYMENT: NON-NATIVE RESIDENTS

	TOTAL NON-NATIVE EMPLOYMENT	FEDERAL AND STATE GOVERNMENT EMPLOYMENT	BOROUGH OPERATING EMPLOYMENT	LOCAL SUPPORT EMPLOYMENT	NON-OIL BASIC EMPLOYMENT	BOROUGH CIP EMPLOYMENT
1980	473*	54*	350*	216*	0	55*
1981	668	54	360	192	0	62
1982	717	54	365	220	0	78
1983	831	55	442	246	0	88
1984	839	55	459	249	0	77
1985	1136	57	662	317	0	100
1986	903	54	558	248	0	43
1987	951	54	618	250	0	28
1988	842	54	559	216	0	12
1989	806	54	534	207	0	11
1990	782	54	529	196	0	2
1991	793	54	538	199	0	2
1992	806	54	547	202	0	2
1993	789	54	535	198	0	2
1994	797	54	541	200	0	2
1995	799	54	543	200	0	2
1996	794	54	540	199	0	2
1997	794	54	540	198	0	2
1998	789	54	536	196	0	2
1999	784	54	533	195	0	2
2000	789	54	536	196	0	2
2001	809	54	552	201	0	2
2002	786	54	537	194	0	2
2003	792	54	541	195	0	2
2004	782	54	534	192	0	2
2005	788	54	539	193	0	2
2006	789	54	540	194	0	2
2007	755	54	515	184	0	2
2008	744	54	507	181	0	2
2009	732	54	498	178	0	2
2010	719	54	488	175	0	2

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B65--12/20/85
VARIABLES: EMNN, EMNNGONL, EMNNGOOP, EMNNSUEG, EMNNBAOT, EMNNGOCT

TABLE C-5.10
NORTH SLOPE MODEL PROJECTIONS
HIGH REVENUES BASE CASE

EMPLOYMENT: NON-RESIDENTS

	TOTAL NON- RESIDENT EMPLOYMENT	FEDERAL AND STATE GOVERNMENT EMPLOYMENT	OTHER CIP EMPLOYMENT	OIL INDUSTRY EMPLOYMENT
1980	4472*	211*	45*	4217*
1981	6957	180	120	6657
1982	7595	123	274	7198
1983	8111	97	253	7761
1984	7301	98	294	6909
1985	6373	98	291	5984
1986	7417	98	172	7147
1987	6858	98	112	6648
1988	4996	98	49	4850
1989	5156	98	43	5015
1990	5162	98	7	5057
1991	4994	98	7	4889
1992	5107	98	7	5002
1993	4308	98	7	4203
1994	4224	98	7	4119
1995	4103	98	7	3998
1996	3872	98	7	3767
1997	3779	98	7	3674
1998	3560	98	7	3455
1999	3382	98	7	3277
2000	3382	98	7	3277
2001	3244	98	7	3139
2002	2494	98	7	2389
2003	2494	98	7	2389
2004	2140	98	7	2035
2005	2140	98	7	2035
2006	2140	98	7	2035
2007	1537	98	7	1432
2008	1537	98	7	1432
2009	1537	98	7	1432
2010	1537	98	7	1432

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B65--12/20/85
 VARIABLES: EMNR, EMNRGONL, EMNRCTGO, AND EMNRBAOI

TABLE C-5.11
NORTH-SLOPE MODEL PROJECTIONS
HIGH REVENUES BASE CASE

	TOTAL BOROUGH REVENUES (000)	NON- PROPERTY TAX NON- INTEREST REVENUES (000)	PROPERTY TAX REVENUES FOR OPERATIONS (000)	PROPERTY TAX REVENUES FOR DEBT SERVICE (000)	INTEREST EARNINGS (000)
1980	72900**	18200**	21000**	26300**	7400**
1981	90000**	22000**	26400**	32800**	8800**
1982	189100**	34900**	34800**	75000**	44400**
1983	215400**	37300**	38500**	95200**	44400**
1984	251400**	40200**	331 00**	118900**	59200**
1985	302300**	32600**	40600**	184600**	44500**
1986	316873	28415	50221	199717	38520
1987	316240	28509	50037	208894	28800
1988	315566	28697	43813	218456	24600
1989	303075	26540	45332	210322	20880
1990	275085	25293	46345	183166	20280
1991	191888	26526	47137	98545	19680
1992	255338	26974	49012	160272	19080
1993	243983	27295	47086	151122	18480
1994	234544	27926	48100	140638	17880
1995	224328	28037	48935	130076	17280
1996	171000	27749	49249	77322	16680
1997	132519	27467	50146	38826	16080
1998	124405	27116	50454	31355	15480
1999	108718	26700	50928	16210	14880
2000	108855	26537	52303	15735	14280
2001	111240	28966	53274	15320	13680
2002	108075	29091	50989	14915	13080
2003	108422	28966	52416	14560	12480
2004	106828	28717	52085	14145	11880
2005	107278	28613	53615	13770	11280
2006	102112	28615	54392	8425	10680
2007	89379	27958	51341	0	10080
2008	87964	27334	51150	0	9480
2009	86411	26700	50832	0	8880
2010	84655	25993	50382	0	8280

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B65--12/20/85
VARIABLES: RVTO, RVNPOP, RVPYOP, RVPYDB, RVIT

TABLE C-5.12
 NORTH SLOPE MODEL PROJECTIONS
 HIGH REVENUES BASE CASE

	TOTAL BOROUGH EXPENDI- TURES (000)	OPERATIONS EXPENDI- TURES (000)	CON- STRUCTION EXPENDI- TURES (000)	DEBT SERVICE EXPENDI- TURES (000)
1980	158765**	39685**	93000**	26080**
1981	216637**	50020**	131000**	35617**
1982	342192**	63506**	211000**	67686**
1983	466118**	68807**	302000**	95311**
1984	419494**	78544**	211000**	129950**
1985	489655**	102577**	199000**	188078**
1986	420613	96896	124000	199717
1987	397240	107346	81000	208894
1988	350566	97110	35000	218456
1989	334075	92753	31000	210322
1990	280085	91919	5000	183166
1991	196888	93343	5000	98545
1992	260338	95066	5000	160272
1993	248983	92861	5000	151122
1994	239544	93906	5000	140638
1995	229328	94252	5000	130076
1996	176000	93678	5000	77322
1997	137519	93693	5000	38826
1998	129405	93050	5000	31355
1999	113718	92508	5000	16210
2000	113855	93120	5000	15735
2001	116240	95920	5000	15320
2002	113075	93160	5000	14915
2003	113422	93862	5000	14560
2004	111828	92683	5000	14145
2005	112278	93508	5000	13770
2006	107112	93687	5000	8425
2007	94379	89379	5000	0
2008	92964	87964	5000	0
2009	91411	86411	5000	0
2010	89655	84655	5000	0

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B65--12/20/85
 VARIABLES: SPTO, SPLOGOOP, SPLOGOCT, AND CSDBTO

TABLE C-5.13
NORTH SLOPE MODEL PROJECTIONS
HIGH REVENUES BASE CASE

	TOTAL PROPERTY VALUE (000)	TOTAL PROPERTY TAXES (000)	TAX RATE	TAX RATE FOR OPER- ATING REVENUES	TAX RATE FOR DEBT SERVICE REVENUES	LIMIT ON PROPERTY TAX OPER- ATING REVENUES PER CAPITA (000)	ACTUAL PROPERTY TAX OPER- ATING REVENUES PER CAPITA ^a (000)
1980	5061955**	52400**	0.0103**	0.0052**	0.0051	3.196**	3.086
1981	5723582**	59100**	0.0103**	0.0051**	0.0052	3.601**	3.008
1982	6621652**	109700**	0.0167**	0.0055**	0.0112	3.914**	3.718
1983	8186986**	133700**	0.0164**	0.0041**	0.0123	4.761**	3.869
1984	9996290**	152400**	0.0153**	0.0033**	0.0120	5.119**	3.476
1985	12261420**	225300**	0.0184**	0.0033**	0.0151	5.099**	4.321
1986	13554000	249938	0.0184	0.0037	0.0147	5.100	5.100
1987	15084600	258931	0.0172	0.0033	0.0138	5.200	5.200
1988	15975300	262269	0.0164	0.0027	0.0137	5.300	5.300
1989	16744000	255654	0.0153	0.0027	0.0126	5.400	5.400
1990	17104500	229511	0.0134	0.0027	0.0107	5.500	5.500
1991	16949390	145682	0.0086	0.0028	0.0058	5.600	5.600
1992	16777600	209284	0.0125	0.0029	0.0096	5.700	5.700
1993	16567200	198208	0.0120	0.0028	0.0091	5.800	5.800
1994	16178400	188738	0.0117	0.0030	0.0087	5.900	5.900
1995	16005000	179011	0.0112	0.0031	0.0081	6.000	6.000
1996	15617700	126571	0.0081	0.0032	0.0050	6.100	6.100
1997	15176000	88972	0.0059	0.0033	0.0026	6.200	6.200
1998	14633500	81809	0.0056	0.0034	0.0021	6.300	6.300
1999	13999200	67138	0.0048	0.0036	0.0012	6.400	6.400
2000	13225000	68038	0.0051	0.0040	0.0012	6.500	6.500
2001	12435200	68594	0.0055	0.0043	0.0012	6.600	6.600
2002	11629800	65904	0.0057	0.0044	0.0013	6.700	6.700
2003	10808800	66976	0.0062	0.0048	0.0013	6.800	6.800
2004	9972200	66230	0.0066	0.0052	0.0014	6.900	6.900
2005	9120000	67385	0.0074	0.0059	0.0015	7.000	7.000
2006	8184000	62817	0.0077	0.0066	0.0010	7.000	7.000
2007	7248000	51341	0.0071	0.0071	0.0000	7.000	7.000
2008	6312000	51150	0.0081	0.0081	0.0000	7.000	7.000
2009	5376000	50832	0.0095	0.0095	0.0000	7.000	7.000
2010	4440000	50382	0.0113	0.0113	0.0000	7.000	7.000

^abased on total population as defined by model, rather than official state figure used for calculating revenue limit.

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B65--12/20/85
VARIABLES: VATO, RVPYTO, TARA, TARAOP, TARADB, RVPYOPPC, RVOPPCFI

TABLE C-5. 14
 NORTH SLOPE MODEL PROJECTIONS
 HIGH REVENUES BASE CASE

	TOTAL RESIDENT INCOME (000)	TOTAL NATIVE INCOME (000)	TOTAL NON-NATIVE RESIDENT INCOME (000)	PER CAPITA RESIDENT INCOME (000)	PER CAPITA NATIVE INCOME (000)	PER CAPITA NON-NATIVE RESIDENT INCOME (000)
1980	66377**					
1981	72392	47335	25057	17.477	14.486	28.648
1982	81481	54595	26886	18.944	16.235	28.648
1983	87782	56609	31173	19.299	16.360	28.648
1984	90655	59203	31452	19.454	16.621	28.648
1985	104061	61446	42615	20.197	16.766	28.652
1986	91448	57588	33859	18.634	15.458	28.643
1987	92494	56835	35660	18.298	14.917	28.650
1988	80565	48997	31568	16.311	12.769	28.643
1989	77537	47302	30236	15.630	12.112	28.646
1990	73928	44606	29322	14.819	11.250	28.645
1991	74953	45228	29725	14.722	11.157	28.648
1992	76176	45966	30210	14.657	11.094	28.659
1993	74971	45373	29598	14.283	10.763	28.647
1994	75676	45789	29887	14.173	10.658	28.648
1995	75899	45925	29974	13.996	10.493	28.646
1996	75407	45623	29784	13.723	10.240	28.647
1997	75434	45656	29778	13.540	10.074	28.647
1998	74905	45334	29571	13.287	9.844	28.647
1999	74482	45085	29396	13.055	9.636	28.647
2000	74996	45425	29571	12.943	9.539	28.648
2001	76796	46440	30356	12.991	9.572	28.648
2002	74361	44873	29487	12.499	9.121	28.645
2003	74941	45255	29685	12.393	9.031	28.649
2004	73956	44644	29312	12.078	8.754	28.647
2005	74634	45088	29546	11.973	8.667	28.648
2006	74909	45311	29597	11.806	8.530	28.648
2007	71539	43236	28303	11.335	8.122	28.648
2008	70621	42715	27905	11.239	8.045	28.640
2009	69559	42104	27454	11.150	7.975	28.648
2010	68357	41405	26953	11.072	7.912	28.647

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B65--12/20/85
 VARIABLES: IN, INNA, INNN, INPC, INPCNA, AND INPCNN

TABLE C-5. 15
 NORTH SLOPE MODEL PROJECTIONS
 HIGH REVENUES BASE CASE

	ADULT NATIVE POPULATION	NATIVE LABOR SUPPLY	NATIVE EMPLOYMENT	NATIVE UNEMPLOY- MENT	NATIVE UNEMPLOY- MENT RATE BEFORE MIGRATION	NATIVE UNEMPLOY- MENT RATE AFTER MIGRATION
1980	1667**	1235**	1173*			
1981	1725	1278	1136	142	0.111	0.107
1982	1789	1326	1326	0	0.000	0.000
1983	1857	1376	1376	0	0.000	0.000
1984	1945	1441	1441	0	0.000	0.000
1985	2020	1497	1497	0	0.000	0.000
1986	2048	1518	1392	126	0.083	0.066
1987	2065	1530	1368	162	0.106	0.098
1988	2043	1514	1158	355	0.235	0.207
1989	2041	1512	1110	402	0.266	0.254
1990	2058	1525	1036	489	0.321	0.307
1991	2071	1535	1049	485	0.316	0.314
1992	2092	1550	1066	484	0.313	0.313
1993	2114	1567	1047	520	0.332	0.328
1994	2139	1585	1055	530	0.334	0.333
1995	2167	1606	1055	550	0.343	0.341
1996	2178	1614	1044	569	0.353	0.350
1997	2201	1631	1042	589	0.361	0.359
1998	2229	1652	1031	621	0.376	0.373
1999	2269	1681	1021	660	0.392	0.388
2000	2305	1708	1027	681	0.399	0.397
2001	2373	1759	1051	708	0.403	0.401
2002	2433	1803	1006	797	0.442	0.434
2003	2495	1849	1013	836	0.452	0.448
2004	2559	1896	993	903	0.476	0.471
2005	2633	1951	1001	950	0.487	0.484
2006	2699	2000	1003	997	0.499	0.496
2007	2715	2012	947	1065	0.529	0.500
2008	2717	2013	934	1079	0.536	0.500
2009	2695	1997	919	1079	0.540	0.500
2010	2670	1979	902	1077	0.544	0.500

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B65--12/20/85
 VARIABLES: PONAAT, LSNA, EMNA, UNNA, UNRANA, UNRANAFI

TABLE C-6.1
 NORTH SLOPE MODEL PROJECTIONS
 MODERATE HIGH REVENUES BASE CASE

	TOTAL POPULATION	RESIDENT POPULATION	AVERAGE NON- RESIDENT POPULATION
1980	6805*	3827**	2978*
1981	8776	4142	4633
1982	9360	4301	5058
1983	9950	4548	5402
1984	9523	4660	4863
1985	9397	5152	4245
1986	9847	4908	4940
1987	9535	4971	4564
1988	8174	4850	3324
1989	8298	4867	3430
1990	8317	4884	3433
1991	8295	4974	3321
1992	8464	5068	3396
1993	7976	5107	2869
1994	7997	5184	2813
1995	7988	5255	2733
1996	7895	5316	2579
1997	7897	5380	2517
1998	7807	5436	2371
1999	7745	5493	2252
2000	7821	5569	2252
2001	7833	5673	2160
2002	7317	5656	1661
2003	7297	5636	1661
2004	6955	5530	1425
2005	6843	5418	1425
2006	6725	5300	1425
2007	6102	5078	1023
2008	5909	4886	1023
2009	5728	4705	1023
2010	5555	4531	1023

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B66--12/20/85
 VARIABLES: POTO, PORE, AND PONRAV

TABLE C-6.2
 NORTH SLOPE MODEL PROJECTIONS
 MODERATE HIGH REVENUES BASE CASE

	RESIDENT POPULATION	RESIDENT NATIVE POPULATION	RESIDENT NON-NATIVE POPULATION
1980	3827*	3208**	619*
1981	4142	3268	875
1982	4301	-3363	938
1983	4548	3460	1088
1984	4660	3562	1098
1985	5152	3665	1487
1986	4908	3726	1182
1987	4971	3792	1179
1988	4850	3815	1036
1989	4867	3881	987
1990	4884	3937	947
1991	4974	4022	952
1992	5060	4109	959
1993	5107	4176	931
1994	5184	4252	932
1995	5255	4328	927
1996	5316	4403	913
1997	5380	4475	905
1998	5436	4545	891
1999	5493	4615	877
2000	5569	4694	874
2001	5673	4781	892
2002	5656	4799	857
2003	5636	4791	844
2004	5530	4720	810
2005	5418	4629	789
2006	5300	4532	768
2007	5078	4363	715
2008	4886	4198	688
2009	4705	4042	662
2010	4531	3893	638

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B66--12/20/85
 VARIABLES: PORE, PONA, AND PONN

TABLE C-6.3
 NORTH SLOPE MODEL PROJECTIONS
 MODERATE HIGH REVENUES BASE CASE

	NATIVE POPULATION	PRE-SCHOOL NATIVE POPULATION	SCHOOL-AGE NATIVE POPULATION	ADULT NATIVE POPULATION	AGED NATIVE POPULATION	
1980	3208**	362**	1042**	1667**	137**	
1981	3268	377	1027	1725	139	
1982	3363	443	987	1789	144	
1983	3460	496	962	1857	145	
1984	3562	536	933	1945	148	
1985	3665	578	913	2020	154	
1986	3726	616	898	2048	163	
1987	3792	626	948	2054	163	
1988	3815	625	994	2030	165	
1989	3881	627	1058	2027	169	
-	1990	3937	624	1095	2043	176
	1991	4022	618	1165	2054	185
	1992	4109	608	1229	2074	199
	1993	4176	591	1288	2094	203
	1994	4252	578	1348	2116	209
	1995	4328	569	1402	2142	215
	1996	4403	563	1467	2151	221
	1997	4475	559	1514	2173	229
	1998	4545	561	1540	2200	244
	1999	4615	566	1565	2237	247
	2000	4694	573	1594	2272	256
	2001	4781	585	1597	2338	261
	2002	4799	595	1571	2372	261
	2003	4791	608	1532	2383	267
	2004	4720	617	1475	2363	264
	2005	4629	624	1413	2336	257
	2006	4532	630	1352	2293	257
	2007	4363	627	1275	2214	248
*	2008	4198	618	1210	2134	235
	2009	4042	605	1157	2049	232
	2010	3893	589	1113	1971	220

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.866--12/20/85
 VARIABLES: PONA, PONA K D, PONA S L, PONA A T, AND PONA G E

TABLE C-6.4
 NORTH SLOPE MODEL PROJECTIONS
 MODERATE HIGH REVENUES BASE CASE

	NATIVE POPULATION	NATIVE MALE POPULATION	NATIVE FEMALE POPULATION	NATIVE NATURAL INCREASE	NATIVE RATE OF NATURAL INCREASE	NATIVE MI GRATION
1980	3208**	1669**	1509**			
1981	3268	1722	1545	90	0.028	-36
1982	3363	1764	1538	95	0.029	-0
1983	3460	1808	1653	98	0.029	-0
1984	3562	1853	1709	102	0.029	-0
1985	3665	1899	1766	103	0.029	0
1986	3726	1923	1802	105	0.029	-45
1987	3792	1950	1842	106	0.028	-40
1988	3815	1955	1860	103	0.027	-40
1989	3881	1982	1899	100	0.026	-34
1990	3937	2004	1933	97	0.025	-41
1991	4022	2042	1981	93	0.024	-8
1992	4109	2079	2029	89	0.022	-2
1993	4176	2107	2068	84	0.020	-17
1994	4252	2140	2112	84	0.020	-8
1995	4328	2173	2155	85	0.020	-9
1996	4403	2204	2198	85	0.020	-11
1997	4475	2235	2240	83	0.019	-10
1998	4545	2265	2280	84	0.019	-14
1999	4615	2294	2321	86	0.019	-16
2000	4694	2328	2366	89	0.019	-10
2001	4781	2365	2415	93	0.020	-6
2002	4799	2369	2430	95	0.020	-77
2003	4791	2360	2431	102	0.021	-109
2004	4720	2319	2400	104	0.022	-176
2005	4629	2270	2359	106	0.022	-196
2006	4532	2218	2314	107	0.023	-204
2007	4363	2131	2232	106	0.023	-275
2008	4198	2046	2152	104	0.024	-269
2009	4042	1967	2076	99	0.024	-255
2010	3893	1891	2003	95	0.023	-244

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B66--12/20/85
 VARIABLES: PONA, PONAMA, PONAFA, NTICNA, NTICNARA, AND MGNA

TABLE C-6.5
 NORTH SLOPE MODEL PROJECTIONS
 MODERATE HIGH REVENUES BASE CASE

	TOTAL EMPLOYMENT	TOTAL NATIVE EMPLOYMENT	TOTAL NON-NATIVE RESIDENT EMPLOYMENT	TOTAL NON- RESIDENT EMPLOYMENT
1980	6118**	1173*	473*	4472*
1981	8761**	1136	668	6957
1982	9638**	1326	717	7595
1983	10318**	1376	831	8111
1984	9581**	1441	839	7301
1985	9006	1497	1136	6373
1986	9711	1392	903	7417
1987	9065	1311	901	6853
1988	6881	1100	791	4991
1989	6954	1050	754	5151
1990	6847	968	723	5155
1991	6688	974	727	4987
1992	6814	982	733	5099
1993	5968	949	711	4308
1994	5884	948	712	4224
1995	5752	941	708	4103
1996	5492	923	698	3872
1997	5383	913	691	3779
1998	5135	895	680	3560
1999	4931	878	670	3382
2000	4925	875	668	3382
2001	4815	890	682	3244
2002	3989	840	655	2494
2003	3967	828	645	2494
2004	3547	788	619	2140
2005	3510	767	602	2140
2006	3475	748	587	2140
2007	2767	684	546	1537
2008	2720	658	525	1537
2009	2677	634	506	1537
2010	2634	610	487	1537

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B66--12/20/85
 VARIABLES: EMTO, EMNA, EMNN, AND EMNR

TABLE C-6.6
 NORTH SLOPE MODEL PROJECTIONS
 MODERATE HIGH REVENUES BASE CASE

EMPLOYMENT: ALL RACES

	TOTAL EMPLOY- MENT	FEDERAL AND STATE GOVERN- MENT EMPLOY- MENT	BOROUGH OPER- ATING EMPLOY- MENT	BOROUGH CIP EMPLOY- MENT	OTHER CIP EMPLOY- MENT	LOCAL SUPPORT EMPLOY- MENT	" OIL INDUSTRY EMPLOY- MENT	NON-OIL BASIC EMPLOY- MENT
1980	6118**	291**	795*	322*	71*	393*	4246*	0
1981	8761**	260**	818*	363*	190*	427*	6703*	0
1982	9638**	203**	828*	456*	435*	488*	7228*	0
1983	10318**	177**	970*	457*	395*	528*	7791*	0
1984	9581**	178**	1028*	427*	464*	545*	6939*	0
1985	9006	178	1343	402	438	632	6014	0
1986	971-1	178	1268	250	273	551	7191	0
1987	9065	178	1318	164	178	531	6696	0
1988	6881	178	1183	71	77	454	4919	0
1989	6954	178	1123	63	68	433	5090	0
1990	6847	178	1101	10	11	406	5141	0
1991	6688	178	1108	10	11	408	4973	0
1992	6814	178	1117	10	11	412	5086	0
1993	5968	178	1082	10	11	398	4289	0
1994	5884	178	1084	10	11	399	4203	0
1995	5752	178	1077	10	11	396	4080	0
1996	5492	178	1060	10	11	389	3844	0
1997	5383	178	1050	10	11	385	3749	0
1998	5135	178	1032	10	11	378	3526	0
1999	4931	178	1016	10	11	372	3344	0
2000	4925	178	1012	10	11	370	3344	0
2001	4815	178	1036	10	11	377	3203	0
2002	3989	178	993	10	11	359	2438	0
2003	3967	178	977	10	11	354	2438	0
2004	3547	178	933	10	11	338	2077	0
2005	3510	178	905	10	11	329	2077	0
2006	3475	178	878	10	11	320	2077	0
2007	2767	178	812	10	11	295	1461	0
2008	2720	178	776	10	11	284	1461	0
2009	2677	178	743	10	11	274	1461	0
2010	2634	178	711	10	11	263	1461	0

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B66 --12/20/85
 VARIABLES: EMTO, EMGONL, EMGOOP, EMGOCT, EMCTGO, EMSUEG, EMBAOI, AND EMBAOT

TABLE C-6.7
 NORTH SLOPE MODEL PROJECTIONS
 MODERATE HIGH REVENUES BASE CASE

EMPLOYMENT: NATIVES

	TOTAL EMPLOY- MENT	FEDERAL AND STATE GOVERN- MENT EMPLOY- MENT	BOROUGH OPER- ATING EMPLOY- MENT	BOROUGH CIP EMPLOY- MENT	OTHER CIP EMPLOY- MENT	LOCAL SUPPORT EMPLOY- MENT	OIL INDUSTRY EMPLOY- MENT	NON-OIL BASIC EMPLOY- MENT
1980	1173*	26*	445*	267*	26*	216*	30**	0
1981	1136	26	458	301	70	235	46	0
1982	1326	26	463	378	161	268	30	0
1983	1376	25	528	369	142	282	30	0
1984	1441	25	569	350	170	296	30	0
1985	1497	23	681	302	147	315	30	0
1986	1392	26	710	208	101	303	44	0
1987	1311	26	738	136	66	292	54	0
1988	1100	26	662	59	28	250	75	0
1989	1050	26	629	52	25	238	80	0
1990	968	26	616	8	4	223	91	0
1991	994	26	620	8	4	225	91	0
1992	982	26	626	8	4	226	92	0
1993	949	26	606	8	4	219	86	0
1994	948	26	607	8	4	219	84	0
1995	941	26	603	8	4	218	82	0
1996	923	26	594	8	4	214	77	0
1997	913	26	588	8	4	212	75	0
1998	895	26	578	8	4	208	71	0
1999	878	26	569	8	4	204	67	0
2000	875	26	567	8	4	204	67	0
2001	890	26	580	8	4	207	64	0
2002	840	26	556	8	4	197	49	0
2003	828	26	547	8	4	194	49	0
2004	788	26	523	8	4	186	42	0
2005	767	26	507	8	4	181	42	0
2006	748	26	492	8	4	176	42	0
2007	684	26	455	8	4	162	29	0
2008	658	26	435	8	4	156	29	0
2009	634	26	416	8	4	150	29	0
2010	610	26	398	8	4	145	29	0

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.866 --12/20/85
 VARIABLES: EMNA, EMNAGONL, EMNAGOOP, EMNAGOCT, EMNACTGO,
 EMNASUEG, EMNAOI, AND EMNABAOT

TABLE C-6.8
NORTH SLOPE MODEL PROJECTIONS
MODERATE HIGH REVENUES BASE CASE

NATIVE OIL INDUSTRY EMPLOYMENT

	ASSUMED MINIMUM NATIVE OIL EMPLOYMENT	OIL INDUSTRY MAXIMUM DEMAND FOR NATIVE LABOR	MAXIMUM NATIVE SUPPLY OF LABOR TO OIL INDUSTRY	NATIVE OIL INDUSTRY EMPLOYMENT
1980				
1981	30	134	46	46
1982	30	145	30	30
1983	30	156	30	30
1984	30	139	30	30
1985	30	120	30	30
1986	30	144	44	44
1987	30	134	54	54
1988	30	98	75	75
1989	30	102	80	80
1990	30	103	91	91
1991	30	99	91	91
1992	30	102	92	92
1993	30	86	96	86
1994	30	84	97	84
1995	30	82	100	82
1996	30	77	102	77
1997	30	75	104	75
1998	30	71	108	71
1999	30	67	112	67
2000	30	67	114	67
2001	30	64	118	64
2002	30	49	124	49
2003	30	49	126	49
2004	3	42	127	42
2005	3	42	127	42
2006	30	42	126	42
2007	30	29	126	29
2008	30	29	122	29
2009	30	29	118	29
2010	30	29	115	29

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B66--12/20/85
VARIABLES: EMNAOIE, LDNABAOI, LSNAOI, EMNAOI

TABLE C-6.9
 NORTH SLOPE MODEL PROJECTIONS.
 MODERATE HIGH REVENUES BASE CASE

EMPLOYMENT: NON-NATIVE RESIDENTS

	TOTAL NON-NATIVE EMPLOYMENT	FEDERAL AND STATE GOVERNMENT EMPLOYMENT	BOROUGH OPERATING EMPLOYMENT	LOCAL SUPPORT EMPLOYMENT	NON-OIL BASIC EMPLOYMENT	BOROUGH CIP EMPLOYMENT
1980	473*	54*	350*	216*	0	55*
1981	668	54	360	192	0	62
1982	717	54	365	220	0	78
1983	831	55	442	246	0	88
1984	839	55	459	249	0	77
1985	1136	57	662	317	0	100
1986	903	54	558	248	0	43
1987	901	54	580	239	0	28
1988	791	54	520	204	0	12
1989	754	54	494	195	0	11
1990	723	54	484	183	0	2
1991	727	54	487	184	0	2
1992	733	54	492	185	0	2
1993	711	54	476	179	0	2
1994	712	54	477	179	0	2
1995	708	54	474	178	0	2
1996	698	54	467	175	0	2
1997	691	54	462	173	0	2
1998	680	54	454	170	0	2
1999	670	54	447	167	0	2
2000	668	54	445	167	0	2
2001	682	54	456	170	0	2
2002	655	54	437	161	0	2
2003	645	54	430	159	0	2
2004	619	54	411	152	0	2
2005	602	54	398	148	0	2
2006	587	54	386	144	0	2
2007	546	54	357	133	0	2
2008	525	54	341	128	0	2
2009	506	54	327	123	0	2
2010	487	54	313	119	0	2

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B66--12/20/85
 VARIABLES: EMNN, EMNNGONL, EMNNGOOP, EMNNSUEG, EMNNBAOT, EMNNGOCT

TABLE C-6.10
NORTH SLOPE MODEL PROJECTIONS
MODERATE HIGH REVENUES BASE CASE

EMPLOYMENT: NON-RESIDENTS

	TOTAL NON- RESIDENT EMPLOYMENT-GOVERNMENT EMPLOYMENT	FEDERAL AND AND STATE GOVERNMENT EMPLOYMENT	OTHER CIP EMPLOYMENT	OIL INDUSTRY EMPLOYMENT
1980	4472*	211*	45*	4217*
1981	6957	180	120	6657
1982	7595	123	274	7198
1983	8111	97	253	7761
1984	7301	98	294	6909
1985	6373	98	291	5984
1986	7417	98	172	7147
1987	6853	98	112	6642
1988	4991	98	49	4844
1989	5151	98	43	5010
1990	5155	98	7	5050
1991	4987	98	7	4882
1992	5099	98	7	4994
1993	4308	98	7	4203
1994	4224	98	7	4119
1995	4103	98	7	3998
1996	3872	98	7	3767
1997	3779	98	7	3674
1998	3560	98	7	3455
1999	3382	98	7	3277
2000	3382	98	7	3277
2001	3244	98	7	3139
2002	2494	98	7	2389
2003	2494	98	7	2389
2004	2140	98	7	2035
2005	2140	98	7	2035
2006	2140	98	7	2035
2007	1537	98	7	1432
2008	1537	98	7	1432
2009	1537	98	7	1432
2010	1537	98	7	1432

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B66--12/20/85
 VARIABLES: EMNR, EMNRGONL, EMNRCTGO, AND EMNRBAOI

TABLE C-6.11
 NORTH SLOPE MODEL PROJECTIONS
 MODERATE HIGH REVENUES BASE CASE

	TOTAL BOROUGH REVENUES (000)	NON- PROPERTY TAX NON- INTEREST REVENUES (000)	PROPERTY TAX REVENUES FOR OPERATIONS (000)	PROPERTY TAX REVENUES FOR DEBT SERVICE (000)	INTEREST EARNINGS (000)
1980	72900**	18200**	21 000**	26300**	7400**
1981	90000**	22000**	26400**	32800**	8800**
1982	189100**	34900**	34800**	75000**	44400**
1983	215400**	37300**	38500**	95200**	44400**
1984	251400**	40200**	33100**	118900**	59200**
1985	302300**	32600**	40600**	184600**	44500**
1986	310443	28415	50211	199717	32100
1987	309553	28039	48621	208894	24000
1988	308816	28181	41680	218456	20500
1989	296073	26040-	42310	210322	17400
1990	267238	24761	42410	183166	16900
1991	183158	25915	42298	98545	16400
1992	245636	26304	43160	160272	15900
1993	233745	26554	40669	151122	15400
1994	223427	27112	40777	140638	14900
1995	212374	27168	40730	130076	14400
1996	158321	26844	40254	77322	13900
1997	119015	26523	40266	38826	13400
1998	110208	26146	39807	31355	12900
1999	93811	25707	39494	16210	12400
2000	93020	25505	39880	15735	11900
2001	94459	27797	39942	15320	11400
2002	90778	27656	37308	14915	10900
2003	89160	26994	37205	14560	10400
2004	85443	25934	35464	14145	9900
2005	82931	24868	34894	13770	9400
2006	75520	23902	34292	8425	8900
2007	62010	22497	31113	0	8400
2008	59282	21252	30130	0	7900
2009	56746	20137	29209	0	7400
2010	54300	19077	28324	0	6900

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B66--12/20/85
 VARIABLES: RVTO, RVNPOP, RVPYOP, RVPYDB, RVIT

TABLE C-6.12
 NORTH SLOPE MODEL PROJECTIONS
 MODERATE HIGH REVENUES BASE CASE

	TOTAL BOROUGH EXPENDI- TURES (000)	OPERATI- ONS EXPENDI- TURES (000)	CON- STRUCTION EXPENDI- TURES (000)	DEBT SERVICE EXPENDI- TURES (000)
1980	158765**	39685**	93000**	26080**
1981	216637**	50020**	131000**	35617**
1982	342192**	63506**	211000**	67686**
1983	466118**	68807**	302000**	95311**
1984	419494**	78544**	211000**	129950**
1985	489655**	102577**	199000**	188078**
1986	420613	96896	124000	199717
1987	390553	100659	81000	208894
1988	343816	90360	35000	218456
1989	327073	85751	31000	210322
1990	272238	84072	5000	183166
1991	188158	84613	5000	98545
1992	250636	85364	5000	160272
1993	238745	82623	5000	151122
1994	228427	82789	5000	140638
1995	217374	82298	5000	130076
1996	163321	80999	5000	77322
1997	124015	80189	5000	38826
1998	115208	78853	5000	31355
1999	98811	77601	5000	16210
2000	98020	77285	5000	15735
2001	99459	79139	5000	15320
2002	95778	75863	5000	14915
2003	94160	74600	5000	14560
2004	90443	71298	5000	14145
2005	87931	69161	5000	13770
2006	80520	67095	5000	8425
2007	67010	62010	5000	0
2008	64282	59282	5000	0
2009	61746	56746	5000	0
2010	59300	54300	5000	0

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B66--12/20/85
 VARIABLES: SPTO, SPLOGOOP, SPLOGOCT, AND CSDBTO

TABLE C-6.13
 NORTH SLOPE MODEL PROJECTIONS
 MODERATE HIGH REVENUES BASE CASE

	TOTAL PROPERTY VALUE (000)	TOTAL PROPERTY TAXES (000)	TAX RATE	TAX RATE FOR OPER- ATING REVENUES	TAX RATE FOR DEBT SERVICE REVENUES	LIMIT ON PROPERTY TAX OPER- ATING REVENUES PER CAPITA (000)	ACTUAL PROPERTY TAX OPER- ATING REVENUES PER CAPITA ^a (000)
1980	5061955**	52400**	0.0103**	0.0052**	0.0051	3.196**	3.086
1981	5723582**	59100**	0.0103**	0.0051**	0.0052	3.601**	3.008
1982	6621652**	109700**	0.0167**	0.0055**	0.0112	3.914**	3.718
1983	8186986**	133700**	0.0164**	0.0041**	0.0123	4.761**	3.869
1984	9996290**	152400**	0.0153**	0.0033**	0.0120	5.119**	3.476
1985	12261420**	225300**	0.0184**	0.0033**	0.0151	5.099**	4.321
1986	13420000	249928	0.0186	0.0037	0.0149	5.099	5.099
1987	14730000	257515	0.0175	0.0033	0.0142	5.099	5.099
1988	15510000	260136	0.0168	0.0027	0.0141	5.099	5.099
1989	16100000	252632	0.0157	0.0026	0.0131	5.099	5.099
1990	16290000	225576	0.0138	0.0026	0.0112	5.099	5.099
1991	15990000	140843	0.0088	0.0026	0.0062	5.099	5.099
1992	15680000	203432	0.0130	0.0028	0.0102	5.099	5.099
1993	15340000	191791	0.0125	0.0027	0.0099	5.099	5.099
1994	14980000	181415	0.0121	0.0027	0.0094	5.099	5.099
1995	14550000	170806	0.0117	0.0028	0.0089	5.099	5.099
1996	14070000	117576	0.0084	0.0029	0.0055	5.099	5.099
1997	13550000	79092	0.0058	0.0030	0.0029	5.099	5.099
1998	12950000	71162	0.0055	0.0031	0.0024	5.099	5.099
1999	12280000	55704	0.0045	0.0032	0.0013	5.099	5.099
2000	11500000	55615	0.0048	0.0035	0.0014	5.099	5.099
2001	10720000	55262	0.0052	0.0037	0.0014	5.099	5.099
2002	9940000	52223	0.0053	0.0038	0.0015	5.099	5.099
2003	9160000	51765	0.0057	0.0041	0.0016	5.099	5.099
2004	8380000	49609	0.0059	0.0042	0.0017	5.099	5.099
2005	7600000	48664	0.0064	0.0046	0.0018	5.099	5.099
2006	6820000	42717	0.0063	0.0050	0.0012	5.099	5.099
2007	6040000	31113	0.0052	0.0052	0.0000	5.099	5.099
2008	5260000	30130	0.0057	0.0057	0.0000	5.099	5.099
2009	4480000	29209	0.0065	0.0065	0.0000	5.099	5.099
2010	3700000	28324	0.0077	0.0077	0.0000	5.099	5.099

^aBased on total population as defined by model, rather than official state figure used for calculating revenue limit.

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP. B66--12/20/85
 VARIABLES: VATO, RVPYTO, TARA, TARAOP, TARA08, RVPYOPPC, RVOPPCFI

TABLE C-6.14
 NORTH SLOPE MODEL PROJECTIONS
 MODERATE HIGH REVENUES BASE CASE

	TOTAL RESIDENT INCOME (000)	TOTAL NATIVE INCOME (000)	TOTAL NON-NATIVE RESIDENT INCOME (000)	PER CAPITA RESIDENT INCOME (000)	PER CAPITA NATIVE INCOME (000)	PER CAPITA NON-NATIVE RESIDENT INCOME (000)
1980	66377**					
1981	72392	47335	25057	17.477	14.486	28.648
1982	81481	54595	26886	18.944	16.235	28.648
1983	87782	56609	31173	19.299	16.360	28.648
1984	90655	59203	31452	19.454	16.621	28.648
1985	104061	61446	42615	20.197	16.766	28.652
1986	91448	57588	33859	18.634	15.458	28.643
1987	88439	54653	33786	17.790	14.413	28.645
1988	76442	46774	29668	15.760	12.262	28.643
1989	73258	44993	28265	15.051	11.594	28.646
1990	69133	42019	27114	14.155	10.672	28.644
1991	69614	42347	27267	13.995	10.528	28.649
1992	70262	42776	27487	13.863	10.411	28.648
1993	68301	41628	26673	13.375	9.970	28.646
1994	68433	41722	26711	13.201	9.813	28.647
1995	68104	41547	26557	12.960	9.600	28.647
1996	67140	40980	26161	12.630	9.308	28.647
1997	66629	40710	25919	12.385	9.097	28.647
1998	65648	40134	25514	12.077	8.830	28.646
1999	64762	39625	25137	11.790	8.585	28.647
2000	64672	39625	25047	11.613	8.441	28.647
2001	65853	40293	25560	11.608	8.428	28.649
2002	63011	38467	24544	11.142	8.016	28.648
2003	62186	38002	24184	11.035	7.932	28.645
2004	59598	36394	23204	10.778	7.711	28.644
2005	58081	35490	22591	10.721	7.667	28.647
2006	56606	34605	22000	10.681	7.636	28.648
2007	52477	31991	20485	10.334	7.332	28.640
2008	50468	30765	19703	10.330	7.329	28.648
2009	48604	29626	18978	10.331	7.329	28.648
2010	46808	28529	18279	10.330	7.328	28.648

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B66--12/20/85
 VARIABLES: IN, INNA, INNN, INPC, INPCNA, AND INPCNN

TABLE C-6.15
 NORTH SLOPE MODEL PROJECTIONS
 MODERATE HIGH REVENUES BASE CASE

	ADULT NATIVE POPULATION	NATIVE LABOR SUPPLY	NATIVE EMPLOYMENT	NATIVE UNEMPLOY- MENT	NATIVE UNEMPLOY- MENT RATE BEFORE MIGRATION	NATIVE UNEMPLOY- MENT RATE AFTER MIGRATION
1980	1 667**	1235**	1173*			
1981	1725	1278	1136	142	0.111	0.107
1982	1789	1326	1326	0	0.000	0.000
1983	1857	1376	1376	0	0.000	0.000
1984	1945	1441	1441	0	0.000	0.000
1985	2020	1497	1497	0	0.000	0.000
1986	2048	1518	1392	126	0.083	0.066
1987	2054	1522	1311	212	0.139	0.124
1988	2030	1504	1100	405	0.269	0.240
1989	2027	1502	1050	452	0.301	0.289
1990	2043	1514	968	546	0.360	0.346
1991	2054	1522	974	549	0.360	0.358
1992	2074	1537	982	555	0.361	0.360
1993	2094	1551	949	603	0.389	0.383
1994	2116	1568	948	620	0.395	0.393
1995	2142	1587	941	647	0.407	0.405
1996	2151	1 5 9 4	923	672	0.421	0.418
1997	2173	1610	913	697	0.433	0.430
1998	2200	1630	895	735	0.451	0.447
1999	2237	1658	878	780	0.470	0.466
2000	2272	1683	875	808	0.480	0.477
2001	2338	1732	890	843	0.486	0.485
2002	2372	1758	840	917	0.522	0.500
2003	2383	1766	828	938	0.531	0.500
2004	2363	1751	788	963	0.550	0.500
2005	2336	1731	767	963	0.557	0.500
2006	2293	1699	748	952	0.560	0.500
2007	2214	1640	684	956	0.583	0.500
2008	2134	1582	658	924	0.584	0.500
2009	2049	1518	634	885	0.583	0.500
2010	1971	1461	-610	851	0.582	0.500

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B66--12/20/85
 VARIABLES: PONAAT, LSNA, EMNA, UNNA, UNRANA, UNRANAFI

TABLE C-7.1
NORTH SLOPE MODEL PROJECTIONS
LOW EMPLOYMENT. BASE CASE

	TOTAL POPULATION	RESIDENT POPULATION	AVERAGE NON- RESIDENT POPULATION
1980	6805*	3827**	2978*
1981	8776	4142	4633
1982	9360	4301	5058
1983	9950	4548	5402
1984	9523	4660	4863
1985	9397	5152	4245
1986	9776	4864	4912
1987	9540	4991	4549
1988	8225	4890	3334
1989	8361	4917	3444
1990	8395	4939	3456
1991	8399	5053	3345
1992	8592	5173	3420
1993	8127	5232	2894
1994	8172	5334	2837
1995	8186	5430	2756
1996	8115	5515	2601
1997	8141	5603	2538
1998	8072	5681	2391
1999	7997	5725	2271
2000	8009	5738	2271
2001	7937	5759	2178
2002	7315	5641	1674
2003	7225	5551	1674
2004	6842	5407	1436
2005	6715	5279	1436
2006	6597	5162	1436
2007	6000	4970	1029
2008	5853	4823	1029
2009	5724	4694	1029
2010	5608	4579	1029

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B67--12/20/85
 VARIABLES: POTO, PORE, AND PONRAV

TABLE C-7.2
NORTH SLOPE MODEL PROJECTIONS
LOW EMPLOYMENT BASE CASE

	RESIDENT POPULATION	RESIDENT NATIVE POPULATION	RESIDENT NON-NATIVE POPULATION
1980	3827*	3208**	619*
1981	4142	3268	875
1982	4301	3363	938
1983	4548	3460	1088
1984	4660	3562	1098
1985	5152	3665	1487
1986	4864	3705	1159
1987	4991	3786	1206
1988	4890	3813	1077
1989	4917	3882	1035
1990	4939	3939	1000
1991	5053	4020	1034
1992	5173	4101	1071
1993	5232	4163	1070
1994	5334	4234	1100
1995	5430	4306	1124
1996	5515	4376	1138
1997	5603	4445	1158
1998	5681	4511	1171
1999	5725	4545	1180
2000	5738	4543	1195
2001	5759	4547	1213
2002	5641	4478	1163
2003	5551	4407	1144
2004	5407	4303	1103
2005	5279	4199	1080
2006	5162	4102	1060
2007	4970	3965	1005
2008	4823	3841	982
2009	4694	3733	962
2010	4579	3635	943

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B67--12/20/85
 VARIABLES: PORE, PONA, AND PONN

TABLE C-7.3
 NORTH SLOPE MODEL PROJECTIONS
 LOW EMPLOYMENT BASE CASE

	NATIVE POPULATION	PRE-SCHOOL NATIVE POPULATION	SCHOOL-AGE NATIVE POPULATION	ADULT NATIVE POPULATION	AGED NATIVE POPULATION
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1980	3208**	362**	1042**	1667**	137**
1981	3268	377	1027	1725	139
1982	3363	443	987	1789	144
1983	3460	496	962	1857	145
1984	3562	536	933	1945	148
1985	3665	578	913	2020	154
1986	3705	613	893	2036	162
1987	3786	625	947	2051	163
1988	3813	625	993	2030	165
1989	3882	627	1058	2028	169
1990	3939	624	1095	2044	176
1991	4020	617	1165	2053	185
1992	4101	607	1227	2070	198
1993	4163	590	1284	2087	202
1994	4234	596	1343	2107	208
1995	4306	566	1395	2131	214
1996	4376	560	1458	2138	220
1997	4445	556	1503	2157	228
1998	4511	557	1528	2182	242
1999	4545	559	1541	2202	243
2000	4543	557	1542	2197	247
2001	4547	561	1517	2221	248
2002	4478	561	1464	2210	243
2003	4407	567	1407	2187	245
2004	4303	570	1343	2150	240
2005	4199	572	1281	2114	232
2006	4102	574	1225	2071	232
2007	3965	571	1162	2007	224
2008	3841	564	1113	1950	215
2009	3733	556	1074	1889	214
2010	3635	546	1045	1839	205

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.867--12/20/85
 VARIABLES: PONA, PONAkd, PONAsl, PONAAT, ANO PONAge

TABLE C-7.4
NORTH SLOPE MODEL PROJECTIONS
LOW EMPLOYMENT BASE CASE

	NATIVE POPULATION	NATIVE MALE POPULATION	NATIVE FEMALE POPULATION	NATIVE NATURAL INCREASE	NATIVE RATE OF NATURAL INCREASE	NATIVE MI GRATION
1980	3208**	1 669**	1 509**			
1981	3268	1722	1545	90	0.028	-36
1982	3363	1764	1598	95	0.029	-0
1983	3460	1808	1653	98	0.029	-0
1984	3562	1853	1709	102	0.029	-0
1985	3665	1899	1766	103	0.029	0
1986	3705	1912	1792	105	0.029	-65
1987	3786	1947	1839	106	0.028	-24
1988	3813	1954	1859	103	0.027	-75
1989	3882	1982	1899	100	0.026	-32
1990	3939	2005	1934	97	0.025	-40
1991	4020	2040	1979	93	0.024	-13
1992	4101	2076	2026	89	0.022	-7
1993	4163	2101	2062	83	0.020	-22
1994	4234	2131	2103	83	0.020	-12
1995	4306	2161	2144	85	0.020	-13
1996	4376	2191	2185	85	0.020	-14
1997	4445	2220	2225	82	0.019	-14
1998	4511	2248	2263	83	0.019	-17
1999	4545	2259	2286	85	0.019	-50
2000	4543	2253	2290	87	0.019	-90
2001	4547	2249	2297	90	0.020	-86
2002	4478	2210	2268	90	0.020	-159
2003	4407	2170	2236	95	0.021	-166
2004	4303	2115	2189	96	0.022	-199
2005	4199	2059	2140	96	0.022	-201
2006	4102	2007	2094	97	0.023	-194
2007	3965	1937	2029	96	0.023	-232
2008	3841	1872	1969	94	0.024	-218
2009	3733	1816	1917	91	0.024	-199
2010	3635	1765	1870	88	0.023	-185

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B67--12/20/85
VARIABLES: PONA, PONAMA, PONAFA, NTICNA, NTICNARA, AND MGNA

TABLE C-7.5
NORTH SLOPE MOREL PROJECTIONS
LOW EMPLOYMENT BASE CASE

	TOTAL EMPLOYMENT	TOTAL NATIVE EMPLOYMENT	TOTAL NON-NATIVE RESIDENT EMPLOYMENT	TOTAL NON- RESIDENT EMPLOYMENT
1980	6118**	1173*	473*	4472*
1981	8761**	1136	668	6957
1982	9638**	1326	717	7595
1983	10318**	1376	831	8111
1984	9581**	1441	839	7301
1985	9006	1497	1136	6373
1986	9587	1325	885	7376
1987	9054	1304	921	6830
1988	6929	1099	823	5007
1989	7017	1055	791	5171
1990	6926	973	764	5189
1991	6778	965	790	5023
1992	6915	962	818	5135
1993	6079	917	817	4345
1994	6007	906	841	4260
1995	5886	889	859	4139
1996	5638	863	870	-3905
1997	5539	844	885	3811
1998	5303	818	894	3590
1999	5103	791	901	3410
2000	5093	770	913	3410
2001	4977	780	926	3270
2002	4142	741	889	2513
2003	4116	728	874	2513
2004	3697	699	843	2156
2005	3665	684	825	2156
2006	3636	671	810	2156
2007	2942	629	768	1546
2008	2910	614	750	1546
2009	2881	601	735	1546
2010	2855	589	720	1546

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B67--12/20/85
VARIABLES: EMTO, EMNA, **EMNN**, AND EMNR

TABLE C-7.6
NORTH SLOPE MODEL PROJECTIONS
LOW EMPLOYMENT BASE CASE

EMPLOYMENT: ALL RACES

	TOTAL EMPLOY- MENT	FEDERAL AND STATE GOVERN- MENT EMPLOY- MENT	BOROUGH OPER- ATING EMPLOY- MENT	BOROUGH CIP EMPLOY- MENT	OTHER CIP EMPLOY- MENT	LOCAL SUPPORT EMPLOY- MENT?	OIL INDUSTRY EMPLOY- MENT	NON-OIL BASIC EMPLOY- MENT
1980	6118**	291**	795*	322*	71*	393*	4246*	0
1981	8761**	260**	818*	363*	190*	427*	6703*	0
1982	9638**	203**	828*	456*	435*	488*	7228*	0
1983	10318**	177**	970*	457*	395*	528*	7791*	0
1984	9581**	178**	1028*	427*	464*	545*	6939*	0
1985	9006	178	1343	402	438	632	6014	0
1986	9587	178	1268	200	218	531	7191	0
1987	9054	178	1373	131	143	534	6696	0
1988	6929	178	1252	57	62	461	4919	0
1989	7017	178	1201	50	55	443	5090	0
1990	6926	178	1186	2	2	417	5141	0
1991	6778	178	1201	2	2	421	4973	0
1992	6915	178	1220	2	2	427	5086	0
1993	6079	178	1192	2	2	416	4289	0
1994	6007	178	1203	2	2	419	4203	0
1995	5886	178	1205	2	2	420	4080	0
1996	5638	178	1196	2	2	416	3844	0
1997	5539	178	1193	2	2	415	3749	0
1998	5303	178	1183	2	2	411	3526	0
1999	5103	178	1170	2	2	406	3344	0
2000	5093	178	1163	2	2	404	3344	0
2001	4977	178	1182	2	2	410	3203	0
2002	4142	178	1131	2	2	391	2438	0
2003	4116	178	1111	2	2	385	2438	0
2004	3697	178	1068	2	2	370	2077	0
2005	3665	178	1043	2	2	362	2077	0
2006	3636	178	1022	2	2	355	2077	0
2007	2942	178	964	2	2	335	1461	0
2008	2910	178	939	2	2	327	1461	0
2009	2881	178	918	2	2	321	1461	0
2010	2855	178	898	2	2	314	1461	0

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B67--12/20/85
VARIABLES: EMTO, EMGONL, EMGOOP, EMGOCT, EMCTGO, EMSUEG, EMBAOI, ANO EMBAOT

TABLE C-7.7
NORTH SLOPE MODEL PROJECTIONS
LOW EMPLOYMENT BASE CASE

EMPLOYMENT: NATIVES

	TOTAL EMPLOY- MENT	FEDERAL AND STATE GOVERN- MENT EMPLOY- MENT	BOROUGH OPER- ATING EMPLOY- MENT	BOROUGH CIP EMPLOY- MENT	OTHER CIP EMPLOY- MENT	LOCAL SUPPORT EMPLOY- MENT	OIL INDUSTRY EMPLOY- MENT	NON-OIL BASIC EMPLOY- MENT
1980	1173*	26*	445*	267*	26*	216*	30**	0
1981	1136	26	458	301	70	235	46	0
1982	1326	26	463	378	161	268	30	0
1983	1376	25	528	369	142	282	30	0
1984	1441	25	569	350	170	296	30	0
1985	1497	23	681	302	147	315	30	0
1986	1325	26	710	166	81	292	50	0
1987	1304	26	769	109	53	294	54	0
1988	1099	26	701	47	23	" 254	49	0
1989	1055	26	673	42	20	244	51	0
1990	973	26	664	2	1	229	51	0
1991	965	25	661	2	1	227	50	0
1992	962	24	659	2	1	227	51	0
1993	917	23	632	2	1	216	43	0
1994	906	22	625	2	1	214	42	0
1995	889	22	614	2	1	210	41	0
1996	863	21	598	2	1	204	38	0
1997	844	20	585	2	1	199	37	0
1998	818	19	568	2	1	193	35	0
1999	791	18	550	2	1	187	33	0
2000	770	18	535	2	1	182	33	0
2001	780	18	544	2	1	184	32	0
2002	741	18	520	2	1	176	24	0
2003	728	18	511	2	1	173	24	0
2004	699	18	491	2	1	166	21	0
2005	684	18	480	2	1	163	21	o"
2006	671	18	470	2	1	160	21	0
2007	629	18	443	2	1	151	15	0
2008	614	18	432	2	1	147	15	0
2009	601	18	422	2	1	144	15	0
2010	589	18	413	2	1	141	15	0

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B67--12/20/85
VARIABLES: EMNA, EMNAGONL, EMNAGOOP, EMNAGOCT, EMNACTGO,
EMNASUEG, EMNAOI, AND EMNABAOT

TABLE C-7.8
NORTH SLOPE MODEL PROJECTIONS
LOW EMPLOYMENT BASE CASE

NATIVE OIL INDUSTR% EMPLOYMENT

	ASSUMED MINIMUM NATIVE OIL EMPLOYMENT	OIL INDUSTR% MAXIMUM DEMAND FOR NATIVE LABOR	MAXIMUM NATIVE SUPPLY OF LABOR TO OIL INDUSTRY	NATIVE OIL INDUSTRY EMPLOYMENT
1980				
1981	30	67	46	46
1982	30	72	30	30
1983	30	78	30	30
1984	30	69	30	30
1985	30	60	30	30
1986	30	72	50	50
1987	30	67	54	54
1988	30	49	72	49
1989	30	51	77	51
1990	30	51	86	51
1991	30	50	88	50
1992	30	51	89	51
1993	30	43	94	43
1994	30	42	97	42
1995	30	41	100	41
1996	30	38	103	38
1997	30	37	106	37
1998	30	35	110	35
1999	30	33	114	33
2000	30	33	116	33
2001	30	32	117	32
2002	30	24	119	24
2003	30	24	119	24
2004	30	21	119	21
2005	30	21	117	21
2006	30	21	115	21
2007	30	15	114	15
2008	30	15	112	15
2009	30	15	108	15
2010	30	15	106	15

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B67--12/20/85
VARIABLES: EMNAOIEX, LDNABAOI, LSNAOI, EMNAOI

TABLE C-7.9
NORTH SLOPE MODEL PROJECTIONS
LOW EMPLOYMENT BASE CASE

EMPLOYMENT: NON-NATIVE RESIDENTS

	TOTAL NON-NATIVE EMPLOYMENT	FEDERAL AND STATE GOVERNMENT EMPLOYMENT	BOROUGH OPERATING EMPLOYMENT	LOCAL SUPPORT EMPLOYMENT	NON-LOCAL BASIC EMPLOYMENT	BOROUGH CIP EMPLOYMENT
1980	473*	54*	350*	216*	0	55*
1981	668	54	360	192	0	62
1982	717	54	365	220	0	78
1983	831	55	442	246	0	88
1984	839	55	459	249	0	77
1985	1136	57	662	317	0	100
1986	885	54	558	239	0	34
1987	921	54	604	240	0	22
1988	823	54	551	208	0	10
1989	791	54	529	199	0	9
1990	764	54	522	188	0	0
1991	790	55	541	194	0	0
1992	818	56	561	201	0	0
1993	817	57	560	200	0	0
1994	841	58	577	205	0	0
1995	859	58	590	210	0	0
1996	870	59	598	212	0	0
1997	885	60	609	216	0	0
1998	894	61	615	218	0	0
1999	901	62	620	219	0	0
2000	913	62	628	222	0	0
2001	926	62	638	225	0	0
2002	889	62	611	215	0	0
2003	874	62	600	212	0	0
2004	843	62	577	203	0	0
2005	825	62	563	199	0	0
2006	810	62	552	195	0	0
2007	768	62	521	184	0	0
2008	750	62	507	180	0	0
2009	735	62	496	176	0	0
2010	720	62	485	173	0	0

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.867--12/20/85
VARIABLES: EMNN, EMNNGONL, EMNNGOOP, EMNNSUEG, EMNNBAOT, EMNNGOCT

TABLE C-7.10
NORTH SLOPE MODEL PROJECTIONS
LOW EMPLOYMENT BASE CASE

EMPLOYMENT: NON-RESIDENTS

	TOTAL NON- RESIDENT EMPLOYMENT	FEDERAL AND AND STATE " OTHER GOVERNMENT EMPLOYMENT	OTHER CIP EMPLOYMENT	OIL INDUSTRY EMPLOYMENT
1980	4472*	211*	45*	4217*
1981	6957	180	120	6657
1982	7595	123	274	7198
1983	8111	97	253	7761
1984	7301	98	294	6909
1985	6373	98	291	5984
1986	7376	98	137	7141
1987	6830	98	90	6642
1988	5007	98	39	4870
1989	5171	98	34	5039
1990	5189	98	1	5090
1991	5023	98	1	4923
1992	5135	98	1	5035
1993	4345	98	1	4246
1994	4260	98	1	4161
1995	4139	98	1	4039
1996	3905	98	1	3806
1997	3811	98	1	3712
1998	3590	98	1	3491
1999	3410	98	1	3311
2000	3410	98	1	3311
2001	3270	98	1	3171
2002	2513	98	1	2414
2003	2513	98	1	2414
2004	2156	98	1	2056
2005	2156	98	1	2056
2006	2156	98	1	2056
2007	1546	98	1	1446
2008	1546	98	1	1446
2009	1546	98	1	1446
2010	1546	98	1	1446

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.867--12/20/85
 VARIABLES: EMNR, EMNRGONL, EMNRCTGO, AND EMNRBAOI

TABLE C-7.11
NORTH SLOPE MODEL PROJECTIONS
LOW EMPLOYMENT BASE CASE

	TOTAL BOROUGH REVENUES (000)	NON- PROPERTY TAX NON- INTEREST REVENUES (000)	PROPERTY TAX REVENUES FOR OPERATIONS (000)	PROPERTY TAX REVENUES FOR DEBT SERVICE (000)	INTEREST EARNINGS (000)
1980	72900**	18200**	21 000**	26300**	7400**
1981	90000**	22000**	26400**	32800**	8800**
1982	189100**	34900**	34800**	75000**	44400**
1983	215400**	37300**	38500**	95200**	44400**
1984	251400**	40200**	331 00**	118900**	59200**
1985	302300**	32600**	40600**	184600**	44500**
1986	309267	28161	46808	199717	34580
1987	313789	28151	48644	208894	28100
1988	314105	28412	41937	218456	25300
1989	302083	26306	42634	210322	22820
1990	273734	25042	42806	183166	22720
1991	190317	26328	42824	98545	22620
1992	253448	26845	43811	160.272	22520
1993	242188	27209	41437	151122	22420
1994	232524	27899	41668	140638	22320
1995	222111	28073	41742	130076	22220
1996	168673	27850	41381	77322	22120
1997	129975	27621	41509	38826	22020
1998	121764	27327	41161	31355	21920
1999	105599	26795	40774	16210	21820
2000	104577	26282	40840	15735	21720
2001	105633	28220	40472	15320	21620
2002	101321	27586	37299	14915	21520
2003	99406	26589	36838	14560	21420
2004	95711	25357	34889	14145	21320
2005	93458	24230	34238	13770	21220
2006	86464	23279	33640	8425	21120
2007	73633	22019	30594	0	21020
2008	71743	20980	29842	0	20920
2009	70098	20092	29186	0	20820
2010	68592	19276	28596	0	20720

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B67--12/20/85
VARIABLES: RVTO, RVNPOP, RVPYOP, RVPYDB, RVI T

TABLE C-7.12
 NORTH SLOPE MODEL PROJECTIONS
 LOW EMPLOYMENT BASE CASE

	TOTAL BOROUGH EXPENDI- TURES (000)	OPERATI ONS EXPENDI- TURES (000)	CON- STRUC- TION EXPENDI- TURES (000)	DEBT SERVICE EXPENDI- TURES (000)
1980	158765**	39685**	93000**	26080**
1981	216637**	50020**	131000**	35617**
1982	342192**	63506**	211000**	67686**
1983	466118**	68807**	302000**	95311**
1984	419494**	78544**	211000**	129950**
1985	489655**	102577**	199000**	188078**
1986	395813	96896	99200	197717
1987	378589	1 (94895	64800	208894
1988	342105	95649	28000	218456
1989	326883	91761	24800	210322
1990	274734	90568	1000	183166
1991	191317	91772	1000	98545
1992	254448	93176	1000	160272
1993	243188	91066	1000	151122
1994	233524	91886	1000 "	140638
1995	223111	92035	1000	130076
1996	169673	91351	1000	77322
1997	130975	91149	1000	38826
1998	122764	90409	1000	31355
1999	106599	89389	1000	16210
2000	105577	88842	1000	15735
2001	106633	90313	1000	15320
2002	102321	86406	1000	14915
2003	100406	84846	1000	14560
2004	96711	81566	1000	14145
2005	94458	79688	1000	13770
2006	87464	78039	1000	8425
2007	74633	73633	1000	0
2008	72743	71743	1000	0
2009	71098	70098	1000	0
2010	69592	68592	1000	0

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B67--12/20/85
 VARIABLES: SPTO, SPLOGOOP, SPLOGOCT, AND CSDBTO

TABLE C-7.13
NORTH SLOPE MODEL PROJECTIONS
LOW EMPLOYMENT EASE CASE

	TOTAL PROPERTY VALUE (000)	TOTAL PROPERTY TAXES (000)	TAX RATE	TAX RATE FOR OPER- ATING REVENUES	TAX RATE FOR DEBT SERVICE REVENUES	LIMIT ON PROPERTY TAX OPER- ATING REVENUES PER CAPITA (000)	ACTUAL PROPERTY TAX OPER- ATING REVENUES PER CAPITA ^a (000)
1980	5061955**	52400**	0.0103**	0.0052**	0.0051	3.196**	3.086
1981	5723582**	59100**	0.0103**	0.0051**	0.0052	3.601**	3.008
1982	6621652**	109700**	0.0167**	0.0055**	0.0112	3.914**	3.718
1983	8186986**	133700**	0.0164**	0.0041**	0.0123	4.761**	3.869
1984	9996290**	152400**	0.0153**	0.0033**	0.0120	5.119**	3.476
1985	12261420**	225300**	0.0184**	0.0033**	0.0151	5.099**	4.321
1986	13420000	246525	0.0184	0.0035	0.0149	5.099	4.788
1987	14730000	257538	0.0175	0.0033	0.0142	5.099	5.099
1988	15510000	260393	0.0168	0.0027	0.0141	5.099	5.099
1989	16100000	252956	0.0157	0.0026	0.0131	5.099	5.099
1990	16290000	225972	0.0139	0.0026	0.0112	5.099	5.099
1991	15990000	141369	0.0088	0.0027	0.0062	5.099	5.099
1992	15680000	204083	0.0130	0.0028	0.0102	5.099	5.099
1993	15340000	192559	0.0126	0.0027	0.0099	5.099	5.099
1994	14980000	182306	0.0122	0.0028	0.0094	5.099	5.099
1995	14550000	171818	0.0118	0.0029	0.0089	5.099	5.099
1996	14070000	118703	0.0084	0.0029	0.0055	5.099	5.099
1997	13550000	80335	0.0059	0.0031	0.0029	5.099	5.099
1998	12950000	72516	0.0056	0.0032	0.0024	5.099	5.099
1999	12280000	56984	0.0046	0.0033	0.0013	5.099	5.099
2000	11500000	56575	0.0049	0.0036	0.0014	5.099	5.099
2001	10720000	55792	0.0052	0.0038	0.0014	5.099	5.099
2002	9940000	52214	0.0053	0.0038	0.0015	5.099	5.099
2003	9160000	51398	0.0056	0.0040	0.0016	5.099	5.099
2004	8380000	49034	0.0059	0.0042	0.0017	5.099	5.099
2005	7600000	48008	0.0063	0.0045	0.0018	5.099	5.099
2006	6820000	42065	0.0062	0.0049	0.0012	5.099	5.099
2007	6040000	30594	0.0051	0.0051	0.0000	5.099	5.099
2008	5260000	29842	0.0057	0.0057	0.0000	5.099	5.099
2009	4480000	29186	0.0065	0.0065	0.0000	5.099	5.099
2010	3700000	28596	0.0077	0.0077	0.0000	5.099	5.099

^aBased on total population as defined by model, rather than official state figure used for calculating revenue limit.

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B67--12/20/85
VARIABLES: VATO, RVPYTO, TARA, TARAOP, TARADB, RVPYOPPC, RVOPPCFI

TABLE C-7.14
NORTH SLOPE MODEL PROJECTIONS
LOW EMPLOYMENT BASE CASE

	TOTAL RESIDENT INCOME (000)	TOTAL NATIVE INCOME (000)	TOTAL NON-NATIVE RESIDENT INCOME (000)	PER CAPITA RESIDENT INCOME (000)	PER CAPITA NATIVE INCOME (000)	PER CAPITA NON-NATIVE RESIDENT" INCOME (000)
1980	66377**					
1981	72392	47335	25057	17.477	14.486	28.648
1982	81481	54595	26886	18.944	16.235	28.648
1983	87782	56609	31173	19.299	16.360	28.648
1984	90655	59203	31452	19.454	16.621	28.648
1985	704061	61446	42615	20.197	16.766	28.652
1986	88266	55067	33200	18.148	14.864	28.642
1987	88911	54372	34539	17.813	14.362	28.649
1988	77606	46760	30846	15.870	12.262	28.642
1989	74825	45173	29652	15.217	11.636	28.646
1990	70836	42187	28649	14.342	10.710	28.645
1991	71642	42022	29620	14.177	10.454	28.649
1992	72725	42040	30685	14.060	10.250	28.648
1993	71060	40416	30644	13.581	9.709	28.646
1994	71647	40121	31526	13.431	9.476	28.649
1995	71790	39584	32206	13.221	9.193	28.647
1996	71333	38725	32609	12.935	8.848	28.647
1997	71255	38085	33171	12.718	8.569	28.647
1998	70763	37223	33540	12.455	8.252	28.647
1999	70065	36259	33805	12.237	7.977	28.648
2000	69708	35474	34235	12.148	7.808	28.648
2001	70593	35852	34741	12.257	7.885	28.649
2002	67596	34272	33324	11.982	7.653	28.647
2003	66487	33708	32779	11.978	7.649	28.647
2004	64041	32435	31606	11.845	7.537	28.644
2005	62677	31728	30949	11.873	7.557	28.647
2006	61464	31097	30367	11.908	7.582	28.645
2007	58126	29337	28788	11.694	7.398	28.642
2008	56716	28595	28121	11.759	7.444	28.645
2009	55498	27952	27546	11.822	7.488	28.648
2010	54382	27365	27017	11.877	7.527	28.645

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B67--12/20/85
VARIABLES: IN, INNA, INNN, INPC, INPCNA, AND INPCNN

TABLE C-7.15
 NORTH SLOPE MODEL PROJECTIONS
 LOW EMPLOYMENT BASE CASE

	ADULT NATIVE POPULATION	NATIVE LABOR SUPPLY	NATIVE EMPLOYMENT	NATIVE UNEMPLOY- MENT	NATIVE UNEMPLOY- MENT RATE BEFORE MIGRATION	NATIVE UNEMPLOY- MENT RATE AFTER MIGRATION
1980	1667**	1235**	1173*			
1981	1725	1278	1136	142	0.111	0.107
1982	1789	1326	1326	0	0.000	0.000
1983	1857	1376	1376	0	0.000	0.000
1984	1945	1441	1441	0	0.000	0.000
1985	2020	1497	1497	0	0.000	0.000
1986	2036	1509	1325	184	0.122	0.097
1987	2051	1520	1304	216	0.142	0.133
1988	2030	1504	1099	404	0.269	0.242
1989	2028	1503	1055	448	0.298	0.287
1990	2044	1515	973	542	0.358	0.344
1991	2053	1521	965	556	0.366	0.361
1992	2070	1534	962	571	0.373	0.370
1993	2087	1546	917	630	0.407	0.400
1994	2107	1561	906	655	0.420	0.416
1995	2131	1579	889	690	0.437	0.433
1996	2138	1584	863	721	0.455	0.451
1997	2157	1599	844	755	0.472	0.468
1998	2182	1617	818	799	0.494	0.489
1999	2202	1632	791	841	0.515	0.500
2000	2197	1628	770	857	0.527	0.500
2001	2221	1645	780	865	0.526	0.500
2002	2210	1637	741	897	0.548	0.500
2003	2187	1621	728	892	0.551	0.500
2004	2150	1593	699	895	0.562	0.500
2005	2114	1566	684	883	0.564	0.500
2006	2071	1534	671	864	0.563	0.500
2007	2007	1488	629	859	0.577	0.500
2008	1950	1445	614	831	0.575	0.500
2009	1889	1400	601	799	0.571	0.500
2010	1839	1363	589	773	0.568	0.500

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.867--12/20/85
 VARIABLES: PONAAT, LSNA, EMNA, UNNA, UNRANA, UNRANAFI

TABLE C-8.1
 NORTH SLOPE MODEL PROJECTIONS
 HIGH EMPLOYMENT BASE CASE

	TOTAL, POPULATION	RESIDENT POPULATION	AVERAGE NON- RESIDENT POPULATION
1980	6805*	3827**	2978*
1981	8767	4150	4617
1982	9366	4308	5058
1983	9954	4553	5402
1984	9527	4664	4862
1985	9401	5157	4244
1986	9925	4966	4959
1987	9538	4982	4556
1988	8134	4853	3281
1989	8247	4866	3380
1990	8255	4884	3370
1991	8210	4951	3259
1992	8355	5021 "	3334
1993	7845	5047	2797
1994	7845	5107	2739
1995	7815	5159	2656
1996	7704	5197	2507
1997	7686	5240	2446
1998	7578	5273	2305
1999	7499	5308	2190
2000	7555	5365	2190
2001	7563	5462	2101
2002	7112	5495	1617
2003	7201	5584	1617
2004	7014	5625	1389
2005	7037	5649	1389
2006	7046	5657	1389
2007	6509	5511	999
2008	6384	5385	999
2009	6268	5269	999
2010	6156	5157	999

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B68--12/20/85
 VARIABLES: POTO, PORE, AND PONRAV

TABLE C-8.2
NORTH SLOPE MODEL PROJECTIONS
HIGH EMPLOYMENT BASE CASE

	RESIDENT POPULATION	RESIDENT NATIVE POPULATION	RESIDENT NON-NATIVE POPULATION
1980	3827*	3208**	619*
1981	4150	3276	875
1982	4308	3371	937
1983	4553	3469	1084
1984	4664	3571	1094
1985	5157	3674	1483
1986	4966	3759	1207
1987	4982	3820	1162
1988	4853	3846	1007
1989	4866	31315	952
1990	4884	3976	908
1991	4951	4065	886
1992	5021	4155	866
1993	5047	4231	816
1994	5107	4314	793
1995	5159	4396	764
1996	5197	4471	726
1997	5240	4545	694
1998	5273	4615	658
1999	5308	4684	624
2000	5365	4765	600
2001	5462	4850	612
2002	5495	4907	588
2003	5584	4994	589
2004	5625	5049	576
2005	5649	5075	573
2006	5657	5087	570
2007	5511	4974	536
2008	5385	4862	524
2009	5269	4757	512
2010	5157	4656	501

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.868--12/20/85
VARIABLES: PORE, PONA, AND PONN

TABLE C-8.3
NORTH SLOPE MODEL PROJECTIONS
HIGH EMPLOYMENT BASE CASE

	NATIVE POPULATION	PRE-SCHOOL NATIVE POPULATION	SCHOOL-AGE NATIVE POPULATION	ADULT NATIVE POPULATION	AGED NATIVE POPULATION
1980	3208**	362**	1042**	1667**	137**
1981	3276	378	1029	1729	139
1982	3371	444	989	1794	144
1983	3469	497	965	1861	146
1984	3571	538	936	1950	148
1985	3674	579	915	2025	155
1986	3759	621	906	2067	165
1987	3820	630	955	2070	164
1988	3846	630	1002	2048	166
1989	3915	632	1067	2046	171
1990	3976	629	1106	2064	178
1991	4065	625	1176	2077	187
1992	4155	614	1242	2098	201
1993	4231	599	1304	2122	206
1994	4314	586	1368	2148	212
1995	4396	577	1424	2177	218
1996	4471	572	1490	2186	225
1997	4545	568	1537	2208	233
1998	4615	570	1563	2234	248
1999	4684	575	1587	2271	251
2000	4765	582	1617	2306	260
2001	4850	593	1619	2372	265
2002	4907	607	1606	2427	267
2003	4994	631	1598	2487	279
2004	5049	653	1580	2533	283
2005	5075	674	1553	2566	282
2006	5087	694	1522	2581	289
2007	4974	701	1458	2532	283
2008	4862	703	1404	2481	274
2009	4757	701	1360	2421	274
2010	4656	695	1328	2368	265

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B68--12/20/85
 VARIABLES: PONA, PONAkd, PONAsl, PONAAT, AND PONAge

TABLE C-8.4
NORTH SLOPE MODEL PROJECTIONS
HIGH EMPLOYMENT BASE CASE

	NATIVE POPULATION	NATIVE MALE POPULATION	NATIVE FEMALE POPULATION	NATIVE NATURAL INCREASE	NATIVE RATE OF NATURAL INCREASE	NATIVE MIGRATION
1980	3208**	1669**	1 509**			
1981	3276	1726	1549	90	0.028	-28
1982	3371	1769	1602	95	0.029	-0
1983	3469	1812	1657	98	0.029	-0
1984	3571	1858	1713	102	0.029	-0
1985	3674	1904	1770	103	0.029	0
1986	3759	1940	1818	106	0.029	-21
1987	3820	1965	1856	107	0.029	-45
1988	3846	1971	1875	104	0.027	-78
1989	3915	1 999	1915	101	0.026	-33
1990	3976	2024	1952	98	0.025	-37
1991	4065	2063	2002	94	0.024	-5
1992	4155	2103	2052	90	0.022	-0
1993	4231	2135	2096	85	0.020	- 8
1994	4314	2171	2143	85	0.020	-2
1995	4396	2207	2189	87	0.020	-5
1996	4471	2239	2232	87	0.020	-11
1997	4545	2270	2275	84	0.019	-10
1998	4615	2299	2315	85	0.019	-16
1999	4684	2328	2356	87	0.019	-18
2000	4765	2363	2402	90	0.019	-9
2001	4850	2400	2451	94	0.020	-9
2002	4907	2422	2485	97	0.020	-40
2003	4994	2460	2534	104	0.021	-16
2004	5049	2481	2567	109	0.022	-55
2005	5075	2489	2586	113	0.022	-87
2006	5087	2490	2597	117	0.023	-106
2007	4974	2430	2545	120	0.024	-232
2008	4862	2370	2492	119	0.024	-231
2009	4757	2315	2442	116	0.024	-220
2010	4656	2261	2395	112	0.024	-213

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.868--12/20/85
VARIABLES: PONA, PONAMA, PONAFA, NTICNA, NTICNARA, AND MGNA

TABLE C-8.5
 NORTH SLOPE MODEL PROJECTIONS
 HIGH EMPLOYMENT BASE CASE

	TOTAL EMPLOYMENT	TOTAL NATIVE EMPLOYMENT	TOTAL NON-NATIVE RESIDENT EMPLOYMENT	TOTAL NON- RESIDENT EMPLOYMENT
1980	6118**	1173*	473*	4472*
1981	8761**	1160	668	6932
1982	9638**	1328	716	7595
1983	10318**	1379	828	8111
1984	9581**	1445	836	7301
1985	9007	1501	1133	6373
1986	9840	1472	922	7446
1987	9089	1361	887	6841
1988	6855	1160	769	4926
1989	6915	1112	727	5075
1990	6797	1043	694	5061
1991	6625	1055	677	4893
1992	6738	1070	662	5006
1993	5885	1061	624	4200
1994	5791	1073	606	4112
1995	5648	1076	583	3988
1996	5374	1055	554	3764
1997	5251	1047	530	3673
1998	4990	1025	503	3462
1999	4772	1006	477	3289
2000	4755	1008	458	3289
2001	4642	1019	468	3155
2002	3823	946	449	2428
2003	3826	948	450	2428
2004	3436	910	440	2085
2005	3429	906	438	2085
2006	3423	902	436	2085
2007	2731	821	410	1500
2008	2703	803	400	1500
2009	2677	786	391	1500
2010	2653	770	383	1500

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B68--12/20/85
 VARIABLES: EMT0, EMNA, EMNN, AND EMNR

TABLE C-8.6
NORTH SLOPE MODEL PROJECTIONS
HIGH EMPLOYMENT BASE CASE

EMPLOYMENT: ALL RACES

	TOTAL EMPLOY- MENT	FEDERAL AND STATE GOVERN- MENT EMPLOY- MENT	BOROUGH OPER- ATING EMPLOY- MENT	" BOROUGH CIP EMPLOY- MENT	OTHER CIP EMPLOY- MENT	LOCAL SUPPORT EMPLOY- MENT	OIL INDUSTRY EMPLOY- MENT	NON-OIL BASIC EMPLOY- MENT
1980	6118**	291 **	795*	322*	71*	393*	4246*	0
1981	8761**	260**	818*	363*	190*	427*	6703*	0
1982	9638**	203**	828*	456*	435*	488*	7228*	0
1983	10318**	177**	970*	457*	395*	528*	7791*	0
1984	9581 **	178**	1028*	427*	464*	545*	6939*	0
1985	9007	178	1343	402	438	632	6014	0
1986	9840	178	1268	301	327	575	7191	0
1987	9089	178	1265	196	214	540	6696	0
1988	6855	178	1118	85	92	463	4919	0
1989	6915	178	704%	75	82	442	5090	0
1990	6797	178	1019	20	22	417	5141	0
1991	6625	178	1016	20	22	416	4973	0
1992	6738	178	1016	20	22	416	5086	0
1993	5885	178	972	20	22	404	4289	0
1994	5791	178	965	20	22	403	4203	0
1995	5648	178	949	20	22	398	4080	0
1996	5374	178	923	20	22	386	3844	0
1997	5251	178	903	20	22	379	3749	0
1998	4990	178	877	20	22	367	3526	0
1999	4772	178	852	20	22	356	3344	0
2000	4755	178	839	20	22	352	3344	0
2001	4642	178	862	20	22	357	3203	0
2002	3823	178	830	20	22	335	2438	0
2003	3826	178	832	20	22	336	2438	0
2004	3436	178	814	20	22	324	2077	0
2005	3429	178	810	20	22	323	2077	0
2006	3423	178	804	20	22	321	2077	0
2007	2731	178	754	20	22	295	1461	0
2008	2703	178	733	20	22	289	1461	0
2009	2677	178	714	20	22	283	1461	0
2010	2653	178	695	20	22	277	1461	0

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B68--12/20/85
VARIABLES: EMTO, EMGONL, EMGOOP, EMGOCT, EMCTGO, EMSUEG, EMBAOI, AND EMBAOT

EMPLOYMENT: NATIVES

	TOTAL EMPLOY- MENT	FEDERAL AND STATE GOVERN- MENT EMPLOY- MENT	BOROUGH OPER- ATING EMPLOY- MENT	BOROUGH CIP EMPLOY- MENT	OTHER CIP EMPLOY- MENT	LOCAL SUPPORT EMPLOY- MENT	OIL INDUSTRY EMPLOY- MENT	NON-OIL BASIC EMPLOY- MENT
1980	1173*	26*	445*	267*	26*	216*	30**	0
1981	1160	26	458	301	70	235	70	0
1982	1328	26	464	378	161	268	31	0
1983	1379	25	529	370	142	283	30	0
1984	1445	25	571	351	170	297	30	0
1985	1501	23	682	303	147	315	30	0
1986	1472	26	710	249	121	316	50	0
1987	1361	26	708	163	79	297	88	0
1988	1160	26	626	70	34	255	149	0
1989	1112	26	587	62	30	243	164	0
1990	1043	26	571	17	8	229	192	0
1991	1055	26	579	17	8	233	191	0
1992	1070	27	589	17	8	237	191	0
1993	1061	28	573	17	8	235	200	0
1994	1073	29	579	17	8	238	203	0
1995	1076	30	579	17	8	239	204	0
1996	1055	30	572	17	8	236	192	0
1997	1047	31	569	17	8	235	187	0
1998	1025	32	561	17	8	231	176	0
1999	1006	33	554	17	8	22B	167	0
2000	1008	34	554	17	8	229	167	0
2001	1019	34	569	17	8	232	160	0
2002	946	34	548	17	8	218	122	0
2003	948	34	549	17	8	218	122	0
2004	910	34	537	17	8	211	104	0
2005	906	34	534	17	8	210	104	0
2006	902	34	531	17	8	209	104	0
2007	821	34	498	17	8	192	73	0
2008	803	34	484	17	8	188	73	0
2009	786	34	471	17	8	184	73	0
2010	770	34	459	17	8	180	73	0

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B68--12/20/85
 VARIABLES: EMNA, EMNAGONL, EMNAGOOP, EMNAGOCT, EMNACTGO,
 EMNASUEG, EMNAOI, AND EMNABAOT

TABLE C-8.8
NORTH SLOPE MODEL PROJECTIONS
HIGH EMPLOYMENT BASE CASE

NATIVE OIL 1NDUSTR% EMPLOYMENT

	ASSUMED MINIMUM NATIVE OIL EMPLOYMENT	OIL 1NDUSTR% MAXIMUM DEMAND FOR NATIVE LABOR	MAXIMUM NATIVE SUPPLY OF LABOR TO OIL INDUSTRY	NATIVE OIL INDUSTRY EMPLOYMENT
1980				
1981	30	335	70	70
1982	30	361	31	31
1983	30	390	30	30
1984	30	347	30	30
1985	30	301	30	30
1986	30	360	50	50
1987	30	335	88	'88
1988	30	246	149	149
1989	30	255	164	164
1990	30	257	192	192
1991	30	249	191	191
1992	30	254	191	191
1993	30	214	200	200
1994	30	210	203	203
1995	30	204	208	204
1996	30	192	212	192
1997	30	187	216	187
1998	30	176	224	176
1999	30	167	233	167
2000	30	167	240	167
2001	30	160	247	160
2002	30	122	266	122
2003	30	122	277	122
2004	30	104	290	104
2005	30	104	297	104
2006	30	104	301	104
2007	30	73	304	73
2008	30	73	300	73
2009	30	73	293	73
2010	30	73	287	73

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B68--12/20/85
 VARIABLES: EMNAOIEX, LDNABAOI, LSNAOI, EMNAOI

TABLE C-8.9
NORTH SLOPE MODEL PROJECTIONS
HIGH EMPLOYMENT BASE CASE

EMPLOYMENT: NON-NATIVE RESIDENTS

	TOTAL NON-NATIVE EMPLOYMENT	FEDERAL AND STATE GOVERNMENT EMPLOYMENT	BOROUGH OPERATING EMPLOYMENT	LOCAL SUPPORT EMPLOYMENT	NON-OIL BASIC EMPLOYMENT	BOROUGH CIP EMPLOYMENT
1980	473*	54*	350*	216*	0	55*
1981	668	54	360	192	0	62
1982	716	54	364	220	0	78
1983	828	55	441	245	0	87
1984	836	55	457	248	0	76
1985	1133	57	660	317	0	99
1986	922	54	558	259	0	51
1987	887	54	557	243	0	33
1988	769	54	492	208	0	14
1989	727	54	461	199	0	13
1990	694	54	448	188	0	3
1991	677	54	43-1	183	0	3
1992	662	53	427	179	0	3
1993	624	52	398	170	0	3
1994	606	51	386	165	0	3
1995	583	50	370	159	0	3
1996	554	50	351	151	0	3
1997	530	49	334	144	0	3
1998	503	48	316	136	0	3
1999	477	47	298	128	0	3
2000	458	46	285	123	0	3
2001	468	46	293	125	0	3
2002	449	46	282	117	0	3
2003	450	46	283	117	0	3
2004	440	46	277	113	0	3
2005	438	46	275	113	0	3
2006	436	46	274	112	0	3
2007	410	46	256	103	0	3
2008	400	46	249	101	0	3
2009	391	46	243	99	0	3
2010	383	46	236	97	0	3

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP. B68--12/20/85
 VARIABLES: EMNN, EMNNGONL, EMNNGOOP, EMNNSUEG, EMNNBAOT, EMNNGOCT

TABLE C-8.10
NORTH SLOPE MODEL PROJECTIONS
HIGH EMPLOYMENT BASE CASE

EMPLOYMENT: NON-RESIDENTS

	TOTAL NON- RESIDENT EMPLOYMENT	FEDERAL AND STATE GOVERNMENT EMPLOYMENT	" OTHER CIP EMPLOYMENT	OIL INDUSTRY EMPLOYMENT
1980	4472*	211*	45*	4217*
1981	6932	180	120	6633
1982	7595	123	274	7197
1983	8111	97	253	7761
1984	7301	98	294	6909
1985	6373	98	291	5984
1986	7446	98	206	7141
1987	6841	98	135	6608
1988	4926	98	58	4770
1989	5075	98	52	4926
1990	5061	98	14	4949
1991	4893	98	14	4782
1992	5006	98	14	4895
1993	4200	98	14	4089
1994	4112	98	14	4000
1995	3988	98	14	3876
1996	3764	98	14	3652
1997	3673	98	14	3562
1998	3462	98	14	3350
1999	3289	98	14	3177
2000	3289	98	14	3177
2001	3155	98	14	3043
2002	2428	98	14	2316
2003	2428	98	14	2316
2004	2085	98	14	1973
2005	2085	98	14	1973
2006	2085	98	14	1973
2007	1500	98	14	1388
2008	1500	98	14	1388
2009	1500	98	14	1388
2010	1500	98	14	1388

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B68--12/20/85
 VARIABLES: EMNR, EMNRGONL, EMNRCTGO, AND EMNRBAOI

TABLE C-8.11
 NORTH SLOPE MODEL PROJECTIONS
 HIGH EMPLOYMENT BASE CASE

	TOTAL BOROUGH REVENUES (000)	NON- PROPERTY TAX NON- INTEREST REVENUES (000)	" PROPERTY TAX REVENUES FOR OPERATIONS (000)	PROPERTY TAX REVENUES FOR DEBT SERVICE (000)	INTEREST EARNINGS (000)
1980	92900**	18200**	21 000**	26300**	7400**
1981	90000**	22000**	26400**	32800**	8800**
1982	189100**	34900**	34800**	75000**	44400**
1983	215400**	37300**	38500**	95200**	44400**
1984	251400**	40200**	331 00**	118900**	59200**
1985	302300**	32600**	40600**	184600**	44500**
1986	304898	28752	46808	199717	29620
1987	305526	28098	48634	208894	19900
1988	303825	28195	41473	218456	15700
1989	290386	26036	42049	210322	11980
1990	261000	24764	42091	183166	10980
1991	176183	25795	41863	98545	9980
1992	237911	26058	42602	160272	8980
1993	225349	26246	40001	151122	7980
1994	214328	26707	40002	140638	6980
1995	202580	26674	39850	130076	5980
1996	147828	26245	39281	77322	4980
1997	1 0 7 8 2 9	25831	39192	38826	3980
1998	98337	25362	38641	31355	2980
1999	81268	24843	38235	16210	1980
2000	79836	24571	38524	15751	990
2001	81971	26766	38566	16144	495
2002	80321	26868	36262	16943	248
2003	81577	26746	36717	17990	124
2004	81281	26381	35762	19076	62
2005	82094	25928	35884	20252	31
2006	77939	25515	35927	16482	15
2007	67255	24412	33191	9644	8
2008	67220	23426	32553	11238	4
2009	67349	22552	31960	12835	2
2010	67520	21712	31390	14418	1

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B68--12/20/85
 VARIABLES: RVTO, RVNPOP, RVPYOP, RVPYDB, RVIT

TABLE C-8.12
 NORTH SLOPE MODEL PROJECTIONS
 HIGH EMPLOYMENT BASE CASE

	TOTAL BOROUGH EXPENDI- TURES (000)	OPERATIONS EXPENDI- TURES (000)	CON- STRUCTION EXPENDI- TURES (000)	DEBT SERVICE EXPENDI- TURES (000)
1980	158765**	39685**	93000**	26080**
1981	216637**	50020**	131000**	35617**
1982	342192**	63506**	211000**	67686**
1983	466118**	68807**	302000**	95311**
1984	419494**	78544**	211000**	129950**
1985	489655**	102577**	199000**	188078**
1986	445413	96896	148800	199717
1987	402726	96632	97200	208894
1988	345825	85369	42000	218456
1989	327586	80064	37200	210322
1990	271000	77834	10000	183166
1991	186183	77638	10000	98545
1992	247911	77639	10000	160272
1993	235349	74227	10000	151122
1994	224328	- 73690	10000	140638
1995	212580	72504	10000	130076
1996	157828	70506	10000	77322
1997	117829	69003	10000	38826
1998	108337	66982	10000	31355
1999	91268	65058	10000	16210
2000	89836	64085	10000	15751
2001	91971	65827	10000	16144
2002	90321	63378	10000	16943
2003	91 577	63587	10000	17990
2004	91281	62205	10000	19076
2005	92094	61843	10000	20252
2006	87939	61457	10000	16482
2007	77255	57611	10000	9644
2008	77220	55982	1 0000	11238
2009	77349	54514	1 0000	12835
2010	77520	53103	10000	14418

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B68--12/20/85
 VARIABLES: SPTO, SPLOGOOP, SPLOGOCT, AND CSDBTO

TABLE C-8.13
 NORTH SLOPE MODEL PROJECTIONS
 HIGH EMPLOYMENT BASE CASE

	TOTAL PROPERTY VALUE (000)	TOTAL PROPERTY TAXES (000)	TAX RATE	TAX FOR OPER- ATING REVENUES	RATE TAX RATE FOR DEBT SERVICE REVENUES	LIMIT ON PROPERTY TAX OPER- ATING REVENUES PER CAPITA (000)	ACTUAL PROPERTY TAX OPER- ATING REVENUES PER CAPITA ^a (000)
1980	5061955**	52400**	0.0103**	0.0052**	0.0051	3.196**	3.086
1981	5723582**	59100**	0.0103**	0.0051**	0.0052	3.601**	3.011
1982	6621652**	109700**	0.0167**	0.0055**	0.0112	3.914**	3.716
1983	8186986**	133700**	0.0164**	0.0041**	0.0123	4.761**	3.868
1984	9996290**	152400**	0.0153**	0.0033**	0.0120	58119**	3.474
1985	12261420**	225300**	0.0184**	0.0033**	0.0151	5.099**	4.319
1986	13420000	246525	0.0184	0.0035	0.0149	5.099	4.716
1987	14730000	257528	0.0175	0.0033	0.0142	5.099	5.099
1988	15510000	259929	0.0168	0.0027	0.0141	5.099	5.099
1989	16100000	252371	0.0157	0.0026	0.0131	5.099	5.099
1990	16290000	225257	0.0138	0.0026	0.0112	5.099	5.099
1991	15990000	140408	0.0088	0.0026	0.0062	5.099	5.099
1992	15680000	202874	0.0129	0.0027	0.0102	5.099	5.099
1993	15340000	191123	0.0125	0.0026	0.0099	5.099	5.099
1994	14980000	180640	0.0121	0.0027	0.0094	5.099	5.099
1995	14550000	169926	0.0117	0.0027	0.0089	5.099	5.099
1996	14070000	116603	0.0083	0.0028	0.0055	5.099	5.099
1997	13550000	78018	0.0058	0.0029	0.0029	5.099	5.099
1998	12950000	69996	0.0054	0.0030	0.0024	5.099	5.099
1999	12280000	54445	0.0044	0.0031	0.0013	5.099	5.099
2000	11500000	54275	0.0047	0.0033	0.0014	5.099	5.099
2001	10720000	54710	0.0051	0.0036	0.0015	5.099	5.099
2002	9940000	53205	0.0054	0.0036	0.0017	5.099	5.099
2003	9160000	54707	0.0060	0.0040	0.0020	5.099	5.099
2004	8380000	54838	0.0065	0.0043	0.0023	5.099	5.099
2005	7600000	56135	0.0074	0.0047	0.0027	5.099	5.099
2006	6820000	52409	0.0077	0.0053	0.0024	5.099	5.099
2007	6040000	42836	0.0071	0.0055	0.0016	5.099	5.099
2008	5260000	43791	0.0083	0.0062	0.0021	5.099	5.099
2009	4480000	44795	0.0100	0.0071	0.0029	5.099	5.099
2010	3700000	45807	0.0124	0.0085	0.0039	5.099	5.099

^aBased on total population as defined by model, rather than official state figure used for calculating revenue limit.

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B68--12/20/85
 VARIABLES: VATO, RVPYTO, TARA, TARAOP, TARADB, RVPYOPPC, RVOPPCFI

TABLE C-8.14
NORTH SLOPE MODEL PROJECTIONS
HIGH EMPLOYMENT BASE CASE

	TOTAL RESIDENT INCOME (000)	TOTAL NATIVE INCOME (000)	TOTAL NON-NATIVE RESIDENT INCOME (000)	PER CAPITA RESIDENT INCOME (000)	PER CAPITA NATIVE INCOME (000)	PER CAPITA NON-NATIVE RESIDENT INCOME (000)
1980	" 66377**'					
1981	73322	48266	25057	17.667	14.735	28.648
1982	81518	54674	26844	18.922	16.219	28.648
1983	87807	56750	31057	19.286	16.361	28.648
1984	90684	59351	31333	19.442	16.622	28.648
1985	104093	61600	42493	20.185	16.767	28.652
1986	95245	60662	34583	19.180	16.140	28.645
1987	89833	56564	33269	18.032	14.806	28.643
1988	77903	49071	28833	16.053	12.758	28.643
1989	74656	47393	27263	15.341	12.107	28.644
1990	70873	44860	26013	14.510	11.282	28.644
1991	70830	45446	25384	14.306	11.180	28.647
1992	70961	46145	24816	14.134	11.107	28.653
1993	69314	45928	23386	13.733	10.855	28.647
1994	69206	46494	22712	13.552	10.778	28.647
1995	68615	46741	21874	13.299	10.633	28.647
1996	66853	46062	20791	12.864	10.302	28.647
1997	65755	45867	19887	12.549	10.091	28.647
1998	64000	45145	18855	12.138	9.783	28.647
1999	62409	44527	17882	11.757	9.506	28.646
2000	61897	44714	17183	11.537	9.384	28.647
2001	62797	45258	17539	11.496	9.331	28.648
2002	59414	42573	16841	10.813	8.677	28.644
2003	59671	42786	16885	10.687	8.567	28.649
2004	57968	41463	16505	10.306	8.213	28.648
2005	57774	41348	16425	10.228	8.147	28.648
2006	57542	41202	16340	10.171	8.099	28.648
2007	53377	313014	15363	9.686	7.642	28.647
2008	52160	37158	15002	9.686	7.643	28.648
2009	51059	36382	14677	9.690	7.649	28.648
2010	50002	35636	14365	9.695	7.654	28.648

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B68--12/20/85
VARIABLES: IN, INNA, INNN, INPC, INPCNA, AND INPCNN

TABLE C-8.15
NORTH SLOPE MODEL PROJECTIONS
HIGH EMPLOYMENT BASE CASE

	ADULT NATIVE POPULATION	NATIVE LABOR SUPPLY	NATIVE EMPLOYMENT	NATIVE UNEMPLOY- MENT	NATIVE UNEMPLOY- MENT RATE BEFORE MIGRATION	NATIVE UNEMPLOY- MENT RATE AFTER MIGRATION
1980	1667**	1235**	1173*			
1981	1729	1281	1160	121	0.094	0.093
1982	1794	1329	1328	2	0.001	0.001
1983	1861	1379	1379	0	0.000	0.000
1984	1950	1445	1445	0	0.000	0.000
1985	2025	1501	1501	0	0.000	0.000
1986	2067	1531	1472	59	0.039	0.031
1987	2070	1534	1361	173	0.113	0.097
1988	2048	1517	1160	358	0.236	0.208
1989	2046	1516	1112	403	0.266	0.254
1990	2064	1529	1043	487	0.318	0.306
1991	2077	1539	1055	484	0.315	0.313
1992	2098	1554	1070	484	0.312	0.312
1993	2122	1573	1061	511	0.325	0.322
1994	2148	1592	1073	519	0.326	0.325
1995	2177	1613	1076	536	0.333	0.331
1996	2186	1620	1055	564	0.348	0.345
1997	2208	1636	1047	588	0.360	0.357
1998	2234	1655	1025	630	0.381	0.376
1999	2271	1683	1006	677	0.402	0.397
2000	2306	1709	1008	701	0.410	0.407
2001	2372	1758	1019	739	0.420	0.418
2002	2427	1798	946	853	0.474	0.463
2003	2487	1843	948	895	0.486	0.481
2004	2533	1877	910	966	0.515	0.500
2005	2566	1902	906	995	0.523	0.500
2006	2581	1913	902	1011	0.528	0.500
2007	2532	1876	821	1055	0.562	0.500
2008	2481	1839	803	1036	0.563	0.500
2009	2421	1794	786	1008	0.562	0.500
2010	2368	1755	770	9a4	0.561	0.500

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B68--12/20/85
VARIABLES: PONAAT, LSNA, EMNA, UNNA, UNRANA, UNRANAFI

TABLE C-9.1
 NORTH SLOPE MODEL PROJECTIONS
 EXTREME **LOW** BASE CASE

	TOTAL POPULATION	RESIDENT POPULATION	AVERAGE NON- RESIDENT POPULATION
1980	6805*	3827**	2978*
1981	8771	4138	4633
1982	9357	4299	5059
1983	9948	4546	5402
1984	9520	4657	4863
1985	9394	5150	4245
1986	9745	4832	4913
1987	9388	4841	4546
1988	8025	4690	3334
1989	8152	4708	3444
1990	8034	4578	3456
1991	7847	4502	3345
1992	7851	4431	3420
1993	7144	4250	2894
1994	6944	4106	2837
1995	6709	3952	2756
1996	6385	3785	2601
1997	6160	3622	2538
1998	5835	3444	2391
1999	5534	3263	2271
2000	5378	3107	2271
2001	5158	2980	2178
2002	4457	2783	1674
2003	4315	2641	1674
2004	3921	2485	1436
2005	3801	2365	1436
2006	3701	2266	1436
2007	3166	2136	1029
2008	3082	2053	1029
2009	3018	1989	1029
2010	2968	1938	1029

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B69--12/20/85
 VARIABLES: POTO, PORE, AND PONRAV

TABLE C-9.2
NORTH SLOPE MODEL PROJECTIONS
EXTREME LOW BASE CASE

	RESIDENT POPULATION	RESIDENT NATIVE POPULATION	RESIDENT NON-NATIVE POPULATION
1980	3827*	3208**	619*
1981	4138	3263	875
1982	4299	3358	941
1983	4546	3456	1090
1984	4657	3557	1100
1985	5150	3660	1490
1986	4832	3673	1159
1987	4841	3707	1134
1988	4690	3686	1005
1989	4708	3740	968
1990	4578	3660	918
1991	4502	3580	922
1992	4431	3503	928
1993	4250	3359	892
1994	4106	3222	884
1995	3952	3083	869
1996	3785	2939	846
1997	3622	2794	828
1998	3444	2641	803
1999	3263	2484	779
2000	3107	2342	765
2001	2980	2229	751
2002	2783	2087	696
2003	2641	1970	671
2004	2485	1851	634
2005	2365	1752	613
2006	2266	1670	596
2007	2136	1575	561
2008	2053	1502	550
2009	1989	1448	541
2010	1938	1404	534

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B69--12/20/85
 VARIABLES: PORE, PONA, AND PONN

TABLE C-9.3
 NORTH SLOPE MODEL PROJECTIONS
 EXTREME LOW BASE CASE

	NATIVE POPULATION	PRE-SCHOOL NATIVE POPULATION	SCHOOL-AGE NATIVE POPULATION	ADULT NATIVE POPULATION	AGED NATIVE POPULATION
1980	3208**	362**	1042**	1667**	137**
1981	3263	377	1025	1723	139
1982	3358	443	985	1787	143
1983	3456	495	961	1854	145
1984	3557	536	932	1942	147
1985	3660	577	912	2017	154
1986	3673	609	885	2018	161
1987	3707	614	926	2007	159
1988	3686	608	959	1960	159
1989	3740	608	1018	1952	163
1990	3660	587	1015	1895	163
1991	3580	560	1034	1822	164
1992	3503	530	1044	1760	168
1993	3359	490	1032	1674	162
1994	3222	456	1017	1592	157
1995	3083	424	996	1513	151
1996	2939	394	978	1421	146
1997	2794	367	945	1341	141
1998	2641	343	896	1262	140
1999	2484	321	846	1187	131
2000	2342	302	800	1115	125
2001	2229	287	751	1071	119
2002	2087	272	691	1012	111
2003	1970	262	640	960	107
2004	1851	252	590	908	101
2005	1752	243	548	866	95
2006	1670	238	512	828	92
2007	1575	229	475	783	87
2008	1502	222	449	749	82
2009	1448	216	430	721	81
2010	1404	211	416	700	77

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B69--12/20/85
 VARIABLES: PONA, PONAkd, PONAsl, PONAAt, AND PONAge

TABLE C-9.4
NORTH SLOPE MODEL PROJECTIONS
EXTREME LOW BASE CASE

	NATIVE POPULATION	NATIVE MALE POPULATION	NATIVE FEMALE POPULATION	NATIVE NATURAL INCREASE	NATIVE RATE OF NATURAL INCREASE	NATIVE MIGRATION
1980	3208**	1669**	1509**			
1981	3263	1720	1543	90	0.028	-41
1982	3358	1762	1596	95	0.029	-0
1983	3456	1805	1650	97	0.029	-0
1984	3557	1851	1707	102	0.029	-0
1985	3650	1897	1764	103	0.029	-0
1986	3673	1896	1777	105	0.029	-92
1987	3707	1906	1801	105	0.028	-70
1988	3686	1889	1797	101	0.027	-122
1989	3740	1910	1830	97	0.026	-42
1990	3660	1863	1797	94	0.025	-174
1991	3580	1816	1763	86	0.024	-166
1992	3503	1772	1731	78	0.022	-156
1993	3359	1694	1664	71	0.020	-215
1994	3222	1621	1601	67	0.020	-203
1995	3083	1547	1536	64	0.020	-203
1996	2939	1470	1468	60	0.019	-204
1997	2794	1394	1400	54	0.018	-199
1998	2641	1315	1326	51	0.018	-204
1999	2454	1234	1251	49	0.019	-206
2000	2342	1160	1182	47	0.019	-189
2001	2229	1101	1128	45	0.019	-158
2002	2087	1029	1058	43	0.019	-186
2003	1970	969	1001	43	0.021	-160
2004	1851	908	943	42	0.021	-161
2005	1752	857	894	40	0.022	-140
2006	1670	816	854	40	0.023	-121
2007	1575	768	807	38	0.023	-133
2008	1502	731	772	37	0.023	-109
2009	1448	703	745	35	0.023	-90
2010	1404	680	724	34	0.023	-77

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B69--12/20/85
VARIABLES: PONA, PONAMA, PONAFA, NTICNA, NTICNARA, AND MGNA

TABLE C-9.5
 NORTH SLOPE MODEL PROJECTIONS
 EXTREME LOW BASE CASE

	TOTAL EMPLOYMENT	TOTAL NATIVE EMPLOYMENT	TOTAL NON-NATIVE RESIDENT EMPLOYMENT	TOTAL NON- RESIDENT EMPLOYMENT
1980	6118**	1173*	473*	4472*
1981	8761**	1136	668	6957
1982	9638**	1324	719	-/595
1983	10318**	1374	833	8111
1984	9581**	1439	840	7301
1985	9006	1495	1138	6373
1986	9586	1324	885	7377
1987	8931	1238	866	6826
1988	6804	1030	767	5007
1989	6900	990	739	5171
1990	6784	894	701	5189
1991	6588	862	704	5023
1992	6679	836	709	5135
1993	5791	765	681	4345
1994	5664	729	675	4260
1995	5491	688	664	4139
1996	5193	642	646	3905
1997	5047	604	632	3811
1998	4765	561	614	3590
1999	4527	522	595	3410
2000	4487	493	584	3410
2001	4326	482	573	3270
2002	3485	440	532	2513
2003	3450	424	513	2513
2004	3036	396	485	2156
2005	3007	383	469	2156
2006	2982	371	455	2156
2007	2318	343	429	1546
2008	2302	336	420	1546
2009	2289	330	413	1546
2010	2279	325	408	1546

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B69--12/20/85
 VARIABLES: EMT0, EMNA, EMNN, ANO EMNR

TABLE C-9.6
NORTH SLOPE MODEL PROJECTIONS
EXTREME LOW BASE CASE

EMPLOYMENT: ALL RACES

	TOTAL EMPLOY- MENT	FEDERAL AND STATE GOVERN- MENT EMPLOY- MENT	BOROUGH OPER- ATING EMPLOY- MENT	BOROUGH CIP EMPLOY- MENT	OTHER CIP EMPLOY- MENT	LOCAL SUPPORT EMPLOY- MENT	OIL INDUSTRY EMPLOY- MENT	NON-OIL BASIC EMPLOY- MENT
1980	6118**	291**	795*	322*	71*	393*	4246*	0
1981	8761**	260**	818*	363*	190*	427*	6703*	0
1982	9638**	203**	828*	456*	435*	488*	7228*	0
1983	10318**	177**	970*	457*	395*	528*	7791*	0
1984	9581**	178**	1028*	427*	464*	545*	6939*	0
1985	9006	178	1343	402	438	632	6014	0
1986	9586	178	1268	200	218	530	7191	0
1987	8931	178	1278	131	143	505	6696	0
1988	6804	178	1157	57	62	431	4919	0
1989	6900	178	1113	50	55	415	5090	0
1990	6784	178	1078	2	2	383	5141	0
1991	6588	178	1057	2	2	376	4973	0
1992	6679	178	1040	2	2	371	5086	0
1993	5791	178	973	2	2	347	4289	0
1994	5664	178	942	2	2	337	4203	0
1995	5491	178	904	2	2	325	4080	0
1996	5193	178	858	2	2	309	3844	0
1997	5047	178	819	2	2	297	3749	0
1998	4765	178	775	2	2	282	3526	0
1999	4527	178	733	2	2	268	3344	0
2000	4487	178	702	2	2	259	3344	0
2001	4326	178	688	2	2	253	3203	0
2002	3485	178	631	2	2	233	2438	0
2003	3450	178	605	2	2	225	2438	0
2004	3036	178	566	2	2	211	2077	0
2005	3007	178	543	2	2	204	2077	0
2006	2982	178	524	2	2	198	2077	0
2007	2318	178	489	2	2	185	1461	0
2008	2302	178	477	2	2	181	1461	0
2009	2289	178	468	2	2	178	1461	0
2010	2279	178	460	2	2	176	1461	0

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.869--12/20/85
VARIABLES: EMTO, EMGONL, EMGOOP, EMGOCT, EMCTGO, EMSUEG, EMBAOI, AND EMBAOT

TABLE C-9.7
NORTH SLOPE MODEL PROJECTIONS
EXTREME LOW BASE CASE

EMPLOYMENT: NATIVES

	TOTAL EMPLOY- MENT	FEDERAL AND STATE GOVERN- MENT EMPLOY- MENT	BOROUGH OPER- ATING EMPLOY- MENT	BOROUGH CIP EMPLOY- MENT	OTHER CIP EMPLOY- MENT	LOCAL SUPPORT EMPLOY- MENT	OIL INDUSTRY EMPLOY- MENT	NON-OIL BASIC EMPLOY- MENT
1980	1173*	26*	445*	267*	26*	216*	30**	0
1981	1136	26	458	301	70	235	46	0
1982	324	26	463	378	161	268	30	0
1983	374	25	527	368	142	282	30	0
1984	439	25	568	350	170	296	30	0
1985	495	23	680	302	146	314	30	0
1986	324	26	710	166	81	292	49	0
1987	238	26	716	109	53	278	58	0
1988	030	26	648	47	23	237	49	0
1989	990	26	623	42	20	228	51	0
1990	894	26	604	2	1	211	51	0
1991	862	25	582	2	1	203	50	0
1992	836	24	562	2	1	197	51	0
1993	765	23	516	2	1	180	43	0
1994	729	22	490	2	1	172	42	0
1995	688	22	461	2	1	162	41	0
1996	642	21	429	2	1	152	38	0
1997	604	20	401	2	1	142	37	0
1998	561	19	372	2	1	133	35	0
1999	522	18	344	2	1	123	33	0
2000	493	18	323	2	1	116	33	0
2001	482	18	316	2	1	114	32	0
2002	440	18	290	2	1	105	24	0
2003	424	18	278	2	1	101	24	0
2004	396	18	260	2	1	95	21	0
2005	383	18	250	2	1	92	21	0
2006	371	18	241	2	1	89	21	0
2007	343	18	225	2	1	83	15	0
2008	336	18	219	2	1	82	15	0
2009	330	18	215	2	1	80	15	0
2010	325	18	211	2	1	79	15	0

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B69--12/20/85
VARIABLES: EMNA, EMNAGONL, EMNAGOOP, EMNAGOCT, EMNACTGO,
EMNASUEG, EMNAOI, AND EMNABAOT

TABLE C-9.8
 NORTH SLOPE MODEL PROJECTIONS
 EXTREME LOW BASE CASE

NATIVE OIL 1NDUSTR% EMPLOYMENT

	ASSUMED MINIMUM NATIVE OIL EMPLOYMENT	OIL INDUSTRY MAXIMUM DEMAND FOR NATIVE LABOR	MAXIMUM NATIVE SUPPLY OF LABOR TO OIL INDUSTRY	NATIVE OIL INDUSTRY EMPLOYMENT
1980				
1981	30	67	46	46
1982	30	72	30	30
1983	30	78	30	30
1984	30	69	30	30
1985	30	60	30	30
1986	30	72	49	49
1987	30	67	58	58
1988	30	49	74	49
1989	30	51	78	51
1990	30	51	83	51
1991	30	50	81	50
1992	30	51	79	51
1993	30	43	79	43
1994	30	42	76	42
1995	30	41	74	41
1996	30	38	72	38
1997	30	37	70	37
1998	30	35	68	35
1999	30	33	66	33
2000	30	33	64	33
2001	30	32	61	32
2002	30	24	60	24
2003	30	24	58	24
2004	30	21	57	21
2005	30	21	55	21
2006	30	21	53	21
2007	30	15	52	15
2008	30	15	50	15
2009	30	15	49	15
2010	30	15	48	15

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B69--12/20/85
 VARIABLES: EMNAOIEX, LDNABAOI, LSNAOI, EMNAOI

TABLE C-9.9
 NORTH SLOPE MODEL PROJECTIONS
 EXTREME LOW BASE CASE

EMPLOYMENT: NON-NATIVE RESIDENTS

	TOTAL NONNATIVE EMPLOYMENT	FEDERAL AND STATE GOVERNMENT EMPLOYMENT	BOROUGH OPERATING EMPLOYMENT	LOCAL SUPPORT EMPLOYMENT	NON-OIL BASIC EMPLOYMENT	BOROUGH CIP EMPLOYMENT
1980	473*	54*	350*	216*	0	55*
1981	668	54	360	192	0	62
1982	719	54	365	220	0	78
1983	833	55	443	246	0	89
1984	840	55	460	249	0	77
1985	1138	57	663	318	0	100
1986	885	54	558	239	0	34
1987	866	54	562	227	0	22
1988	767	54	509	194	0	10
1989	739	54	490	187	0	9
1990	701	54	474	172	0	0
1991	704	55	476	173	0	0
1992	709	56	479	174	0	0
1993	681	57	457	167	0	0
1994	675	58	452	165	0	0
1995	664	58	443	162	0	0
1996	646	59	429	158	0	0
1997	632	60	418	154	0	0
1998	614	61	403	149	0	0
1999	595	62	388	145	0	0
2000	584	62	379	142	0	0
2001	573	62	371	139	0	0
2002	532	62	341	128	0	0
2003	513	62	326	124	0	0
2004	485	62	306	116	0	0
2005	469	62	293	112	0	0
2006	455	62	283	109	0	0
2007	429	62	264	102	0	0
2008	420	62	258	100	0	0
2009	413	62	253	98	0	0
2010	408	62	248	97	0	0

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B69--12/20/85
 VARIABLES: EMNN, EMNNGONL, EMNNGOOP, EMNNSUEG, EMNNBAOT, EMNNGOCT

TABLE C-9.10
NORTH SLOPE MODEL PROJECTIONS
EXTREME LOW BASE CASE

EMPLOYMENT: NON-RESIDENTS

	TOTAL NON- RESIDENT EMPLOYMENT	FEDERAL AND AND STATE GOVERNMENT EMPLOYMENT	OTHER CIP EMPLOYMENT	OIL INDUSTRY EMPLOYMENT
1980	4472*	211*	45*	4217*
1981	6957	180	120	6657
1982	7595	123	274	7198
1983	8111	97	253	7761
1984	7301	98	294	6909
1985	6373	98	291	5984
1986	7377	98	137	7142
1987	6826	98	90	6638
1988	5007	98	39	4870
1989	5171	98	34	5039
1990	5189	98	1	5090
1991	5023	98	1	4923
1992	5135	98	1	5035
1993	4345	98	1	4246
1994	4260	98	1	4161
1995	4139	98	1	4039
1996	3905	98	1	3806
1997	3811	98	1	3712
1998	3590	98	1	3491
1999	3410	98	1	3311
2000	3410	98	1	3311
2001	3270	98	1	3171
2002	2513	98	1	2414
2003	2513	98	1	2414
2004	2156	98	1	2056
2005	2156	98	1	2056
2006	2156	98	1	2056
2007	1546	98	1	1446
2008	1546	98	1	1446
2009	1546	98	1	1446
2010	1546	98	1	1446

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B69--12/20/85
 VARIABLES: EMNR, EMNRGONL, EMNRCTGO, AND EMNRBAOI

TABLE C-9.11
 NORTH SLOPE MODEL PROJECTIONS -
 EXTREME LOW BASE CASE

	TOTAL BOROUGH REVENUES (000)	NON- PROPERTY TAX NON- INTEREST REVENUES (000)	PROPERTY TAX REVENUES FOR OPERATIONS (000)	PROPERTY TAX REVENUES FOR DEBT SERVICE (000)	INTEREST EARNINGS (000)
1980	72900**	18200**	21000**	26300**	7400**
1981	90000**	22000**	26400**	32800**	8800**
1982	189100**	34900**	34800**	7 5000**	44400**
1983	215400**	37300**	38500**	95200**	44400**
1984	251400**	40200**	331 00**	118900**	59200**
1985	302300**	32600**	40600**	184600**	44500**
1986	299702	27975	44347	199717	27664
1987	306546	27305	47867	208894	22480
1988	306866	27252	40919	218456	20240
1989	295332	25187	41567	210322	18256
1990	265514	23209	40963	183166	18176
1991	179329	23454	39234	98545	18096
1992	239754	22997	38468	60272	18016
1993	225452	22101	34293	51122	17936
1994	212605	21476	32635	40638	17856
1995	199145	20433	30859	30076	17776
1996	142864	19112	28734	77322	17696
1997	101398	17854	27102	38826	17616
1998	90550	16567	25092	31355	17536
1999	72182	15272	23244	16210	17456
2000	69392	14231	22050	1 5735	17376
2001	67849	14602	20632	15320	17296
2002	63122	13610	17382	14915	17216
2003	60743	12651	16396	14560	17136
2004	57366	11657	14508	14145	17056
2005	55283	10855	13682	13770	6976
2006	48493	10218	12954	8425	6896
2007	37361	9464	11081	0	6816
2008	36451	8928	10787	0	6736
2009	35733	8513	10564	0	6656
2010	35122	8160	10387	0	6576

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B69--12/20/85
 VARIABLES: RVTO, RVNPOP, RVPYOP, RVPYDB, RVIT

TABLE C-9. 12
 NORTH SLOPE MODEL PROJECTIONS
 - EXTREME LOW-BASE CASE

	TOTAL BOROUGH EXPENDI- TURES (000)	OPERATIONS EXPENDI- TURES (000)	CON- STRUCTION EXPENDI- TURES (000)	DEBT SERVICE EXPENDI- TURES (000)
1980	158765**	39685**	93000**	26080**
1981	216637**	50020**	131000**	35617**
1982	342192**	63506**	211000**	67686**
1983	466118**	68807**	302000**	95311**
1984	419494**	78544**	211000**	129950**
1985	489655**	102577**	199000**	188078**
1986	395813	96896	99200	199717
1987	371346	97652	64800	208894
1988	334866	88410	28000	218456
1989	320132	85010	24800	210322
1990	266514	82348	1000	183166
1991	180329	80784	1000	98545
1992	240754	79482	1000	-160272
1993	226452	74330	1000	151122
1994	213605	71967	1000	140638
1995	200145	69069	1000	130076
1996	143864	65542	1000	77322
1997	102398	62572	1000	38826
1998	91550	59195	1000	31355
1999	73182	55972	1000	16210
2000	70392	53657	1000	15735
2001	68849	52529	1000	15320
2002	64122	48207	1000	14915
2003	61743	46183	1000	14560
2004	58366	43221	1000	14145
2005	56283	41513	1000	13770
2006	49493	40068	1000	8425
2007	38361	37361	1000	0
2008	37451	36451	1000	0
2009	36733	35733	1000	0
2010	36122	35122	1000	0

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B69--12/20/85
 VARIABLES: SPTO, SPLOGOOP, SPLOGOCT, AND CSDBTO

TABLE C-9.13
NORTH SLOPE MODEL PROJECTIONS
EXTREME LOW **BASE** CASE

	TOTAL PROPERTY VALUE (000)	TOTAL PROPERTY TAXES (000)	TAX RATE	TAX RATE FOR OPER- ATING REVENUES	TAX RATE FOR DEBT SERVICE REVENUES	LIMIT ON PROPERTY TAX OPER- ATING REVENUES PER CAPITA (000)	ACTUAL PROPERTY TAX OPER- ATING REVENUES PER CAPITA ^a (000)
1980	5061955**	52400**	0.0103**	0.0052**	0.0051	3.196**	3.086
1981	5723582**	59100**	0.0103**	0.0051**	0.0052	3.601**	3.010
1982	6621652**	109700**	0.0167**	0.0055**	0.0112	3.914**	3.719
1983	8186986**	133700**	0.0164**	0.0041**	0.0123	4.761**	3.870
1984	9996290**	152400**	0.0153**	0.0033**	0.0120	5.119**	3.477
1985	12261420**	225300**	0.0184**	0.0033**	0.0151	5.099**	4.322
1986	13286000	244064	0.0184	0.0033	0.0150	5.099	4.551
1987	14375400	256761	0.0179	0.0033	0.0145	5.099	5.099
1988	15044700	259375	0.0172	0.0027	0.0145	5.099	5.099
1989	15456000	251889	0.0163	0.0027	0.0136	5.099	5.099
1990	15475500	224129	0.0145	0.0026	0.0118	5.099	5.099
1991	15030600	137779	0.0092	0.0026	0.0066	5.000	5.000
1992	14582400	198740	0.0136	0.0026	0.0110	4.900	4.900
1993	14112800	185415	0.0131	0.0024	0.0107	4.800	4.800
1994	13781600	173273	0.0126	0.0024	0.0102	4.700	4.700
1995	13095000	160935	0.0123	0.0024	0.0099	4.600	4.600
1996	12522300	106056	0.0085	0.0023	0.0062	4.500	4.500
1997	11924000	65928	0.0055	0.0023	0.0033	4.400	4.400
1998	11266500	56447	0.0050	0.0022	0.0028	4.300	4.300
1999	10560800	39454	0.0037	0.0022	0.0015	4.200	4.200
2000	9775000	37785	0.0039	0.0023	0.0016	4.100	4.100
2001	9004800	35952	0.0040	0.0023	0.0017	4.000	4.000
2002	8250200	32297	0.0039	0.0021	0.0018	3.900	3.900
2003	7511200	30956	0.0041	0.0022	0.0019	3.800	3.800
2004	6787800	28653	0.0042	0.0021	0.0021	3.700	3.700
2005	6080000	27452	0.0045	0.0023	0.0023	3.600	3.600
2006	5456000	21379	0.0039	0.0024	0.0015	3.500	3.500
2007	4832000	11081	0.0023	0.0023	0.0000	3.500	3.500
2008	4208000	10787	0.0026	0.0026	0.0000	3.500	3.500
2009	3584000	10564	0.0029	0.0029	0.0000	3.500	3.500
2010	2960000	10387	0.0035	0.0035	0.0000	3.500	3.500

^aBased on total Copulation as defined by model, rather than official state figure used for calculating revenue limit.

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B69--12/20/85
VARIABLES: VATO, RVPYTO, TARA, TARAOP, TARADB, RVPYOPPC, RVOPPCFI

TABLE C-9.14
NORTH SLOPE MODEL PROJECTIONS
EXTREME LOW BASE CASE

	TOTAL RESIDENT INCOME (000)	TOTAL NATIVE INCOME (000)	TOTAL NON-NATIVE RESIDENT INCOME (000)	PER CAPITA RESIDENT INCOME (000)	PER CAPITA NATIVE INCOME (000)	PER CAPITA NON-NATIVE RESIDENT INCOME (0 0 0)
1980	66377**					
1981	72379	47322	25057	17.491	14.501	28.648
1982	81466	54522	26944	18.951	16.235	28.648
1983	87768	56533	31235	19.306	16.359	28.648
1984	90640	591124	31516	19.461	16.620	28.648
1985	104045	61364	42681	20.204	16.766	28.652
1986	88155	54962	33193	18.246	14.965	28.642
1987	84307	51814	32493	17.414	13.977	28.644
1988	72747	43969	28779	15.510	11.930	28.641
1989	70256	42534	27722	14.923	11.372	28.648
1990	65117	38819	26298	14.225	10.607	28.647
1991	63908	37499	26410	14.196	10.475	28.647
1992	63013	36418	26595	14.221	10.397	28.648
1993	59087	33548	25539	13.902	9.988	28.647
1994	57315	31995	25320	13.958	9.929	28.647
1995	55183	30281	24902	13.962	9.822	28.649
1996	52580	28345	24234	13.893	9.646	28.649
1997	50404	26691	23713	13.918	9.554	28.649
1998	47891	24883	23008	13.904	9.421	28.648
1999	45490	23177	22313	13.940	9.329	28.647
2000	43791	21883	21908	14.094	9.342	28.649
2001	42827	21324	21503	14.372	9.565	28.647
2002	39459	19516	19943	14.178	9.352	28.641
2003	37976	18746	19231	14.379	9.516	28.648
2004	35713	17544	18170	14.369	9.477	28.648
2005	34464	16893	17571	14.573	9.644	28.647
2006	33412	16348	17064	14.748	9.790	28.647
2007	31226	15148	16078	14.616	9.617	28.644
2008	30530	14772	15757	14.874	9.832	28.647
2009	29986	14481	15506	15.077	10.003	28.647
2010	29529	14237	15292	15.236	10.138	28.647

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B69--12/20/85
VARIABLES: IN, INNA, INNN, INPC, INPCNA, AND INPCNN

TABLE C-9.15
 NORTH SLOPE MODEL PROJECTIONS
 EXTREME LOW BASE CASE

	ADULT NATIVE POPULATION	NATIVE LABOR SUPPLY	NATIVE EMPLOYMENT	NATIVE UNEMPLOY- MENT	NATIVE UNEMPLOY- MENT RATE BEFORE MI GRATION	NATIVE UNEMPLOY- MENT RATE AFTER MI GRATION
1980	1667**	1235**	1173*			
1981	1723	1276	1136	141	0.110	0.104
1982	1787	1324	1324	0	0.000	0.000
1983	1854	1374	1374	0	0.000	0.000
1984	1942	1439	1439	0	0.000	0.000
1985	2017	1495	1495	0	0.000	0.000
1986	2018	1495	1324	172	0.115	0.080
1987	2007	1487	1238	249	0.167	0.141
1988	1960	1452	1030	422	0.291	0.246
1989	1952	1446	990	456	0.316	0.300
1990	1895	1404	894	510	0.363	0.300
1991	1822	1350	862	489	0.362	0.300
1992	1760	1304	836	468	0.359	0.300
1993	1674	1240	765	476	0.383	0.300
1994	1592	1180	729	457	0.382	0.300
1995	1513	1121	688	433	0.386	0.300
1996	1421	1053	642	411	0.390	0.300
1997	1341	993	604	390	0.392	0.300
1998	1262	935	561	373	0.399	0.300
1999	1187	879	522	357	0.406	0.300
2000	1115	826	493	333	0.403	0.300
2001	1071	794	482	311	0.392	0.300
2002	1012	750	440	310	0.414	0.300
2003	960	712	424	288	0.405	0.300
2004	908	673	396	277	0.411	0.300
2005	866	642	383	259	0.403	0.300
2006	828	613	371	242	0.395	0.300
2007	783	580	343	237	0.409	0.300
2008	749	555	336	219	0.395	0.300
2009	727	534	330	204	0.382	0.300
2010	700	519	325	193	0.373	0.300

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B69--12/20/85
 VARIABLES: PONAAT, LSNA, EMNA, UNNA, UNRANA, UNRANAFI

TABLE C-10.1
NORTH SLOPE MODEL PROJECTIONS .
EXTREME HIGH BASE CASE

	TOTAL POPULATION	RESIDENT POPULATION	AVERAGE NON- RESIDENT POPULATION
1980	6805*	3827**	2978*
1981	8769	4152	4617
1982	9368	4310	5058
1983	9956	4554	5402
1984	9528	4666	4862
1985	9402	5158	4244
1986	9947	4989	4957
1987	9674	5113	4561
1988	8356	5074	3282
1989	8510	5130	3380
1990	8570	5201	3370
1991	8544	5285	3259
1992	8701	5365	3336
1993	8207	5407	2800
1994	8220	5478	2742
1995	8204	5546	2658
1996	8110	5603	2507
1997	8111	5665	2446
1998	8027	5722	2305
1999	7975	5784	2190
2000	8050"	5860	2190
2001	8084	5983	2101
2002	7685	6068	1617
2003	7810	6193	1617
2004	7697	6308	1389
2005	7835	6446	1389
2006	7975	6586	1389
2007	7704	6705	999
2008	7855	6856	999
2009	8011	7012	999
2010	8169	7170	999

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B70--12/20/85
VARIABLES: POTO, PORE, AND PONRAV

TABLE C-10.2
 NORTH SLOPE MODEL PROJECTIONS
 EXTREME HIGH BASE CASE

	RESIDENT POPULATION	RESIDENT NATIVE POPULATION	RESIDENT NON-NATIVE POPULATION
1980	3827*	3208**	619*
1981	4152	3278	875
1982	4310	3373	937
1983	4554	3471	1083
1984	4666	3573	1093
1985	5158	3676	1482
1986	4989	3782	1208
1987	5113	3890	1223
1988	5074	3995	1079
1989	5130	4101	1029
1990	5201	4204	997
1991	5285	4304	951
1992 "	5365	4399	966
1993	5407	4489	919
1994	5478	4579	900
1995	5546	4671	875
1996	5603	4763	840
1997	5665	4853	812
1998	5722	4944	778
1999	5784	5037	747
2000	5860	5135	726
2001	5983	5236	747
2002	6068	5341	728
2003	6193	5454	738
2004	6308	5573	735
2005	6446	5698	748
2006	6586	5830	756
2007	6705	5968	738
2008	6856	6110	746
2009	7012	6256	756
2010	7170	6404	766

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.870--12/20/85
 VARIABLES: PORE, PONA, ANO PONN

TABLE C-10.3
 'NORTH SLOPE. MODEL PROJECTIONS
 EXTREME HIGH BASE CASE

	NATIVE POPULATION	PRE-SCHOOL NATIVE POPULATION	SCHOOL-AGE NATIVE POPULATION	ADULT NATIVE POPULATION	AGED NATIVE POPULATION
1980	3208**	362**	1042**	166.7 **	1 37**
1981	3278	378	1030	1730	139
1982	3373	444	990	1795	144
1983	3471	497	966	1862	146
1984	3573	538	936	1951	148
1985	3676	580	916	2026	155
1986	3782	624	912	2080	166
1987	3890	640	973	2109	168
1988	3995	650	1042"	2130	173
1989	4101	656	1119	2146	179
1990	4204	659	1171	2186	188
1991	4304	656	1247	2203	198
1992	4399	646	1315	2225	213
1993	4489	633	1381	2255	219
1994	4579	621	1448	2284	226
1995	4671	614	1508	2317	232
1996	4763	609	1582	2332	240
1997	4853	606	1636	2361	249
1998	4944	610	1669	2398	266
1999	5037	618	1703	2447	270
2000	5135	626	1738	2490	280
2001	5236	640	1743	"2566	287
2002	5341	660	1743	2646	291
2003	5454	688	1740	2721	305
2004	5573	718	1739	2803	313
2005	5698	751	1740	2889	318
2006	5830	787	1744	2967	333
2007	5968	826	1752	3048	342
2008	6110	861	1771	3132	346
2009	6256	893	1798	3201	364
2010	6404	922	1835	3280	368

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B70--12/20/85
 VARIABLES: PONA, PONAkd, PONAsl, PONAAT, AND PONAge

TABLE C-10.4
NORTH SLOPE MODEL PROJECTIONS
EXTREME HIGH BASE CASE

	NATIVE POPULATION	NATIVE MALE POPULATION	NATIVE FEMALE POPULATION	NATIVE NATURAL INCREASE	NATIVE RATE OF NATURAL INCREASE	NATIVE MIGRATION
1980	3208**	1669**	1509**			
1981	3278	1728	1550	90	0.028	-26
1982	3373	1770	1603	95	0.029	-0
1983	3471	1813	1658	98	0.029	-0
1984	3573	1859	1714	102	0.029	-0
1985	3676	1905	1771	103	0.029	-0
1986	3782	1952	1830	106	0.029	-0
1987	3890	2000	1889	108	0.029	-0
1988	3995	2048	1948	106	0.027	-0
1989	4101	2095	2006	105	0.026	0
1990	4204	2140	2064	103	0.025	-0
1991	4304	2185	2119	100	0.024	-0
1992	4399	2226	2172	95	0.022	-0
1993	4489	2266	2223	90	0.020	-0
1994	4579	2305	2274	90	0.020	-0
1995	4671	2345	2326	92	0.020	0
1996	4763	2385	2378	92	0.020	-0
1997	4853	2424	2429	89	0.019	-0
1998	4944	2454	2480	91	0.019	-0
1999	5037	2504	2533	94	0.019	-0
2000	5135	2546	2588	97	0.019	-0
2001	5236	2591	2645	102	0.020	-0
2002	5341	2637	2704	105	0.020	-0
2003	5454	2687	2768	114	0.021	-0
2004	5573	2739	2834	119	0.022	-0
2005	5698	2995	2903	125	0.022	0
2006	5830	2854	2976	132	0.023	-0
2007	5968	2915	3052	137	0.024	-0
2008	6110	2979	3131	143	0.024	0
2009	6256	3045	3211	146	0.024	-0
2010	6404	3111	3293	148	0.024	-0

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B70--12/20/85
VARIABLES: PONA, PONAMA, PONAFA, NTICNA, NTICNARA, AND MGNA

TABLE C-10.5
 NORTH SLOPE MOREL PROJECTIONS -
 EXTREME **HIGH** BASE CASE

	TOTAL EMPLOYMENT	TOTAL NATIVE EMPLOYMENT	TOTAL NON-NATIVE RESIDENT EMPLOYMENT	TOTAL NON- RESIDENT EMPLOYMENT
1980	6118**	1173*	473*	4472*
1981	8761**	1161	668	6932
1982	9638**	1328	716	7594
1983	10318**	1380	827	8110
1984	9581**	1446	835	7301
1985	9007	1502	1132	6373
1986	9841	475	923	7 4 4 3
1987	9196	413	935	6849
1988	6979	227	824	4928
1989	7047	187	786	5075
1990	6950	129	761	5059
1991	6792	149	749	4894
1992	6919	172	738	5009
1993	6075	1169	702	4204
1994	5993	1189	687	4117
1995	5864	1204	668	3991
1996	5602	1196	642	3764
1997	5492	1199	620	3673
1998	5243	1187	595	3462
1999	5038	1178	571	3289
2000	5035	1192	554	3289
2001	4942	1217	570	3155
2002	4134	1150	556	2428
2003	4159	1167	564	2428
2004	3790	1143	561	2085
2005	3819	1162	571	2085
2006	3837	1175	578	2085
2007	3179	1116	563	1500
2008	3199	1129	570	1500
2009	3221	1144	578	1500
2010	3243	1158	585	1500

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B70--12/20/85
 VARIABLES: EMT0, EMNA, EMNN, AND EMNR

TABLE C-10.6
NORTH SLOPE MODEL PROJECTIONS
EXTREME HIGH BASE CASE

EMPLOYMENT: ALL RACES

	TOTAL EMPLOY- MENT	FEDERAL AND STATE GOVERN- MENT EMPLOY- MENT	BOROUGH OPER- ATING EMPLOY- MENT	" BOROUGH CIP EMPLOY- MENT	OTHER CIP EMPLOY- MENT	LOCAL SUPPORT EMPLOY- MENT	OIL INDUSTRY EMPLOY- MENT	NON-OIL BASIC EMPLOY- MENT
1980	6118**	291 **	795*	322*	71*	393*	4246*	0
1981	8761**	260**	818*	363*	190*	427*	6703*	0
1982	9638**	203**	828*	456*	435*	488*	7228*	0
1983	110318**	177**	970*	457*	395*	528*	7791*	0
1984	9581**	178**	1028*	427*	464*	545*	6939*	0
1985	9007	178	1343	402	438	63-2	6014	0
1986	9841	178	1268	301	327	575	7191	0
1987	9196	178	1349	196	214	563	6696	0
1988	6979	178	1212	85	92	492	4919	0
1989	7047	178	1149	75	82	473	5090	0
1990	6950	178	1135	20	22	454	5141	0
1991	6792	178	1144	20	22	456	4973	0
1992	6919	178	1155	20	22	458	5086	0
1993	6075	178	1117	20	22	449	4289	0
1994	5993	178	1120	20	22	450	4203	0
1995	5864	178	1114	20	22	450	4080	0
1996	5602	178	1096	20	22	441	3844	0
1997	5492	178	1086	20	22	437	3749	0
1998	5243	178	1069	20	22	428	3526	0
1999	5038	178	1054	20	22	420	3344	0
2000	5035	178	1052	20	22	419	3344	0
2001	4942	178	1090	20	22	429	3203	0
2002	4134	178	1066	20	22	410	2438	0
2003	4159	178	1085	20	22	415	2438	0
2004	3790	178	1083	20	22	409	2077	0
2005	3819	178	1106	20	22	416	2077	0
2006	3837	178	1120	20	22	420	2077	0
2007	3179	178	1095	20	22	403	1461	0
2008	3199	178	1110	20	22	408	1461	0
2009	3221	178	1127	20	22	413	1461	0
2010	3243	178	1144	20	22	418	1461	0

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B70--12/20/85
VARIABLES: EMTO, EMGONL, EMGOOP, EMGOCT, EMCTGO, EMSUEG, EMBAOI, AND EMBAOT

TABLE C-10.7
NORTH SLOPE MODEL PROJECTIONS
EXTREME HIGH BASE CASE

EMPLOYMENT: NATIVES

	TOTAL EMPLOY- MENT	FEDERAL AND STATE GOVERN- MENT EMPLOY- MENT	BOROUGH OPER- ATING EMPLOY- MENT	BOROUGH CIP EMPLOY- MENT	OTHER CIP EMPLOY- MENT	LOCAL SUPPORT EMPLOY- MENT	OIL INDUSTRY EMPLOY- MENT	NON-OIL BASIC EMPLOY- MENT
1980	1173*	26*	445*	267*	26*	216*	3(-j**	0
1981	1161	26	458	301	70	235	71	0
1982	1328	26	464	378	161	268	31	0
1983	1380	25	530	370	143	283	30	0
1984	1446	25	571	352	170	297	30	0
1985	1502	23	683	303	147	316	30	0
1986	1475	26	710	249	121	317	52	0
1987	1413	26	755	163	79	310	80	0
1988	1227	26	679	70	34	271	147	0
1989	1187	26	643	62	30	260	165	0
1990	1129	26	635	17	8	250	194	0
1991	1149	26	652	17	8	255	191	0
1992	1172	27	670	17	8	261	189	0
1993	1169	28	659	17	8	261	197	0
1994	1189	29	672	17	8	266	198	0
1995	1204	30	679	17	8	270	201	0
1996	1196	30	680	17	8	269	192	0
1997	1199	31	684	17	8	271	187	0
1998	1187	32	684	17	8	269	176	0
1999	1178	33	685	17	8	269	167	0
2000	1192	34	694	17	8	273	167	0
2001	1217	34	719	17	8	279	160	0
2002	1150	34	704	17	8	266	122	0
2003	1167	34	716	17	8	270	122	0
2004	1143	34	715	17	8	266	104	0
2005	1162	34	730	17	8	270	104	0
2006	1175	34	739	17	8	273	104	0
2007	1116	34	723	17	8	262	73	0
2008	1129	34	733	17	8	265	73	0
2009	1144	34	744	17	8	268	73	0
2010	1158	34	755	17	8	272	73	0

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B70--12/20/85
VARIABLES: EMNA, EMNAGONL, EMNAGOOP, EMNAGOCT, EMNACTGO,
EMNASUEG, EMNAOI, AND EMNABAOT

TABLE C-10.8
 NORTH SLOPE MODEL PROJECTIONS
 EXTREME HIGH BASE CASE

NATIVE OIL INDUSTRY EMPLOYMENT

	ASSUMED MINIMUM NATIVE OIL EMPLOYMENT	OIL INDUSTRY MAXIMUM DEMAND FOR NATIVE LABOR	MAXIMUM NATIVE SUPPLY OF NATIVE OIL LABOR TO OIL INDUSTRY	INDUSTRY EMPLOYMENT
1980				
1981	30	335	71	71
1982	30	361	31	31
1983	30	390	30	30
1984	30	347	30	30
1985	30	301	30	30
1986	30	360	52	52
1987	30	335	80	80
1988	30	246	147	147
1989	30	255	165	165
1990	30	257	194	194
1991	30	249	191	191
1992	30	254	189	189
1993	30	214	197	197
1994	30	210	198	198
1995	30	204	201	201
1996	30	192	204	192
1997	30	187	207	187
1998	30	176	214	176
1999	30	167	223	167
2000	30	167	227	167
2001	30	160	234	160
2002	30	122	256	122
2003	30	122	265	122
2004	30	104	282	104
2005	30	104	293	104
2006	30	104	304	104
2007	30	73	326	73
2008	30	73	339	73
2009	30	73	348	73
2010	30	73	359	73

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.870--12/20/85
 VARIABLES: EMNAOIEX, LDNABAOI, LSNAOI, EMNAOI

TABLE C-10.9
NORTH SLOPE MODEL PROJECTIONS
EXTREME HIGH BASE CASE

EMPLOYMENT: NON-NATIVE RESIDENTS

	TOTAL NON-NATIVE EMPLOYMENT	FEDERAL AND STATE GOVERNMENT EMPLOYMENT	BOROUGH OPERATING EMPLOYMENT	LOCAL SUPPORT EMPLOYMENT	NON-OIL BASIC EMPLOYMENT	BOROUGH, CIP EMPLOYMENT
1980	473*	54*	350*	216*	0	55*
1981	668	54	360	192	0	62
1982	716	54	364	220	0	78
1983	827	55	440	2 4 5	0	87
1984	835	55	457	248	0	75
1985	1132	57	660	316	0	99
1986	923	54	558	259	0	51
1987	935	54	593	253	0	33
1988	824	54	533	222	0	14
1989	786	54	506	213	0	13
1990	761	54	499	204	0	3
1991	749	54"	492	201	0	3
1992	738	53	4 8 5	197	0	3
1993	702	52	458	189	0	3
1994	687	51	448	185	0	3
1995	668	50	434	180	0	3
1996	642	50	417	172	0	3
1997	620	49	402	166	0	3
1998	595	48	385	158	0	3
1999	571	47	369	151	0	3
2000	554	46	358	147	0	3
2001	570	46	371	150	0	3
2002	556	46	363	143	0	3
2003	564	46	369	145	0	3
2004	561	46	368	143	0	3
2005	571	46	376	146	0	3
2006	578	46	381	147	0	3
2007	563	46	372	141	0	3
2008	570	46	377	143	0	3
2009	578	46	383	145	0	3
2010	585	46	389	146	0	3

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B70--12/20/85
VARIABLES: EMNN, EMNNGONL, EMNNGOOP, EMNNSUEG, EMNNBAOT, EMNNGOCT

TABLE C-10.10
NORTH SLOPE MODEL PROJECTIONS
EXTREME HIGH BASE CASE

EMPLOYMENT: NON-RESIDENTS

	TOTAL NON- RESIDENT EMPLOYMENT	F E D E R A L AND AND STATE GOVERNMENT EMPLOYMENT	OTHER CIP EMPLOYMENT	OIL INDUSTRY EMPLOYMENT
1980	4472*	211*	45*	4217*
1981	6932	180	120	6632
1982	7594	123	274	7197
1983	8110	97	252	7761
1984	7301	98	294	6909
1985	6373	98	291	5984
1986	7443	98	206	7139
1987	6849	98	135	6616
1988	4928	98	58	4772
1989	5075	98	52	4925
1990	5059	98	14	4947
1991	4894	98	14	4782
1992	5009	98	14	4897
1993	4204	98	14	4092
1994	4117	98	14	4005
1995	3991	98	14	3879
1996	3764	98	14	3652
1997	3673	98	14	3562
1998	3462	98	14	3350
1999	3289	98	14	3177
2000	3289	98	14	3177
2001	3155	98	14	3043
2002	2428	98	14	2316
2003	2428	98	14	2316
2004	2085	98	14	1973
2005	2085	98	14	1973
2006	2085	98	14	1973
2007	1500	98	14	1388
2008	1500	98	14	1388
2009	1500	98	14	1388
2010	1500	98	14	1388

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B70--12/20/85
 VARIABLES: EMNR, EMNRGONL, EMNRCTGO, AND EMNRBAOI

TABLE C-10.11
 NORTH SLOPE MODEL PROJECTIONS
 EXTREME HIGH BASE CASE

	TOTAL BOROUGH REVENUES (000)	NON- PROPERTY TAX NON- INTEREST REVENUES (000)	PROPERTY TAX REVENUES FOR OPERATIONS (000)	PROPERTY TAX REVENUES FOR DEBT SERVICE (000)	INTEREST EARNINGS (000)
1980	72900**	18200**	21 000**	26300**	7400**
1981	90000**	22000**	26400**	32800**	8800**
1982	189100**	34900**	34800**	75000**	44400**
1983	215400**	37300**	38500**	95200**	44400**
1984	251400**	40200**	331 00**	118900**	59200**
1985	302300**	32600**	40600**	184600**	44500**
1986	314878	28889	50728	199717	35544
1987	311916	28837	50306	208894	23880
1988	311063	29480	44288	218456	18840
1989	298094	27444	45952	210322	14376
1990	269848	26368	47137	183166	13176
1991	185902	27534	47848	98545	11976
1992	248485	27843	49594	160272	10776
1993	236418	28119	47601	151122	9576
1994	226166	28652	48500	140638	8376
1995	215149	28672	49224	130076	7176
1996	161065	28297	49471	77322	5976
1997	121818	27927	50289	38826	4776
1998	113027	27523	50573	31355	3576
1999	96693	27070	51037	16210	2376
2000	96106	26839	52327	15751	1188
2001	99405	29375	53352	16144	594
2002	98404	29673	51491	16943	297
2003	100906	29662	53105	17990	149
2004	101844	29585	53108	19076	74
2005	104719	29587	54843	20252	37
2006	102028	29704	55824	16482	19
2007	93287	29704	53929	9644	9
2008	96056	29826	54987	11238	5
2009	98923	30011	56075	12835	2
2010	101786	30186	57182	14418	1

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B70--12/20/85
 VARIABLES: RVTO, RVNPOP, RVPYOP, RVPYDB, RVIT

TABLE C-10.12
 NORTH SLOPE MODEL PROJECTIONS
 EXTREME HIGH BASE CASE

	TOTAL BOROUGH EXPENDI- TURES (000)	OPERATI ONS EXPENDI- TURES (000)	CON- STRUC- TION EXPENDI- TURES (000)	DEBT SERVI CE EXPENDI- TURES (000)
1980	158765**	39685**	93000**	26080**
1981	216637**	50020**	131000**	35617**
1982	342192**	63506**	211000**	67686**
1983	466118**	68807**	302000**	95311**
1984	419494**	78544**	211000**	129950**
1985	489655**	102577**	199000**	188078**
1986	445413	96896	148800	199717
1987	409116	103022	97200	208894
1988	353063	92607	42000	218456
1989	335294	87772	37200	210322
1990	279848	86682	10000	183166
1991	195902	87357	10000	98545
1992	258485	88213	10000	160272
1993	246418	85296	10000	151122
1994	236166	85528	10000	140638
1995	225149	85073	10000	130076
1996	171065	83743	10000	77322
1997	131818	82992	10000	38826
1998	123027	81672	10000	31355
1999	106693	80483	10000	16210
2000	106106	80355	0000	15751
2001	109405	83261	0000	16144
2002	108404	81461	0000	16943
2003	110906	82916	0000	17990
2004	111844	82768	0000	19076
2005	114719	84467	0000	20252
2006	112028	85546	0000	16482
2007	103287	83643	0000	9644
2008	106056	84817	10000	11238
2009	10EKI 23	86088	10000	12835
2010	111786	87369	10000	14418

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B70--12/20/85
 VARIABLES: SPTO, SPLOGOOP, SPLOGOCT, AND CSDBTO

TABLE C-10.13
NORTH SLOPE MODEL PROJECTIONS
EXTREME HIGH BASE CASE

	TOTAL PROPERTY VALUE (000)	TOTAL PROPERTY TAXES (000)	TAX RATE	TAX RATE FOR OPER- ATING REVENUES	TAX RATE FOR DEBT SERVI CE REVENUES	LIMIT ON PROPERTY TAX OPER- ATING REVENUES PER CAPITA (000)	ACTUAL PROPERTY TAX OPER- ATING REVENUES PER CAPITA ^a (000)
1980	5061955**	52400**	0.0103**	0.0052**	0.0051	3.196**	3.086
1981	5723582**	59100**	0.0103**	0.0051**	0.0052	3.601**	3.011
1982	6621652**	109700**	0.0167**	0.0055**	0.0112	3.914**	3.715
1983	8186986**	133700**	0.0164**	0.0041**	0.0123	4.761**	3.867
1984	9996290**	152400**	0.0153**	0.0033**	0.0120	5.119**	3.474
1985	12261420**	225300**	0.0184**	0.0033**	0.0151	5.099**	4.318
1986	13554000	250445	0.0185	0.0037	0.0147	5.100	5.100
1987	15084600	259200	0.0172	0.0033	0.0138	5.200	5.200
1988	15995300	262744	0.0164	0.0028	0.0137	5.300	5.300
1989	16744000	256274	0.0153	0.0027	0.0126	5.400	5.400
1990	17104500	230303	0.0135	0.0028	0.0107	5.500	5.500
1991	16949390	146393	0.0086	0.0028	0.0058	5.600	5.600
1992	16777600	209866	0.0125	0.0030	0.0096	5.700	5.700
1993	16567200	198723	0.0120	0.0029	0.0091	5.800	5.800
1994	16178400	189138	0.0117	0.0030	0.0087	5.900	5.900
1995	16005000	179300	0.0112	0.0031	0.0081	6.000	6.000
1996	15617700	126793	0.0081	0.0032	0.0050	6.100	6.100
1997	15176000	89115	0.0059	0.0033	0.0026	6.200	6.200
1998	14633500	81928	0.0056	0.0035	0.0021	6.300	6.300
1999	13999200	67247	0.0048	0.0036	0.0012	6.400	6.400
2000	13225000	68078	0.0051	0.0040	0.0012	6.500	6.500
2001	12435200	69496	0.0056	0.0043	0.0013	6.600	6.600
2002	11629800	68434	0.0059	0.0044	0.0015	6.700	6.700
2003	10808800	71095	0.0066	0.0049	0.0017	6.800	6.800
2004	9972200	72184	0.0072	0.0053	0.0019	6.900	6.900
2005	9120000	75094	0.0082	0.0060	0.0022	7.000	7.000
2006	8184000	72305	0.0088	0.0068	0.0020	7.000	7.000
2007	7248000	63574	0.0088	0.0074	0.0013	7.000	7.000
2008	6312000	66225	0.0105	0.0087	0.0018	7.000	7.000
2009	5376000	68910	0.0128	0.0104	0.0024	7.000	7.000
2010	4440000	71600	0.0161	0.0129	0.0032	7.000	7.000

^aBased on total population as defined by model, rather than official state figure used for calculating revenue limit.

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B70--12/20/85
VARIABLES: VATO, RVPYTO, TARA, TARAOP, TARADB, RVPYOPPC, RVOPPCFI

TABLE C-10.14
NORTH SLOPE MODEL PROJECTIONS
EXTREME HIGH BASE CASE

	TOTAL RESIDENT INCOME (000)	TOTAL NATIVE INCOME (000)	TOTAL NON-NATIVE RESIDENT INCOME (000)	PER CAPITA RESIDENT INCOME (000)	PER CAPITA NATIVE INCOME (000)	PER CAPITA NON-NATIVE RESIDENT INCOME (000)
1980	66377**					
1981	73333	48276	25057	17.661	14.729	28.648
1982	81529	54685	26844	18.916	16.212	28.648
1983	87814	56787	31027	19.283	16.361	28.648
1984	90692	59390	31302	19.438	16.622	28.648
1985	104101	61640	42461	20.182	16.767	28.652
1986	95394	60798	34595	19.119	16.077	28.645
1987	93668	58618	35050	18.320	15.070	28.651
1988	82694	51803	30891	16.298	12.966	28.641
1989	79913	50445	29468	15.579	12.301	28.641
1990	76988	48437	28551	14.803	11.522	28.639
1991	77436	49338	28098	14.653	11.464	28.638
1992	78005	50322	27683	14.540	11.440	28.659
1993	76683	50362	26321	14.181	11.220	28.643
1994	76990	51224	25767	14.054	11.187	28.639
1995	76989	51938	25051	13.882	11.119	28.631
1996	75832	51769	24063	13.533	10.868	28.642
1997	75244	51989	23255	13.283	10.713	28.640
1998	73970	51675	22295	12.927	10.453	28.642
1999	72888	51494	21394	12.601	10.222	28.643
2000	72946	52163	20783	2.448	10.159	28.643
2001	74609	53217	21392	2.471	10.164	28.656
2002	71725	50885	20841	1.820	9.528	28.643
2003	72817	51659	21158	1.759	9.471	28.654
2004	72015	50961	21054	1.416	9.144	28.643
2005	73281	51855	21426	1.368	9.100	28.655
2006	74164	52502	21663	1.261	9.005	28.658
2007	71640	50517	21123	0.684	8.465	28.636
2008	72587	51211	21376	10.587	8.381	28.653
2009	73619	51962	21657	10.499	8.306	28.653
2010	74661	52721	21940	10.413	8.232	28.653

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.870--12/20/85
 VARIABLES: IN, INNA, INNN, INPC, INPCNA, AND INPCNN

TABLE C-10.15
NORTH SLOPE MODEL PROJECTIONS
EXTREME HIGH BASE CASE

	ADULT NATIVE POPULATION	NATIVE LABOR SUPPLY	NATIVE EMPLOYMENT	NATIVE UNEMPLOY- MENT	NATIVE UNEMPLOY- MENT RATE BEFORE MIGRATION	NATIVE UNEMPLOY- MENT RATE AFTER MIGRATION
1980	1667**	1235**	1173*			
1981	1730	1282	1161	122	0.095	0.095
1982	1795	1330	1328	2	0.002	0.002
1983	1862	1380	1380	0	0.000	0.000
1984	1951	1446	1446	0	0.000	0.000
1985	2026	1502	1502	0	0.000	0.000
1986	2080	1541	1475	66	0.043	0.043
1987	2109	1563	1413	150	0.096	0.096
1988	2130	1578	1227	351	0.223	0.223
1989	2146	1590	1187	404	0.254	0.254
1990	2186	1620 "	1129	491	0.303	0.303
1991	2203	1632	1149	483	0.296	0.296
1992	2225	1648	1172	477	0.289	0.289
1993	2255	1671	1169	502	0.300	0.300
1994	2284	1692	1189	503	0.297	0.297
1995	2317	1717	1204	512	0.298	0.298
1996	2332	1728	1196	532	0.308	0.308
1997	2361	1749	1199	551	0.315	0.315
1998	2398	1777	1187	590	0.332	0.332
1999	2447	1873	1178	635	0.350	0.350
2000	2490	1845	1192	652	0.354	0.354
2001	2566	1901	1217	685	0.360	0.360
2002	2646	1961	1150	811	0.413	0.413
2003	2721	2017	1167	850	0.421	0.421
2004	2803	2077	1143	933	0.449	0.449
2005	2889	2141	1162	978	0.457	0.457
2006	2967	2198	1175	1024	0.466	0.466
2007	3048	2258	1116	1142	0.506	0.506
2008	3132	2321	1129	1192	0.513	0.513
2009	3201	2372	1144	1229	0.518	0.518
2010	3280	2430	1158	1272	0.523	0.523

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.870--12/20/85
VARIABLES: PONAAT, LSNA, EMNA, UNNA, UNRANA, UNRANAFI

TABLE C-11.1
 NORTH SLOPE MODEL PROJECTIONS
 HIGH IMPACT BASE CASE

	TOTAL POPULATION	RESIDENT POPULATION	AVERAGE NON- RESIDENT POPULATION
1980	6805*	3827**	2978*
1981	8766	4149	4617
1982	9365	4307	5058
1983	9954	4552	5402
1984	9526	4664	4862
1985	9401	5156	4244
1986	9757	4864	4893
1987	9410	4892	4518
1988	8061	4788	3273
1989	8187	4809	3378
1990	8199	4824	3375
1991	8191	4929	3262
1992	8377	5042	3335
1993	7870	5072	2797
1994	7850	5111	2738
1995	7772	5117	2655
1996	7582	5084	2498
1997	7459	5021	2438
1998	7199	4902	2297
1999	6928	4746	2182
2000	6796	4614	2182
2001	6596	4503	2093
2002	5834	4225	1609
2003	5644	4035	1609
2004	5180	3799	1380
2005	5005	3624	1380
2006	4868	3487	1380
2007	4235	3244	991
2008	4074	3084	991
2009	3953	2963	991
2010	3859	2868	991

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B71--12/20/85
 VARIABLES: POTO, PORE, ANO PONRAV

TABLE C-11.2
NORTH SLOPE MODEL PROJECTIONS
HIGH IMPACT BASE CASE

	RESIDENT POPULATION	RESIDENT NATIVE POPULATION	RESIDENT NON-NATIVE POPULATION
1980	3827*	3208**	619*
1981	4149	3275	875
1982	4307	3370	937
1983	4552	3468	1085
1984	4664	3570	1094
1985	5156	3673	1484
1986	4864	3699	1164
1987	4892	3746	1146
1988	4788	3759	1029
1989	4809	3815	994
1990	4824	3862	962
1991	4929	3935	994
1992	5042	4012	1030
1993	5072	4044	1028
1994	5111	4060	1051
1995	5117	4052	065
1996	5084	4019	065
1997	5021	3955	066
1998	4902	3848	054
1999	4746	3709	037
2000	4614	3580	034
2001	4503	3473	030
2002	4225	3270	956
2003	4035	3109	927
2004	3799	2925	874
2005	3624'	2777	848
2006	3487	2660	827
2007	3244	2481	763
2008	3084	2343	740
2009	2963	2240	723
2010	2868	2160	709

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B71--12/20/85
 VARIABLES: PORE, PONA, AND PONN

TABLE C-11.3
NORTH SLOPE MODEL PROJECTIONS
HIGH IMPACT BASE CASE

	NATIVE POPULATION	PRE-SCHOOL NATIVE POPULATION	SCHOOL-AGE NATIVE POPULATION	ADULT NATIVE POPULATION	AGED NATIVE POPULATION
1980	3208**	362**	1042**	1667**	137**
1981	3275	378	1029	1729	139
1982	3370	444	989	1793	144
1983	3468	497	965	1861	146
1984	3570	537	935	1949	148
1985	3673	579	915	2025	154
1986	3699	613	892	2033	162
1987	3746	620	936	2029	161
1988	3759	618	978	2000	163
1989	3815	618	1039	1992	166
1990	3862	614	1073	2003	172
1991	3935	606	1139	2008	181
1992	4012	594	1200	2023	194
1993	4044	574	1248	2026	196
1994	4060	554	1288	2018	199
1995	4052	536	1313	2002	201
1996	4019	520	1338	1959	201
1997	3955	503	1336	1914	202
1998	3848	486	1301	1855	206
1999	3709	469	1255	1788	197
2000	3580	453	1213	1721	194
2001	3473	441	1158	1685	188
2002	3270	423	1069	1601	176
2003	3109	412	995	1530	171
2004	2925	398	917	1448	162
2005	2777	388	853	1385	152
2006	2660	381	801	1330	149
2007	2481	364	735	1243	139
2008	2343	350	687	1177	129
2009	2240	338	654	1122	127
2010	2160	328	631	1081	120

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B71--12/20/85
 VARIABLES: PONA, PONAkd, PONAsl, PONAAT, AND PONAGE

TABLE 'C-11.4
NORTH SLOPE MODEL PROJECTIONS
HIGH IMPACT BASE CASE

	NATIVE POPULATION	NATIVE MALE POPULATION	NATIVE FEMALE POPULATION	NATIVE NATURAL INCREASE	NATIVE RATE OF NATURAL INCREASE	NATIVE MIGRATION
1980	3208**	1 669**	1 509**			
1981	3275	1726	1549	90	0.028	-29
1982	3370	1768	1602	95	0.029	-0
1983	3468	1812	1656	98	0.029	"0
1984	3570	1857	1713	102	0.029	-0
1985	3673	1903	1770	103	0.029	-0
1986	3699	1909	1790	105	0.029	-79
1987	3746	1926	1820	105	0.028	-58
1988	3759	1926	1833	102	0.027	-89
1989	3815	1948	1867	99	0.026	-42
1990	3862	1966	1896	96	0.025	-49
1991	3935	1997	1938	91	0.024	-18
1992	4012	2030	1982	87	0.022	-10
1993	4044	2041	2003	82	0.020	-49
1994	4060	2043	2017	81	0.020	-66
1995	4052	2034	2018	81	0.020	-89
1996	4019	2012	2007	80	0.020	-113
1997	3935	1975	1980	75	0.019	-139
1998	3848	1917	1931	74	0.019	-180
1999	3709	1843	1866	72	0.019	-272
2000	3580	1775	1806	71	0.019	-199
2001	3473	1718	1756	70	0.020	-177
2002	3270	1613	1657	69	0.020	-272
2003	3109	1530	1578	69	0.021	-230
2004	2925	1437	1489	67	0.022	-250
2005	2777	1361	1416	65	0.022	-213
2006	2660	1301	1359	63	0.023	-180
2007	2481	1211	1270	62	0.023	-241
2008	2343	1141	1202	58	0.023	-196
2009	2240	1089	1151	55	0.023	-158
2010	2160	1048	1112	52	0.023	-132

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B71--12/20/85
VARIABLES: PONA, PONAMA, PONAPE, NTICNA, NTICNARA, AND MGNA

TABLE C-11.5
 NORTH SLOPE MODEL PROJECTIONS
 HIGH IMPACT BASE CASE

	TOTAL EMPLOYMENT	TOTAL NATIVE EMPLOYMENT	TOTAL NON-NATIVE RESIDENT EMPLOYMENT	TOTAL NON- RESIDENT EMPLOYMENT
1980	6118**	1173*	473*	4472*
1981	8761**	1160	668	6932
1982	9638**	1328	716	7595
1983	10318**	1379	829	8111
1984	9581**	1444	836	7301
1985	9007	1500	1134	6373
1986	9596	1359	889	7347
1987	8951	1292	876	6784
1988	6846	1146	786	4914
1989	6944	1114	759	5072
1990	6858	1056	734	5068
1991	6710	1053	760	4897
1992	6847	1053	787	5007
1993	6011	1026	785	4200
1994	5929	1014	803	4112
1995	5794	994	814	3986
1996	5526	961	814	3751
1997	5401	926	814	3661
1998	5131	877	805	3449
1999	4897	828	792	3276
2000	4865	799	790	3276
2001	4719	790	787	3142
2002	3850	704	730	2415
2003	3809	685	708	2415
2004	3374	634	668	2073
2005	3337	617	648	2073
2006	3308	603	632	2073
2007	2602	531	583	1487
2008	2570	517	566	1487
2009	2545	505	552	1487
2010	2525	496	541	1487

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B71--12/20/85
 VARIABLES: EMTO, EMNA, EMNN, AND EMNR

TABLE C-11.6
NORTH SLOPE MODEL PROJECTIONS
HIGH IMPACT BASE CASE

EMPLOYMENT: ALL RACES"

	TOTAL EMPLOY- MENT	FEDERAL AND STATE GOVERN- MENT EMPLOY- MENT	BOROUGH OPER- ATING EMPLOY- MENT	BOROUGH CIP EMPLOY- MENT	OTHER CIP EMPLOY- MENT	LOCAL SUPPORT EMPLOY- MENT	OIL INDUSTRY EMPLOY- MENT	NON-OIL BASIC EMPLOY- MENT
1980	6118**	291 **	795*	322*	71*	393*	4246*	0
1981	8761**	260**	818*	363*	190*	427*	6703*	0
1982	9638**	203**	828*	456*	435*	488*	7228*	0
1983	10318**	177**	970*	457*	395*	528*	7791*	0
1984	9581**	178**	1028*	427*	464*	545*	6939*	0
1985	9007	178	1343	402	438	632	6014	0
1986	9596	178	1268	200	218	540	7191	0
1987	8951	178	1284	131	143	520	6696	0
1988	6846	178	1167	57	62	464	4919	0
1989	6944	178	1122	50	55	450	5090	0
1990	6858	178	1105	2	2	430	5141	0
1991	6710	178	1120	2	2	435	4973	0
1992	6847	178	1137	2	2	442	5086	0
1993	6011	178	1105	2	2	435	4289	0
1994	5929	178	1108	2	2	436	4203	0
1995	5794	178	1098	2	2	434	4080	0
1996	5526	178	1074	2	2	426	3844	0
1997	5401	178	1052	2	2	418	3749	0
1998	5131	178	1019	2	2	404	3526	0
1999	4897	178	982	2	2	389	3344	0
2000	4865	178	958	2	2	381	3344	0
2001	-4719	178	955	2	2	378	3203	0
2002	3850	178	885	2	2	344	2438	0
2003	3809	178	854	2	2	334	2438	0
2004	3374	178	802	2	2	312	2077	0
2005	3337	178	774	2	2	303	2077	0
2006	3308	178	752	2	2	296	2077	0
2007	2602	178	691	2	2	267	1461	0
2008	2570	178	667	2	2	260	1461	0
2009	2545	178	648	2	2	254	1461	0
2010	2525	178	633	2	2	249	1461	0

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B71--12/20/85
VARIABLES: EMTO, EMGNL, EMGOOP, EMGOCT, EMCTGO, EMSUEG,
EMBAOI, AND EMBAOT

TABLE C-11.7
NORTH SLOPE MODEL PROJECTIONS
HIGH IMPACT BASE CASE

EMPLOYMENT: NATIVES

	TOTAL EMPLOY- MENT	FEDERAL AND STATE GOVERN- MENT EMPLOY- MENT	BOROUGH OPER- ATING EMPLOY- MENT	BOROUGH CIP EMPLOY- MENT	OTHER CIP EMPLOY- MENT	LOCAL SUPPORT EMPLOY- MENT	OIL INDUSTRY EMPLOY- MENT	NON-OIL BASIC EMPLOY- MENT
1980	1173*	26*	445*	267*	26*	216*	30**	0
1981	1160	26	458	301	70	235	70	0
1982	1328	26	464	378	161	268	30	0
1983	1379	25	529	369	142	283	30	0
1984	1444	25	570	351	170	29.7	30	0
1985	1500	23	682	303	147	315	30	0
1986	1359	26	710	166	81	297	79	0
1987	1292	26	719	109	53	286	100	0
1988	1146	26	654	47	23	255	142	0
1989	1114	26	628	42	20	247	1 5 1	0
1990	1056	26	619	2	1	236	173	0
1991	1053	25	616	2	1	235	175	0
1992	1053	24	614	2	1	234	179	0
1993	1026	23	586	2	1	226	188	0
1994	1014	22	576	2	1	222	191	0
1995	994	22	560	2	1	217	193	0
1996	961	21	537	2	1	209	192	0
1997	926	20	516	2	1	201	187	0
1998	877	19	489	2	1	190	176	0
1999	828	18	461	2	1	179	167	0
2000	799	18	441	2	1	172	167	0
2001	790	18	440	2	1	170	160	0
2002	704	18	407	2	1	155	122	0
2003	685	18	393	2	1	1*50	122	0
2004	634	18	369	2	1	141	104	0
2005	617	18	356	2	1	137	104	0
2006	603	18	346	2	1	133	104	0
2007	531	18	318	2	1	120	73	0
2008	517	18	307	2	1	117	73	0
2009	505	18	298	2	1	114	73	0
2010	496	18	291	2	1	112	73	0

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B71--12/20/85
VARIABLES: EMNA, EMNAGONL, EMNAGOOP, EMNAGOCT, EMNACTGO,
EMNASUEG, EMNAOI, AND EMNABAOT

TABLE C-11.8
NORTH SLOPE MODEL PROJECTIONS
HIGH IMPACT BASE CASE

NATIVE OIL INDUSTRY EMPLOYMENT

	ASSUMED MINIMUM NATIVE OIL EMPLOYMENT	OIL INDUSTRY MAXIMUM DEMAND FOR NATIVE LABOR	MAXIMUM NATIVE SUPPLY OF LABOR TO OIL INDUSTRY	NATIVE OIL INDUSTRY EMPLOYMENT
1980				
1981	30	335	70	70
1982	30	361	30	30
1983	30	390	30	30
1984	30	347	30	30
1985	30	301	30	30
1986	30	360	79	79
1987	30	335	100	100
1988	30	246	142	142
1989	30	255	151	151
1990	30	257	173	173
1991	30	249	175	175
1992	30	254	179	179
1993	30	214	188	188
1994	30	210	191	191
1995	30	204	193	193
1996	30	192	193	192
1997	30	187	192	187
1998	30	176	191	176
1999	30	167	188	167
2000	30	167	183	167
2001	30	160	177	160
2002	30	122	174	122
2003	30	122	165	122
2004	30	104	158	104
2005	30	104	151	104
2006	30	104	144	104
2007	30	73	138	73
2008	30	73	130	73
2009	30	73	122	73
2010	30	73	117	73

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B71--12/20/85
VARIABLES: EMNAOIEX, LDNABAOI, LSNAOI, EMNAOI

TABLE C-11.9
NORTH SLOPE MODEL PROJECTIONS
HIGH IMPACT BASE CASE

EMPLOYMENT: NON-NATIVE RESIDENTS

	TOTAL NON-NATIVE EMPLOYMENT	FEDERAL AND STATE GOVERNMENT EMPLOYMENT	BOROUGH OPERATING EMPLOYMENT	LOCAL SUPPORT EMPLOYMENT	NON-OIL BASIC EMPLOYMENT	BOROUGH CIP EMPLOYMENT
1980	473*	54*	350*	216*	0	55*
1981	668	54	360	192	0	62
1982	716	54	364	220	0	78
1983	829	55	441	245	0	88
1984	836	55	458	248	0	76
1985	1134	57	661	317	0	99
1986	889	54	558	243	0	34
1987	876	54	565	234	0	22
1988	786	54	514	209	0	10
1989	759	54	494	202	0	9
1990	734	54	486	193	0	0
1991	760	55	504	200	0	0
1992	787	56	523	208	0	0
1993	785	57	520	209	0	0
1994	803	58	532	214	0	0
1995	814	58	538	217	0	0
1996	814	59	537	217	0	0
1997	814	60	537	217	0	0
1998	805	61	530	214	0	0
1999	792	62	520	210	0	0
2000	790	62	517	210	0	0
2001	787	62	516	208	0	0
2002	730	62	478	189	0	0
2003	708	62	461	184	0	0
2004	668	62	433	172	0	0
2005	648	62	418	167	0	0
2006	632	62	406	163	0	0
2007	583	62	373	147	0	0
2008	566	62	360	143	0	0
2009	552	62	350	140	0	0
2010	541	62	342	137	0	0

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.871--12/20/85
 VARIABLES: EMNN, EMNNGONL, EMNNGOOP, EMNNSUEG, EMNNBAOT, EMNNGOCT

TABLE C-11.10
 NORTH SLOPE MODEL PROJECTIONS
 HIGH IMPACT BASE CASE

EMPLOYMENT: NON-RESIDENTS

	TOTAL NON- RESIDENT EMPLOYMENT	FEDERAL AND STATE GOVERNMENT EMPLOYMENT	OTHER CIP EMPLOYMENT	OIL INDUSTRY EMPLOYMENT
1980	4472*	211*	45*	4217*
1981	6932	180	120	6633
1982	7595	123	274	7198
1983	8111	97	253	7761
1984	7301	98	294	6909
1985	6373	98	291	5984
1986	7347	98	137	7112
1987	6784	98	90	6596
1988	4914	98	39	4777
1989	5072	98	34	4939
1990	5068	98	1	4968
1991	4897	98	1	4798
1992	5007	98	1	4907
1993	4200	98	1	4101
1994	4112	98	1	4012
1995	3986	98	1	3887
1996	3751	98	1	3652
1997	3661	98	1	3562
1998	3449	98	1	3350
1999	3276	98	1	3177
2000	3276	98	1	3177
2001	3142	98	1	3043
2002	2415	98	1	2316
2003	2415	98	1	2316
2004	2073	98	1	1973
2005	2073	98	1	1973
2006	2073	98	1	1973
2007	1487	98	1	1388
2008	1487	98	1	1388
2009	1487	98	1	1388
2010	1487	98	1	1388

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B71--12/20/85
 VARIABLES: EMNR, EMNRGONL, EMNRCTGO, AND EMNRBAOI

TABLE C-11.11
 NORTH SLOPE MODEL PROJECTIONS
 HIGH IMPACT BASE CASE

	TOTAL BOROUGH REVENUES (000)	NON- PROPERTY TAX NON- INTEREST REVENUES (000)	PROPERTY TAX REVENUES FOR OPERATIONS (000)	PROPERTY TAX REVENUES FOR DEBT SERVICE (000)	INTEREST EARNINGS (000)
1980	72900**	18200**	21 000**	26300**	7400**
1981	90000**	22000**	26400**	32800**	8800**
1982	189100**	34900**	34800**	75000**	44400**
1983	215400**	37300**	38500**	95200**	44400**
1984	251400**	40200**	33100**	118900**	59200**
1985	302300**	32600**	40600**	184600**	44500**
1986	302349	28160	46808	199717	27664
1987	306948	27592	47982	208894	22480
1988	307619	27820	41103	218456	20240
1989	296050	25728	41744	210322	18256
1990	267602	24455	41805	183166	18176
1991	184087	25681	41765	98545	18096
1992	247169	26169	42713	160272	18016
1993	235561	26377	40127	151122	17936
1994	225252	26732	40026	140638	17856
1995	213933	26454	39627	130076	17776
1996	159350	25672	38660	77322	17696
1997	119227	24752	38033	38826	17616
1998	709181	23580	36710	31355	17536
1999	91204	22212	35326	16210	17456
2000	88896	21132	34653	15735	17376
2001	88315	22066	33633	15320	17296
2002	82541	20662	29748	14915	17216
2003	79803	19329	28778	14560	17136
2004	75430	17819	26411	14145	17056
2005	72902	16636	25519	13770	16976
2006	65870	15728	24821	8425	16896
2007	52782	14372	21593	0	16816
2008	50926	13414	20775	0	16736
2009	49496	12681	20159	0	16656
2010	48329	12076	19677	0	16576

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B71--12/20/85
 VARIABLES: RVTO, RVNPOP, RVPYOP, RVPYDB, RVIT

TABLE C-11.12
 NORTH SLOPE MODEL PROJECTIONS
 HIGH IMPACT BASE CASE

	TOTAL BOROUGH EXPENDI- TURES (000)	OPERATIONS EXPENDI- TURES (000)	CON- STRUCTION EXPENDI- TURES (000)	DEBT SERVICE EXPENDI- TURES (000)
1980	158765**	39685**	93000**	26080**
1981	216637**	50020**	131000**	35617**
1982	342192**	63506**	211000**	67686**
1983	466118**	68807**	302000**	95311**
1984	419494**	78544**	211000**	129950**
1985	489655**	102577**	199000**	188078**
1986	395813	96896	99200	199717
1987	371748	98054	64800	208894
1988	335619	89163	28000	218456
1989	320850	85728	24800	210322
1990	268602	84436	1000	183166
1991	185087	85542	1000	38545
1992	248169	86897	1000	160272
1993	236561	84439	1000	151122
1994	226252	84614	1000	740638
1995	214933	83857	1000	130076
1996	160350	82028	1000	77322?
1997	120227	80401	1000	38826
1998	110181	77826	1000	31355
1999	92204	74994	1000	16210
2000	89896	73161	1000	15735
2001	89315	72995	1000	15320
2002	83541	67626	1000	14915
2003	80803	65243	1000	14560
2004	76430	61285	1000	14145
2005	73902	59132	1000	13770
2006	66870	57445	1000	8425
2007	53782	52782	1000	0
2008	51926	50926	1000	0
2009	50496	49496	1000	0
2010	49329	48329	1000	0

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B71--12/20/85
 VARIABLES: SPT0, SPLOG00P, SPLOG0CT, AND CSDBT0

TABLE C-11.13
NORTH SLOPE MODEL PROJECTIONS
HIGH IMPACT BASE CASE

	TOTAL PROPERTY VALUE (000)	TOTAL PROPERTY TAXES (000)	TAX RATE	TAX RATE FOR OPER- ATING REVENUES	TAX RATE FOR DEBT SERVICE REVENUES	LIMIT ON PROPERTY TAX OPER- ATING REVENUES PER CAPITA (000)	ACTUAL PROPERTY TAX OPER- ATING REVENUES PER CAPITA ^a (000)
1980	5061955**	52400**	0.0103**	0.0052**	0.0051	3.196**	3.086
1981	5723582**	59100**	0.0103**	0.0051**	0.0052	3.601**	3.008
1982	6621652**	109700**	0.0167**	0.0055**	0.0112	3.914**	3.71a
1983	8186986**	133700**	0.0164**	0.0041**	0.0123	4.761**	3.869
1984	9996290**	152400**	0.0153**	0.0033**	0.0120	5.119**	3.476
1985	12261420**	225300**	0.0184**	0.0033**	0.0151	5.099**	4.321
1986	13420000	246525	0.0184	0.0035	0.0149	5.099	4.797
1987	14730000	256876	0.0174	0.0033	0.0142	5.099	5.099
1988	15510000	259559	0.0167	0.0027	0.0141	5.099	5.099
1989	16100000	252066	0.0157	0.0026	0.0131	5.099	5.099
1990	16290000	224971	0.0138	0.0026	0.0112	5.099	5.099
1991	15990000	140310	0.0088	0.0026	0.0062	5.099	5.099
1992	15680000	202985	0.0129	0.0027	0.0102	5.099	5.099
1993	15340000	191249	0.0125	0.0026	0.0099	5.099	5.099
1994	14980000	180664	0.0121	0.0027	0.0094	5.099	5.099
1995	14550000	169703	0.0117	0.0027	0.0089	5.099	5.099
1996	14070000	115982	0.0082	0.0027	0.0055	5.099	5.099
1997	13550000	76859	0.0057	0.0028	0.0029	5.099	5.099
1998	12950000	68065	0.0053	0.0028	0.0024	5.099	5.099
1999	12280000	51536	0.0042	0.0029	0.0013	5.099	5.099
2000	11500000	50388	0.0044	0.0030	0.0014	5.099	5.099
2001	10720000	48953	0.0046	0.0031	0.0014	5.099	5.099
2002	9940000	44663	0.0045	0.0030	0.0015	5.099	5.099
2003	9160000	43338	0.0047	0.0031	0.0016	5.099	5.099
2004	8380000	40556	0.0048	0.0032	0.0017	5.099	5.099
2005	7600000	39289	0.0052	0.0034"	0.0018	5.099	5.099
2006	6820000	33246	0.0049	0.0036	0.0012	5.099	5.099
2007	6040000	21593	0.0036	0.0036	0.0000	5.099	5.099
2008	5260000	20775	0.0039	0.0039	0.0000	5.099	5.099
2009	4480000	20159	0.0045	0.0045	0.0000	5.099	5.099
2010	3700000	19677	0.0053	0.0053	0.0000	5.099	5.099

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.871--12/20/85
VARIABLES: VATO, RVPYTO, TARA, TARAOP, TARADB, RVPYOPPC, RVOPPCFI

^aBased on total population as defined by model, rather than official state figure used for calculating revenue limit.

TABLE C-11.14
NORTH SLOPE MODEL PROJECTIONS
HIGH IMPACT BASE CASE

	TOTAL RESIDENT INCOME (000)	TOTAL NATIVE INCOME (000)	TOTAL NON-NATIVE RESIDENT INCOME (000)	PER CAPITA RESIDENT INCOME (000)	PER CAPITA NATIVE INCOME (000)	PER CAPITA NON-NATIVE RESIDENT INCOME (000)
1980	66377**					
1981	73318	48261	25057	17.670	14.738	28.648
1982	81513	54669	26844	18.925	16.222	28.648
1983	87805	56734	31070	19.288	16.360	28.648
1984	90681	57335	31346	19.443	16.622	28.648
1985	104089	61583	42506	20.186	16.767	28.652
1986	89677	56324	33352	18.438	15.226	28.643
1987	86727	53893	32834	17.727	14.387	28.645
1988	77912	48425	29486	16.271	12.883	28.643
1989	75765	47302	28463	15.755	12.398	28.645
1990	72745	45202	27543	15.081	11.704	28.645
1991	73679	45197	28482	14.948	11.486	28.649
1992	74842	45322	29520	14.843	11.297	28.649
1993	73788	44339	29449	14.547	10.963	28.648
1994	74027	43904	30123	14.483	10.814	28.647
1995	73658	43151	30508	14.395	10.650	28.648
1996	72380	41868	30512	14.238	10.419	28.648
1997	71003	40466	30537	14.142	10.232	28.647
1998	68650	38462	30188	14.003	9.995	28.639
1999	66157	36445	29712	13.939	9.826	28.647
2000	64784	35171	29612	14.041	9.823	28.649
2001	64171	34664	29507	14.250	9.980	28.647
2002	58525	31145	27379	13.851	9.526	28.648
2003	56748	30206	26542	14.063	9.717	28.647
2004	53038	27998	25040	13.960	9.571	28.648
2005	51432	27147	24285	14.190	9.776	28.649
2006	50173	26479	23694	14.387	9.953	28.649
2007	45384	23523	21861	13.989	9.481	28.647
2008	43983	22774	21210	14.263	9.718	28.649
2009	42910	22201	20709	14.482	9.911	28.649
2010	42039	21740	20300	14.656	10.065	28.649

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.871--12/20/85
VARIABLES: IN, INNA, INNN, INPC, INPCNA, AND INPCNN

TABLE C-11.15
 NORTH SLOPE MODEL PROJECTIONS
 HIGH IMPACT BASE CASE

	ADULT NATIVE POPULATION	NATIVE LABOR SUPPLY	NATIVE EMPLOYMENT	NATIVE UNEMPLOY- MENT	NATIVE UNEMPLOY- MENT RATE BEFORE MIGRATION	NATIVE UNEMPLOY- MENT RATE AFTER MIGRATION
1980	1667**	1235**	1173*			
1981	1729	1281	1160	121	0.094	0.093
1982	1793	1329	1328	1	0.001	0.001
1983	1861	1379	1379	0	0.000	0.000
1984	1949	1444	1444	0	0.000	0.000
1985	2025	1500	1500	0	0.000	0.000
1986	2033	1506	1359	148	0.098	0.069
1987	2029	1503	1292	211	0.140	0.119
1988	2000	1482	1146	336	0.227	0.194
1989	1992	1476	1114	362	0.245	0.230
1990	2003	1484	1056	428	0.288	0.271
1991	2008	1488	1053	435	0.292	0.286
1992	2023	1499	1053	446	0.297	0.294
1993	2026	1501	1026	475	0.317	0.300
1994	2018	1495	1014	482	0.322	0.300
1995	2002	1484	994	490	0.330	0.300
1996	1959	1452	961	491	0.338	0.300
1997	1914	1418	926	492	0.347	0.300
1998	1855	1374	877	498	0.362	0.300
1999	1788	1325	828	497	0.375	0.300
2000	1721	1275	799	476	0.373	0.300
2001	1685	1249	790	459	0.367	0.300
2002	1601	1187	704	483	0.407	0.300
2003	1530	1134	685	449	0.396	0.300
2004	1448	1073	634	440	0.410	0.300
2005	1385	1026	617	410	0.399	0.300
2006	1330	986	603	383	0.388	0.300
2007	1243	921	531	390	0.423	0.300
2008	1177	872	517	355	0.408	0.300
2009	1122	831	505	326	0.392	0.300
2010	1081	801	496	305	0.380	0.300

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.B71--12/20/85
 VARIABLES: PONAAT, LSNA, EMNA, UNNA, UNRANA, UNRANAFI



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TABLE C-12.1
 NORTH SLOPE MODEL PROJECTIONS
 SALE 97 MEDIUM IMPACT CASE

	TOTAL POPULATION	RESIDENT POPULATION	AVERAGE NON- RESIDENT POPULATION
1980	6805*	3827**	2978*
1981	8776	4142	4633
1982	9360	4301	5058
1983	9950	4548	5402
1984	9523	4660	4863
1985	9397	5152	4245
1986	9847	4908	4940
1987	9535	4971	4564
1988	8461	4870	3590
1989	8672	4894	3777
1990	8574	4903	3671
1991	8513	4991	3522
1992	8656	5083	3573
1993	8113	5120	2993
1994	8285	5211	3074
1995	9495	5358	4137
1996	8988	5396	3591
1997	8325	5406	2919
1998	8231	5458	2773
1999	8178	5515	2663
2000	8253	5590	2663
2001	8279	5695	2584
2002	7836	5752	2085
2003	7881	5796	2085
2004	7596	5747	1849
2005	7534	5685	1849
2006	7457	5608	1849
2007	6870	5423	1447
2008	6707	5260	1447
2009	6553	5105	1447
2010	6400	4953	1447

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.161--12/20/85
 VARIABLES: POTO, PORE, ANO PONRAV

TABLE C-12.2
NORTH SLOPE MODEL PROJECTIONS
SALE 97 MEDIUM IMPACT CASE

	RESIDENT POPULATION	RESIDENT NATIVE POPULATION	RESIDENT NON-NATIVE POPULATION
1980	3827*	3208**	619*
1981	4142	3268	875
1982	4301	3363	938
1983	4548	3460	1088
1984	4660	3562	1098
1985	5152	3665	1487
1986	4908	3726	1182
1987	4971	3792	1179
1988	4870	3819	1051
1989	4894	3888	1007
1990	4903	3943	960
1991	4991	4027	964
1992	5083	4113	970
1993	5120	4181	939
1994	5211	4261	950
1995	5358	4347	1010
1996	5396	4420	976
1997	5406	4476	930
1998	5458	4542	916
1999	5515	4612	903
2000	5590	4690	900
2001	5695	4777	918
2002	5752	4861	890
2003	5796	4912	884
2004	5747	4892	855
2005	5685	4846	839
2006	5608	4787	821
2007	5423	4651	772
2008	5260	4513	747
2009	5105	4382	724
2010	4953	4252	701

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.I61--12/20/85
 VARIABLES: PORE, PONA, AND PONN

TABLE C-12.3
 NORTH SLOPE MODEL PROJECTIONS
 SALE 97 MEDIUM IMPACT CASE

	NATIVE POPULATION	PRE-SCHOOL NATIVE POPULATION	SCHOOL-AGE NATIVE POPULATION	ADULT NATIVE POPULATION	AGED NATIVE POPULATION
1980	3208**	362**	1042**	1667**	737**
1981	3268	377	1027	1725	139
1982	3363	443	987	1789	144
1983	3460	496	962	1857	145
1984	3562	536	933	1945	148
1985	3665	578	913	2020	154
1986	3726	616	898	2048	163
1987	3792	626	948	2054	163
1988	3819	626	995	2033	165
1989	3888	628	1060	2031	169
1990	3943	624	1096	2046	176
1991	4027	619	1166	-2057	185
1992	4113	608	1230	2076	199
1993	4181	592	1289	2096	203
1994	4261	579	1351	2121	210
1995	4347	571	1409	2152	216
1996	4420	565	1473	2160	222
1997	4476	560	1514	2173	229
1998	4542	561	1539	2198	244
1999	4612	566	1564	2235	247
2000	4690	573	1592	2270	255
2001	4777	585	1595	2336	261
2002	4861	601	1592	2404	265
2003	4912	621	1572	2445	274
2004	4892	635	1531	2452	274
2005	4846	647	1482	2448	269
2006	4787	659	1430	2426	272
2007	4651	662	1361	2364	264
2008	4513	659	1301	2299	253
2009	4382	651	1253	2226	252
2010	4252	639	1214	2158	241

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.I61--12/20/85
 VARIABLES: PONA, PONA KD, PONA SL, PONA AT, AND PONA GE

TABLE C-12.4
NORTH SLOPE MODEL PROJECTIONS
SALE 97 MEDIUM IMPACT CASE

	NATIVE POPULATION	NATIVE MALE POPULATION	NATIVE FEMALE POPULATION	NATIVE NATURAL INCREASE	NATIVE RATE OF NATURAL INCREASE	NATIVE MIGRATION
1980	3208**	1669**	1509**			
1981	3268	1722	1545	90	0.028	-36
1982	3363	1764	1598	95	0.029	-0
1983	3460	1808	16153	98	0.029	-0
1984	3562	1853	1709	102	0.029	-0
1985	3665	1899	1766	103	0.029	0
1986	3726	1923	1802	105	0.029	-45
1987	3792	1950	1842	106	0.028	-40
1988	3819	1957	1862	103	0.027	-76
1989	3888	1985	1902	100	0.026	-32
1990	3943	2007	1936	98	0.025	-42
1991	4027	2044	1983	93	0.024	-9
1992	4113	2082	2031	89	0.022	-3
1993	4181	2110	2071	84	0.020	-16
1994	4261	2145	2117	84	0.020	-3
1995	4347	2182	2165	86	0.020	-0
1996	4420	2213	2207	86	0.020	-13
1997	4476	2236	2240	83	0.019	-2/-
1998	4542	2263	2279	84	0.019	-17
1999	4612	2292	2319	86	0.019	-16
2000	4690	2326	2364	89	0.019	-10
2001	4777	2363	2413	93	0.020	-6
2002	4861	2400	2462	95	0.020	-10
2003	4912	2420	2493	103	0.021	-52
2004	4892	2404	2488	107	0.022	-127
2005	4846	2377	2470	110	0.022	-156
2006	4787	2343	2444	112	0.023	-172
2007	4651	2272	2373	113	0.024	-248
2008	4513	2200	2313	111	0.024	-248
2009	4382	2132	2250	107	0.024	-239
2010	4252	2065	2187	103	0.024	-233

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.I61--12/20/85
VARIABLES: PONA, PONAMA, PONAFA, NTICNA, NTICNARA, AND MGNA

TABLE C-12.5
 NORTH SLOPE MODEL PROJECTIONS
 SALE 97 MEDIUM IMPACT CASE

	TOTAL EMPLOYMENT	TOTAL NATIVE EMPLOYMENT	TOTAL NON-NATIVE RESIDENT EMPLOYMENT	TOTAL NON- RESIDENT EMPLOYMENT
1980	6118**	1173*	473*	4472*
1981	8761**	1136	668	6957
1982	9638**	326	717	7595
1983	10318**	376	831	8111
1984	9581**	441	839	7301
1985	9006	497	1136	6373
1986	9711	392	903	7417
1987	9065	311	901	6853
1988	7307	113	803	5391
1989	7508	1068	769	5671
1990	7226	980	734	5512
1991	7009	984	736	5289
1992	7097	991	741	5365
1993	6171	960	718	4493
1994	6314	973	726	4615
1995	8017	" 1032	772	6212
1996	7141	1003	746	5393
1997	6042	949	711	4383
1998	5794	931	699	4164
1999	5603	915	690	3998
2000	5598	912	687	3998
2001	5509	928	702	3880
2002	4696	885	680	3130
2003	4685	879	675	3130
2004	4274	844	653	2776
2005	4246	828	641	2776
2006	4216	812	628	2776
2007	3514	752	590	2173
2008	3471	728	571	2173
2009	3432	706	553	2173
2010	3392	684	536	2173

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.161--12/20/85
 VARIABLES: EMTO, EMNA, EMNN, AND EMNR

TABLE C-12.6
NORTH SLOPE MODEL PROJECTIONS
SALE 97 MEDIUM IMPACT CASE

EMPLOYMENT: ALL RACES

	TOTAL EMPLOY- MENT	FEDERAL AND STATE GOVERN- MENT EMPLOY- MENT	BOROUGH OPER- ATING EMPLOY- MENT	BOROUGH CIP EMPLOY- MENT	OTHER CIP EMPLOY- MENT	LOCAL SUPPORT EMPLOY- MENT	OIL INDUSTRY EMPLOY- MENT	NON-OIL BASIC EMPLOY- MENT
1980	6118**	291 **	795*	322*	71*	393*	4246*	0
1981	8761**	260**	818*	363*	190*	427*	6703*	0
1982	9638**	203**	828*	456*	435*	488*	7228*	0
1983	10318**	177**	970*	457*	395*	528*	7791*	0
1984	9581**	178**	1028*	427*	464*	545*	6939*	0
1985	9006	178	1343	402	438	632	6014	0
1986	9711	178	1268	250	273	551	7191	0
1987	9065	178	1318	164	178	531	6696	0
1988	7307	178	1204	71	77	460	5318	0
1989	7508	178	1149	63	68	441	5609	0
1990	7226	178	1119	10	11	411	5497	0
1991	7009	178	1123	10	11	413	5274	0
1992	7097	178	1131	10	11	416	5351	0
1993	6171	178	1092	10	11	403	4478	0
1994	6314	178	1105	10	11	408	4602	0
1995	8017	178	1185	10	11	433	6200	0
1996	7141	178	1139	10	11	420	5384	0
1997	6042	178	1080	10	11	398	4365	0
1998	5794	178	1062	10	11	391	4142	0
1999	5603	178	1046	10	11	385	3973	0
2000	5598	178	1042	10	11	384	3973	0
2001	5509	178	1067	10	11	391	3852	0
2002	4696	178	1034	10	11	376	3087	0
2003	4685	178	1026	10	11	373	3087	0
2004	4274	178	989	10	11	359	2726	0
2005	4246	178	968	10	11	353	2726	0
2006	4216	178	945	10	11	345	2726	0
2007	3514	178	883	10	11	322	2110	0
2008	3471	178	851	10	11	312	2110	0
2009	3432	178	820	10	11	302	2110	0
2010	3392	178	791	10	11	293	2110	0

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.I61--12/20/85
VARIABLES: EMTO, EMGONL, EMGOOP, EMGOCT, EMCTGO, EMSUEG,
EMBAOI, AND EMBAOT

TABLE C-12.7
NORTH SLOPE MODEL PROJECTIONS
SALE 97 MEDIUM IMPACT CASE

EMPLOYMENT: NATIVES

	TOTAL EMPLOY- MENT	FEDERAL ANI) STATE GOVERN- MENT EMPLOY- MENT	BOROUGH OPER- ATING EMPLOY- MENT	BOROUGH CIP EMPLOY- MENT	OTHER CIP EMPLOY- MENT	LOCAL SUPPORT EMPLOY- MENT	OIL INDUSTRY EMPLOY- MENT	NON-OIL BASIC EMPLOY- MENT
1980	1173*	26*	445*	267*	26*	216*	30**	0
1981	1136	26	458	301	70	235	46	0
1982	1326	26	463	378	161	268	30	0
1983	1376	25	528	369	142	282	30	0
1984	1441	25	569	350	170	296	30	0
1985	1497	23	681	302	147	315	30	0
1986	1392	26	710	208	101	303	44	0
1987	1311	26	738	136	66	292	54	0
1988	1113	26	674	59	28	253	74	0
1989	1068	26	644	52	25	242	79	0
1990	980	26	627	8	4	226	90	0
1991	984	26	629	8	4	227	90	0
1992	991	26	633	8	4	229	91	0
1993	960	26	611	8	4	222	90	0
1994	973	26	619	8	4	224	92	0
1995	1032	26	663	8	4	238	93	0
1996	1003	26	638	8	4	231	96	0
1997	949	26	605	8	4	219	87	0
1998	931	26	595	8	4	215	83	0
1999	915	26	586	8	4	212	79	0
2000	912	26	583	8	4	211	79	0
2001	928	26	598	8	4	215	77	0
2002	885	26	579	8	4	207	62	0
2003	879	26	574	8	4	205	62	0
2004	844	26	554	8	4	198	55	0
2005	828	26	542	8	4	194	55	0
2006	812	26	529	8	4	190	55	0
2007	752	26	495	8	4	177	42	0
2008	728	26	476	8	4	171	42	0
2009	706	26	459	8	4	166	42	0
2010	684	26	443	8	4	161	42	0

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.I61--12/20/85
VARIABLES: EMNA, EMNAGONL, EMNAGOOP, EMNAGOCT, EMNACTGO,
EMNASUEG, EMNAOI, AND EMNABAOT

"TABLE C-12.8
 NORTH SLOPE MOREL PROJECTIONS
 SALE 97 MEDIUM IMPACT CASE

NATIVE OIL INDUSTR% EMPLOYMENT

	ASSUMED MINIMUM NATIVE OIL EMPLOYMENT	OIL INDUSTRY MAXIMUM DEMAND FOR NATIVE LABOR	MAXIMUM NATIVE SUPPLY OF LABOR TO OIL INDUSTRY	NATIVE OIL INDUSTRY EMPLOYMENT
1980				
1981	30	134	46	46
1982	30	145	30	30
1983	30	156	30	30
1984	30	139	30	30
1985	30	120	30	30
1986	30	144	44	44
1987	30	134	54	54
1988	30	106	74	74
1989	30	112	79	79
1990	30	110	90	90
1991	30	105	90	90
1992	30	107	91	91
1993	30	90	95	90
1994	30	92	96	92
1995	30	124	93	93
1996	30	108	96	96
1997	30	87	102	87
1998	30	83	105	83
1999	30	79	109	79
2000	30	79	112	79
2001	30	77	115	77
2002	30	62	123	62
2003	30	62	126	62
2004	30	55	130	55
2005	30	55	131	55
2006	30	55	131	55
2007	30	42	131	42
2008	30	42	129	42
2009	30	42	126	42
2010	30	42	123	42

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.161--12/20/85
 VARIABLES: EMNAOIEX, LDNABAOI, LSNAOI, EMNAOI

TABLE C-12.9
NORTH SLOPE MODEL PROJECTIONS
SALE 97 MEDIUM IMPACT CASE

EMPLOYMENT: NON-NATIVE RESIDENTS

	TOTAL NON-NATIVE EMPLOYMENT	FEDERAL AND STATE GOVERNMENT EMPLOYMENT	BOROUGH OPERATING EMPLOYMENT	LOCAL SUPPORT EMPLOYMENT	NON-OIL BASIC EMPLOYMENT	BOROUGH CIP EMPLOYMENT
1980	473*	54*	350*	216*	0	55*
1981	668	54	360	192	0	62
1982	717	54	365	220	0	78
1983	831	55	442	246	0	88
1984	839	55	459	249	0	77
1985	1136	57	662	317	0	100
1986	903	54	558	248	0	43
1987	901	54	580	239	0	28
1988	803	54	530	207	0	12
1989	769	54	506	198	0	11
1990	734	54	492	185	0	"2
1991	736	54	494	186	0	2
1992	741	54	498	187	0	2
1993	718	54	480	181	0	2
1994	726	54	486	183	0	2
1995	772	54	521	195	0	2
1996	746	54	501	189	0	2
1997	711	54	475	179	0	2
1998	699	54	467	176	0	2
1999	690	54	460	173	0	2
2000	687	54	458	173	0	2
2001	702	54	470	176	0	2
2002	680	54	455	169	0	2
2003	675	54	451	168	0	2
2004	653	54	435	162	0	2
2005	641	54	426	159	0	2
2006	628	54	416	155	0	2
2007	590	54	389	145	0	2
2008	571	54	374	140	0	2
2009	553	54	361	136	0	2
2010	536	54	348	132	0	2

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.161--12/20/85
VARIABLES: EMNN, EMNNGONL, EMNNGOOP, EMNNSUEG, EMNN8AOT, EMNNGOCT

TABLE C-12. 10
 NORTH SLOPE MODEL PROJECTIONS
 SALE 97 MEDIUM IMPACT CASE

EMPLOYMENT: NON-RESIDENTS

	TOTAL NON- RESIDENT EMPLOYMENT	FEDERAL AND STATE GOVERNMENT EMPLOYMENT	AND OTHER EMPLOYMENT	OIL CIP INDUSTRY EMPLOYMENT
1980	4472*	211*	45*	4217*
1981	6957	180	120	6657
1982	7595	123	274	7198
1983	8111	97	253	7761
1984	7301	98	294	6909
1985	6373	98	291	5984
1986	7477	98	172	7147
1987	6853	98	112	6642
1988	5391	98	49	5244
1989	5671	98	43	5530
1990	5512	98	7	5407
1991	5289	98	7	5184
1992	5365	98	7"	5260
1993	4493	98	7	4388
1994	4615	98	7	4510
1995	6212	98	7	6107
1996	5393	98	7	5288
1997	4383	98	7	4278
1998	4164	98	7	4059
1999	3998	98	7	3894
2000	3998	98	7	3894
2001	3880	98	7	3775
2002	3130	98	7	3025
2003	3130	98	7	3025
2004	2776	98	7	2671
2005	2776	98	7	2671
2006	2776	98	7	2671
2007	2173	98	7	2068
2008	2173	98	7	2068
2009	2173	98	7	2068
2010	2173	98	7	2068

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.161--12/20/85
 VARIABLES: EMNR, EMNRGONL, EMNRCTGO, AND EMNRBAOI

TABLE C-12.11
NORTH SLOPE MODEL PROJECTIONS
SALE 97 MEDIUM IMPACT CASE

	TOTAL BOROUGH REVENUES (000)	NON- PROPERTY TAX NON- INTEREST REVENUES (000)	PROPERTY TAX REVENUES FOR OPERATIONS (000)	PROPERTY TAX REVENUES FOR DEBT SERVICE (000)	INTEREST EARNINGS (000)
1980	72900**	18200**	21 000**	26300**	7400**
1981	90000**	22000**	26400**	32800**	8800**
1982	189100**	34900**	34800**	75000**	44400**
1983	215400**	37300**	38500**	95200**	44400**
1984	251400**	40200**	33100**	118900**	59200**
1985	302300**	32600**	40600**	184600**	44500**
1986	307041	28415	46808	199717	32100
1987	309553	28039	48621	208894	24000
1988	310393	28296	43141	218456	20500
1989	298124	26185	44216	210322	17400
1990	268646	24859	43721	183166	16900
1991	184355	26001	43408	98545	16400
1992	246688	26380	44137	160272	15900
1993	234512	26624	41366	151122	15400
1994	225038	27255	42244	140638	14900
1995	220589	27698	48415	130076	14400
1996	164300	27251	45828	77322	13900
1997	121326	26652	42448	38826	13400
1998	112476	26251	41970	31355	12900
1999	96117	25809	41698	16210	12400
2000	95319	25602	42082	15735	11900
2001	96840	27905	42214	15320	11400
2002	93899	28126	39958	14915	10900
2003	92910	27765	40186	14560	10400
2004	89732	26954	38733	14145	9900
2005	87681	26094	38417	13770	9400
2006	80641	25292	38024	8425	8900
2007	67451	24023	35029	0	8400
2008	64984	22883	34201	0	7900
2009	62663	21851	33411	0	7400
2010	60389	20854	32636	0	6900

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.I61--12/20/85
VARIABLES: RVTO, RVNPOP, RVPYOP, RVPYDB, RVIT

TABLE C-12.12
 NORTH SLOPE MODEL PROJECTIONS "
 SALE 97 MEDIUM IMPACT CASE

	TOTAL BOROUGH EXPENDI- TURES (000)	OPERATI- ONS EXPENDI- TURES (000)	CON- " STRUC- TION EXPENDI- TURES (000)	DEBT SERVI CE EXPENDI - TURES (000)
1980	158765**	39685**	93000**	26080**
1981	216637**	50020**	131000**	3561 '7**
1982	342192**	63506**	211000**	67686**
1983	456118**	68807**	302000**	95311**
1984	419494**	78544**	211000**	129950**
1985	489655**	102577**	199000**	188078**
1986	420613	96896	124000**	199717
1987	390553	100659	81000	208894
1988	345393	91937	35000	218456
1989	329124	87802	31000	210322
1990	273646	85480	5000	183166
1991	189355	85810	5000	98545
1992	251688	86416	5000	160272
1993	239512	83390	5000	151122
1994	230038	84400	5000	140638
1995	225589	90513	5000	130076
1996	169300	86978	5000	77322
1997	126326	82500	5000	38826
1998	117476	81121	5000	31355
1999	101117	79907	5000	16210
2000	100319	79584	5000	15735
2001	101840	81520	5000	15320
2002	98899	78984	5000	14915
2003	97910	78350	5000	14560
2004	94732	75587	5000	14145
2005	92681	73911	5000	13770
2006	85641	72216	5000	8425
2007	72451	67451	5000	0
2008	69984	64984	5000	0
2009	67663	62663	5000	0
2010	65389	60389	5000	0

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.161--12/20/85
 VARIABLES: SPTO, SPLOGOOP, SPLOGOCT, AND CSDBTO

TABLE C-12.13
NORTH SLOPE MODEL PROJECTIONS
SALE 97 MEDIUM IMPACT CASE

	TOTAL PROPERTY VALUE (000)	TOTAL PROPERTY TAXES (000)	TAX RATE	TAX RATE FOR OPER- ATING REVENUES	TAX RATE FOR OEBT SERVICE REVENUES	LIMIT ON PROPERTY TAX OPER- ATING REVENUES PER CAPITA (000)	ACTUAL PROPERTY TAX OPER- ATING REVENUES PER CAPITA ^a (000)
1980	5061955**	52400**	0.0103**	0.0052**	0.0051	3.196**	3.086
1981	5723582**	59100**	0.0103**	0.0051**	0.0052	3.601**	3.008
1982"	6621652**	109700**	0.0167**	0.0055**	0.0112	3.914**	3.718
1983	8186986**	133700**	0.0164**	0.0041**	0.0123	4.761**	3.869
1984	9996290**	152400**	0.0153**	0.0033**	0.0120	5.119**	3.476
1985	12261420**	225300**	0.0184**	0.0033**	0.0151	5.099**	4.321
1986	13420000	246525	0.0184	0.0035	0.0149	5.099	4.753
1987	14730000	257515	0.0175	0.0033	0.142	5.099	5.099
1988	15560000	261597	0.0168	0.0028	0.0140	5.099	5.099
1989	16148150	254538	0.0158	0.0027	0.0130	5.099	5.099
1990	16336300	226887	0.0139	0.0027	0.0112	5.099	5.099
1991	16034440	141953	0.0089	0.0027	0.0061	5.099	5.099
1992	15722590	204409	0.0130	0.0028	0.0102	5.099	5.099
1993	15380240	192488	0.0125	0.0027	0.0098	5.099	5.099
1994	15178890	182882	0.0120	0.0028	0.0093	5.099	5.099
1995	14949420	178491	0.0119	0.0032	0.0087	5.099	5.099
1996	14449450	123150	0.0085	0.0032	0.0054	5.099	5.099
1997	13909480	81274	0.0058	0.0031	0.0028	5.099	5.099
1998	13289510	73325	0.0055	0.0032	0.0024	5.099	5.099
1999	12599530	57908	0.0046	0.0033	0.0013	5.099	5.099
2000	11799560	57817	0.0049	0.0036	0.0013	5.099	5.099
2001	10999590	57534	0.0052	0.0038	0.0014	5.099	5.099
2002	10199620	54873	0.0054	0.0039	0.0015	5.099	5.099
2003	9399650	54746	0.0058	0.0043	0.0015	5.099	5.099
2004	8599680	52878	0.0061	0.0045	0.0016	5.099	5.099
2005	7799709	52187	0.0067	0.0049	0.0018	5.099	5.099
2006	6999738	46449	0.0066	0.0054	0.0012	5.099	5.099
2007	6199767	35029	0.0057	0.0057	0.0000	5.099	5.099
2008	5399796	34201	0.0063	0.0063	0.0000	5.099	5.099
2009	4599825	33411	0.0073	0.0073	0.0000	5.099	5.099
2010	3799854	32636	0.0086	0.0086	0.0000	5.099	5.099

aBased on total population as defined by model, rather than official state figure used for calculating revenue limit.

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.I61--12/20/85
VARIABLES: VATO, RVPYTO, TARA, TARAOP, TARADB, RVPYOPPC, RVOPPCFI

TABLE C-12.14
NORTH SLOPE MODEL PROJECTIONS
SALE 97 MEDIUM IMPACT CASE

	TOTAL RESIDENT INCOME (000)	TOTAL NATIVE INCOME (000)	TOTAL NON-NATIVE RESIDENT INCOME (000)	PER CAPITA RESIDENT INCOME (000)	PER CAPITA NATIVE INCOME (000)	PER CAPITA NON-NATIVE RESIDENT INCOME (000)
1980	66377**					
1981	72392	47335	25057	17.477	14.486	28.648
1982	81481	54595	26886	18.944	16.235	28.648
1983	87782	56609	31173	19.299	16.360	28.648
1984	90655	59203	31452	19.454	16.621	28.648
1985	104061	61446	42615	20.197	16.766	28.652
1986	91448	57588	33859	18.634	15.458	28.643
1987	88439	54653	33786	17.790	14.413	28.645
1988	77401	47290	30111	15.892	12.383	28.643
1989	74511	45669	28843	15.224	11.747	28.645
1990	69994	42484	27510	14.275	10.775	28.646
1991	70352	42746	27606	14.097	10.615	28.646
1992	70906	43124	27783	13.950	10.485	28.648
1993	68989	42077	26912	13.475	10.065	28.647
19134	69879	42666	27213	13.409	10.012	28.648
1995	73962	45006	28956	13.805	10.353	28.659
1996	71990	44017	27974	13.341	9.959	28.647
1997	68733	42086	26646	12.714	9.403	28.645
1998	67717	41489	26228	12.408	9.134	28.646
1999	66867	41004	25863	12.125	8.891	28.647
2000	66772	41001	25771	11.945	8.741	28.647
2001	68025	41716	26310	11.945	8.733	28.649
2002	65757	40253	25504	11.433	8.280	28.648
2003	65421	40098	25323	11.287	8.163	28.647
2004	63254	38757	24496	11.006	7.923	28.647
2005	62120	38096	24024	10.927	7.861	28.640
2005	60923	37390	23533	10.863	7.811	28.648
2007	57049	34940	22110	10.520	7.513	28.642
2008	55248	33847	21401	10.503	7.499	28.648
2009	53558	32820	20738	10.490	7.490	28.648
2010	51902	31814	20088	10.478	7.482	28.648

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.I61--12/20/85
VARIABLES: IN, INNA, INNN, INPC, INPCNA, AND INPCNN

TABLE C-12.15
 NORTH SLOPE MODEL PROJECTIONS
 SALE 97 MEDIUM IMPACT CASE

	ADULT' NATIVE POPULATION	NATIVE LABOR SUPPLY	NATIVE EMPLOYMENT	NATIVE UNEMPLOY- MENT	NATIVE UNEMPLOY- MENT RATE BEFORE MIGRATION	NATIVE UNEMPLOY- MENT RATE AFTER MIGRATION
1980	1667**	1235**	1173*			
1981	1725	1278	1136	142	0.111	0.107
1982	1789	1326	1326	0	0.000	0.000
1983	1857	1376	1376	0	0.000	0.000
1984	1945	1441	1441	0	0.000	0.000
1985	2020	1497	1497	0	0.000	0.000
1986	2048	1518	1392	126	0.083	0.066
1987	2054	1522	1311	212	0.139	0.124
1988	2033	1506	1113	393	0.261	0.234
1989	2031	1505	1068	437	0.291	0.279
1990	2046	1516	980	536	0.353	0.338
1991	2057	1524	984	540	0.354	0.351
1992	2076	1538	991	547	0.356	0.355
1993	2096	1553	960	593	0.382	0.376
1994	2121	1572	973	599	0.381	0.380
1995	2152	1595	1032	563	0.353	0.353
1996	2160	1600	1003	598	0.373	0.369
1997	2173	1610	949	661	0.410	0.402
1998	2198	1629	931	698	0.429	0.423
1999	2235	1656	915	741	0.448	0.443
2000	2270	1682	912	770	0.458	0.455
2001	2336	1731	928	803	0.464	0.462
2002	2404	1781	885	896	0.503	0.500
2003	2445	1812	879	933	0.515	0.500
2004	2452	1817	844	973	0.535	0.500
2005	2448	1814	828	986	0.543	0.500
2006	2426	1797	812	985	0.548	0.500
2007	2364	1751	752	999	0.571	0.500
2008	2299	1704	728	976	0.573	0.500
2009	2226	1649	706	943	0.572	0.500
2010	2158	1599	684	915	0.572	0.500

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.161--12/20/85
 VARIABLES: PONAAT, LSNA, EMNA, UNNA, UNRANA, UNRANAFI

TABLE C-13.1
 NORTH SLOPE MODEL PROJECTIONS
 SALE 97 HIGH IMPACT CASE

	TOTAL POPULATION	RESIDENT POPULATION	AVERAGE NON- RESIDENT POPULATION
1980	6805*	3827**	2978*
1981	8766	4149	4617
1982	9365	4307	5058
1983	9954	4552	5402
1984	9526	4664	4862
1985	9401	5156	4244
1986	9757	4864	4893
1987	9410	4892	4518
1988	8350	4809	3540
1989	8564	4838	3726
1990	8459	4845	3614
1991	8411	4948	3464
1992	8571	5059	3512
1993	8018	5095	2924
1994	8164	5159	3005
1995	9405	5332	4073
1996	8860	5336	3524
1997	8092	5252	2841
1998	7861	5169	2692
1999	7639	5059	2580
2000	7533	4951	2582
2001	7372	4868	2504
2002	6631	4611	2019
2003	6454	4434	2019
2004	5998	4207	1791
2005	5828	4037	1791
2006	5693	3902	1791
2007	5061	3660	1401
2008	4901	3500	1401
2009	4779	3378	1401
2010	4684	3283	1401

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.162--12/20/85
 VARIABLES: POTO, PORE, AND PONRAV

TABLE C-13.2
 NORTH SLOPE MODEL PROJECTIONS
 SALE 97 HIGH IMPACT CASE

	RESIDENT- POPULATION	RESIDENT NATIVE POPULATION	RESIDENT NON-NATIVE POPULATION
1980	3827*	3208**	619*
1981	4149	3275	875
1982	4307	3370	937
1983	4552	3468	1085
1984	4664	3570	1094
1985	5156	3673	1484
1986	4864	3699	1164
1987	4892	3746	1146
1988	4809	3764	1045
1989	4838	3824	1013
1990	4845	3870	975
1991	4948	3941	1006
1992	5059	4017	1041
1993	5095	4057	1037
1994	5159	4088	1071
1995	5332	4165	1168
1996	5336	4183	1153
1997	5252	4132	1119
1998	5169	4056	1114
1999	5059	3953	1105
2000	4951	3846	1105
2001	4868	3760	1108
2002	4611	3575	1036
2003	4434	3427	1008
2004	4207	3251	956
2005	4037	3107	930
2006	3902	2993	909
2007	3660	2816	845
2008	3500	2678	821
2009	3378	2575	803
2010	3283	2494	789

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP. I62--12/20/85
 VARIABLES: PORE, PONA, AND PONN

TABLE C-13.3
 NORTH SLOPE MODEL PROJECTIONS
 SALE 97 HIGH IMPACT CASE

	NATIVE POPULATION	PRE-SCHOOL NATIVE POPULATION	SCHOOL-AGE NATIVE POPULATION	ADULT NATIVE POPULATION	AGED NATIVE POPULATION
1980	3208**	362**	1042**	1667**	137**
1981	3275	378	1029	1729	139
1982	3370	444	989	1793	144
1983	3468	497	965	1861	146
1984	3570	537	935	1949	148
1985	3673	579	915	2025	154
1986	3699	613	892	2033	162
1987	3746	620	936	2029	161
1988	3764	619	980	2003	163
1989	3824	619	1041	1997	167
1990	3870	615	1075	2007	173
1991	3941	607	1141	2012	181
1992	4017	595	1202	2026	194
1993	4057	576	1252	2033	197
1994	4088	558	1297	2033	201
1995	4165	549	1350	2059	206
1996	4183	538	1394	2041	210
1997	4132	522	1397	2002	211
1998	4056	508	1373	1957	217
1999	3953	495	1339	1909	211
2000	3846	483	1303	1852	208
2001	3760	475	1253	1828	204
2002	3575	460	1168	1755	193
2003	3427	451	1095	1691	189
2004	3251	440	1018	1614	180
2005	3107	431	952	1554	170
2006	2993	426	898	1501	168
2007	2816	412	831	1415	158
2008	2678	399	782	1349	148
2009	2575	387	748	1293	146
2010	2494	377	725	1252	140

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.162--12/20/85
 VARIABLES: PONA, PONA KD, PONA SL, PONA AT, ANO PONA GE

TABLE C-13.4
NORTH SLOPE MODEL PROJECTIONS
SALE 97 HIGH IMPACT CASE

	NATIVE POPULATION	NATIVE MALE POPULATION	NATIVE FEMALE POPULATION	NATIVE NATURAL INCREASE	NATIVE RATE OF NATURAL INCREASE	NATIVE MIGRATION
1980	3208**	1669**	1509**	90	0.028	-29
1981	3275	1726	1549	95	0.029	-0
1982	3370	1768	1602	98	0.029	-0
1983	3468	1812	1656	102	0.029	-0
1984	3570	1857	1713	103	0.029	-0
1985	3673	1903	1770	105	0.029	-79
1986	3699	1909	1790	105	0.029	-58
1987	3746	1926	1820	102	0.027	-83
1988	3764	1929	1835	99	0.026	-39
1989	3824	1953	1871	96	0.025	-50
1990	3870	1970	1900	91	0.024	-20
1991	3941	2000	1941	87	0.022	-11
1992	4017	2033	1984	82	0.020	-42
1993	4057	2048	2010	81	0.020	-51
1994	4088	2057	2031	82	0.020	-5
1995	4165	2090	2074	78	0.019	-64
1996	4183	2094	2089	77	0.019	-129
1997	4132	2064	2069	76	0.019	-154
1998	4056	2020	2035	75	0.019	-179
1999	3953	1965	1989	76	0.019	-183
2000	3846	1907	1939	75	0.020	-161
2001	3760	1860	1901	74	0.020	-259
2002	3575	1764	1811	75	0.021	-224
2003	3427	1687	1740	74	0.022	-249
2004	3251	1597	1654	72	0.022	-216
2005	3107	1523	1584	71	0.023	-185
2006	2993	1464	1529	70	0.023	-247
2007	2816	1374	1441	66	0.024	-204
2008	2678	1305	1374	63	0.023	-166
2009	2575	1252	1323	60	0.023	-141
2010	2494	1210	1284			

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.162--12/20/85
VARIABLES: PONA, PONAMA, PONAFE, NTICNA, NTI , AND MGNA

TABLE C-13.5
 NORTH SLOPE MODEL PROJECTIONS
 SALE 97 HIGH IMPACT CASE

	TOTAL EMPLOYMENT	TOTAL NATIVE" EMPLOYMENT	TOTAL NON-NATIVE RESIDENT EMPLOYMENT	TOTAL NON- RESIDENT EMPLOYMENT
1980	6118**	1173*	473*	4472*
1981	8761**	1160	668	6932
1982	9638**	1328	716	7595
1983	10318**	1379	829	8111
1984	9581**	1444	836	7301
1985	9007	1500	1134	6373
1986	9596	1359	889	7347
1987	8951	1292	876	6784
1988	7272	1158	798	5316
1989	7498	1129	774	5595
1990	7238	1067	745	5426
1991	7031	1062	769	5200
1992	7130	1061	796	5274
1993	6215	1033	792	4390
1994	6359	1029	818	4512
1995	8093	1065	892	6116
1996	7200	1027	881	5292
1997	6097	976	855	4265
1998	5834	942	851	4042
1999	5624	905	844	3874
2000	5595	874	844	3876
2001	5477	871	846	3760
2002	4611	788	791	3032
2003	4572	770	770	3032
2004	4138	719	730	2689
2005	4101	702	710	2689
2006	4071	688	694	2689
2007	3365	616	645	2104
2008	3333	601	627	2104
2009	3307	590	614	2104
2010	3287	580	603	2104

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.I62--12/20/85
 VARIABLES: EMTO, EMNA, EMNN, AND EMNR

TABLE C-13.6
NORTH SLOPE MODEL PROJECTIONS
SALE 97 HIGH IMPACT CASE

EMPLOYMENT: ALL RACES

	TOTAL EMPLOY- MENT	FEDERAL AND STATE GOVERN- MENT EMPLOY- MENT	BOROUGH OPER- ATING EMPLOY- MENT	BOROUGH CIP EMPLOY- MENT	OTHER CIP EMPLOY- MENT	LOCAL SUPPORT EMPLOY- MENT	OIL INDUSTRY EMPLOY- MENT	NON-OIL BASIC EMPLOY- MENT
1980	6118**	291**	795*	322*	71*	393*	4246*	0
1981	8761**	260**	818*	363*	190*	427*	6703*	0
1982	9638**	203**	828*	456*	435*	488*	7228*	0
1983	10318**	177**	970*	457*	395*	528*	7791*	0
1984	9581**	178**	1028*	427*	464*	545*	6939*	0
1985	9007	178	1343	402	438	632	6014	0
1986	9596	178	1268	200	218	540	7191	0
1987	8951	178	1284	131	143	520	6696	0
1988	7272	178	1188	57	62	469	5318	0
1989	7498	178	1149	50	55	457	5609	0
1990	7238	178	1124	2	2	435	5497	0
1991	7031	178	1136	2	2	439	5274	0
1992	7130	178	1152	2	2	446	5351	0
1993	6215	178	1117	2	2	438	4478	0
1994	6359	178	1132	2	2	443	4602	0
1995	8073	178	1221	2	2	470	6200	0
1996	7200	178	1176	2	2	458	5384	0
1997	6097	178	1110	2	2	440	4365	0
1998	5834	178	1080	2	2	430	4142	0
1999	5624	178	1048	2	2	420	3973	0
2000	5595	178	1027	2	2	412	3973	0
2001	5477	178	1031	2	2	412	3852	0
2002	4611	178	963	2	2	379	3087	0
2003	4572	178	933	2	2	370	3087	0
2004	4138	178	882	2	2	348	2726	0
2005	4101	178	854	2	2	339	2726	0
2006	4071	178	832	2	2	332	2726	0
2007	3365	178	770	2	2	303	2110	0
2008	3333	178	745	2	2	295	2110	0
2009	3307	178	726	2	2	289	2110	0
2010	3287	178	711	2	2	284	2110	0

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.162--12/20/85
VARIABLES: EMTO, EMGONL, EMGOOP, EMGOCT, EMCTGO, EMSUEG,
EMBAOI, AND EMBAOT

TABLE C-13.7
NORTH SLOPE MODEL PROJECTIONS
SALE 97 HIGH IMPACT CASE

EMPLOYMENT: NATIVES

	TOTAL EMPLOY- MENT	FEDERAL AND STATE GOVERN- MENT EMPLOY- MENT	BOROUGH OPER- ATING EMPLOY- MENT	BOROUGH CIP EMPLOY- MENT	OTHER CIP EMPLOY- MENT	LOCAL SUPPORT EMPLOY- MENT	OIL INDUSTRY EMPLOY- MENT	NON-OIL BASIC EMPLOY- MENT
1980	1173*	26*	445*	267*	26*	216*	30**	0
1981	1160	26	458	301	70	235	70	0
1982	1328	26	464	378	161	268	30	0
1983	1379	25	529	369	142	283	30	0
1984	1444	25	570	351	170	297	30	0
1985	1500	23	682	303	147	315	30	0
1986	1359	26	710	166	81	297	79	0
1987	1292	26	719	109	53	286	100	0
1988	1158	26	665	47	23	258	139	0
1989	1129	26	644	42	20	251	147	0
1990	1067	26	630	2	1	239	170	0
1991	1062	25	625	2	1	237	173	0
1992	1061	24	622	2	1	236	177	0
1993	1033	23	592	2	1	228	188	0
1994	1029	22	589	2	1	226	189	0
1995	1065	22	623	2	1	235	184	0
1996	1027	21	588	2	1	224	192	0
1997	976	20	544	2	1	211	199	0
1998	942	19	518	2	1	202	200	0
1999	905	18	493	2	1	193	199	0
2000	874	18	472	2	1	186	196	0
2001	871	18	474	2	1	185	191	0
2002	788	18	443	2	1	171	154	0
2003	770	18	429	2	1	166	154	0
2004	719	18	406	2	1	156	136	0
2005	702	18	393	2	1	152	136	0
2006	688	18	382	2	1	149	136	0
2007	616	18	354	2	1	136	106	0
2008	601	18	343	2	1	133	106	0
2009	590	18	334	2	1	130	106	0
2010	580	18	327	2	1	128	106	0

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.I62--12/20/85
VARIABLES: EMNA, EMNAGONL, **EMNAGOOP**, EMNAGOCT, EMNACTGO,
EMNASUEG, EMNAOI, AND EMNABAOT

TABLE C-13.8
NORTH SLOPE MODEL PROJECTIONS
SALE 97 HIGH IMPACT CASE

NATIVE OIL INDUSTRY EMPLOYMENT

	ASSUMED MINIMUM NATIVE OIL EMPLOYMENT	OIL INDUSTRY% MAXIMUM DEMAND FOR NATIVE LABOR	MAXIMUM NATIVE SUPPLY OF LABOR TO OIL INDUSTRY	NATIVE OIL INDUSTRY EMPLOYMENT
1980				
1981	30	335	70	70
1982	30	361	30	30
1983	30	390	30	30
1984	30	347	30	30
1985	30	301	30	30
1986	30	360	79	79
1987	30	335	100	100
1988	30	266	139	139
1989	30	280	147	147
1990	30	275	170	170
1991	30	264	173	173
1992	30	268	177	177
1993	30	224	188	188
1994	30	230	189	189
1995	30	310	184	184
1996	30	269	192	192
1997	30	218	199	199
1998	30	207	200	200
1999	30	199	199	199
2000	30	199	196	196
2001	30	193	191	191
2002	30	154	189	154
2003	30	154	182	154
2004	30	136	176	136
2005	30	136	169	136
2006	30	136	163	136
2007	30	106	157	106
2008	30	106	148	106
2009	30	106	141	106
2010	30	106	136	106

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.I62--12/20/85
 VARIABLES: EMNAOIE, LDNABAOI, LSNAOI, EMNAOI

TABLE C-13.9
 NORTH SLOPE MODEL PROJECTIONS -
 SALE 97 HIGH IMPACT CASE

EMPLOYMENT: NON-NATIVE RESIDENTS

	TOTAL NON-NATIVE EMPLOYMENT	FEDERAL AND STATE GOVERNMENT EMPLOYMENT	BOROUGH OPERATING EMPLOYMENT	LOCAL SUPPORT EMPLOYMENT	NON-OIL BASIC EMPLOYMENT	BOROUGH CIP EMPLOYMENT
1980	473*	54*	350*	216*	0	55*
1981	668	54	360	192	0	62
1982	716	54	364	220	0	78
1983	829	55	441	245	0	88
1984	836	55	458	248	0	76
1985	1134	57	661	317	0	99
1986	889	54	558	243	0	34
1987	876	54	565	234	0	22
1988	798	54	523	211	0	10
1989	774	54	506	206	0	9
1990	745	54	495	196	0	0
1991	769	55	511	202	0	0
1992	796	56	530	209	0	0
1993	792	57	525	210	0	0
1994	818	58	543	217	0	0
1995	892	58	598	235	0	0
1996	881	59	588	234	0	0
1997	855	60	566	229	0	0
1998	851	61	561	228	0	0
1999	844	62	556	227	0	0
2000	844	62	555	227	0	0
2001	846	62	557	227	0	0
2002	791	62	520	208	0	0
2003	770	62	504	203	0	0
2004	730	62	476	191	0	0
2005	710	62	461	186	0	0
2006	694	62	449	182	0	0
2007	645	62	416	167	0	0
2008	627	62	403	162	0	0
2009	614	62	392	159	0	0
2010	603	62	384	156	0	0

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.I62--12/20/85
 VARIABLES: EMNN, EMNNGONL, EMNNGOOP, EMNNSUEG, EMNNBAOT, EMNNGOCT

TABLE C-13.10
 NORTH SLOPE MODEL PROJECTIONS
 SALE 97 HIGH IMPACT CASE

EMPLOYMENT: NON-RESIDENTS

	TOTAL NON- RESIDENT EMPLOYMENT	FEDERAL AND STATE GOVERNMENT EMPLOYMENT	AND OTHER EMPLOYMENT	OIL CIP INDUSTRY EMPLOYMENT
1980	4472*	211*	45*	4217*
1981	6932	180	120	6633
1982	7595	123	274	7198
1983	8111	97	253	7761
1984	7301	98	294	6909
1985	6373	98	291	5984
1986	7347	98	137	7112
1987	6784	98	90	6596
1988	5316	98	39	5179
1989	5595	98	34	5462
1990	5426	98	1	5327
1991	5200	98	1	5101
1992	5274	98	1	5174
1993	4390	98	1	4290
1994	4512	98	1	4413
1995	6116	98	1	6016
1996	5292	98	1	5192
1997	4265	98	1	4166
1998	4042	98	1	3942
1999	3874	98	1	3774
2000	3876	98	1	3777
2001	3760	98	1	3661
2002	3032	98	1	2933
2003	3032	98	1	2933
2004	2689	98	1	2590
2005	2689	98	1	2590
2006	2689	98	1	2590
2007	2104	98	1	2005
2008	2104	98	1	2005
2009	2104	98	1	2005
2010	2104	98	1	2005

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.I62--12/20/85
 VARIABLES: EMNR, EMNRGONL, EMNRCTGO, AND EMNRBAOI

TABLE C-13.11
 NORTH SLOPE MODEL PROJECTIONS
 SALE 97 HIGH IMPACT CASE

	TOTAL BOROUGH REVENUES (000)	NON- PROPERTY TAX NON- INTEREST REVENUES (000)	PROPERTY TAX REVENUES FOR OPERATIONS (000)	PROPERTY TAX REVENUES FOR DEBT SERVICE (000)	INTEREST EARNINGS (000)
1980	72900**	18200**	21 000**	26300**	7400**
1981	90000**	22000**	26400**	32800**	8800**
1982	189100**	34900**	34800**	75000**	44400**
1983	215400**	37300**	38500**	95200**	44400**
1984	251400**	40200**	331 00**	118900**	59200**
1985	302300**	32600**	40600**	184600**	44500**
1986	302349	28160	46808	199717	27664
1987	306948	27592	47982	208894	22480
1988	309210	27940	42574	218456	20240
1989	298125	25881	43666	210322	18256
1990	269039	24564	43132	183166	18176
1991	185307	25777	42889	98545	18096
1992	248246	26255	43703	160272	18016
1993	236434	26492	40884	151122	17936
1994	227106	26983	41630	140638	17856
1995	223378	27568	47958	130076	17776
1996	167145	26948	45180	77322	17696
1997	123594	25890	41262	38826	17616
1998	113839	24864	40084	31355	17536
1999	96291	23675	38950	16210	17456
2000	94198	22677	38410	15735	17376
2001	94061	23853	37591	15320	17296
2002	88489	22549	33809	14915	17216
2003	85844	21241	32908	14560	17136
2004	81518	19732	30585	14145	17056
2005	78989	18528	29715	13770	16976
2006	71944	17597	29027	8425	16896
2007	58839	16215	25808	0	16816
2008	56949	15223	24989	0	16736
2009	55485	14459	24370	0	16656
2010	54278	13820	23883	0	16576

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.I62--12/20/85
 VARIABLES: RVTO, RVNPOP, RVPYOP, RVPYDB, RVIT

TABLE C-13.12
 NORTH SLOPE MODEL PROJECTIONS
 SALE 97 HIGH IMPACT-CASE

	TOTAL BOROUGH EXPENDI- TURES (000)	OPERATIONS EXPENDI- TURES (0009	CON- STRUCTION EXPENDI- TURES (000)	DEBT SERVICE EXPENDI- TURES (000)
1 980	158765**	39685**	93000**	26080**
1981	216637**	50020**	131000**	35617**
1982	342192**	63506**	211000**	67686**
1983	466118**	68807**	302000**	95311**
1984	419494**	78544**	211000**	129950**
1985	489655**	102577**	199000**	188078**
1986	395813	96896	99200	199717
1987	371748	98054	64800	208894
1988	337210	90754	28000	218456
1989	322925	87803	24800	210322
1990	270039	85873	1000	183166
1991	186307	86762	1000	98545
1992	249246	87974	1000	160272
1993	237434	85312	1000	151122
1994	228106	86468	1000	140638
1995	22437\$	93302	1000	130076
1996	168145	89823	1000	77322
1997	124594	84768	1000	38826
1998	114839	82484	1000	31355
1999	97291	80081	1000	16210
2000	95198	78463	1000	15735
2001	95061	78741	1000	15320
2002	89489	73574	1000	14915
2003	86844	71284	1000	14560
2004	82518	67373	1000	14145
2005	79989	65219	1000	13770
2006	72944	63519	1000	8425
2007	59839	58839	1000	0
2008	57949	56949	1000	0
2009	56485	55485	1000	0
2010	55278	54278	1000	0

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.I62--12/20/85
 VARIABLES: SPTO, SPLOGOOP, SPLOGOCT, AND CSDBTO

TABLE C-13.13
NORTH SLOPE MODEL PROJECTIONS
SALE 97 HIGH IMPACT CASE

	TOTAL PROPERTY VALUE (000)	TOTAL PROPERTY TAXES (000)	TAX RATE	TAX RATE FOR OPER- ATING REVENUES	TAX RATE FOR DEBT SERVICE REVENUES	LIMIT ON PROPERTY TAX OPER- ATING REVENUES PER CAPITA (000)	ACTUAL PROPERTY TAX OPER- ATING REVENUES PER CAPITA ^a (000)
1980	5061-955**	52400**	0.0103**	0.0052**	0.0051	3.196**	3.086
1981	5723582**	59100**	0.0103**	0.0051**	0.0052	3.601**	3.008
1982	6621652**	109700**	0.0167**	0.0055**	0.0112	3.914**	3.718
1983	8186986**	133700**	0.0164**	0.0041**	0.0123	4.761**	3.869
1984	9996290**	152400**	0.0153**	0.0033**	0.0120	5.119**	3.476
1985	12261420**	225300**	0.0184**	0.0033**	0.0151	5.099**	4.321
1986	13420000	246525	0.0184	0.0035	0.0149	5.099	4.797
1987	14730000	256876	0.0174	0.0033	0.0142	5.099	5.099
1988	15560000	261030	0.0168	0.0027	0.0140	5.099	5.099
1989	16148150	253988	0.0157	0.0027	0.0130	5.099	5.099
1990	16336300	226298	0.0139	0.0026	0.0112	5.099	5.099
1991	16034440	141434	0.0088	0.0027	0.0061	5.099	5.099
1992	15722590	203975	0.0130	0.0028	0.0102	5.099	5.099
1993	15380240	192006	0.0125	0.0027	0.0098	5.099	5.099
1934	15178890	182268	0.0120	0.0027	0.0093	5.099	5.099
1995	14949420	178034	0.0119	0.0032	0.0087	5.099	5.099
1996	4449450	122502	0.0085	0.0031	0.0054	5.099	5.099
1997	3909480	80088	0.0058	0.0030	0.0028	5.099	5.099
1998	3289510	71439	0.0054	0.0030	0.0024	5.099	5.099
1999	2599530	55160	0.0044	0.0031	0.0013	5.099	5.099
2000	1799560	54145	0.0046	0.0033	0.0013	5.099	5.099
2001	0999590	52911	0.0048	0.0034	0.0014	5.099	5.099
2002	0199620	48724	0.0048	0.0033	0.0015	5.099	5.099
2003	9399650	47468	0.0050	0.0035	0.0015	5.099	5.099
2004	8599680	44730	0.0052	0.0036	0.0016	5.099	5.099
2005	7799709	43485	0.0056	0.0038	0.0018	5.099	5.099
2006	6999738	37452	0.0054	0.0041	0.0012	5.099	5.099
2007	6199767	25808	0.0042	0.0042	0.0000	5.099	5.099
2008	5399796	24989	0.0046	0.0046	0.0000	5.099	5.099
2009	4599825	24370	0.0053	0.0053	0.0000	5.099	5.099
2010	3799854	3883	0.0063	0.0063	0.0000	5.099	5.099

^aBased on total population as defined by model, rather than official state figure used for calculating revenue limit.

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.162--12/20/85
VARIABLES: VATO, RVPYTO, TARA, TARAOP, TARADB, RVPYOPPC, RVOPPCFI

TABLE C-13.14
 NORTH SLOPE MODEL PROJECTIONS
 SALE 97 HIGH IMPACT CASE

	TOTAL RESIDENT INCOME (000)	TOTAL NATIVE INCOME (000)	TOTAL NON-NATIVE RESIDENT INCOME (000]	PER CAPITA RESIDENT INCOME (000)	PER CAPITA NATIVE INCOME (000)	PER CAPITA NON-NATIVE RESIDENT INCOME (000)
1980	66377**					
1981	73318	48261	25057	17.670	14.738	28.648
1982	81513	54669	26844	18.925	16.222	28.648
1983	87805	56734	31070	19.288	16.360	28.648
1984	90681	59335	31346	19.443	16.622	28.648
1985	104089	61583	42506	20.186	16.767	28.652
1986	89677	56324	33352	18.438	15.226	28.643
1987	86727	53893	32834	17.727	14.387	28.645
1988	78792	48868	29924	16.384	12.982	28.644
1989	76921	47887	29034	15.901	12.522	28.647
1990	73558	45618	27940	15.182	11.789	28.644
1991	74370	45543	28827	15.031	11.555	28.649
1992	75454	45623	29832	14.916	11.356	28.648
1993	74335	44624	29711	14.591	10.998	28.648
1994	75192	44502	30690	14.574	10.886	28.649
1995	79443	45990	33453	14.899	11.043	28.648
1996	77631	44592	33040	14.548	10.660	28.647
1997	74665	42606	32060	14.218	10.310	28.644
1998	73094	41195	31899	14.140	10.157	28.644
1999	71353	39688	31665	14.105	10.039	28.645
2000	70020	38360	31660	14.142	9.974	28.647
2001	69842	38114	31728	14.347	10.136	28.644
2002	64407	34735	29672	13.967	9.715	28.647
2003	62712	33842	28870	14.142	9.876	28.647
2004	59048	31662	27386	14.035	9.738	28.646
2005	57444	30815	26629	14.230	9.917	28.649
2006	56180	30146	26033	14.399	10.072	28.649
2007	51383	27188	24195	14.038	9.656	28.647
2008	49960	26429	23531	14.276	9.868	28.649
2009	48864	25846	23018	14.465	10.038	28.649
2010	47967	25392	22595	14.613	10.174	28.648

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.162--12/20/85
 VARIABLES: IN, INNA, INNN, INPC, INPCNA, AND INPCNN

TABLE C-13.15
 NORTH SLOPE MODEL PROJECTIONS
 SALE 97 HIGH IMPACT CASE

	ADULT NATIVE POPULATION	NATIVE LABOR SUPPLY	NATIVE EMPLOYMENT	NATIVE UNEMPLOY- MENT	NATIVE UNEMPLOY- MENT RATE BEFORE MIGRATION	NATIVE UNEMPLOY- MENT RATE AFTER MIGRATION
1980	1667**	1235**	1173*			
1981	1729	1281	1160	121	0.094	0.093
1982	1793	1329	1328	1	0.001	0.001
1983	1861	1379	1379	0	0.000	0.000
1984	1949	1444	1444	0	0.000	0.000
1985	2025	1500	1500	0	0.000	0.000
1986	2033	1506	1359	148	0.098	0.069
1987	2029	1503	1292	211	0.140	0.119
1988	2003	1484	1158	326	0.220	0.190
1989	1997	1480	1129	350	0.237	0.223
1990 "	2007	1487	1067	420	0.283	0.265
1991	2012	1491	1062	429	0.288	0.281
1992	2026	1502	1061	440	0.293	0.289
1993	2033	1506	1033	473	0.314	0.300
1994	2033	1506	1029	477	0.317	0.300
1995	2059	1526	1065	461	0.302	0.300
1996	2041	1513	1027	485	0.321	0.300
1997	2002	1484	976	507	0.342	0.300
1998	1957	1450	942	509	0.351	0.300
1999	1909	1415	905	509	0.360	0.300
2000	1852	1372	874	498	0.363	0.300
2001	1828	1355	871	484	0.357	0.300
2002	1755	1300	788	512	0.394	0.300
2003	1691	1253	770	483	0.385	0.300
2004	1614	1196	719	477	0.399	0.300
2005	1554	1151	702	450	0.391	0.300
2006	1501	1112	688	424	0.381	0.300
2007	1415	1048	616	432	0.412	0.300
2008	1349	999	601	398	0.398	0.300
2009	1293	958	590	368	0.385	0.300
2010	1252	928	580	347	0.375	0.300

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.I62--12/20/85
 VARIABLES: PONAAT, LSNA, EMNA, UNNA, UNRANA, UNRANAFI

TABLE C-14.1
 NORTH SLOPE MODEL PROJECTIONS
 SALE 109 MEDIUM IMPACT CASE

	TOTAL POPULATION	RESIDENT POPULATION	AVERAGE NON- RESIDENT POPULATION
1981	8776	4142	4633
1982	9360	4301	5058
1983	9950	4548	5402
1984	9523	4660	4863
1985	9397	5152	4245
1986	9847	4908	4940
1987	9535	4971	4564
1988	8270	4857	3413
1989	8434	4877	3557
1990	8454	4894	3560
1991	8691	5002	3688
1992	8932	5103	3830
1993	8444	5148	3296
1994	8466	5229	3238
1995	8437	5300	3137
1996	8919	5404	3516
1997	10499	5563	4936
1998	11294	5681	5612
1999	8875	5575	3300
2000	9256	5670	3586
2001	9268	5775	3493
2002	8890	5819	3070
2003	8998	5907	3092
2004	8832	5975	2856
2005	8917	6061	2856
2006	8970	6114	2856
200-?	8496	6042	2454
2008	8430	5976	2454
2009	8358	5904	2454
2010	8276	5821	2454

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.181--1/30/86
 VARIABLES: POTO, PORE, ANO PONRAV

TABLE C-14.2
 NORTH SLOPE MODEL PROJECTIONS
 SALE 109 MEDIUM IMPACT CASE

	RESIDENT POPULATION	RESIDENT NATIVE POPULATION	RESIDENT NON-NATIVE POPULATION
1981	4142	3268	875
1982	4301	3363	938
1983	4548	3460	1088
1984	4660	3562	1098
1985	5152	3665	1487
1986	4908	3726	1182
1987	4971	3792	1179
1988	4857	3816	1041
1989	4877	3883	994
1990	4894	3940	954
1991	5002	4029	973
1992	5103	4118	985
1993	5148	4189	959
1994	5229	4268	961
1995	5300	4345	955
1996	5404	4431	973
1997	5563	4514	1049
1998	5681	4598	1083
1999	5575	4630	945
2000	5670	4711	959
2001	5775	4797	978
2002	5819	4866	953
2003	5907	4955	952
2004	5975	5041	934
2005	6061	5130	932
2006	6114	5187	927
2007	6042	5154	887
2008	5976	5105	872
2009	5904	5048	855
2010	5821	4983	839

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.181--1/30/86
 VARIABLES: PORE, PONA, AND PONN

TABLE C-14.3
 NORTH SLOPE MODEL PROJECTIONS
 SALE 109 MEDIUM IMPACT CASE

	NATIVE POPULATION	PRE-SCHOOL NATIVE POPULATION	SCHOOL-AGE NATIVE POPULATION	ADULT NATIVE POPULATION	AGED NATIVE POPULATION
1981	3268	377	1027	1725	139
1982	3363	443	987	1789	144
1983	3460	496	962	1857	145
1984	3562	536	933	1945	148
1985	3665	578	913	2020	154
1986	3726	616	898	2048	163
1987	3792	626	948	2054	163
1988	3816	626	994	2031	165
1989	3883	627	1058	2029	169
1990	3940	624	1095	2044	176
1991	4029	619	1167	2058	185
1992	4118	609	1231	2079	199
1993	4189	593	1292	2101	204
1994	4268	580	1354	2125	210
1995	4345	571	1408	2151	216
1996	4431	566	1477	2165	222
1997	4514	564	1527	2192	231
1998	4598	567	1558	2226	247
1999	4630	568	1570	2245	248
2000	4711	575	1600	2280	257
2001	4797	587	1602	2346	262
2002	4866	603	1593	2406	265
2003	4955	626	1585	2467	277
2004	5041	651	1579	2529	283
2005	5130	678	1571	2596	285
2006	5187	704	1553	2634	295
2007	5154	721	1512	2627	294
2008	5105	731	1476	2610	288
2009	5048	737	1446	2574	291
2010	4983	737	1422	2540	284

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.181--1/30/86
 VARIABLES: PONA, PONAkd, PONAsl, PONAAT, AND PONAAGE

TABLE C-14.4
 NORTHSLOPE MODEL PROJECTIONS
 SALE 109 MEDIUM IMPACT CASE

	NATIVE POPULATION	NATIVE MALE POPULATION	NATIVE FEMALE POPULATION	NATIVE NATURAL INCREASE	NATIVE RATE OF NATURAL INCREASE	NATIVE MIGRATION
1981	3268	1722	1545	90	0.028	-36
1982	3363	1764	1598	95	0.029	-0
1983	3460	1808	1653	98	0.029	-0
1984	3562	1853	1709	102	0.029	-0
1985	3665	1899	1766	103	0.029	0
1986	3726	1923	1802	105	0.029	-45
1987	3792	1950	1842	106	0.028	-40
1988	3816	1955	1861	103	0.027	-79
1989	3883	1983	1900	100	0.026	-33
1990	3940	2006	1934	97	0.025	-41
1991	4029	2045	1984	93	0.024	-4
1992	4118	2084	2034	89	0.022	-0
1993	4189	2114	2075	84	0.020	-12
1994	4268	2148	2120	84	0.020	-5
1995	4345	2181	2164	86	0.020	-9
1996	4431	2219	2212	86	0.020	-0
1997	4514	2255	2259	83	0.019	-0
1998	4598	2291	2307	84	0.019	-0
1999	4630	2302	2329	87	0.019	-55
2000	4711	2336	2375	89	0.019	-8
2001	4797	2373	2424	93	0.020	-7
2002	4866	2402	2464	96	0.020	-26
2003	4955	2440	2514	103	0.021	-15
2004	5041	2478	2563	108	0.022	-22
2005	5130	2516	2614	113	0.022	-25
2006	5187	2539	2648	119	0.023	-62
2007	5154	2518	2636	122	0.024	-155
2008	5105	2489	2616	123	0.024	-173
2009	5048	2456	2592	122	0.024	-178
2010	4983	2420	2563	120	0.024	-185

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.181--1/30/86
 VARIABLES: PONA, PONAMA, PONAFA, NTICNA, NTICNARA, AND MGNA

TABLE C-14.5
 NORTH SLOPE MODEL PROJECTIONS
 SALE 109 MEDIUM IMPACT CASE

	TOTAL EMPLOYMENT	TOTAL NATIVE EMPLOYMENT	TOTAL NON-NATIVE RESIDENT EMPLOYMENT	TOTAL NON- RESIDENT EMPLOYMENT
1981	8761	1136	668	6957
1982	9638	1326	717	7595
1983	10318	1376	831	8111
1984	9581	1441	839	7301
1985	9006	1497	1136	6373
1986	9711	1392	903	7417
1987	9065	1311	901	6853
1988	7023	1104	795	5124
1989	7156	1056	759	5340
1990	7048	975	729	5345
1991	7274	992	743	5538
1992	7507	1004	752	5750
1993	6664	983	732	4949
1994	6582	987	734	4862
1995	6419	979	729	4711
1996	7023	1001	744	5279
1997	9282	1068	801	7412
1998	10355	1100	828	8427
1999	6652	975	722	4955
2000	7114	997	733	5384
2001	7005	1013	747	5245
2002	6313	976	728	4610
2003	6345	975	727	4642
2004	5954	951	714	4289
2005	5949	949	712	4289
2006	5941	944	708	4289
2007	5257	894	678	3685
2008	5229	879	666	3685
2009	5202	863	654	3685
2010	5173	847	641	3685

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.181--1/30/86
 VARIABLES: EMTO, EMNA, EMNN, ANO EMNR

TABLE C-14.6
NORTH SLOPE MODEL PROJECTIONS
SALE 109 MEDIUM IMPACT CASE

EMPLOYMENT: ALL RACES

	TOTAL EMPLOY- MENT	FEDERAL AND STATE GOVERN- MENT EMPLOY- MENT	BOROUGH OPER- ATING EMPLOY- MENT	BOROUGH CIP EMPLOY- MENT	OTHER CIP EMPLOY- MENT	LOCAL SUPPORT EMPLOY- MENT	OIL INDUSTRY EMPLOY- MENT	NON-OIL BASIC EMPLOY- MENT
1981	\$761	260	818	363	190	427	6703	0
1982	9638	203	828	456	435	488	7228	0
1983	10318	177	970	457	395	528	7791	0
1984	9581	178	1028	427	464	545	6939	0
1985	9006	178	1343	402	438	632	6014	0
1986	9711	178	1268	250	273	551	7191	0
1987	9065	178	1318	164	178	531	6636	0
1988	7023	178	1190	71	77	456	5052	0
1989	7156	178	1132	63	68	436	5279	0
1990	7048	178	1110	10	11	409	5330	0
1991	7274	178	1136	10	11	417	5522	0
1992	7507	178	1151	10	11	421	5735	0
1993	6664	178	1116	10	11	412	4938	0
1994	6582	178	1118	10	11	413	4852	0
1995	6419	178	1110	10	11	410	4700	0
1996	7023	178	1134	10	11	418	5271	0
1997	9282	178	1235	10	11	449	7399	0
1998	10355	178	1280	10	11	463	8413	0
1999	6652	178	1096	10	11	407	4949	0
2000	7114	178	1114	10	11	415	5386	0
2001	7005	178	1138	10	11	422	5245	0
2002	6313	178	1109	10	11	409	4597	0
2003	6345	178	1107	10	11	409	4630	0
2004	5954	178	1086	10	11	400	4269	0
2005	5949	178	1082	10	11	399	4269	0
2006	5941	178	1076	10	11	397	4269	0
2007	5257	178	1027	10	11	377	3653	0
2008	5229	178	1006	10	11	371	3653	0
2009	5202	178	985	10	11	364	3653	0
2010	5173	178	964	10	11	357	3653	0

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.I81--1/30/86
VARIABLES: EMTO, EMGNL, EMGOOP, EMGOCT, EMCTGO, EMSUEG,
EMBAOI, AND EMBAOT

TABLE C-14.7
 NORTH SLOPE MODEL PROJECTIONS
 SALE 109 MEDIUM IMPACT CASE

EMPLOYMENT: NATIVES

	TOTAL EMPLOY- MENT	FEDERAL AND STATE GOVERN- MENT EMPLOY- MENT	BOROUGH OPER- ATING EMPLOY- MENT	BOROUGH CIP EMPLOY- MENT	OTHER CIP EMPLOY- MENT	LOCAL SUPPORT EMPLOY- MENT	OIL INDUSTRY EMPLOY- MENT	NON-OIL BASIC EMPLOY- MENT
1981	1136	26	458	301	70	235	46	0
1982	1326	26	463	378	161	268	30	0
1983	1376	25	528	369	142	282	30	0
1984	1441	25	569	350	170	296	30	0
1985	1497	23	681	302	147	315	30	0
1986	1392	26	710	208	101	303	44	0
1987	1311	26	738	136	66	292	54	0
1988	1104	26	666	59	28	251	75	0
1989	1056	26	634	52	25	240	80	0
1990	975	26	622	8	4	225	90	0
1991	992	26	636	8	4	229	89	0
1992	1004	26	645	8	4	232	90	0
1993	983	26	625	8	4	226	94	0
1994	987	26	626	8	4	227	95	0
1995	979	26	622	8	4	226	94	0
1996	1001	26	635	8	4	230	97	0
1997	1068	26	692	8	4	247	92	0
1998	1100	26	717	8	4	254	91	0
1999	975	26	614	8	4	224	99	0
2000	997	26	624	8	4	228	107	0
2001	1013	26	637	8	4	232	105	0
2002	976	26	621	8	4	225	92	0
2003	975	26	620	8	4	225	93	0
2004	951	26	608	8	4	220	85	0
2005	949	26	606	8	4	219	85	0
2006	944	26	603	8	4	218	85	0
2007	894	26	575	8	4	207	73	0
2008	879	26	564	8	4	204	73	0
2009	863	26	552	8	4	200	73	0
2010	847	26	540	8	4	196	73	0

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.I81--1/30/86
 VARIABLES: EMNA, EMNAGONL, EMNAGOOP, EMNAGOCT, EMNACTGO,
 EMNASUEG, EMNAOI, AND EMNABAOT

TABLE C-14.8
 NORTH SLOPE MODEL PROJECTIONS
 SALE 109 MEDIUM IMPACT CASE

NATIVE OIL INDUSTRY EMPLOYMENT

	ASSUMED MINIMUM NATIVE OIL EMPLOYMENT'	OIL INDUSTRY MAXIMUM DEMAND FOR NATIVE LABOR	MAXIMUM NATIVE SUPPLY OF LABOR TO OIL INDUSTRY	OF NATIVE OIL INDUSTRY EMPLOYMENT'
1981	30	134	46	46
1982	30	145	30	30
1983	30	156	30	30
1984	30	139	30	30
1985	30	120	30	30
1986	30	144	44	44
1987	30	134	54	54
1988	30	101	75	75
1989	30	106	80	80
1990	30	107	90	90
1991	30	110	89	89
1992	30	115	90	90
1993	30	99	94	94
1994	30	97	95	95
1995	30	94	98	94
1996	30	105	97	97
1997	30	148	92	92
1998	30	168	91	91
1999	30	99	106	99
2000	30	108	10-9	107
2001	30	105	110	105
2002	30	92	117	92
2003	30	93	122	93
2004	30	85	128	85
2005	30	85	133	85
2006	30	85	136	85
2007	30	73	140	73
2008	30	73	140	73
2009	30	73	139	73
2010	30	73	138	73

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.I81--1/30/86
 VARIABLES: EMNAOIEX, LDNABAOI, LSNAOI, EMNAOI

TABLE C-14.9.
NORTH SLOPE MODEL PROJECTIONS
SALE 109 MEDIUM IMPACT CASE

EMPLOYMENT: NON-NATIVE RESIDENTS

	TOTAL NON-NATIVE EMPLOYMENT	FEDERAL AND STATE GOVERNMENT EMPLOYMENT	BOROUGH OPERATING EMPLOYMENT	LOCAL SUPPORT EMPLOYMENT	NON-OIL BASIC EMPLOYMENT	BOROUGH CIP EMPLOYMENT
1981	668	54	360	192	0	62
1982	717	54	365	220	0	78
1983	831	55	442	246	0	88
1984	839	55	459	249	0	77
1985	1136	57	662	317	0	100
1986	903	54	558	248	0	43
1987	901	54	580	239	0	28
1988	795	54	523	205	0	12
1989	759	54	498	196	0	11
1990	729	54	489	184	0	2
1991	743	54	500	187	0	2
1992	752	54	506	190	0	2
1993	732	54	491	185	0	2
1994	734	54	492	186	0	2
1995	729	54	489	185	0	2
1996	744	54	499	188	0	2
1997	801	54	543	202	0	2
1998	828	54	563	208	0	2
1999	722	54	482	183	0	2
2000	733	54	490	187	0	2
2001	747	54	501	190	0	2
2002	728	54	488	184	0	2
2003	727	54	487	184	0	2
2004	714	54	478	180	0	2
2005	712	54	476	179	0	2
2006	708	54	474	178	0	2
2007	678	54	452	170	0	2
2008	666	54	443	167	0	2
2009	654	54	434	164	0	2
2010	641	54	424	161	0	2

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.I81--1/30/86
VARIABLES: EMNN, EMNNGONL, EMNNGOOP, EMNNSUEG, EMNNBAOT, EMNNGOCT

TABLE C-14.10
 NORTH SLOPE MODEL PROJECTIONS
 - SALE 109 MEDIUM IMPACT CASE

EMPLOYMENT: NON-RESIDENTS

	TOTAL NON- RESIDENT EMPLOYMENT	FEDERAL AND STATE GOVERNMENT EMPLOYMENT	" OTHER EMPLOYMENT	OIL CIP INDUSTRY EMPLOYMENT
1981	6957	180	120	6657
1982	7595	123	274	7198
1983	8111	97	253	7761
1984	7301	98	294	6909
1985	6373	98	291	5984
1986	7417	98	172	7147
1987	6853	98	112	6642
1988	5124	98	49	4977
1989	5340	98	43	5199
1990	5345	98	7	5240
1991	5538	98	7	5433
1992	5750	98	7	5645
1993	4949	98	7	4844
1994	4862	98	7	4757
1995	4711	98	7	4606
1996	5279	98	7	5174
1997	7412	98	7	7307
1998	8427	98	7	8322
1999	4955	98	7	4850
2000	5384	98	7	5279
2001	5245	98	7	5140
2002	4610	98	7	4505
2003	4642	98	7	4537
2004	4289	98	7	4184
2005	4289	98	7	4184
2006	4289	98	7	4184
2007	3685	98	7	3580
2008	3685	98	7	3580
2009	3685	98	7	3580
2010	3685	98	7	3580

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.I81--1/30/86
 VARIABLES: EMNR, EMNRGONL, EMNRCTGO, ANI) EMNRBAOI

TABLE C-14.11
 NORTH SLOPE MODEL PROJECTIONS "
 SALE 109 MEDIUM IMPACT CASE

	TOTAL BOROUGH REVENUES (000)	NON- PROPERTY TAX NON- INTEREST REVENUES (000)	PROPERTY TAX REVENUES FOR OPERATIONS (000)	PROPERTY TAX REVENUES FOR DEBT SERVICE (000)	INTEREST EARNINGS (000)
1981	90000	22000	26400	32800	8800
1982	189100	34900	34800	75000	44400
1983	215400	37300	38500	" 95200	44400
1984	251400	40200	33100	118900	59200
1985	302300	32600	40600	184600	44500
1986	307041	28415	46808	199717	32100
1987	309553	28039	48621	208894	24000
1988	309342	28219	42167	218456	20500
1989	296820	26094	43005	210322	17400
1990	267984	24812	43105	183166	16900
1991	185320	26062	44313	98545	16400
1992	248201	26483	45546	160272	15900
1993	236348	26769	43056	151122	15400
1994	226054	27346	43171	140638	14900
1995	214895	27398	43020	130076	14400
1996	163989	27288	45479	77322	13900
1997	133184	27423	53535	38826	13400
1998	129167	27327	57586	31355	12900
1999	99957	26092	45255	16210	12400
2000	100803	25971	47197	15735	11900
2001	102275	28297	47258	15320	11400
2002	99599	28456	45328	14915	10900
2003	99135	28292	45882	14560	10400
2004	97102	28025	45032	14145	9900
2005	96461	27821	45470	13770	9400
2006	90637	27574	45739	8425	8900
2007	78483	26764	43319	0	8400
2008	76881	25996	42985	0	7900
2009	75284	25268	42616	0	7400
2010	73606	24508	42197	0	6900

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.I81--1/30/86
 VARIABLES: RVTO, RVNPOP, RVPYOP, RVPYDB, RVIT

TABLE C-14.12
 NORTH SLOPE, MODEL PROJECTIONS
 SALE 109 MEDIUM IMPACT CASE

	TOTAL BOROUGH EXPENDI- TURES (000)	OPERATIONS EXPENDI- TURES (000)	CON- STRUCTION EXPENDI- TURES (000)	DEBT SERVI CE EXPENDI- TURES (000)
1981	-216637	50020	131000	35617
1982	342192	63506	211000	67686
1983	466118	68807	302000	95311
1984	419494	78544	211000	129950
1985	489655	102577	199000	188078
1986	420613	96896	124000	199717
1987	390553	100659	81000	208894
1988	344342	90886	35000	218456
1989	327820	86498	31000	210322
1990	272984	84818	5000	183166
1991	190320	86775	5000	98545
1992	253201	87929	5000	160272
1993	241348	85226	5000	151122
1994	231054	85416	5000	140638
1995	219895	84819	5000	130076
1996	168989	86667	5000	77322
1997	138184	94358	5000	38826
1998	134167	97812	5000	31355
1999	104957	83747	5000	16210
2000	105803	85068	5000	15735
2001	107275	86955	5000	15320
2002	104599	84684	5000	14915
2003	104135	84575	5000	14560
2004	102102	82957	5000	14145
2005	101461	82691	5000	13770
2006	95637	82212	5000	8425
2007	83483	78483	5000	0
2008	81881	76881	5000	0
2009	80284	75284	5000	0
2010	78606	73606	5000	0

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.181--1/30/86
 VARIABLES: SPTO, SPLOGOOP, SPLOGOCT, AND CSDBTO

"TABLE C-14.13
NORTH SLOPE MODEL PROJECTIONS
SALE 109 MEDIUM IMPACT CASE

	TOTAL PROPERTY VALUE (000)	TOTAL PROPERTY TAXES (000)	TAX RATE	TAX RATE FOR OPER- ATING REVENUES	TAX RATE FOR DEBT SERVICE REVENUES	LIMIT ON PROPERTY TAX OPER- ATING REVENUES PER CAPITA (000)	ACTUAL PROPERTY TAX OPER- ATING REVENUES PER CAPITA ^a (000)
1981	5723582	59100	0.0103	0.0051	0.0052	3.601	3.008
1982	6621652	109700	0.0167	0.0055	0.0112	3.914	3.718
1983	8186986	233700	0.0164	0.0041	0.0123	4.767	3.869
1984	9996290	152400	0.0153	0.0033	0.0120	5.119	3.476
1985	12261420	225300	0.0184	0.0033	0.0151	5.099	4.321
1986	13420000	246525	0.0184	0.0035	0.0149	5.099	4.753
1987	74730000	257515	0.0175	0.0033	0.0142	5.099	5.099
1988	15550000	260623	0.0168	0.0027	0.0140	5.099	5.099
1989	16138670	253327	0.0157	0.0027	0.0130	5.099	5.099
1990	16327330	226271	0.0139	0.0026	0.0112	5.099	5.099
1991	16026000	142858	0.0089	0.0028	0.0061	5.099	5.099
1992	15714670	205818	0.0131	0.0029	0.0102	5.099	5.099
1993	15373330	194178	0.0126	0.0028	0.0098	5.099	5.099
1994	15012000	183809	0.0122	0.0029	0.0094	5.099	5.099
1995	14930670	173096	0.0116	0.0029	0.0087	5.099	5.099
1996	14814120	122801	0.0083	0.0031	0.0052	5.099	5.099
1997	14640290	92361	0.0063	0.0037	0.0027	5.099	5.099
1998	14378370	88941	0.0062	0.0040	0.0022	5.099	5.099
1999	13636960	61465	0.0045	0.0033	0.0012	5.099	5.099
2000	12785540	62932	0.0049	0.0037	0.0012	5.099	5.099
2001	11934120	62578	0.0052	0.0040	0.0013	5.099	5.099
2002	11082700	60243	0.0054	0.0041	0.0013	5.099	5.099
2003	10231280	60442	0.0059	0.0045	0.0014	5.099	5.099
2004	9379860	59177	0.0063	0.0048	0.0015	5.099	5.099
2005	8528443	59240	0.0069	0.0053	0.0016	5.099	5.099
2006	7677024	54164	0.0071	0.0060	0.0011	5.099	5.099
2007	6825606	43319	0.0063	0.0063	0.0000	5.099	5.099
2008	5974187	42985	0.0072	0.0072	0.0000	5.099	5.099
2009	5122768	42616	0.0083	0.0083	0.0000	5.099	5.099
2010	4271350	42197	0.0099	0.0099	0.0000	5.099	5.099

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.I81--1/30/86
VARIABLES: VATO, RVPYTO, TARA, TARAOP, TARADB, RVPYOPPC, RVOPPCFI

TABLE C-14.74
 NORTH SLOPE MODEL PROJECTIONS
 SALE 109 MEDIUM IMPACT CASE

	TOTAL RESIDENT INCOME (000)	TOTAL NATIVE INCOME (000)	TOTAL NON-NATIVE RESIDENT INCOME (000)	PER CAPITA RESIDENT INCOME (000)	PER CAPITA NATIVE INCOME (000)	PER CAPITA NON-NATIVE RESIDENT INCOME (000)
1981	72392	47335	25057	17.477	14.486	28.648
1982	81481	54595	26886	18.944	16.235	28.648
1983	87782	56609	31173	19.299	16.360	28.648
1984	90655	59203	31452	19.454	16.621	28.648
1985	104061	61446	42615	20.197	16.766	28.652
1986	91448	57588	33859	18.634	15.458	28.643
1987	88439	54653	33786	17.790	14.413	28.645
1988	76761	46946	29816	15.804	12.302	28.643
1989	73716	45240	28476	15.114	11.650	28.644
1990	69589	42265	27324	14.219	10.727	28.644
1991	70936	43059	27876	14.180	10.687	28.648
1992	71830	43621	28208	14.077	10.593	28.648
1993	70394	42935	27459	13.674	10.248	28.647
1994	70708	43186	27521	13.523	10.119	28.648
1995	70369	43026	27344	13.278	9.902	28.647
1996	71828	43945	27883	13.293	9.919	28.658
1997	76657	46603	30054	13.781	10.325	28.653
1998	78971	47935	31036	13.900	10.425	28.654
1999	70340	43275	27066	12.616	9.346	28.644
2000	71697	44214	27483	12.644	9.385	28.649
2001	72940	44929	28011	12.631	9.366	28.648
2002	70937	43643	27295	12.190	8.968	28.646
2003	71024	43759	27265	12.025	8.832	28.649
2004	69752	42986	26767	11.673	8.527	28.646
2005	69707	43017	26690	11.500	8.386	28.648
2006	69481	42928	26553	11.364	8.276	28.648
2007	66420	40997	25423	10.994	7.954	28.647
2008	65315	40349	24966	10.929	7.905	28.647
2009	64198	39690	24508	10.874	7.862	28.648
2010	63019	38991	24028	10.825	7.825	28.648

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.181--1/30/86
 VARIABLES: IN, INNA, INNN, INPC, INPCNA, AND INPCNN

TABLE C-14.15
 NORTH SLOPE MODEL PROJECTIONS
 SALE 109 MEDIUM IMPACT CASE

	ADULT NATIVE POPULATION	NATIVE LABOR SUPPLY	NATIVE EMPLOYMENT	NATIVE UNEMPLOY- MENT	NATIVE UNEMPLOY- MENT RATE BEFORE MI GRATION	NATIVE UNEMPLOY- MENT RATE AFTER MI GRATION
1981	1725	1278	1136	142	0.111	0.107
1982	1789	1326	1326	0	0.000	0.000
1983	1857	1376	1376	0	0.000	0.000
1984	1945	1441	1441	0	0.000	0.000
1985	2020	1497	1497	0	0.000	0.000
1986	2048	1518	1392	126	0.083	0.066
1987	2054	1522	1311	212	0.139	0.124
1988	2031	1505	1104	401	0.266	0.238
1989	2029	1503	1056	447	0.297	0.285
1990	2044	1515	975	540	0.357	0.342
1991	2058	1525	992	533	0.349	0.348
1992	2079	1540	1004	536	0.348	0.348
1993	2101	1557	983	574	0.369	0.364
1994	2125	1574	987	588	0.373	0.372
1995	2151	1594	979	615	0.386	0.383
1996	2165	1605	1001	604	0.376	0.376
1997	2192	1624	1068	556	0.342	0.342
1998	2226	1649	1100	549	0.333	0.333
1999	2245	1663	975	688	0.414	0.398
2000	2280	1689	997	692	0.410	0.407
2001	2346	1738	1013	726	0.417	0.415
2002	2406	1783	976	808	0.453	0.445
2003	2467	1828	975	853	0.466	0.462
2004	2529	1874	951	923	0.492	0.486
2005	2596	1923	949	974	0.507	0.500
2006	2634	1952	944	1008	0.516	0.500
2007	2627	1947	894	1053	0.541	0.500
2008	2610	1934	879	1055	0.546	0.500
2009	2574	1908	863	1044	0.547	0.500
2010	2540	1882	847	1035	0.550	0.500

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.181--1/30/86
 VARIABLES: PONAAT, LSNA, EMNA, UNNA, UNRANA, UNRANAFI

TABLE C-15.1
 NORTH SLOPE MODEL PROJECTIONS
 SALE 109 HIGH IMPACT CASE

	TOTAL POPULATION	RESIDENT POPULATION	AVERAGE NON- RESIDENT POPULATION
1981	8766	4149	4617
1982	9365	4307	5058
1983	9954	4552	5402
1984	9526	4664	4862
1985	9401	5156	4244
1986	9757	4864	4893
1987	9410	4892	4518
1988	8157	4795	3362
1989	8324	4819	3505
1990	8336	4834	3502
1991	8590	4960	3630
1992	8850	5080	3770
1993	8372	5141	3231
1994	8378	5206	3172
1995	8300	5232	3068
1996	8742	5292	3450
1997	10361	5488	4873
1998	11188	5641	5547
1999	8617	5394	3223
2000	8846	5329	3517
2001	8690	5264	3426
2002	8115	5122	2993
2003	8029	5013	3017
2004	7650	4873	2777
2005	7532	4753	2779
2006	7427	4645	2781
2007	6850	4472	2377
2008	6732	4355	2377
2009	6637	4257	2380
2010	6551	4168	2383

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.I82 --1/30/86
 VARIABLES: POTO, PORE, AND PONRAV

TABLE C- 5.2
 NSLIP SLOPE MODEL PROJECTIONS
 SALE 109 HIGH IMPACT CASE

	RESIDENT POPULATION	RESIDENT NATIVE POPULATION	RESIDENT NON-NATIVE POPULATION
1981	4149	3275	875
1982	4307	3370	937
1983	4552	3468	1085
1984	4664	3570	1094
1985	5156	3673	1484
1986	4864	3699	1164
1987	4892	3746	1146
1988	4795	3761	1035
1989	4819	3818	1001
1990	4834	3866	969
1991	4960	3944	1016
1992	5080	4023	1057
1993	5141	4082	1058
1994	5206	4120	1086
1995	5232	4131	1101
1996	5292	4149	1144
1997	5488	4226	1262
1998	5641	4305	1336
1999	5394	4208	1187
2000	5329	4119	1210
2001	5264	4049	1215
2002	5122	3952	1170
2003	5013	3862	1150
2004	4873	3761	1112
2005	4753	3664	1090
2006	4645	3575	1071
2007	4472	3454	1018
2008	4355	3356	999
2009	4257	3275	982
2010	4168	3202	967

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP. I82--1/30/86
 VARIABLES: FORE, PONA, AND PONN

TABLE C-15.3
NORTH SLOPE MODEL PROJECTIONS
SALE 109 HIGH IMPACT CASE

	NATIVE POPULATION	PRE-SCHOOL NATIVE POPULATION	SCHOOL-AGE NATIVE POPULATION	ADULT NATIVE POPULATION	AGED NATIVE POPULATION
1981	3275	378	1029	1729	139
1982	3370	444	989	1793	144
1983	3468	497	965	1861	146
1984	3570	537	935	1949	148
1985	3673	579	915	2025	154
1986	3699	613	892	2033	162
1987	3746	620	936	2029	161
1988	3761	618	979	2001	163
1989	3818	619	1040	1994	166
1990	3866	615	1074	2005	173
1991	3944	608	1142	2013	181
1992	4023	596	1204	2029	194
1993	4082	578	1260	2045	198
1994	4120	561	1308	2049	202
1995	4131	545	1339	2042	205
1996	4149	534	1383	2024	208
1997	4226	531	1430	2049	216
1998	4305	534	1459	2081	231
1999	4208	521	1427	2035	225
2000	4119	510	1399	1987	224
2001	4049	504	1353	1972	220
2002	3952	501	1292	1944	214
2003	3862	504	1233	1911	214
2004	3761	502	1177	1873	209
2005	3664	501	1122	1839	202
2006	3575	501	1072	1800	201
2007	3454	497	1018	1745	195
2008	3356	492	977	1700	187
2009	3275	486	947	1654	187
2010	3202	479	926	1616	180

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.182--1/30/86
VARIABLES: PONA, **PONAKD**, **PONASL**, PONAAT, AND PONAGE

TABLE C-15.4
NORTH SLOPE MODEL PROJECTIONS
SALE 109 HIGH IMPACT CASE

	NATIVE POPULATION	NATIVE MALE POPULATION	NATIVE FEMALE POPULATION	NATIVE NATURAL INCREASE	NATIVE RATE OF NATURAL INCREASE	NATIVE MIGRATION
1981	3275	1726	1549	90	0.028	-29
1982	3370	1768	1602	95	0.029	-0
1983	3468	1812	1656	98	0.029	-0
1984	3570	1857	1713	102	0.029	-0
1985	3673	1903	1770	103	0.029	-0
1986	3699	1909	1730	105	0.029	-79
1987	3746	1926	1820	105	0.028	-58
1988	3761	1927	1834	102	0.027	-87
1989	3818	1950	1869	99	0.026	-41
1990	3866	1968	1898	96	0.025	-49
1991	3944	2002	1942	91	0.024	-13
1992	4023	2036	1987	87	0.022	-7
1993	4082	2060	2022	82	0.020	-23
1994	4120	2074	2047	82	0.020	-44
1995	4131	2073	2057	83	0.020	-72
1996	4149	2077	2072	81	0.020	-63
1997	4226	2111	2115	78	0.019	-0
1998	4305	2145	2160	79	0.019	-0
1999	4208	2091	2116	81	0.019	-179
2000	4119	2042	2077	81	0.019	-169
2001	4049	2003	2046	81	0.020	-151
2002	3952	-1950	2002	80	0.020	-177
2003	3862	-1302	1961	83	0.021	-173
2004	3761	1848	1913	84	0.022	-185
2005	3664	1796	1867	84	0.022	-182
2006	3575	1749	1826	84	0.023	-173
2007	3454	1687	1768	83	0.023	-204
2008	3356	1636	1721	82	0.024	-180
2009	3275	1593	1682	79	0.024	-161
2010	3202	1554	1647	77	0.023	-150

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.182--1/30/86
VARIABLES: PONA, PONAMA, PONAFAE, NTICNA, NTICNARA, AND MGNA

TABLE C-15.5
 NORTH SLOPE MODEL PROJECTIONS
 SALE 109 HIGH IMPACT CASE

	TOTAL EMPLOYMENT	TOTAL NATIVE EMPLOYMENT	TOTAL NON-NATIVE RESIDENT EMPLOYMENT	TOTAL NON- RESIDENT EMPLOYMENT
1981	8761	1160	668	6932
1982	9638	1328	716	7595
1983	10318	1379	829	8111
1984	9581	1444	836	7301
1985	9007	1500	1134	6373
1986	9596	1359	889	7347
1987	8951	1292	876	6784
1988	6988	1150	790	5048
1989	7146	1119	765	5262
1990	7060	1062	740	5258
1991	7295	1069	776	5450
1992	7540	1072	807	5660
1993	6710	1049	809	4852
1994	6632	1041	830	4762
1995	6470	1023	841	4606
1996	7072	1019	874	5180
1997	9344	1063	964	7317
1998	10431	1081	1021	8329
1999	6716	970	906	4839
2000	7155	950	924	5281
2001	7022	950	928	5144
2002	6310	923	894	4494
2003	6315	907	879	4530
2004	5900	881	849	4169
2005	5869	864	832	4172
2006	5842	848	818	4176
2007	5152	805	777	3570
2008	5125	792	-763	3570
2009	5102	778	750	3573
2010	5080	764	738	3578

SOURCE: : NORTH SLOPE MODEL SIMULATION NSLP.182--1/30/86
 VARIABLES: EMTO, EMNA, EMNN, AND EMNR

TABLE C-15.6
 NORTH SLOPE MODEL PROJECTIONS
 SALE 109 HIGH IMPACT CASE

EMPLOYMENT: ALL RACES

	TOTAL EMPLOY- MENT	FEDERAL AND STATE GOVERN- MENT EMPLOY- MENT	BOROUGH OPER- ATING EMPLOY- MENT	BOROUGH CIP EMPLOY- MENT	OTHER CIP EMPLOY- MENT	LOCAL SUPPORT EMPLOY- MENT	OIL INDUSTRY EMPLOY- MENT	NON-OIL BASIC EMPLOY- MENT
1981	8761	260	818	363	190	427	6703	0
1982	9638	203	828	456	435	488	7228	0
1983	10318	177	970	457	395	528	7791	0
1984	9581	178	1028	427	464	545	6939	0
1985	9007	178	1343	402	438	632	6014	0
1986	9596	178	1268	200	218	540	7191	0
1987	8951	178	1284	131	143	520	6696	0
1988	6988	178	1174	57	62	466	5052	0
1989	7146	178	1132	50	55	452	5279	0
1990	7060	178	1115	2	2	432	5330	0
1991	7295	178	1148	2	2	443	5522	0
1992	7540	178	1172	2	2	451	5735	0
1993	6710	178	1144	2	2	446	4938	0
1994	6632	178	1149	2	2	449	4852	0
1995	6470	178	1141	2	2	447	4700	0
1996	7072	178	1165	2	2	454	5271	0
1997	9344	178	1276	2	2	486	7399	0
1998	10431	178	1331	2	2	504	8413	0
1999	6716	178	1134	2	2	450	4949	0
2000	7155	178	1137	2	2	450	5386	0
2001	7022	178	1144	2	2	451	5245	0
2002	6310	178	1095	2	2	436	4597	0
2003	6315	178	1075	2	2	429	4630	0
2004	5900	178	1033	2	2	415	4269	0
2005	5869	178	1011	2	2	407	4269	0
2006	5842	178	991	2	2	400	4269	0
2007	5152	178	937	2	2	380	3653	0
2008	5125	178	916	2	2	373	3653	0
2009	5102	178	900	2	2	367	3653	0
2010	5080	178	884	2	2	360	3653	0

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.182--1/30/86
 VARIABLES: EMTO, EMGONL, EMGOOP, EMGOCT, EMCTGO, EMSUEG,
 EMBAOI, AND EMBAOT

TABLE C-15.7
NORTH SLOPE MODEL PROJECTIONS
SALE 109 HIGH IMPACT CASE

EMPLOYMENT: NATIVES

	TOTAL EMPLOY- MENT	FEDERAL AND STATE GOVERN- MENT EMPLOY- MENT	BOROUGH OPER- ATING EMPLOY- MENT	BOROUGH CIP EMPLOY- MENT	OTHER CIP EMPLOY- MENT	LOCAL SUPPORT EMPLOY- MENT	OIL INDUSTRY EMPLOY- MENT	NON-OIL BASIC EMPLOY- MENT
1981	1160	26	458	301	70	235	70	0
1982	1328	26	464	378	161	268	30	0
1983	1379	25	529	369	142	283	30	0
1984	1444	25	570	351	170	297	30	0
1985	1500	23	682	303	147	315	30	0
1986	1359	26	710	166	81	297	79	0
1987	1292	26	719	109	53	286	100	0
1988	1150	26	658	47	23	256	141	0
1989	1119	26	634	42	20	249	149	0
1990	1062	26	625	2	1	238	171	0
1991	1069	25	632	2	1	239	171	0
1992	1072	24	633	2	1	239	174	0
1993	1049	23	606	2	1	232	186	0
1994	1041	22	598	2	1	229	189	0
1995	1023	22	582	2	1	224	193	0
1996	1019	21	582	2	1	223	190	0
1997	1063	20	625	2	1	233	182	0
1998	1081	19	639	2	1	237	183	0
1999	970	18	533	2	1	207	209	0
2000	950	18	523	2	1	202	204	0
2001	950	18	526	2	1	203	200	0
2002	923	18	504	2	1	196	203	0
2003	907	18	494	2	1	193	200	0
2004	881	18	475	2	1	187	199	0
2005	864	18	465	2	1	183	196	0
2006	848	18	456	2	1	180	192	0
2007	805	18	431	2	1	171	183	0
2008	792	18	422	2	1	168	183	0
2009	778	18	414	2	1	165	179	0
2010	764	18	407	2	1	162	175	0

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.182--1/30/86
VARIABLES: EMNA, EMNAGONL, EMNAGOOP, EMNAGOCT, EMNACTGO,
EMNASUEG, EMNAOI, AND EMNABAOT

TABLE C-15.8
 NORTH SLOPE MODEL PROJECTIONS
 SALE 109 HIGH IMPACT CASE

NATIVE OIL INDUSTRY% EMPLOYMENT

	ASSUMED MINIMUM NATIVE OIL EMPLOYMENT	OIL INDUSTRY MAXIMUM DEMAND FOR NATIVE LABOR	MAXIMUM NATIVE SUPPLY OF LABOR TO OIL INDUSTRY	NATIVE OIL INDUSTRY EMPLOYMENT
1981	30	335	70	70
1982	30	361	30	30
1983	30	390	30	30
1984	30	347	30	30
1985	30	301	30	30
1986	30	360	79	79
1987	30	335	100	100
1988	30	253	141	141
1989	30	264	149	149
1990	30	267	171	171
1991	30	276	171	171
1992	30	287	174	174
1993	30	247	186	186
1994	30	243	189	189
1995	30	235	193	193
1996	30	264	190	190
1997	30	370	182	182
1998	30	421	183	183
1999	30	247	209	209
2000	30	269	204	204
2001	30	262	200	200
2002	30	230	203	203
2003	30	232	200	200
2004	30	213	199	199
2005	30	213	196	196
2006	30	213	192	192
2007	30	183	190	183
2008	30	183	185	183
2009	30	183	179	179
2010	30	183	175	175

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.182--1/30/86
 VARIABLES: EMNAOIE, LDNABOI, LSNAOI, EMNAOI

TABLE C-15.9
 NORTH SLOPE MODEL PROJECTIONS
 SALE 109 HIGH IMPACT CASE

EMPLOYMENT: NON-NATIVE RESIDENTS

	TOTAL NON-NATIVE EMPLOYMENT	FEDERAL AND STATE GOVERNMENT EMPLOYMENT	BOROUGH OPERATING EMPLOYMENT	LOCAL SUPPORT EMPLOYMENT	NON-OIL BASIC EMPLOYMENT	BOROUGH CIP EMPLOYMENT
1981	668	54	360	192	0	62
1982	716	54	364	220	0	78
1983	829	55	441	245	0	88
1984	836	55	458	248	0	76
1985	1134	57	661	317	0	99
1986	889	54	558	243	0	34
1987	876	54	565	234	0	22
1988	790	54	517	210	0	10
1989	765	54	498	203	0	9
1990	740	54	491	195	0	0
1991	776	55	517	204	0	0
1992	807	56	539	212	0	0
1993	809	57	537	214	0	0
1994	830	58	552	220	0	0
1995	841	58	559	224	0	0
1996	874	59	582	232	0	0
1997	964	60	651	253	0	0
1998	1021	61	692	267	0	0
1999	906	62	601	243	0	0
2000	924	62	614	247	0	0
2001	928	62	618	248	0	0
2002	894	62	591	240	0	0
2003	879	62	580	236	0	0
2004	849	62	558	228	0	0
2005	832	62	546	224	0	0
2006	818	62	535	220	0	0
2007	777	62	506	209	0	0
2008	763	62	495	205	0	0
2009	750	62	486	202	0	0
2010	738	62	477	198	0	0

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.182--1/30/86
 VARIABLES: EMNN, EMNNGONL, EMNNGOOP, EMNNSUEG, EMNNBAOT, EMNNGOCT

TABLE C-15.10
 NORTH SLOPE MODEL PROJECTIONS
 SALE 109 HIGH IMPACT CASE

EMPLOYMENT: NONRESIDENTS

	TOTAL NON- RESIDENT EMPLOYMENT	FEDERAL AND AND STATE GOVERNMENT EMPLOYMENT	OTHER CIP EMPLOYMENT	OIL INDUSTRY EMPLOYMENT
1981	6932	180	120	6633
1982	7595	123	274	7198
1983	8111	97	2 5 3	7761
1984	7301	98	294	6909
1985	6373	98	291	5984
1986	7347	98	137	7112
1987	6784	98	90	6596
1988	5048	98	39	4911
1989	5262	98	34	5130
1990	5258	98	1	5159
1991	5450	98	1	5351
1992	5660	98	1	5561
1993	4852	98	1	4752
1994	4762	98	1	4663
1995	4606	98	1	4507
1996	5180	98	1	5081
1997	7317	98	1	7217
1998	8329	98	1	8230
1999	4839	98	1	4740
2000	5281	98	1	5182
2001	5144	98	1	5045
2002	4494	98	1	4394
2003	4530	98	1	4430
2004	4169	98	1	4070
2005	4172	98	1	4073
2006	4176	98	1	4077
2007	3570	98	1	3470
2008	3570	98	1	3470
2009	3573	98	1	3474
2010	3578	98	1	3478

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.I82--1/30/86
 VARIABLES: EMNR, EMNRGONL, EMNRCTGO, AND EMNRBAOI

TABLE C-15.11
 NORTH SLOPE MODEL PROJECTIONS
 SALE 109 HIGH IMPACT CASE

	TOTAL BOROUGH REVENUES (000)	NON- PROPERTY TAX NON- INTEREST REVENUES (000)	PROPERTY TAX REVENUES FOR OPERATIONS (000)	PROPERTY TAX REVENUES FOR DEBT SERVICE (000)	INTEREST EARNINGS (000)
1981	90000	22000	26400	32800	8800
1982	189100	34900	34800	75000	44400
1983	215400	37300	38500	95200	44400
1984	251400	40200	33100	118900	59200
1985	302300	32600	40600	184600	44500
1986	302349	28160	46808	199717	27664
1987	306948	27592	47982	208894	22480
1988	308149	27860	41593	218456	20240
1989	296805	25784	42443	210322	18256
1990	268359	24510	42507	183166	18176
1991	186278	25839	43798	98545	18096
1992	249780	26366	45126	160272	18016
1993	238478	26731	42689	151122	17936
1994	228439	27227	42717	140638	17856
1995	217221	27049	42319	130076	17776
1996	166319	26726	44576	77322	17696
1997	136327	27055	52830	38826	17616
1998	133072	27133	57048	31355	17536
1999	102851	25246	43939	16210	17456
2000	102625	24407	45107	15735	17376
2001	102718	25793	44309	15320	17296
2002	98555	25046	41377	14915	17216
2003	96649	24011	40942	14560	17136
2004	93062	22854	39006	14145	17056
2005	90970	21818	38406	13770	16976
2006	84141	20951	37870	8425	16896
2007	71555	19812	34927	0	16816
2008	70007	18944	34328	0	16736
2009	68716	18220	33840	0	16656
2010	67526	17548	33403	0	16576

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.182--1/30/86
 VARIABLES: RVTO, RVNPOP, RVPYOP, RVPYDB, RVIT

TABLE C-15.12
NORTH SLOPE MODEL PROJECTIONS
SALE 109 HIGH IMPACT CASE

	TOTAL BOROUGH EXPENDI- TURES (000)	OPERATI- ONS EXPENDI- TURES (000)	CON- STRUC- TION EXPENDI- TURES (000)	DEBT SERVICE EXPENDI- TURES (000)
1981	216637	50020	131000	35617
1982	342192	63506	211000	67686
1983	466118	68807	302000	95311
1984	419494	75544	211000	129950
1985	489655	102577	199000	188078
1986	395813	96896	99200	199717
1987	371748	98054	64800	208894
1988	336149	89693	28000	218456
1989	321605	86483	24800	210322
1990	269359	85193	1000	183166
1991	187278	87733	1000	98545
1992	250780	89508	1000	160272
1993	239478	87356	1000	151122
1994	229439	87801	1000	140638
1995	218221	87145	1000	130076
1996	167319	88997	1000	77322
1997	137327	97501	1000	38826
1998	134072	101717	1000	31355
1999	103857	86641	1000	16210
2000	103625	86890	1000	15735
2001	103718	87398	1000	15320
2002	99555	83640	1000	14915
2003	97649	82089	1000	14560
2004	94062	78917	1000	14145
2005	91970	77200	1000	13770
2006	85141	75716	1000	8425
2007	72555	71555	1000	0
2008	71007	70007	1000	0
2009	613716	68716	1000	0
2010	68526	67526	1000	0

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.I82--1/30/86
 VARIABLES: SPTO, SPLOGOOP, SPLOGOCT, AND CSDBTO

TABLE C-15.13
NORTH SLOPE MODEL PROJECTIONS
SALE 109 HIGH IMPACT CASE

	TOTAL PROPERTY VALUE (000)	TOTAL PROPERTY TAXES (000)	TAX RATE	TAX RATE FOR OPER- ATING REVENUES	TAX RATE FOR DEBT SERVICE REVENUES	LIMIT ON PROPERTY TAX OPER- ATING REVENUES PER CAPITA (000)	ACTUAL PROPERTY TAX OPER- ATING REVENUES PER CAPITA ^a (000)
1981	5723582	59100	0.0103	0.0051	0.0052	3.601	3.012
1982	6621652	109700	0.0167	0.0055	0.0112	3.914	3.716
1983	8186986	133700	0.0164	0.0041	0.0123	4.761	3.868
1984	9996290	152400	0.0153	0.0033	0.0120	5.119	3.475
1985	12261420	225300	0.0184	0.0033	0.0151	5.099	4.319
1986	13420000	246525	0.0184	0.0035	0.0149	5.099	4.797
1987	14730000	256876	0.0174	0.0033	0.0142	5.099	5.099
1988	15550000	260049	0.0167	0.0027	0.0140	5.099	5.099
1989	16138670	252765	0.0157	0.0026	0.0130	5.099	5.099
1990	16327330	225673	0.0138	0.0026	0.0112	5.099	5.099
1991	16026000	142343	0.0089	0.0027	0.0061	5.099	5.099
1992	15714670	205398	0.0131	0.0029	0.0102	5.099	5.099
1993	15373330	193811	0.0126	0.0028	0.0098	5.099	5.099
1994	15012000	183355	0.0122	0.0028	0.0094	5.099	5.099
1995	14930670	172395	0.0115	0.0028	0.0087	5.099	5.099
1996	14814120	121898	0.0082	0.0030	0.0052	5.099	5.099
1997	14640290	91656	0.0063	0.0036	0.0027	5.099	50099
1998	14378370	88403	0.0061	0.0040	0.0022	5.099	5.099
1999	13636960	60149	0.0044	0.0032	0.0012	5.099	5.099
2000	12785540	60842	0.0048	0.0035	0.0012	5.099	5.099
2001	11934120	59629	0.0050	0.0037	0.0013	5.099	5.099
2002	11082700	56292	0.0051	0.0037	0.0013	5.099	5.099
2003	10231280	55502	0.0054	0.0040	0.0014	5.099	5.099
2004	9379860	53151	0.0057	0.0042	0.0015	5.099	5.099
2005	8528443	52176	0.0061	0.0045	0.0016	5.099	5.099
2006	7677024	46295	0.0060	0.0049	0.0011	5.099	5.099
2007	6825606	34927	0.0051	0.0051	0.0000	5.099	5.099
2008	5974187	34328	0.0057	0.0057	0.0000	5.099	5.099
2009	5122768	33840	0.0066	0.0066	0.0000	5.099	5.099
2010	4271350	33403	0.0078	0.0078	0.0000	5.099	5.099

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.I82--1/30/86
VARIABLES: VATO, RVPYTO, TARA, TARAOP, TARA0B, RVPYOPPC, RVOPPCFI

TABLE C-15. 14
 NORTH SLOPE MODEL PROJECTIONS
 SALE 109 HIGH IMPACT CASE

	TOTAL RESIDENT INCOME (000)	TOTAL NATIVE INCOME (000)	TOTAL NON-NATIVE RESIDENT INCOME (000)	PER CAPITA RESIDENT INCOME (000)	PER CAPITA NATIVE INCOME (000)	PER CAPITA NON-NATIVE RESIDENT INCOME (000)
1981	73318	48261	25057	17.670	14.738	28.648
1982	81513	54669	26844	18.925	16.222	28.648
1983	87805	56734	31070	19.288	16.360	28.648
1984	90681	59335	31346	19.443	16.622	28.648
1985	104089	61583	42506	20.186	16.767	28.652
1986	89677	56324	33352	18.438	15.226	28.643
1987	86727	53893	32834	17.727	14.387	28.645
1988	78205	48573	29632	16.309	12.916	28.643
1989	76185	47514	28671	15.808	12.443	28.646
1990	73170	45419	27751	15.135	11.749	28.645
1991	74903	45803	29100	15.103	11.614	28.649
1992	76313	46039	30274	15.022	11.443	28.649
1993	75583	45261	30323	14.703	11.087	28.647
1994	76107	44999	31108	14.619	10.922	28.648
1995	75904	44350	31553	14.508	10.737	28.647
1996	76977	44216	32761	14.545	10.658	28.648
1997	82138	45988	36150	14.967	10.882	28.653
1998	85072	46792	38281	15.081	10.869	28.654
1999	76479	42490	33989	14.178	10.098	28.645
2000	76248	41589	34660	14.308	10.097	28.648
2001	76299	41482	34817	14.495	10.246	28.649
2002	73847	40329	33518	14.418	10.205	28.644
2003	72568	39614	32954	14.477	10.256	28.648
2004	70339	38499	31840	14.434	10.236	28.642
2005	68944	37726	31218	14.504	10.297	28.647
2006	67651	36980	30671	14.563	10.345	28.648
2007	64333	315179	29154	14.385	10.184	28.643
2008	63184	34576	28608	14.509	10.302	28.648
2009	62064	33929	28135	14.579	10.360	28.648
2010	60967	33279	27689	14.627	10.394	28.648

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.182--1/30/86
 VARIABLES: IN, INNA, INNN, INPC, INPCNA, AND INPCNN

TABLE C-15.15
 NORTH SLOPE MODEL PROJECTIONS
 SALE 109 HIGH IMPACT CASE

	ADULT NATIVE POPULATION	NATIVE LABOR SUPPLY	NATIVE EMPLOYMENT	NATIVE UNEMPLOY- MENT	NATIVE UNEMPLOY- MENT RATE BEFORE MI GRATION	NATIVE UNEMPLOY- MENT RATE AFTER MI GRATION
1981	1729	1281	1160	121	0.094	0.093
1982	1793	1329	1328	1	0.001	0.001
1983	1861	1379	1379	0	0.000	0.000
1984	1949	1444	1444	0	0.000	0.000
1985	2025	1500	1500	0	0.000	0.000
1986	2033	1506	1359	148	0.098	0.069
1987	2029	1503	1292	211	0.140	0.119
1988	2001	1482	1150	333	0.224	0.193
1989	1994	1477	1119	358	0.242	0.227
1990	2005	1485	1062	424	0.285	0.268
1991	2013	1492	1069	423	0.283	0.279
1992	2029	1504	1072	432	0.287	0.285
1993	2045	1516	1049	467	0.308	0.300
1994	2049	1518	1041	478	0.315	0.300
1995	2042	1513	1023	490	0.324	0.300
1996	2024	1500	1019	481	0.321	0.300
1997	2049	1518	1063	455	0.300	0.300
1998	2081	1542	1081	460	0.299	0.299
1999	2035	1508	970	537	0.356	0.300
2000	1987	1472	950	522	0.355	0.300
2001	1972	1461	950	511	0.350	0.300
2002	1944	1441	923	518	0.360	0.300
2003	1911	1416	907	509	0.360	0.300
2004	1873	1388	881	507	0.365	0.300
2005	1839	1363	864	498	0.366	0.300
2006	1800	1334	848	486	0.364	0.300
2007	1745	1293	805	488	0.378	0.300
2008	1700	1259	792	467	0.371	0.300
2009	1654	1226	778	448	0.365	0.300
2010	1616	1198	764	434	0.362	0.300

SOURCE: NORTH SLOPE MODEL SIMULATION NSLP.182--1/30/86
 VARIABLES: PONAAT, LSNA, EMNA, UNNA, UNRANA, UNRANAFI

TABLE C-16.1
 NATIVE POPULATION:
 COMPARISON OF EXTREME LOW BASE CASE, HIGH MIGRATION BASE CASE,
MEDIUM BASE CASE, LOW MIGRATION BASE CASE,
 AND EXTREME HIGH BASE CASE

Base Case Levels

	<u>Extreme Low</u>	<u>High Migration</u>	<u>Med i um</u>	<u>Low Migration</u>	<u>Extreme High</u>
1981	3263	3263	3268	3278	3278
1982	3358	3358	3363	3373	3373
1983	3456	3456	3460	3471	3471
1984	3557	3557	3562	3573	3573
1985	3660	3660	3665	3676	3676
1986	3673	3702	3726	3782	3782
1987	3707	3744	3792	3890	3890
1988	3686	3722	3815	3995	3995
1989	3740	3758	3881	4101	4101
1990	3660	3730	3937	4204	4204
1991	3580	3717	4022	4304	4304
1992	3503	3713	4109	4399	4399
1993	3359	3664	4176	4489	4489
1994	3222	3623	4252	4579	4579
1995	3083	3577	4328	4671	4671
1996	2939	3522	4403	4763	4763
1997	2794	3458	4475	4853	4853
1998	2641	3374	4545	4944	4944
1999	2484	3273	4615	5037	5037
2000	2342	3182	4694	5135	5135
2001	2229	3101	4781	5236	5236
2002	2087	2941	4799	5341	5341
2003	1970	2801	4791	5454	5454
2004	1851	2637	4720	5573	5573
2005	1752	2493	4629	5698	5698
2006	1670	2369	4532	5830	5830
2007	1575	2200	4363	5968	5968
2008	1502	2059	4198	6110	6110
2009	1448	1942	4042	6256	6256
2010	1404	1843	3893	6404	6404

SOURCE : North Slope Model Projections, Variable PONA, DSETS
 NSLP.B69 NSLP.B63 NSLP.B61 NSLP.B62 and NSLP.B70.

TABLE C-16.2
RESIDENT POPULATION:
COMPARISON OF EXTREME LOW BASE CASE, HIGH MIGRATION BASE CASE,
MEDIUM BASE CASE, LOW MIGRATION BASE CASE,
AND EXTREME HIGH BASE CASE

Base Case Levels

	Extreme Low	High Migration	Medium	Low Migration	Extreme High
1981	4138	4138	4142	4152	4152
1982	4299	4299	4301	4310	4310
1983	4546	4546	4548	4554	4554
1984	4657	4657	4660	4666	4666
1985	5150	5150	5152	5158	5158
1986	4832	4884	4908	4964	4989
1987	4841	4918	4971	5081	5113
1988	4690	4746	4850	5054	5074
1989	4708	4730	4867	5114	5130
1990	4578	4652	4884	5182	5201
1991	4502	4632	4974	5289	5285
1992	4431	4625	5068	5392	5365
1993	4250	4536	5107	5456	5407
1994	4106	4482	5184	5549	5478
1995	3952	4418	5255	5638	5546
1996	3785	4336	5316	5718	5603
1997	3622	4250	5380	5800	5665
1998	3444	4136	5436	5879	5722
1999	3263	4005	5493	5961	5784
2000	3107	3895	5569	6056	5860
2001	2980	3807	5673	6178	5983
2002	2783	3592	5656	6258	6068
2003	2641	3427	5636	6371	6193
2004	2485	3222	5530	6476	6308
2005	2365	3053	5418	6601	6446
2006	2266	2908	5300	6735	6586
2007	2136	2688	5078	6852	6705
2008	2053	2524	4886	6997	6856
2009	1989	2388	4705	7146	7012
2010	1938	2271	4531	7299	7170

SOURCE: North Slope Model Projections, Variable PORE, DSETS
NSLP.B69 NSLP.B63 NSLP.B61 NSLP.B62 and NSLP.B70.

TABLE C-16.3
 NATIVE MIGRATION:
 COMPARISON OF **EXTREME** LOW BASE CASE, HIGH MIGRATION BASE CASE,
 MEDIUM BASE CASE, LOW MIGRATION BASE CASE,
 AND EXTREME HIGH BASE CASE

.Base Case Levels

	<u>Extreme Low</u>	<u>High Migration</u>	<u>Medium</u>	<u>Low Migration</u>	<u>Extreme High</u>
1981	-41	-41	-36	-26	-26
1982	0	0	0	0	0
1983	0	0	0	0	0
1984	0	0	0	0	0
1985	0	0	0	0	0
1986	-92	-63	-45	0	0
1987	-70	-64	-40	0	0
1988	-122	-124	-80	0	0
1989	-42	-62	-34	0	0
1990	-174	-122	-41	0	0
1991	-166	-101	-8	0	0
1992	-156	-85	-2	0	0
1993	-215	-124	-17	0	0
1994	-203	-114	-8	0	0
1995	-203	-118	-9	0	0
1996	-204	-125	-11	0	0
1997	-199	-129	-10	0	0
1998	-204	-148	-14	0	0
1999	-206	-165	-16	0	0
2000	-189	-153	-10	0	0
2001	-158	-143	-6	0	0
2002	-186	-221	-77	0	0
2003	-160	-202	-109	0	0
2004	-161	-224	-176	0	0
2005	-140	-202	-196	0	0
2006	-121	-180	-204	0	0
2007	-133	-224	-275	0	0
2008	-109	-193	-269	0	0
2009	-90	-165	-255	0	0
2010	-77	-145	-244	0	0

SOURCE: North Slope Model Projections, Variable MGNA, DSETS
 NSLP.B69 NSLP.B63 NSLP.B61 NSLP.B62 NSLP.B70

TABLE C-16.4
TOTAL NORTH SLOPE BOROUGH REVENUES
COMPARISON OF EXTREME LOW BASE CASE, LOW REVENUES BASE CASE,
MEDIUM BASE CASE, MODERATE HIGH REVENUES BASE CASE,
HIGH REVENUES BASE CASE, AND
EXTREME HIGH BASE CASE

Base Case Levels

	<u>Extreme Low</u>	<u>Low Revenues</u>	<u>Medium</u>	<u>Moderate High Revenues</u>	<u>High Revenues</u>	<u>Extreme High</u>
1981	90000	90000	90000	90000	90090	90000
1982	1.89100	189100	189100	189100	189100	189100
1983	215400	215400	215400	215400	215400	215400
1984	251400	251400	251400	251400	251400	251400
1985	302300	302300	302300	302300	302300	302300
1986	299702	298159	307041	310443	316873	314878
1987	306546	303985	309553	309553	316240	311916
1988	306866	304006	308816	308816	315566	311063
1989	295332	292009	296073	296073	303075	298094
1990	265514	263307	267238	267238	275085	269848
1991	179329	178392	183158	183158	191888	185902
1992	239754	239990	245636	245636	255338	248485
1993	225452	227390	233745	233745	243983	236418
1994	212605	216251	223427	223427	234544	226166
1995	199145	204405	212374	212374	224328	215149
1996	142864	149629	158321	158321	171000	161065
1997	101398	109554	119015	119015	132519	121818
1998	90550	100037	110208	110208	124405	113027
1999	72182	82348	93811	93811	108718	96693
2000	69392	79803	93020	93020	108855	96106
2001	67849	79209	94459	94459	111240	99405
2002	63122	74053	90778	90778	108075	98404
2003	60743	70613	89160	89160	108422	100906
2004	57366	65834	85443	85443	106828	101844
2005	55283	62152	82931	82931	107278	104719
2006	48493	53943	75520	75520	102112	102028
2007	37361	41056	62010	62010	89379	93287
2008	36451	38579	59282	59282	87964	936056
2009	35733	36382	56746	56746	86411	98923
2010	35122	34368	54300	54300	84655	101786

SOURCE: North Slope model projections. Variable RVTO, DSETS
 NSLP.B69, NSLP.B64, NSLP.B61, NSLP.B66, NSLP.B65, NSLP.B70

TABLE C-16.5
 NORTH SLOPE BOROUGH OPERATING REVENUES
 COMPARISON OF EXTREME LOW BASE CASE, LOW REVENUES BASE CASE,
MEDIUM BASE CASE, MODERATE HIGH REVENUES BASE CASE,
HIGH REVENUES BASE CASE, AND
 EXTREME **HIGH** BASE CASE

Base Case Levels

	<u>Extreme Low</u>	<u>Low Revenues</u>	<u>Medium</u>	<u>Moderate High Revenues</u>	<u>High Revenues</u>	<u>Extreme High</u>
1981	57200	57200	57200	57200	57200	57200
1982	114100	114100	114100	114100	114100	114100
1983	120200	120200	120200	120200	120200	120200
1984	132500	132500	132500	132500	132500	132500
1985	117700	117700	117700	117700	117700	117700
1986	99985	98442	107324	110726	117156	115161
1987	97652	95091	100659	100659	107346	103022
1988	88410	85550	90360	90360	97110	92607
1989	85010	81687	85751	85751	92753	87772
1990	82348	80141	84072	84072	91919	86682
1991	80784	79847	84613	84613	93343	87357
1992	79482	79718	85364	85364	95066	88213
1993	74330	76268	82623	82623	92861	85296
1994	71967	75613	82789	82789	93906	85528
1995	69069	74329	82298	82298	94252	85073
1996	65542	72307	80999	80999	93678	83743
1997	62572	70728	80189	80189	93693	82992
1998	59195	68682	78853	78853	93050	81672
1999	55972	66138	77601	77601	92508	80483
2000	53657	64068	77285	77285	93120	80355
2001	52529	63889	79139	79139	95920	83261
2002	48207	59138	75863	75863	93160	81461
2003	46183	56053	74600	74600	93862	82916
2004	43221	51689	71298	71298	92683	82768
2005	41513	48382	69161	69161	93508	84467
2006	40068	45318	67095	67095	93687	85546
2007	37361	41056	62010	62010	89379	83643
2008	36451	38579	59282	59282	87964	84817
2009	35733	36382	56746	56746	86411	86088
2010	35122	34368	54300	54300	84655	87369

SOURCE: North Slope model projections, Variable RVOPT0, DSETS
 NSLP.B69, NSLP.B64, NSLP.B61, NSLP.B66, NSLP.B65, NSLP.B70

TABLE C-16.6
 NORTH SLOPE BOROUGH TAX RATE
 COMPARISON OF EXTREME LOW BASE CASE, LOW REVENUES BASE CASE,
 MEDIUM BASE CASE, MODERATE HIGH REVENUES BASE CASE,
 HIGH REVENUES BASE CASE, AND
 EXTREME HIGH BASE CASE

Base Case Levels

	<u>Extreme Low</u>	<u>Low Revenues</u>	<u>Medium</u>	<u>Moderate High Revenues</u>	<u>High Revenues</u>	<u>Extreme High</u>
1981	0.0103	0.0303	0.0103	0.0103	0.0103	0.0103
1982	0.0167	0.0167	0.0167	0.0167	0.0167	0.0167
1983	0.0164	0.0164	0.0164	0.0164	0.0164	0.0164
1984	0.0153	0.0153	0.0153	0.0153	0.0153	0.0153
1985	0.0184	0.0184	0.0184	0.0184	0.0184	0.0184
1986	0.0184	0.0184	0.0184	0.0186	0.0184	0.0185
1987	0.0179	0.0179	0.0175	0.0175	0.0172	0.0172
1988	0.0172	0.0173	0.0168	0.0168	0.0164	0.0164
1989	0.0163	0.0163	0.0157	0.0157	0.0153	0.0153
1990	0.0145	0.0146	0.0138	0.0138	0.0134	0.0135
1991	0.0092	0.0093	0.0088	0.0088	0.0086	0.0086
1992	0.0136	0.0138	0.0130	0.0130	0.0125	0.0125
1993	0.0131	0.0134	0.0125	0.0125	0.0120	0.0120
1994	0.0126	0.0129	0.0121	0.0121	0.0117	0.0117
1995	0.0123	0.0127	0.0117	0.0117	0.0112	0.0112
1996	0.0085	0.0090	0.0084	0.0084	0.0081	0.0081
1997	0.0055	0.0061	0.0058	0.0058	0.0059	0.0059
1998	0.0050	0.0057	0.0055	0.0055	0.0056	0.0056
1999	0.0037	0.0045	0.0045	0.0045	0.0048	0.0048
2000	0.0039	0.0047	0.0048	0.0048	0.0051	0.0051
2001	0.0040	0.0050	0.0052	0.0052	0.0055	0.0056
2002	0.0039	0.0050	0.0053	0.0053	0.0057	0.0059
2003	0.0041	0.0052	0.0057	0.0057	0.0062	0.0066
2004	0.0042	0.0054	0.0059	0.0059	0.0066	0.0072
2005	0.0045	0.0057	0.0064	0.0064	0.0074	0.0082
2006	000039	0.0051	0.0063	0.0063	0.0077	0.0088
2007	0.0023	0.0036	0.0052	0.0052	0.0071	0.0088
2008	0.0026	0.0039	0.0057	0.0057	0.0081	0.0105
2009	0.0029	0.0044	0.0065	0.0065	0.0095	0.0128
2010	0.0035	0.0051	0.0077	0.0077	0.0113	0.0161

SOURCE: North Slope model projections, Variable TARA, DSETS
 NSLP.B69, NSLP.B64, NSLP.B61, NSLP.B66, NSLP.B65, NSLP.B70

TABLE C-16.7
 NATIVE EMPLOYMENT:
 COMPARISON OF EXTREME LOW BASE CASE, LOW EMPLOYMENT BASE CASE,
 MEDIUM BASE CASE, HIGH EMPLOYMENT BASE CASE,
 AND EXTREME HIGH BASE CASE

Base Case Levels

	Extreme <u>Low</u>	Low <u>Employment</u>	Med i urn	High <u>Employment</u>	Extreme <u>High</u>
1981	1136	1136	1136	1160	1161
1982	1324	1326	1326	1328	1328
1983	1374	1376	1376	1379	1380
1984	1439	1441	1441	1445	1446
1985	1495	1497	1497	1501	1502
1986	1324	1325	1392	1472	1475
1987	1238	1304	1311	1361	1413
1988	1030	1099	1100	1160	1227
1989	990	1055	1050	1112	1187
1990	894	973	968	1043	1129
1991	862	965	974	1055	1149
1992	836	962	982	1070	1172
1993	765	917	949	1061	1169
1994	729	906	948	1073	1189
1995	688	889	941	1076	1204
1996	642	863	923	1055	1196
1997	604	844	913	1047	1199
1998	561	818	895	1025	1187
1999	522	791	878	1006	1178
2000	493	770	875	1008	1192
2001	482	780	890	1019	1217
2002	440	741	840	946	1150
2003	424	728	828	948	1167
2004	396	699	788	910	1143
2005	383	684	767	906	1162
2006	371	671	748	902	1175
2007	343	629	684	821	1116
2008	336	614	658	803	1129
2009	330	601	634	786	1144
2010	325	589	610	770	1158

SOURCE: North Slope Model Projections, Variable EMNA, DSETS
 NSLP.B69, NSLP.B67, NSLP.B61, NSLP.B68, NSLP.B70

TABLE C-16.8
NON-NATIVE RESIDENT EMPLOYMENT
 COMPARISON OF EXTREME LOW BASE CASE, LOW EMPLOYMENT BASE CASE,
 MEDIUM BASE CASE, HIGH EMPLOYMENT BASE CASE,
 AND EXTREME HIGH BASE CASE

Base Case Levels

	Extreme Low	Low Employment	Medium	High Employment	Extreme High
1981	668	668	668	668	668
1982	719	717	717	716	716
1983	833	831	831	828	827
1984	840	839	839	836	835
1985	1138	1136	1136	1133	1132
1986	885	885	903	922	923
1987	866	921	901	887	935
1988	767	823	791	769	824
1989	739	791	754	727	786
1990	701	764	723	694	761
1991	704	790	727	677	749
1992	709	818	733	662	738
1993	681	817	711	624	702
1994	675	841	712	606	687
1995	664	859	708	583	668
1996	646	870	698	554	642
1997	632	885	691	530	620
1998	614	894	680	503	595
1999	595	901	670	477	571
2000	584	913	668	458	554
2001	573	926	682	468	570
2002	532	889	655	449	556
2003	513	874	645	450	564
2004	485	843	619	440	561
2005	469	825	602	438	571
2006	455	810	587	436	578
2007	429	768	546	410	563
2008	420	750	525	400	570
2009	413	735	506	391	578
2010	408	720	487	383	585

SOURCE: North Slope model projections, Variable EMNN, DSETS
 NSLP.B69, NSLP.B67, NSLP.B61, NSLP.B68, NSLP.B70

TABLE C-16.9
 NATIVE OIL INDUSTRY EMPLOYMENT
 COMPARISON OF EXTREME LOW BASE CASE, LOW EMPLOYMENT BASE CASE,
 MEDIUM BASE CASE, HIGH EMPLOYMENT BASE CASE,
 AND EXTREME HIGH BASE CASE

Base Case Levels

	<u>Extreme Low</u>	<u>Low Employment</u>	<u>Medium</u>	<u>High Employment</u>	<u>Extreme High</u>
1981	46	46	46	70	71
1982	30	30	30	31	31
1983	30	30	30	30	30
1984	30	30	30	30	30
1985	30	30	30	30	30
1986	49	50	44	50	52
1987	58	54	54	88	80
1988	49	49	75	149	147
1989	51	51	80	164	165
1990	51	51	91	192	194
1991	50	50	91	191	191
1992	51	51	92	191	189
1993	43	43	86	200	197
1994	42	42	84	203	198
1995	41	41	82	204	201
1996	38	38	77	192	192
1997	37	37	75	187	187
1998	35	35	71	176	176
1999	33	33	67	167	167
2000	33	33	67	167	167
2001	32	32	64	160	160
2002	24	24	49	122	122
2003	24	24	49	122	122
2004	21	21	42	104	104
2005	21	21	42	104	104
2006	21	21	42	104	104
2007	15	15	29	73	73
2008	15	15	29	73	73
2009	15	15	29	73	73
2010	15	15	29	73	73

SOURCE: North Slope model projections, Variable EMNAOI, DSETS
 NSLP.B69, NSLP.B67, NSLP.B61, NSLP.B68, NSLP.B70

APPENDIX D:
DERIVATION OF NORTH SLOPE MODEL EMPLOYMENT ASSUMPTIONS

North Slope Borough Current Employment Assumptions

Table D-1 shows our North Slope Borough employment assumptions for the years 1980-1984. We have, divided all employment into six categories: Borough operating employment, Borough CIP employment, private CIP employment, support employment, federal and state employment, and basic (primarily oil) employment. Within these six categories, we have distinguished between Native employment, non-Native resident employment, and nonresident employment. Below, we discuss our derivation of these employment assumptions.

Total Employment (EMTO)

We assumed that the Alaska Department of Labor's employment figures from the Statistical Quarterly were the most accurate source of annual average employment information for the North Slope Borough. Wherever possible, we based our employment assumptions upon these data. Thus, to begin with, we based our figures for total employment on the average annual employment figure for the Barrow-North Slope Census Division published in the Statistical Quarterly, shown in Table E-26.

State and Federal Government Employment (EMGONL)

We also based our figures for state and federal employment on the Statistical Quarterly figures shown in Table E-26.

TABLE D-1
NORTH SLOPE BOROUGH EMPLOYMENT ASSUMPTIONS
1980 - 1984

	N. Slope Model Variable					
		1980	1981	1982	1983	1984
NSB Operating Employment	(EMGOOP)					
Resident		795	818	828	970	1028
Nonresident		0	0	0	0	0
Total		795	818	828	970	1028
NSB CIP Employment	(EMGOCT)					
Resident		322	363	456	457	427
Nonresident		0	0	0	0	0
Total		322	363	456	457	427
Private CIP Employment	(EMCTGO)					
Resident		26	m	161	146	172
Nonresident		45	120	274	249	292
Total		71	190	435	395	464
Support Employment	(EMCTGO)					
Resident		393	427	488	528	545
Nonresident		0	0	0	0	0
Total		393	427	488	528	545
State & Federal Gov't Employment	(EMGONL)					
Resident		80	80	80	80	80
Nonresident		211	180	123	97	98
Total		291	260	203	177	178
Basic or Oil Industry Employment	(EMBAOJ)					
Resident		30	30	30	30	30
Nonresident		4216	6673	7198	7761	6909
Total		4246	6703	7228	7791	6939
Total Employment						
Total Resident	(EMRE)	1646	1788	2043	2211	2282
Nonresident	(EMNR)	4472	6973	7595	8107	7299
Total	(EMTO)	6118	8761	9638	10318	9581

Source: See text.

North Slope Borough Operating and CIP Employment (EMGOOP and EMGOCT)

The derivation of our other employment assumptions was more complicated and indirect. In deriving our assumptions for Borough operating employment and Borough CIP employment, we assumed that these two categories of employment would total the Statistical Quarterly figure for local government employment. However, the Statistical Quarterly did not provide any information as to the division of **local** government employment between these two categories. We based our estimates of this division on other data for **local** government employment which were available for 1980 and for 1984.

As shown in Table E-46, North Slope Borough employment in July 1980 was 823, of which 356 were **CIP** employees. As shown in Table E-48, North Slope Borough School District employment in **1980** totaled 423. Thus, a rough estimate of **total** local government employment in 1980 is $823 + 423$, or **1246**, of which 356, or 29 percent, were **CIP** employees. Based on these data, we assumed that 29 percent of the Statistical Quarterly figure of 1117 for local government employment for 1980 were **CIP** employees, and the remaining 71 percent were operating employees. This gave us our 1980 employment assumptions of 795 and 322 for these two categories.

We divided 1984 total local government employment (1455 in **total**) into operating employment and CIP employment of 1028 and 427, or the same proportions as appeared in employment data which we derived for

1984 from Borough payroll data given in Table E-153 (operating and CIP employment of 1067 and 443, respectively).

We used our employment assumptions for 1980 and 1984, along with data on Borough expenditures for the years 1980 to 1984, to calculate our employment assumptions for the years 1981, 1982 and 1983. Table D-2 documents our calculations. First, we calculated the ratios of borough expenditures to employment for the years 1980 and 1984. We then assumed that these ratios declined in a linear fashion in the intervening years, as shown in "columns 4 and 5. Based on these ratios, we calculated the preliminary employment estimates shown in columns 6 and 7. We then reduced these estimates proportionally so that they would total the Statistical Quarterly figures for the years 1981 to 1983, giving the final employment estimates shown in columns 8 and 9.

Private CIP Employment (EMCTGO)

We assumed our 1982 figure of 435 based on the 1982 survey by Alaska Consultants, shown in Table E-45. We calculated the remaining figures using the principle that the ratio of total CIP expenditures (SPLOGOCT) (see Table D-2) to total CIP employment should be the same for all years. Thus we calculated EMCTGO as

$$((EMGOCT(82)+EMCTGO(82))/SPLOGOCT(82)) * SPLOGOCT - EMGOCT.$$

TABLE D-2.
 DERIVATION OF ESTIMATES OF NORTH SLOPE BOROUGH
 OPERATING AND CIP EMPLOYMENT
 1981 - 1983

Year (1)	<u>Borough Expenditures</u>		<u>Unadjusted Ratio of Expenditures to Employment</u>		<u>Employment Estimates Assuming Unadjusted Ratios in (4) & (5)</u>		<u>Employment Estimates Reduced Proportionately to Total Figures in Statistical Quarterly</u>	
	<u>Operations^a</u> (2)	<u>CIP^b</u> (3)	<u>Operations</u> (4)	<u>CIP</u> (5)	<u>Operations</u> (6)	<u>CIP</u> (7)	<u>Operations</u> (8)	<u>CIP</u> (9)
1980	39,685	93,000	0.003462	0.020033	795	322	795	322
1981	50,020	131,000	0.003102	0.018296	915	406	818	363
1982	63,506	211,000	0.002742	0.016558	1,052	579	828	456
1983	68,807	202,000	0.002382	0.014821	1,020	481	970	457
1984	78,544	211,000	0.002022	0.013083	1,028	427	1,028	427

^aSource is Table J-1.

^bSource is Table J-2.

NOTE: See text for discussion.

Support Employment (EMSUEG)

Our calculations of support employment are shown in Table D-3. We assumed the 1982 figure of 488, calculated from the Alaska Consultants survey data given in Table E-45. We then calculated support employment figures for the years 1980, 1981, 1983 and 1984 based on the assumption that the ratio of support employment to other resident employment was constant for the period 1980 to 1984. To do this calculation, we first had to calculate other resident employment. We assumed that all North Slope Borough employees were residents. In addition, we assumed that 37 percent of private CIP employment were Natives and therefore residents while the remainder were not residents, based on data from the 1980 Alaska Consultants survey shown in Table E-133. We assumed that basic (oil industry) employment of Natives remained constant at the 1980 figure of 30, also based on the 1980 Alaska Consultants survey shown in Table E-133. Finally, we assumed that federal and state government resident employment remained constant at 80, based on the 1982 Alaska Consultants survey, shown in Table E-45. This resulted in the total figure for resident employment other than support employment shown in column 6. As noted above, we then calculated support employment by assuming that the ratio of support employment to other resident employment remained constant.

Basic Employment (EMBAOI)

We calculated basic employment as the remaining employment after subtracting all other categories of employment from total employment.

TABLE D-3
CALCULATION OF SUPPORT EMPLOYMENT AND RESIDENT EMPLOYMENT ASSUMPTIONS

<u>Year</u> (1)	<u>Resident Nonsupport Employment Assumptions</u>					<u>Total</u> (7)	<u>Support Employment</u> ^b (8)	<u>Tots 1 Resident Employment</u> (9)
	<u>North Slope Borough Operating</u> (2)	<u>CIP</u> (3)	<u>Private CIP^a</u> (4)	<u>State & Federal</u> (5)	<u>Oil</u> (6)			
1980	795	322	26	80	30	1,253	393	1,646
1981	818	363	10	80	30	1,361	427	1,788
1982	828	456	161	80	30	1,555	488	2,043
1983	970	457	146	80	30	1,683	528	2,211
1984	1,028	427	172	80	30	1,736	545	2,282

^aThirty-seven percent of total private CIP employment.

^bAssumed to be 488 in 1982; figures for other years based on assumption that the ratio of support, employment to other resident employment remains constant.

NOTE : See text for discussion.



1

2

3

4

5

6

APPENDIX M: OCS SALE 97 ASSUMPTIONS

In this appendix, we review the assumptions used in preparing our North Slope Model OCS Sale 97 impact projections. Specifically, we based our impact projections on two kinds of assumptions:

- Assumptions about the increase in North Slope Borough property values due to Sale 97.
- Assumptions about the increase in total North Slope oil industry employment due to Sale 97.

In developing these assumptions, we used information provided to us by the Minerals Management Service.

Increase in Property Values

We assumed that the following onshore facilities would be built for Sale 97:

TABLE M-1: SALE 97 ONSHORE FACILITY ASSUMPTIONS

<u>Facility</u>	<u>Year completed</u>	<u>cost (\$million)</u>	<u>Depreciation period (years)</u>
Shore base additions	1987	50	28
Shore base additions	1995	50	20
80 KM onshore pipeline	1994	160	21
80 KM onshore pipeline	1995	160	20

We based our assumptions about the facilities to be built and the timing of construction on the information in Table M-2, which was provided to us by the Minerals Management Service. We based our cost assumptions on figures provided in Han-Padron Associates, Beaufort Sea Petroleum Technology Assessment, Social and Economic Studies Program Technical Report Number 112 (Anchorage, Minerals Management Service, March 1985). Based on the Table M-2 assumption of a maximum production of 55 million barrels per year, we assumed a maximum daily production of 151 thousand barrels per day. According to Technical Report 112, this implies a pipeline diameter of sixteen inches, with a construction cost of \$2 million per kilometer (pages 7-24 and 7-26). We assumed shore base construction costs of \$50 million, based on Technical Report 112, pages 4-100 and 4-101. Finally, we assumed that the assessed value of all facilities would be depreciated in a straight-line fashion until 2014, the final year of production.

Table M-3 shows our calculation of the increase in North Slope Borough property values resulting from Sale 97 (variable VAOIFU).

Increase in Total Oil Industry Employment

We based our oil industry employment assumptions on projections prepared by James Sullivan of the Minerals Management Service using the MMS OCS Manpower Model. These projections are shown in Table M-4. We calculated the increase in total North Slope oil

industry employment due to OCS Sale 97 (the increase in EMBAOI) by subtracting the figures for "Petroleum Headquarters Employment (Anchorage)" from the figures for "All Petroleum Related Employment." These calculations are shown in Table M-5.

TABLE M-2.
 SALE97 (Diapir Field)
 MEAN CASE
 ESTIMATED SCHEDULE OF EXPLORATION, DEVELOPMENT, PRODUCTION
 (Oil Only)

<u>Sale Year</u>	<u>Cal. Year</u>	<u>Explor. Wells</u>	<u>Delin. Wells</u>	<u>Explr. Delin. Rigs</u>	<u>Prod. Platfms</u>	<u>Prod. Wells</u>	<u>Service Rigs</u>	<u>Trunk Pipeline (kilom.)^a</u>	<u>No. Shore Bases</u>	<u>Oil Prodctn (MMB)</u>
1	1987									
2	1988	3	0	2	0	0	0	0	*	0
3	1989	3	1	2	0	0	0	0	0	0
4	1990	3	1	2	0	0	0	0	0	0
5	1991	3	1	2	0	0	0	0	0	0
6	1992	2	1	2	0	0	0	0	0	0
7	1993	1	1	1	0	0	0	0	0	0
8	1994	0	0	0	0	0	0	160	0	0
9	1995	0	0	0	2	6	1	160	*	0
10	1996	0	0	0	0	33	4	0	0	14
11	1997	0	0	0	0	0	0	0	0	55
12	1998	0	0	0	0	0	0	0	0	55
13	1999	0	0	0	0	0	0	0	0	55
14	2000				0	0	0	0	0	55
15	2001									55
16	2002									55
17	2003									48
18	2004									42
19	2005									37
20	2006									31
21	2007									27
22	2008									23
23	2009									21
24	2010									19
25	2011									17
26	2012									15
27	2013									14
28	2014									12
29	2015									0
30	2016									0
31	2017									0
32	2018									0

*"Minor additions to existing exploration base and oil terminal facilities," according to memorandum by R.H. McMullin, MMS Regional Supervisor for Resource Evaluation, dated Aug. 1, 1985.

^aOne-half of the pipeline distance is assumed to be onshore.

SOURCE : Minerals Management Service, Alaska OCS Office.

Table M-3

Calculation of OCS Sale 97 Property Value Assumptions

Year	1987 Shore Base	1995 Shore Base	1994 Pipeline	1995 Pipeline	Total (TABLED)
1987					0.000
1988	50.000				50.000
1989	48.148				48.148
1990	46.296				46.296
1991	44.444				44.444
1992	42.593				42.593
1993	40.741				40.741
1994	38.889		160.000		198.889
1995	37.037	50.000	152.381	160.000	399.418
1996	35.185	47.500	144.753	152.000	379.438
1997	33.333	45.000	137.143	144.000	359.476
1998	31.481	42.500	129.534	136.000	339.505
1999	29.630	40.000	121.905	128.000	319.534
2000	27.778	37.500	114.286	120.000	299.563
2001	25.926	35.000	106.667	112.000	279.593
2002	24.074	32.500	99.048	104.000	259.622
2003	22.222	30.000	91.429	96.000	239.651
2004	20.370	27.500	83.810	88.000	219.680
2005	18.519	25.000	76.190	80.000	199.709
2006	16.667	22.500	68.571	72.000	179.738
2007	14.815	20.000	60.952	64.000	159.767
2008	12.962	17.500	53.333	56.000	139.796
2009	11.111	15.000	45.714	48.000	119.825
2010	9.259	12.500	38.095	40.000	99.854
2011	7.407	10.000	30.476	32.000	79.884
2012	5.556	7.500	22.857	24.000	59.913
2013	3.704	5.000	15.238	16.000	39.942
2014	1.852	2.500	7.619	8.000	19.971
2015	.000	0.000	.000	0.000	.000
2016					

Table M-4: Sale 97 Employment Assumptions Prepared by Minerals Management Service

SALE 97 DIRECT MANPOWER REQUIREMENTS -- TABLE 3

*	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2025	2031
ALL PETROLEUM RELATED EMPLOYMENT	0	0	449	533	376	372	325	239	459	2190	1610	686	686	699	699	719	719	761
PETROLEUM HEADQUARTERS EMPLOYMENT (Anchorage)	0	0	10	14	20	30	40	50	60	70	70	70	70	70	70	70	70	70
PETROLEUM OFFSHORE - TOTAL EXCEPT HEADQUARTERS JOBS	0	0	191	243	243	243	191	139	103	1334	1430	586	586	519	519	539	539	539
ON-SHORE JOBS																		
SHORT-TERM																		
Skilled	0	0	16	18	18	18	14	7	70	0	0	0	0	0	0	0	0	0
Unskilled	0	0	10	10	10	10	10	10	0	0	0	0	0	0	0	0	0	0
LONG-TERM																		
Skilled	0	0	0	0	0	0	0	0	0	0	146	146	146	146	146	146	146	146
Unskilled	0	0	0	0	0	0	0	0	0	0	40	40	40	44	40	40	40	40
OFF-SHORE JOBS																		
SHORT-TERM																		
Skilled	0	0	165	215	215	215	165	115	96	1264	924	0	0	0	0	0	0	0
Unskilled	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LONG-TERM																		
Skilled	0	0	0	0	0	0	0	0	0	0	288	288	288	301	301	321	321	321
Unskilled	0	0	0	0	0	0	0	0	0	0	32	32	32	32	32	32	32	32
PETROLEUM CONSTRUCTION - TOTAL JOBS	0	0	133	177	14	0	0	0	270	570	0	0	0	0	0	0	0	0
ON-SHORE JOBS																		
SHORT-TERM																		
Skilled	0	0	67	0	0	0	0	0	222	372	0	0	0	0	0	0	0	0
Unskilled	0	0	67	0	0	0	0	0	56	206	0	0	0	0	0	0	0	0
LONG-TERM																		
Skilled	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Unskilled	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OFF-SHORE JOBS																		
SHORT-TERM																		
Skilled	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0
Unskilled	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0
LONG-TERM																		
Skilled	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Unskilled	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PETROLEUM TRANSPORTATION - TOTAL AIR TRANSP. JOBS	0	0	11	15	15	15	11	0	1	35	20	20	20	20	20	20	20	20
ON-SHORE JOBS																		
SHORT-TERM																		
Skilled	0	0	11	15	15	15	11	0	1	35	0	0	0	0	0	0	0	0
Unskilled	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LONG-TERM																		
Skilled	0	0	0	0	0	0	0	0	0	0	20	20	20	20	20	20	20	20
Unskilled	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OFF-SHORE JOBS																		
SHORT-TERM																		
Skilled	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Unskilled	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LONG-TERM																		
Skilled	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Unskilled	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Prepared by James Sullivan on Aug. 13, 1985 for use by ISER in the RMM model.

* All employment projections are assumed to be delayed by one year. Thus the employment assumed for 1989 is that shown in the column labeled "1988" (communication with Kevin Banks of Minerals Management Service).

Table M-4 (continued)

TABLE 3 DIRECT MANPOWER REQUIREMENTS

	1972s	1985	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2005	2010
PETROLEUM TRANSPORTATION - TOTAL MARINE TRANSP. JOBS	0	0	63	64	84	84	63	42	16	174	92	96	93	95	98	98	98	98
ONSHORE JOBS																		
SHORT-TERM																		
Skilled	0	0	0	0	0	e	e	e	0	0	0	e	0	e	0	0	0	t
Unskilled	0	0	9	12	12	12	9	6	4	54	0	e	e	0	e	0	e	e
LONG-TERM																		
Skilled	0	0	0	0	0	e	0	e	0	0	0	0	e	0	0	0	e	e
Unskilled	0	0	0	0	0	e	e	0	0	0	18	18	18	18	1a	15	18	18
OFFSHORE JOBS																		
SHORT-TERM																		
Skilled	0	0	Sk	72	72	72	54	36	12	120	e	e	e	e	0	e	e	e
Unskilled	0	0	e	e	0	e	e	e	0	e	0	0	0	0	0	0	e	e
LONG-TERM																		
Skilled	0	0	e	e	0	e	e	e	0	0	72	R	72	72	72	72	72	72
Unskilled	0	0	e	e	0	e	e	e	0	0	0	e	0	e	e	0	e	t
TOTAL DIRECT OCS MANPOWER REQUIREMENTS (Including HQ)	0	0	4e9	533	376	372	385	239	459	2190	1618	626	686	699	699	719	719	729
ONSHORE JOBS - TOTAL (except Headquarters)....	0	0	lee	55	55	55	46	36	290	736	224	224	224	224	224	224	224	224
SHORT-TERM																		
Skilled	0	0	7k	33	33	33	27	22	231	477	e	e	e	0	e	0	e	0
Unskilled	0	0	86	22	22	22	19	16	60	258	0	e	0	e	e	e	e	e
LONG-TERM																		
Skilled	0	0	e	0	0	e	e	e	0	0	166	186	186	166	166	166	166	166
Unskilled	0	0	e	e	0	0	0	e	0	0	58	58	58	58	58	58	58	58
OFFSHORE JOBS - TOTAL	0	0	219	464	381	287	219	151	188	1384	1316	392	392	42s	42s	42s	42s	42s
SHORT-TERM																		
Skilled	0	0	219	3A	294	287	219	151	188	1384	924	e	a	e	e	e	0	0
Unskilled	0	0	0	22	7	0	0	e	0	e	0	e	0	e	e	e	e	0
LONG-TERM																		
Skilled	0	0	0	0	0	0	0	0	0	0	360	360	382	373	373	393	393	393
Unskilled	0	0	e	0	0	0	0	e	0	0	32	32	32	32	32	32	32	32

Prepared by James Sullivan on Aug. 13, 1985 for use by ISER in the AMM model.

Table M-5

Calculation of Total OCS Sale 97 North Slope Employment

Year	All Petroleum Employment	Anchorage Employment	Increase in North Slope Petrol. Emp. (EMBAU)
1987	0	0	0
1988	409	10	399
1989	533	14	519
1990	376	20	356
1991	372	30	342
1992	305	40	265
1993	239	50	189
1994	459	60	399
1995	2190	70	2120
1996	1610	70	1540
1997	686	70	616
1998	686	70	616
1999	699	70	629
2000	699	70	629
2001	719	70	649
2002	719	70	649
2003	719	70	649
2004	719	70	649
2005	719	70	649
2006	719	70	649
2007	719	70	649
2008	719	70	649
2009	719	70	649
2010	719	70	649
2011	719	60	659
2012	719	60	659
2013	719	60	659
2014	719	60	659
2015	719	60	659

Source: Wiggins Management Service employee model printed
prepared by James Sullivan of August 11, 1985.

TABLE M-6
 CALCULATION OF TOTAL OIL INDUSTRY EMPLOYMENT,
 SALE 97 IMPACT CASE (EMBAOI)

<u>Year</u>	<u>Total Oil Industry Employment, Base Case^a</u>	<u>Increase in Oil Industry Employment Due to OCS Sale 97^b</u>	<u>Total Oil Industry Employment, Sale 97 Impact Case</u>
1980	4246	0	4246
1981	6703	0	6703
1982	7228	0	7228
1983	7791	0	7791
1984	6939	0	6939
1985	6014	0	6014
1986	7191	0	7191
1987	6696	0	6696
1988	4919	399	5318
1989	5090	519	5609
1990	5141	356	5497
1991	4973	342	5274
1992	5086	265	5351
1993	4289	189	4478
1994	4203	399	4602
1995	4080	2720	6200
1996	3844	1540	5384
1997	3749	616	4365
1998	3526	616	4142
1999	3344	629	3973
2000	3344	629	3973
2001	3203	649	3852
2002	2438	649	3087
2003	2438	649	3087
2004	2077	649	2726
2005	2077	649	2726
2006	2077	649	2726
2007	1461	649	2110
2008	1461	649	2110
2009	1461	649	2110
2010	1461	649	2110

^aSee Table 6-15.

^bSee Table M-5.

APPENDIX N: OCS SALE 97 IMPACT PROJECTIONS

This appendix presents tables summarizing the projected impacts of OCS Sale 97. There are two sets of impact projections: our "Sale 97 Medium Impact Projections" and our "Sale 97 High Impact Projections."

The "medium" impact projections are based on our "best-guess" assumptions about key model variables such as the availability of oil employment to Natives and the sensitivity of Native migration to unemployment. The "medium" impact projections are calculated as the difference between the Sale 97 Medium Impact Case and the Medium Base Case (DSETS NSLP.I61 and NSLP.B61).

The "high" impact projections are based on assumptions which would result in the highest projected impacts of Sale 97. The "high" impact projections are calculated as the difference between the Sale 97 High Impact Case and the High Impact Base Case (DSETS NSLP.I62 and NSLP.B71).

We feel that the "high" impact projections represent a reasonable estimate of the maximum impacts on employment and population which might result from OCS Sale 97, while the "medium" impact projections represent a more likely level of impacts.

The tables in this appendix are arranged as follows:

Sale 97 "Medium" Impact Projections

N-1.1	Resident Population
N-1.2	Native Population
N-1.3	Non-Native Population
N-1.4	Native Migration
N-1.5	Native Employment
N-1.6	Total Oil Industry Employment
N-1.7	Native Oil Industry Employment
N-1.8	Non-Native Resident Employment
N-1.9	Total North Slope Borough Operating Revenues
N-1.10	North Slope Borough Property Values

Sale 97 "High" Impact Projections

N-2.1	Resident Population
N-2.2	Native Population
N-2.3	Non-Native Population
N-2.4	Native Migration
N-2.5	Native Employment
N-2.6	Total Oil Industry Employment
N-2.7	Native Oil Industry Employment
N-2.8	Non-Native Resident Employment
N-2.9	Total North Slope Borough Operating Revenues
N-2.10	North Slope Borough Property Values

Summary of Sale 97 "Medium" Impact Projections: Percentage Impacts

N-3.1	Resident Population, Native Population, Non-Native Population, and Native Migration
N-3.2	Native Employment, Total Oil Industry Employment, Native Oil Industry Employment, and Non-Native Resident Employment
N-3.3	North Slope Borough Operating Revenues and North Slope Borough Property Values

Summary of Sale 97 "High" Impact Projections: Percentage Impacts

N-4.1	Resident Population, Native Population, Non-Native Population, and Native Migration
N-4.2	Native Employment, Total Oil Industry Employment, Native Oil Industry Employment, and Non-Native Resident Employment
N-4.3	North Slope Borough Operating Revenues and North Slope Borough Property Values

Table N-1.1
North Slope Model Medium Impact Projections
Resident Population

Year	Base Case	Impact Case	Sal e 97 Impact	Percent Impact
1981	4142	4142	0	0
1982	4301	4301	0	0
1983	4548	4548	0	0
1984	4660	4660	0	0
1985	5152	5152	0	0
1986	4908	4908	0	0
1987	4971	4971	0	0
1988	4850	4870	20	0
1989	4867	4894	27	1
1990	4884	4903	19	0
1991	4974	4991	17	0
1992	5068	5083	15	0
1993	5107	5120	13	0
1994	5184	5211	27	1
1995	5255	5358	103	2
1996	5316	5396	80	2
1997	5380	5406	26	0
1998	5436	5458	22	0
1999	5493	5515	22	0
2000	5569	5590	21	0
2001	5673	5695	22	0
2002	5656	5752	96	2
2003	5636	5796	161	3
2004	5530	5747	218	4
2005	5418	5685	267	5
2006	5300	5608	308	6
2007	5078	5423	344	7
2008	4886	5260	375	8
2009	4705	5105	401	9
2010	4531	4953	422	9

Source: **North Slope Model Projections, Variable PORE, Medium Base Case and Sal e 97 Medium Impact Case (DSETS NSLP.B61 and NSLP.I61).**

Table N-1.2
 North Slope Model Medium Impact Projections
 Native Population

Year	Base Case	Impact Case	Sale 97 Impact	Percent Impact
1981	3268	3268	0	0
1982	3363	3363	0	0
1983	3460	3460	0	0
1984	3562	3562	0	0
1985	3665	3665	0	0
1986	3726	3726	0	0
1987	3792	3792	0	0
1988	3815	3819	5	0
1989	3881	3888	7	0
1990	3937	3943	5	0
1991	4022	4027	5	0
1992	4109	4113	4	0
1993	4176	4181	5	0
1994	4252	4261	10	0
1995	4328	4347	19	0
1996	4403	4420	17	0
1997	4475	4476	1	0
1998	4545	4542	-3	0
1999	4615	4612	-4	0
2000	4694	4690	-4	0
2001	4781	4777	-4	0
2002	4799	4861	63	1
2003	4791	4912	121	3
2004	4720	4892	173	4
2005	4629	4846	217	5
2006	4532	4787	255	6
2007	4363	4651	288	7
2008	4198	4513	316	8
2009	4042	4382	339	8
2010-	3893	4252	359	9

Source: North Slope Model Projections, Variable PQNA, Medium Base Case and Sale 97 Medium Impact Case (DSETS NSLP.B61 and NSLP.161).

Table N-1.3
North Slope **Model** Medium Impact Projections
Non-Native Population

Year	Base Case	Impact Case	Sal e 97 Impact	Percent Impact
1981	875	875	0	0
1982	938	938	0	0
1983	1088	1088	0	0
1984	1098	1098	0	0
1985	1487	1487	0	0
1986	1182	1182	0	0
1987	1179	1179	0	0
1988	1036	1051	15	1
1989	987	1007	20	2
1990	947	960	14	1
1991	952	964	12	1
1992	959	970	10	1
1993	931	939	8	1
1994	932	950	17	2
1995	927	1010	83	" 9
1996	913	976	63	7
1997	905	930	25	3
1998	891	916	25	3
1999	877	903	25	3
2000	874	900	25	3
2001	892	918	26	3
2002	857	890	34	4
2003	844	884	40	5
2004	810	855	45	6
2005	789	839	50	6
2006	768	821	53	7
2007	715	772	57	8
2008	688	747	59	9
2009	662	724	61	9
2010	638	701	63	10

Source: North Slope **Model** Projections, Variable **P0NN**, Medium Base Case and Sal e 97 Medium **Impact** Case (DSETS NSLP.B61 and NSLP.I61).

Table N-1.4
North Slope Model Medium Impact Projections
Native Migration

Year	Base Case	Impact Case	Sale 97 Impact	Percent Impact
1981	-36	-36	0	0
1982	0	0	0	0
1983	0	0	0	0
1984	0	0	0	0
1985	0	0	0	0
1986	-45	-45	0	0
1987	-40	-40	0	0
1988	-80	-76	5	-6
1989	-34	-32	2	-7
1990	-41	-42	-2	4
1991	-8	-9	-1	11
1992	-2	-3	-1	32
1993	-17	-16	1	-5
1994	-8	-3	5	-62
1995	-9	0	9	-100
1996	-11	-13	-3	24
1997	-10	-27	-17	171
1998	-14	-17	-3	25
1999	-16	-16	-1	4
2000	-10	-10	0	4
2001	-6	-6	0	0
2002	-77	-10	67	-87
2003	-109	-52	57	-52
2004	-176	-127	49	-28
2005	-196	-156	41	-21
2006	-204	-172	32	-16
2007	-275	-248	27	-10
2008	-269	-248	21	-8
2009	-255	-239	16	-6
2010	-244	-233	12	-5

Source: North Slope Model Projections, Variable MGNA, Medium Base Case and Sale 97 Medium Impact Case (DSETS NSLP.B61 and NSLP.I61).

Table N-1.5
North Slope Model Medium Impact Projections
Native Employment

Year	Base Case	Impact Case	Sale 97 Impact	Percent Impact
1981	1136	1136	0	0
1982	1326	1326	0	0
1983	1376	1376	0	0
1984	1441	1441	0	0
1985	1497	1497	0	0
1986	1392	1392	0	0
1987	1311	1311	0	0
1988	1100	1113	14	1
1989	1050	1068	18	2
1990	968	980	12	1
1991	974	984	10	1
1992	982	991	9	1
1993	949	960	12	1
1994	948	973	25	3
1995	941	1032	91	10
1996	923	1003	80	9
1997	913	949	37	4
1998	895	931	36	4
1999	878	915	37	4
2000	875	912	37	4
2001	890	928	38	4
2002	840	885	45	5
2003	828	879	51	6
2004	788	844	56	7
2005	767	828	61	8
2006	748	812	64	9
2007	684	752	67	10
2008	658	728	70	11
2009	634	706	72	11
2010	610	684	74	12

Source: North Slope Model Projections, Variable EMNA, Medium Base Case and Sale 97 Medium Impact Case (DSETS NSLP.B61 and NSLP.I61).

Table N-1 .6
 North Slope Model Medium Impact Projections
 Total Oil Industry Employment,

Year	Base Case	Impact Case	Sal e 97 Impact	Percent Impact
1981	6703	6703	0	0
1982	7228	7228	0	0
1983	7791	7791	0	0
1984	6939	6939	0	0
1985	6014	6014	0	0
1986	7191	7191	0	0
1987	6696	6696	0	0
1988	4919	5318	399	8
1989	5090	5609	519	10
1990	5141	5497	356	7
1991	4973	5274	307	6
1992	5086	5351	265	5
1993	4289	4478	189	4
1994	4203	4602	399	9
1995	4080	6200	2120	52
1996	3844	5384	1540	40
1997	3749	4365	616	16
1998	3526	4142	616	17
1999	3344	3973	629	19
2000	3344	3973	629	19
2001	3203	3852	649	20
2002	2438	3087	649	27
2003	2438	3087	649	27
2004	2077	2726	649	31
2005	2077	2726	649	31
2006	2077	2726	649	31
2007	1461	2110	649	44
2008	1461	2110	649	44
2009	1461	2110	649	44
2010	1461	2110	649	44

Source: North Slope Model Projections, Variable EMBAOI, Medium Base Case and Sal e 97 Medium Impact Case (DSETS NSLP.B61 and NSLP.I61).

Table N-1.7
North Slope Model Medium Impact Projections
Native Oil Industry Employment

Year	Base Case	Impact Case	Sal e 97 Impact	Percent Impact
1981	46	46	0	0
1982	30	30	0	0
1983	30	30	0	0
1984	30	30	0	0
1985	30	30	0	0
1986	44	44	0	0
1987	54	54	0	0
1988	75	74	-1	-2
1989	80	79	-2	-2
1990	91	90	-1	-1
1991	91	90	-1	-1
1992	92	91	-1	-1
1993	86	90	4	4
1994	84	92	8	9
1995	82	93	11	13
1996	77	96	20	25
1997	75	87	12	16
1998	71	83	12	17
1999	67	79	13	19
2000	67	79	13	19
2001	64	77	13	20
2002	49	62	13	27
2003	49	62	13	27
2004	42	55	13	31
2005	42	55	13	31
2006	42	55	13	31
2007	29	42	13	44
2008	29	42	13	44
2009	29	42	13	44
2010	29	42	13	44

Source: North Slope **Model** Projections, **Variable EMNAOI**, Medium Base Case and Sal e 97 Medium Impact Case (**DSETS NSLP.B61** and **NSLP.I61**).

Table N-1.8
North Slope Model Medium Impact Projections
Non-Native Resident Employment

Year	Base Case	Impact Case	Sal e 97 Impact	Percent Impact
1981	668	668	0	0
1982	717	717	0	0
1983	831	831	0	0
1984	839	839	0	0
1985	1136	1136	0	0
1986	903	903	0	0
1987	901	901	0	0
1988	791	803	12	1
1989	754	769	15	2
1990	723	734	11	1
1991	727	736	9	1
1992	733	741	8	1
1993	711	718	6	1
1994	712	726	13	2
1995	708	772	64	9
1996	698	746	48	7
1997	691	711	19	3
1998	680	699	19	3
1999	670	690	19	3
2000	668	687	19	3
2001	682	702	20	3
2002	655	680	26	4
2003	645	675	30	5
2004	619	653	34	6
2005	602	641	38	6
2006	587	628	41	7
2007	546	590	43	8
2008	525	571	45	9
2009	506	553	47	9
2010	487	536	48	10

Source: North Slope Model Projections, Variable EMNN, Medium Base Case and Sale 97 Medium Impact Case (DSETS NSLP.86 and NSLP.161).

Table N-1.9
 North Slope Model Medium Impact Projections
 Total North Slope Borough Operating Revenues
 (000)

Year	Base Case	Impact Case	Sale 97 Impact	Percent Impact
1981	57200	57200	0	0
1982	114100	114100	0	0
1983	120200	120200	0	0
1984	132500	132500	0	0
1985	117700	117700	0	0
1986	107324	107324	0	0
1987	100659	100659	0	0
1988	90360	9193-7	1577	2
1989	85751	87802	2051	2
1990	84072	85480	1409	2
1991	84613	85810	1197	1
1992	85364	86416	1052	1
1993	82623	83390	766	1
1994	82789	84400	1611	2
1995	82298	90513	8216	10
1996	80999	86978	5979	7
1997	80189	82500	2311	3
1998	78853	81121	2268	3
1999	77601	79907	2306	3
2000	77285	79584	2299	3
2001	79139	81520	2380	3
2002	75863	78984	3121	4
2003	74600	78350	3751	5
2004	71298	75587	4289	6
2005	69161	73911	4750	7
2006	67095	72216	5122	8
2007	62010	67451	5442	9
2008	59282	64984	5702	10
2009	56746	62663	5917	10
2010	54300	60389	6089	11

Source: North Slope Model Projections. Variable RVOPT0. Medium Base Case and Sale 97 Medium Impact-Case (DSETS NSLP.B61 and NSLP.I61).

Table N-1.10
 North Slope Model Medium Impact Projections
 North Slope Borough Property Values
 (000)

Year	Base Case	Impact Case	Sale 97 Impact	Percent Impact
1981	5723582	5723582	0	0
1982	6621652	6621652	0	0
1983	8186986	8186986	0	0
1984	9996289	9996289	0	0
1985	12261421	12261421	0	0
1986	13420000	13420000	0	0
1987	14730000	14730000	0	0
1988	15510000	15560000	50000	0
1989	16100000	16148748	48148	0
1990	16290000	16336296	46296	0
1991	15990000	16034444	44444	0
1992	15680000	15722593	42593	0
1993	15340000	15380241	40241	0
1994	14980000	15178889	198889	1
1995	14550000	14949418	399418	3
1996	14070000	14449447	379447	3
1997	13550000	13909476	359476	3
1998	12950000	13289505	339505	3 "
1999	12280000	12599534	319534	3
2000	11500000	11799563	299563	3
2001	10720000	10999593	279593	3
2002	9940000	10199622	259622	3
2003	\$1160000	9399651	239651	3
2004	8380000	8599680	219680	3
2005	7600000	7799709	199709	3
2006	6870000	6999738	179738	3
2007	6040000	6199767	159767	3
2008	5260000	5399796	139796	3
2009	4480000	4599825	119825	3
2010	3700000	3799854	99854	3

Source: North Slope Model Projections, Variable VATO, Medium Base Case and Sale 97 Medium Impact Case (DSETS NSLP.B61 and NSLP.I61).

Table N-2.1
 North Slope Model High Impact Projections
 Resident Population

Year	Base Case	Impact Case	Sal e 97 Impact	Percent Impact
1981	4149	4149	0	0
1982	4307	4307	0	0
1983	4552	4552	0	0
1984	4664	4664	0	0
1985	5156	5156	0	0
1986	4864	4864	0	0
1987	4892	4892	0	0
1988	4788	4809	21	0
1989	4809	4838	29	1
1990	4824	4845	22	0
1991	4929	4948	19	0
1992	5042	5059	17	0
1993	5072	5095	22	0
1994	5111	5159	48	1
1995	5117	5332	216	4
1996	5084	5336	253	5
1997	5021	5252	231	5
1998	4902	5169	267	5
1999	4746	5059	313	7
2000	4614	4951	337	7
2001	4503	4868	365	8
2002	4225	4611	386	9
2003	4035	4434	399	10
2004	3799	4207	408	11
2005	3624	4037	412	11
2006	3487	3902	414	12
2007	3244	3660	416	13
2008	3084	3500	416	13
2009	2963	3378	415	14
2010	2868	3283	414	14

Source: North Slope Model Projections, Variable PORE, High Impact Base Case and Sale 97 High Impact Case (DSETS NSLP.871 and NSLP.I62.)

Tab N-2.2
North Slope Mode High Impact Projections
Native Population

Year	Base Case	Impact Case	Sal 97 Impact	Percent Impact
1981	3275	3275	0	0
1982	3370	3370	0	0
1983	3468	3468	0	0
1984	3570	3570	0	0
1985	3673	3673	0	0
1986	3699	3699	0	0
1987	3746	3746	0	0
1988	3759	3764	5	0
1989	3815	3824	9	0
1990	3862	3870	8	0
1991	3935	3941	6	0
1992	4012	4017	6	0
1993	4044	4057	13	0
1994	4060	4088	28	1
1995	4052	4165	113	3
1996	4019	4183	164	4
1997	3955	4132	178	4
1998	3848	4056	207	5
1999	3709	3953	244	7
2000	3580	3846	266	7
2001	3473	3760	287	8
2002	3270	3575	306	9
2003	3109	3427	318	10
2004	2925	3251	326	11
2005	2777	3107	330	12
2006	2660	2993	333	13
2007	2481	2816	334	13
2008	2343	2678	335	14
2009	2240	2575	335	15
2010	2160	2494	334	15

Source: North Slope Mode Projections, Variable PONA, High Impact Base Case and Sale 97 High Impact Case (DSETS NSLP.871 and NSLP.162.)

Table N-2.3
 North Slope Model High Impact Projections
 Non-Native Population

Year	Base Case	Impact Case	Sal e 97 Impact	Percent 'Impact
1981	875	875	0	0
1982	937	937	0	0
1983	1085	1085	0	0
1984	1094	1094	0	0
1985	1484	1484	0	0
1986	1164	1164	0	0
1987	1146	1146	0	0
1988	1029	1045	15	1
1989	994	1013	20	2
1990	962	975	14	1
1991	994	1006	12	1
1992	1030	1041	11	1
1993	1028	1037	9	1
1994	1051	1071	20	2
1995	1065	1168	103	10
1996	1065	1153	88	8
1997	1066	1119	53	5
1998	1054	1114	60	6
1999	1037	1105	68	7
2000	1034	1105	71	7
2001	1030	1108	78	8
2002	956	1036	80	8
2003	927	1008	81	9
2004	874	956	82	9
2005	848	930	82	10
2006	827	909	82	10
2007	763	845	81	11
2008	740	821	81	11
2009	723	803	81	11
2010	709	789	80	11

Source: North Slope Model Projections, Variable PONN, High Impact Base Case and Sal e 97 High Impact Case (DSETS NSLP.B71 and NSLP.I62.)

Table N-2.4
 North Slope Model High Impact Projections
 Native Migration

Year	Base Case	Impact Case	Sale 97 Impact	Percent Impact
1981	-29	-29	0	0
1982	0	0	0	0
1983	0	0	0	0
1984	0	0	0	0
1985	0	0	0	0
1986	-79	-79	0	0
1987	-58	-58	0	0
1988	-89	-83	5	-E!
1989	-42	-39	3	-7
1990	-49	-50	-1	3
1991	-18	-20	-1	7
1992	-10	-11	-1	10
1993	-49	-42	7	-15
1994	-66	-51	15	-23
1995	-89	-5	84	-94
1996	-113	-64	49	-44
1997	-139	-129	10	-7
1998	-180	-154	26	-15
1999	-212	-179	33	-16
2000	-199	-183	16	-8
2001	-177	-161	16	-9
2002	-272	-259	13	-5
2003	-230	-224	6	-2
2004	-250	-249	1	0
2005	-213	-216	-3	1
2006	-180	-185	-6	3
2007	-241	-247	-6	3
2008	-196	-204	-8	4
2009	-158	-166	-8	5
2010	-132	-141	-9	7

Source: North Slope Model Projections, Variable MGNA, High Impact Base Case and Sale 97 High Impact Case (DSETS NSLP.B71 and NSLP.I62.)

Table N-2.5
 North Slope Model High Impact Projections
 Native Employment

Year	Base Case	Impact Case	Sale 97 Impact	Percent Impact
1981	1160	1160	0	0
1982	1328	1328	0	0
1983	1379	1379	0	0
1984	1444	1444	0	0
1985	1500	1500	0	0
1986	1359	1359	0	0
1987	1292	1292	0	0
198a	1146	1158	12	1
1989	1114	1129	15	1
1990	1056	1067	11	1
1991	1053	1062	9	1
1992	1053	1061	8	1
1993	1026	1033	7	1
1994	1014	1029	15	1
1995	994	1065	71	7
1996	961	1027	66	7
1997	926	976	50	5
1998	877	942	65	7
1999	828	905	77	9
2000	799	874	75	9
2001	790	871	81	10
2002	704	788	84	12
2003	685	770	85	12
2004	634	719	85	13
2005	617	702	85	14
2006	603	688	85	14
2007	531	616	85	16
2008	517	601	85	16
2009	505	590	84	17
2010	496	580	84	17

Source: North Slope Model Projections, Variable EMNA, High Impact Base Case and Sale 97 High Impact Case (DSETS NSLP.B71 and NSLP.I62.)

Table N-2.6
 North Slope Model High Impact Projections
 Total Oil Including Employment

Year	Base Case	Impact Case	Sal e 97 Impact	Percent Impact
1981	6703	6703	0	0
1982	7228	7228	0	0
1983	7791	7791	0	0
1984	6939	6939	0	0
1985	6014	6014	0	0
1986	7191	7191	0	0
1987	6696	6696	0	0
1988	4919	5318	399	8
1989	5090	5609	519	10
1990	5141	5497	356	7
1991	4973	5274	301	6
1992	5086	5351	265	5
1993	4289	4478	189	4
1994	4203	4602	399	9
1995	4080	6200	2120	52
1996	3844	5384	1540	40
1997	3749	4365	616	16
1998	3526	4142	616	17
1999	3344	3973	629	19
2000	3344	3973	629	19
2001	3203	3852	649	20
2002	2438	3087	649	27
2003	2438	3087	649	27
2004	2077	2726	649	31
2005	2077	2726	649	31
2006	2077	2726	649	31
2007	1461	2110	649	44
2008	1461	2110	649	44
2009	1461	2110	649	44
2010	1461	2110	649	44

Source: North Slope Model Projections, Variable EMBAOI, High Impact Base Case and Sale 97 High Impact Case (DSETS NSLP.B71 and NSLP.I62.)

Table N-2.7
 North Slope Model High Impact Projections
 Native Oil Industry Employment

Year	Base Case	Impact Case	Sal e 97 Impact	Percent, Impact
1981	70	70	0	0
1982	30	30	0	0
1983	30	30	0	0
1984	30	30	0	0
1 9 8 5	30	30	0	0
1986	79		0	0
1987	100	100	0	0
1988	142	139	-3	-2
1989	151	147	-4	-3
1990	173	170	-3	-2
1991	175	173	-2	-1
1992	179	177	-2	-1
1993	188	188	-1	0
1994	191	189	-1	-1
1995	193	184	-10	-5
1996	192	192	0	0
1997	187	199	12	6
1998	176	200	23	13
1999	167	199	31	19
2000	167	196	29	17
2001	160	191	31	19
2002	122	154	32	27
2003	122	154	32	27
2004	104	136	32	31
2005	104	136	32	31
2006	104	136	32	31
2007	73	106	32	44
2008	73	106	32	44
2009	73	1 0 6	32	44
2010	73	106	- 32	44

Source: North Slope Model Projections, Variable EMNAOI, High Impact Base Case and Sal e 97 High Impact Case (DSETS NSLP.B71 and NSLP.I62.)

Table N-2.³
North Slope Model High Impact Projections
Non-Native Resident Employment

Year	Base Case	Impact Case	Sal 97 Impact	Percent Impact
1981	668	668	0	0
1982	716	716	0	0
1983	829	829	0	0
1984	836	836	0	0
1985	1134	1134	0	0
1986	889	889	0	0
1987	876	876	0	0
1988	786	798	12	1
1989	759	774	15	2
1990	734	745	11	1
1991	760	769	9	1
1992	787	796	8	1
1993	785	792	7	1
1994	803	818	15	2
1995	814	892	79	10
1996	814	881	67	8
1997	814	855	41	5
1998	805	851	46	6
1999	792	844	52	7
2000	790	844	55	7
2001	787	846	59	8
2002	730	791	61	8
2003	708	770	62	9
2004	668	730	63	9
2005	648	710	63	10
2006	632	694	62	10
2007	583	645	62	11
2008	566	627	62	11
2009	552	614	62	11
2010	541	603	61	11

Source: North Slope Model Projections. Variable EMNN, High Impact Base Case and Sal 97 High Impact Case (SSETS NSLP.87 and NSLP.162.)

Table N-2.9
 North Slope Model High Impact Projections
 Total North Slope Borough Operating Revenues
 (000)

Year	Base Case	Impact Case	Sale 97 Impact	Percent Impact
1981	57200	57200	0	0
1982	114100	114100	0	0
1983	120200	120200	0	0
1984	132500	132500	0	0
1985	117700	117700	0	0
1986	102632	102632	0	0
1987	98054	98054	0	0
1988	89163	90754	1592	2
1989	85728	87803	2074	2
1990	84436	85873	1437	2
1991	85542	86762	1220	1
1992	86897	87974	1077	1
1993	84439	85312	872	1
1994	84614	86468	1854	2
1995	83857	93302	9445	11
1996	82028	89823	7795	10
1997	80401	84768	4367	5
1998	77826	82484	4657	6
1999	74994	80081	5087	7
2000	73161	78463	5302	7
2001	72995	78741	5746	8
2002	67626	73574	5948	9
2003	65243	71284	6041	9
2004	61285	67373	6088	10
2005	59132	65219	6087	10
2006	57445	63519	6074	11
2007	52782	58839	6057	11
2008	50926	56949	6023	12
2009	49496	55485	5989	12
2010	48329	54278	5949	12

Source: North Slope Model Projections, Variable RVOPT0, High Impact Base Case and Sale 97 High Impact Case (DSETS NSLP.B71 and NSLP.I62.)

Table N-2.10
North Slope Model High Impact Projections
 North-Slope Borough Property Values
 (000)

Year	Base Case	Impact Case	Sale 97 Impact	Percent Impact
1981	5723582	5723582	0	0
1982	6621652	6621652	0	0
1983	8186986	8186986	0	0
1984	9996289	9996289	0	0
1985	12261421	12261421	0	0
1986	13420000	13420000	0	0
1987	14730000	14730000	0	0
1988	15510000	15560000	50000	0
1989	16100000	16148148	48148	0
1990	16290000	16336296	46296	0
1991	15990000	16034444	44444	0
1992	15680000	15722593	42593	0
1993	?5340000	15380241	40241	0
1994	14980000	15178889	198889	1
1995	14550000	14949478	399418	3
1996	14070000	74449447	379447	3
1997	13550000	13909476	359476	3
1998	12950000	13289505	339505	3
1999	12280000	12599534	319534	3
2000	11500000	11799563	299563	3
2001	10720000	10999593	279593	3
2002	9940000	10199622	259622	3
2003	9160000	9399651	239651	3
2004	8380000	8599680	219680	3
2005	7600000	7799709	199709	3
2006	6820000	6999738	179738	3
2007	6040000	6199767	159767	3
2008	5260000	5399796	139796	3
2009	4480000	4599825	119825	3
2010	3700000	3799854	99854	3

Source: **North Slope Model Projections, Variable VATO, High Impact Base Case and Sale 97 High Impact Case (DSETS NSLP.B71 and NSLP.I62.)**

Table N-3.1
 Summary of North Slope Model Medium Impact Projections
 Percentage Impacts

Year	Resident Popul ati on	Native Popul ati on	Non-Nati ve Popul ati on	Native Mi grati on
1981	0	0	0	0
1982	0	0	0	0
1983	0	0	0	0
1984	0	0	0	0
1985	0	0	0	0
1986	0	0	0	0
1987	0	0	0	0
1988	0	0	1	-6
1989	1	0	2	-7
1990	0	0	1	4
1991	0	0	1	11
1992	0	0	1	32
1993	0	0	1	-5
1994	1	0	2	-62
1995	2	0	9	-100
1996	2	0	7	24
1997	0	0	3	171
1998	0	0	3	25
1999	0	0	3	4
2000	0	0	3	4
2001	0	0	3	0
2002	2	1	4	-87
2003	3	3	5	-52
2004	4	4	6	-28
2005	5	5	6	-21
2006	6	6	7	-16
2007	7	7	8	-10
2008	8	8	9	-8
2009	9	8	9	-6
2010	9	9	10	-5

Source: North Slope Model Projections, Medium Base Case and Sale 97 Impact Case (DSETS NSLP.B61 and NSLP. I61), Variables PORE, PONA, PONN, and MGNA.

Table N-3.2
Summary of North Slope Model Medium Impact Projections
Percentage Impacts

Year	Native Employment	Total Oil Industry Employment	Native Oil Industry Employment	Non-Native Resident Employment
1981	0	0	0	0
1982	0	0	0	0
1983	0	0	0	0
1984	0	0	0	0
1985	0	0	0	0
1986	0	0	0	0
1987	0	0	0	0
1988	1	8	-2	1
1989	2	10	-2	2
1990	1	7	-1	1
1991	1	6	-1	1
1992	1	5	-1	1
1993	1	4	4	1
1994	3	9	9	2
1995	10	52	13	9
1996	9	40	25	7
1997	4	16	16	3
1998	4	17	17	3
1999	4	19	19	3
2000	4	19	19	3
2001	4	20	20	3
2002	5	27	27	4
2003	6	27	27	5
2004	7	31	31	6
2005	8	31	31	6
2006	9	31	31	7
2007	10	44	44	8
2008	11	44	44	9
2009	11	44	44	9
2010	12	44	44	10

Source: North Slope Model Projections, Medium Base Case and Sale 97 Impact Case (DSETS NSLP.B61 and NSLP. I61), Variables EMNA, EMBAOI, EMNAOI, EMNN

Table N-3.3
Summary of North Slope Model "Medium" Impact Projections
 Percentage Impacts

Year	North Slope Borough Operating Revenues	North Slope Borough Property Values
1981	0	0
1982	0	0
1983	0	0
1984	0	0
1985	0	0
1986	0	0
1987	0	0
1988	2	0
1989	2	0
1990	2	0
1991	1	0
1992	1	0
1993	1	0
1994	2	1
1995	10	3
1996	7	3
1997	3	3
1998	3	3
1999	3	3
2000	3	3
2001	3	3
2002	4	3
2003	5	3
2004	6	3
2005	7	3
2006	8	3
2007	9	3
2008	10	3
2009	10	3
2010	11	3

Source: North Slope Model Projections, **Medium** Base Case and Sale 97 Impact Case (DSETS NSLP.B61 and NSLP. 161), Variables RVOPTO, VATO

Table N-4.1
Summary of North Slope Model High Impact Projections
Percentage Impacts

Year	Resident Population	Native Population	Non-Native Population	Native Migration
1981	0	0	0	0
1982	0	0	0	0
1983	0	0	0	0
1984	0	0	0	0
1985	0	0	0	0
1986	0	0	0	0
1987	0	0	0	0
1988	0	0	1	-6
1989	1	0	2	-7
1990	0	0	1	3
1991	0	0	1	7
1992	0	0	1	10
1993	0	0	1	-15
1994	1	1	2	-23
1995	4	3	10	-94
1996	5	4	8	-44
1997	5	4	5	-7
1998	5	5	6	-15
1999	7	7	7	-16
2000	7	7	7	-8
2001	8	8	8	-9
2002	9	9	8	-5
2003	10	10	9	-2
2004	11	11	9	0
2005	11	12	10	1
2006	12	13	10	3
20.07	13	13	11	3
2008	13	14	11	4
2009	14	15	11	5
2010	14	15	11	7

Source: North Slope Model Projections, High Impact Base Case and Sale97 High Impact Case (DSETS NSLP.B71 and NSLP.I62), Variables PORE, PONA, PONN, and MGNA.

Table N-4.2
 Summary of North Slope Model High Impact Projections
 Percentage Impacts

Year	Native Employment	Total Oil Industry Employment	Native Oil Industry Employment	Non-Native Resident Employment
1981	0	0	0	0
1982	0	0	0	0
1983	0	0	0	0
1984	0	0	0	0
1985	0	0	0	0
1986	0	0	0	0
1987	0	0	0	0
1988	1	8	-2	1
1989	1	10	-3	2
1990	1	7	-2	1
1991	1	6	-1	1
1992	1	5	-1	1
1993	1	4	0	1
1994	1	9	-1	2
1995	7	52	-5	10
1996	7	40	0	8
1997	5	16	6	5
1998	7	17	13	6
1999	9	19	19	7
2000	9	19	17	7
2001	10	20	19	8
2002	12	27	27	8
2003	12	27	27	9
2004	13	31	31	9
2005	14	31	31	10
2006	14	31	31	10
2007	16	44	44	11
2008	16	44	44	11
2009	17	44	44	11
2010	17	44	44	11

Source: North Slope Model Projections, High Impact Base Case and Sale 97 High Impact Case (DSETS NSLP.871 and NSLP.162), Variables EMNA, EMBAOI, EMNAOI, and MGNA.

Table N-4.3
Summary of North Slope Model High Impact Projections
Percentage Impacts

Year	North Slope Borough Operating Revenues	North Slope Borough Property Values
1981	0	0
1982	0	0
1983	0	0
1984	0	0
1985	0	0
1986	0	0
1987	0	0
1988	2	0
1989	2	0
1990	2	0
1991	1	0
1992	1	0
1993	1	0
1994	2	1
1995	11	3
1996	10	3
1997	5	3
1998	6	3
1999	7	3
2000	7	3
2001	8	3
2002	9	3
2003	9	3
2004	10	3
2005	10	3
2006	11	3
2007	11	3
2008	12	3
2009	12	3
2010	12	3

Source: North Slope Model Projections, High Impact Base Case and Sale 97 High Impact Case (DSETS NSLP.B71 and NSLP.I62), Variables RVOPTO, VATO

APPENDIX 0: OCS SALE 109 ASSUMPTIONS

In this appendix, we review the assumptions used in preparing our North Slope Model OCS Sale 109 impact projections. Specifically, we based our impact projections on two kinds of assumptions:

- o Assumptions about the increase in North Slope Borough property values due to Sale 109
- o Assumptions about the increase in total North Slope oil industry employment due to Sale 109

In developing these assumptions, we used information provided to us by the Minerals Management Service.

Increase in Property Values

We assumed that the following onshore facilities would be built for Sale 109 (Table 0-1):

TABLE 0-1. SALE 109 ONSHORE FACILITY ASSUMPTIONS

<u>Facility</u>	<u>Year Completed</u>	<u>cost (\$million)</u>	<u>Depreciation Period (Years)</u>
Shore base additions	1988	40	30
Shore base additions	1996	30	22
Shore base additions	1999	30	21
Shore base additions	1998	40	20
100 miles onshore pipeline	1995	350	23
100 miles onshore pipeline	1996	350	22
100 miles onshore pipeline	1997	350	21
100 miles onshore pipeline	1998	350	20

We based our assumptions about the facilities to be built and the timing of construction on the information in Table 0-2, which was provided to us by the Minerals Management Service. We based our cost assumptions on figures provided in Han-Padron Associates, Beaufort Sea Petroleum Technology Assessment, Social and Economic Studies Program Technical Report Number 112 (Anchorage, Minerals Management Service, March 1985) and information provided to us by MMS based on Han-Padron Associates, Update of Cost Data for Petroleum Development in the Norton Basin (Social and Economic Studies Program Technical Memorandum Number UCD-3, November 1985). Based on the Table 0-2 assumption of a maximum production of 225 million barrels per year, we assumed a maximum daily production of 616 barrels per day. According to Technical Report Number 112 and Technical Memorandum UCD-3, this implies a pipeline diameter of twenty-six inches, with a construction cost of \$3.5 million per mile (TR 112 p. 7-24 and TM UCD-3 p. 5-8). Thus, we assumed a total cost of \$1.4 billion for the 400 miles of onshore pipeline.

We assumed that a 10-hectare shore base for the exploration phase would be built in 1988 at a total cost of \$40 million and that a 25-hectare shore base for the development phase would be built during the years 1996-1998 at a cost of \$100 million (Technical Report 112, pp. 4-99 through 4-101). Finally, we assumed that the assessed value of all facilities would be depreciated in a straight-line fashion until 2017, the final year of production.

TABLE O-2.
SALE 109 (Chukchi Sea)
 MEAN CASE
 ESTIMATED SCHEDULE OF EXPLORATION, DEVELOPMENT, PRODUCTION
 (Oil Only)

<u>Sale Year</u>	<u>Cal. Year</u>	<u>Explor. Wells</u>	<u>Delin. Wells</u>	<u>Explr. Delin. Rigs</u>	<u>Prod. Platfms</u>	<u>Prod. Wells</u>	<u>Service Rigs</u>	<u>Onshore Pipeline (mi Les)</u>	<u>No. Of Shore Bases</u>	<u>Oil Prodctn (MMB)</u>
1	1987									
2	1988	0	0	0	0	0	0	0	1.0	0
3	1989	2	0	2	0	0	0	0	.0	0
4	1990	2	0	2	0	0	0	0	.0	0
5	1991	4	4	4	0	0	0	0	.0	0
6	1992	4	4	4	0	0	0	0	.0	0
7	1993	4	4	4	0	0	0	0	.0	0
8	1994	4	4	4	0	0	0	0	.0	0
9	1995	0	4	2	0	0	0	100	.0	0
10	1996	0	3	2	0	0	0	100	.3	0
11	1997	0	0	0	4	12	2	100	.3	0
12	1998	0	0	0	5	71	8	100	.4	0
13	1999	0	0	0	0	70	7	0	.0	67
14	2000				0	0	0	0	.0	225
15	2001									225
16	2002									225
17	2003									225
18	2004									225
19	2005									225
20	2006									198
21	2007									174
22	2008									153
23	2009									129
24	2010									110
25	2011									96
26	2012									86
27	2013									78
28	2014									70
29	2015									62
30	2016									56
31	2017									51
32	2018									0

SOURCE: Minerals Management Service, Alaska OCS Office.

All figures are from "Scenarios for Petroleum Development in the Chukchi Sea Planning Area (Sale 109)," except for pipeline miles, which were provided by Kevin Banks of Minerals Management Service in a memorandum dated 1/17/86.

Table CI-3 shows our calculation; of the increase in North Slope Borough property values resulting from Sale 109 (variable VAOIFU).

Increase in Total Oil Industry Employment

We based our Sale 109 oil Industry employment assumptions on projections prepared by the Minerals Management Service using the MMS OCS Manpower Model. These projections are shown as "Total Employment--Except Headquarters" in Table 0-4. Finally, we calculated total oil industry employment (EMBAOI) for the Sale 109 impact cases by adding the Sale 109 oil employment to our base case oil industry employment assumptions, as shown in Table 0-5.

Table 0-3: Calculation of OCS Sale 109 Property Value Assumptions

Year	1988 Shore Base	1996 Shore Base	1997 Shore Ease	1998 Shore Base	1995 Pipeline	1996 Pipeline	1997 Pipeline	1998 Pipeline	Total (VAOIFU)
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	40.000								40.000
1989	38.667								38.667
1990	37.333								37.333
1991	36.000								36.000
1992	34.667								34.667
1993	33.333								33.333
1994	32.000								32.000
1995	30.667				350.000				380.667
1996	29.333	30.000			354.783	350.000			744.116
1997	28.000	28.636	30.000		319.565	334.091	350.000		1090.292
1998	26.667	27.273	28.571	40.000	304.348	318.182	333.333	350.000	1428.374
1999	25.333	25.909	27.143	38.000	289.130	302.273	316.667	332.500	1356.955
2000	24.0011	24.545	25.714	36.000	273.913	286.364	300.000	315.000	1285.536
2001	22.667	23.182	24.286	34.000	258.696	270.455	283.333	297.500	1214.118
2002	21.333	21.818	22.857	32.000	243.478	254.545	266.667	280.000	1142.699
2003	20.000	2(3.455	21.429	30.000	228.261	258.636	250.000	262.500	1071.280
2004	18.667	19.091	20.300	28.000	213.043	222.727	233.333	245.000	999.862
2005	17.333	17.727	18.571	26.000	197.826	206.818	216.667	227.500	928.443
2006	16.000	16.364	17.143	24.000	182.609	190.909	200.000	210.000	857.024
2007	14.667	15.000	15.714	22.000	167.391	175.000	183.333	192.500	785.606
2008	13.333	13.636	14.286	20.000	152.174	159.091	166.667	175.000	714.187
2009	12.000	12.273	12.857	18.000	136.957	143.182	150.000	157.500	642.768
2010	10.667	10.909	11.429	16.000	121.739	127.273	133.333	140.000	571.350
2011	9.333	9.545	10.000	14.000	106.522	111.364	116.667	122.500	499.931
2012	8.000	8.182	8.571	12.000	91.304	95.455	103.000	105.500	428.512
2013	6.667	6.818	7.143	10.000	76.087	79.545	83.333	87.500	357.093
2014	5.333	5.455	5.714	8.000	613.870	63.636	66.667	70.000	285.675
2015	4.000	4.091	4.286	6.000	45.652	47.727	50.000	52.500	214.256
2016	2.667	2.727	2.857	4.000	30.435	31.818	33.333	35.000	142.937
2017	1.333	1.364	1.429	2.000	15.217	15.909	16.667	17.500	71.419
2018	.000	.000	.000	0.000	0.000	0.000	0.000	0.000	0.000

Table O-4: Direct OCS Manpower Requirements, Sale 109

	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2010
TOTAL DIRECT OCS MANPOWER REQUIREMENTS	0	143	204	289	659	639	789	719	780	1527	3053	5387	5805	6242	6242	6259	6392	6392	6392	2372
ON-SHORE JOBS -- TOTAL	0	133	34	34	54	54	94	94	333	1184	1186	1186	1638	278	278	278	278	278	278	278
SHORT-TERM	0	57	22	22	56	56	56	56	255	848	798	741	0	0	0	0	0	0	0	0
Skilled	0	57	16	16	34	34	34	34	78	249	276	284	0	0	0	0	0	0	0	0
Unskilled	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LONG-TERM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Skilled	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Unskilled	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OFFSHORE JOBS -- TOTAL	0	10	170	155	559	559	559	559	247	323	2544	3782	1437	1764	1764	1861	1914	1914	1914	1914
SHORT-TERM	0	0	151	151	559	559	559	559	287	323	2544	3753	633	0	0	0	0	0	0	0
Skilled	0	0	0	0	0	0	0	0	0	0	0	27	0	0	0	0	0	0	0	0
Unskilled	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LONG-TERM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Skilled	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Unskilled	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EXPLORATION PHASE EMPLOYMENT (EXCEPT HQ)	0	133	189	189	649	649	649	649	649	649	649	649	649	649	649	649	649	649	649	649
DEVELOPMENT PHASE EMPLOYMENT (EXCEPT HQ)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PRODUCTION PHASE EMPLOYMENT (EXCEPT HQ)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL EMPLOYMENT - EXCEPT HQ	0	133	189	189	649	649	649	649	649	649	649	649	649	649	649	649	649	649	649	649
TOTAL EMPLOYMENT - INCLUDING HQ	0	143	204	289	659	639	789	719	780	1527	3053	5387	5805	6242	6242	6259	6392	6392	6392	2372

Prepared by J. Lockhart on 12-19-02, using the MMS employment model.

Source: Minerals Management Service.

Table 0-5: Calculation of OCS Sale 109 North Slope Employment
 " and Total Oil Industry Employment

Year	Sale 109 North Slope Employment (from Table 0-4)	Total Base Case Oil Industry Employment (from Table B-15)	Total Oil Industry Employment, Sale 109 Impact Case
1980	0	4246	4246
1981	0	6703	6703
1982	0	7228	7228
1983	0	7791	7791
1984	0	6939	6939
1985	0	6014	6014
1986	0	7191	7191
1987	0	6696	6696
1988	133	4919	5052
1989	189	5090	5279
1990	189	5141	5330
1991	549	4973	5522
1992	649	5086	5735
1993	649	4289	4938
1994	649	4203	4852
1995	620	4080	4700
1996	1427	3844	5271
1997	3650	3749	7399
1998	4887	3526	8413
1999	1605	3344	4949
2000	2042	3344	5386
2001	2042	3203	5245
2002	2159	2438	4597
2003	2192	2438	4630
2004	2192	2077	4269
2005	2192	2077	4269
2006	2192	2077	4269
2007	2192	1461	3653
2008	2192	1461	3653
2009	2192	1461	3653
2010	2192	1461	3653

APPENDIX P: OCS SALE 109 IMPACT PROJECTIONS

This appendix presents **tables summarizing the** projected impacts of OCS Sale 109. There are two "sets of impact projections: our **"Sale 109 Medium Impact Projections"** and our "Sale 109 High Impact Projections."

The "medium" impact projections are based on our "best-guess" assumptions about key model variables such as the availability of oil employment to Natives and the sensitivity of Native migration to unemployment. The **"medium"** impact projections are calculated as the difference between the Sale 109 Medium Impact Case and the **Medium Base Case (DSETS NSLP.I81 and NSLP.B61).**

The "high" impact projections are based on assumptions which would result in the highest projected impacts of Sale 109. The "high" impact projections are calculated as the difference between the **Sale 109 High Impact Case** and the High Impact Base Case **(DSETS NSLP.I82 and NSLP.B71)**

We feel that the "high" impact projections represent a reasonable estimate of the maximum impacts on employment and population which might result from OCS Sale 109, while the "medium" impact projections represent a more likely level of impacts.

The tables in this appendix are arranged as follows:

Sale 109 "Medium" Impact Projections

- P-1.1 Resident Population
- P-1.2 Native Population
- P-1.3 Non-Native Population
- P-1.4 **Native** Migration
- P-1.5 **Native** Employment
- P-1.6 **Total Oil** Industry Employment
- P-1.7 **Native Oil** Industry Employment
- P-1.8 Non-Native **Resident** Employment
- P-1.9 **Total North Slope** Borough Operating Revenues
- P-1.10 **North Slope** Borough Property Values

Sale 109 "High" Impact Projections

- P-2.1 Resident Population
- P-2.2 Native Population
- P-2.3** Non-Native Population
- P-2.4 Native Migration
- P-2.5 **Native** Employment
- P-2.6** **Total Oil Industry** Employment
- P-2.7 **Native Oil** Industry Employment
- P-2.8 **Non-Native** Resident Employment
- P-2.9** **Total North Slope** Borough Operating Revenues
- P-2.10** **North Slope** Borough Property Values

TABLE F-1.1
 NORTH SLOPE MODEL SALE 109
 MEDIUM IMPACT PROJECTIONS

Resident Population

Year	Base Case	Impact Case	Sale 109 Impact	Percent Impact
1981	4142	4142	0	0
1982	4301	4301	0	0
1983	4548	4548	0	0
1984	4660	4660	0	0
1985	5152	5152	0	0
1986	4908	4908	0	0
1987	4971	4971	0 "	0
1988	4850	4857	7	0
1989	4867	4877	1	0 0
1990	4884	4894	10	0
1991	4974	5002	28	1
1992	5068	5103	34	1
1993	5107	5148	" 41	1
1994	5184	5229	45	1
1995	5255	5300	45-	1
1996	5316	5404	88	2
1997	5380	5563	183	3
1998	5436	5681	246	5
1999	5493	5575	82	1
2000	5569	5670	102	2
2001	5673	5775	102	2
2002	5656	5819	164	3
2003	5636	5907	271	5
2004	5530	5975	446	8
2005	5418	6061	644	12
2006	5300	6114	814	15
2007	5078	6042	963	19
2008	4886	5976	1091	22
2009	4705	5904	1199	25
2010	4531	5821	1290	28

SOURCE: North Slope Model Projections, Variable PORE, Medium Base Case and Sale 109 Medium Impact Case (DSETS NSLP.861 and NSLP.181).

TABLE P-1.2
 NORTH SLOPE MODEL SALE 109
 MEDIUM IMPACT PROJECTIONS

Native Population

Year	Base Case	Impact Case	Sale 109 Impact	Percent Impact
1981	3268	3268	0	0
1982	3363	3363	0	0
1983	3460	3460	0	0
1984	3562	3562	0	0
1985	3665	3665	0	0
1986	3726	3726	0	0
1987	3792	3792	0	0
1988	3815	3816	2	0
1989	3881	3883	2	0
1990	3937	3940	3	0
1991	4022	4029	7	0
1992	4109	4118	9	0
1993	4176	4189	14	0
1994	4252	4268	16	0
1995	4328	4345	17	0
1996	4403	4431	28	1
1997	4475	4514	38	1
1998	4545	4598	53	1
1999	4615	4630	15	0
2000	4694	4711	17	0
2001	4781	4797	16	0
2002	4799	4866	68	1
2003	4791	4955	164	3
2004	4720	5041	321	7
2005	4629	5130	500	11
2006	4532	5187	655	14
2007	4363	5154	791	18
2008	4198	5105	907	22
2009	4042	5048	1006	25
2010	3893	4983	1089	28

SOURCE: North Slope Model Projections, Variable PONA, Medium Base Case and Sale 109 Medium Impact Case (DSE-S NSLP.B61 and NSLP.181)

TABLE P-1.3
 NORTH SLOPE MODEL SALE 109
 MEDIUM IMPACT PROJECTIONS

Non-Native Population

Year	Base Case	Impact Case	Sale 109 Impact	Percent Impact
1981	875	875	0	0
1982	938	938	0	0
1983	1088	1088	0	0
1984	1098	1098	0	0
1985	1487	1487	0	0
1986	1182	1182	0	0
1987	1179	1179	0	0
1988	1036	1041	5	0
1989	987	994	7	1
1990	947	954	7	1
1991	952	973	21	2
1992	959	985	25	3
1993	931	959	27	3
1994	932	961	28	3
1995	927	955	27	3
1996	913	973	60	7
1997	905	1049	144	16
1998	891	1083	192	22
1999	877	945	67	8
2000	874	959	85	10
2001	892	978	86	10
2002	857	953	96	11
2003	844	952	107	13
2004	810	934	124	15
2005	789	932	143	18
2006	768	927	159	21
2007	715	887	172	24
2008	688	872	184	27
2009	662	855	193	29
2010	638	839	201	31

SOURCE : North Slope Model Projections, Variable PONN, Medium Base Case and Sale 109 Medium Impact Case (DSETS NSLP.B61 and NSLP.181).

TABLE P-1.4
NORTH SLOPE MODEL SALE 109
MEDIUM IMPACT PROJECTIONS

Native Migration

Year	Base Case	Impact Case	Sale 109 Impact	Percent Impact
1981	-36	-36	0	0
1982	0	0	0	0
1983	0	0	0	0
1984	0	0	0	0
1985	0	0	0	0
1986	-45	-45	0	0
1987	-40	-40	0	0
1988	-80	-79	2	-2
1989	-34	-33	1	-3
1990	-41	-41	0	0
1991	-8	-4	4	-52
1992	-2	0	2	-92
1993	-17	-12	5	-27
1994	-8	-5	2	-29
1995	-9	-9	0	-4
1996	-11	0	11	-100
1997	-10	0	10	-100
1998	-14	0	14	-100
1999	-16	-55	-39	252
2000	-10	-8	1	-15
2001	-6	-7	-1	9
2002	-77	-26	51	-66
2003	-109	-15	94	-86
2004	-176	-22	154	-88
2005	-196	-25	171	-87
2006	-204	-62	143	-70
2007	-275	-155	120	-44
2008	-269	-173	96	-36
2009	-255	-178	77	-30
2010	-244	-185	59	-24

SOURCE : North Slope Model Projections, Variable MGNA, Medium Base Case and Sale 109 Medium Impact Case (DSETS NSLP.B61 and NSLP.181).

TABLE P-1.5
NORTH SLOPE MODEL SALE 109
MEDIUM IMPACT PROJECTIONS

Native Employment

Year	Base Case	Impact Case	Sale 109 Impact	Percent Impact
1981	1136	1136	0	0
1982	1326	1326	0	0
1983	1376	1376	0	0
1984	1441	1441	0	0
1985	1497	1497	0	0
1986	1392	1392	0	0
1987	1311	1311	0	0
1988	1100	1104	5	0
1989	1050	1056	6	1
1990	968	975	6	1
1991	974	992	19	2
1992	982	1004	22	2
1993	949	983	34	4
1994	948	987	38	4
1995	941	979	39	4
1996	923	1001	78	8
1997	913	1068	156	17
1998	895	1100	206	23
1999	878	975	97	11
2000	875	997	122	14
2001	890	1013	123	14
2002	840	976	135	16
2003	828	975	147	18
2004	788	951	163	21
2005	767	949	181	24
2006	748	944	197	26
2007	684	894	210	31
2008	658	879	221	34
2009	634	863	229	36
2010	610	847	237	39

SOURCE : North Slope Model Projections, Variable EMNA, Medium Base Case and Sale 109 Medium Impact Case (DSETS NSLP.B61 and NSLP.181).

TABLE P-1.6
NORTH SLOPE MODEL SALE 109
MEDIUM IMPACT PROJECTIONS

Total Oil Industry Employment

Year	Base Case	Impact Case	Sale 109 Impact	Percent Impact
1981	6703	6703	0	0
1982	7228	7228	0	0
1983	7791	7791	0	0
1984	6939	6939	0	0
1985	6014	6014	0	0
1986	7191	7191	0	0
1987	6696	6696	0	0
1988	4919	5052	133	3
1989	5090	5279	189	4
1990	5141	5330	189	4
1991	4973	5522	549	11
1992	5086	5735	649	13
1993	4289	4938	649	15
1994	4203	4852	649	15
1995	4080	4700	620	15
1996	3844	5271	1427	37
1997	3749	7399	3650	97
1998	3526	8413	4887	139
1999	3344	4949	1605	48
2000	3344	5386	2042	61
2001	3203	5245	2042	64
2002	2438	4597	2159	89
2003	2438	4630	2192	90
2004	2077	4269	2192	106
2005	2077	4269	2192	106
2006	2077	4269	2192	106
2007	1461	3653	2192	150
2008	1461	3653	2192	150
2009	1461	3653	2192	150
2010	1461	3653	2192	150

SOURCE: North Slope Model Projections, Variable EMBAOI, Medium Base Case and Sale 109 Medium Impact Case (DSETS NSLP.B61 and NSLP.181).

TABLE P-1.7
 NORTH SLOPE MODEL SALE 109
 MEDIUM IMPACT PROJECTIONS

Native Oil Industry Employment

Year	Base Case	Impact Case	Sale 109 Impact	Percent Impact
1981	46	46	0	0
1982	30	30	0	0
1983	30	30	0	0
1984	30	30	0	0
1985	30	30	0	0
1986	44	44	0	0
1987	54	54	0	0
1988	75	75	0	-1
1989	80	80	-1	-1
1990	91	90	-1	-1
1991	91	89	-2	-2
1992	92	90	-2	-2
1993	86	94	8	9
1994	84	95	11	13
1995	82	94	12	15
1996	77	97	20	26
1997	75	92	17	22
1998	71	91	20	29
1999	67	99	32	48
2000	67	107	40	60
2001	64	105	41	64
2002	49	92	43	89
2003	49	93	44	90
2004	42	85	44	106
2005	42	85	44	106
2006	42	85	44	106
2007	29	73	44	150
2008	29	73	44	150
2009	29	73	44	150
2010	29	73	44	150

SOURCE: North Slope Model Projections, Variable EMNAOI, Medium Base Case and Sale 109 Medium Impact Case (DSETS NSLP.861 and NSLP.181).

TABLE P-1.8
 NORTH SLOPE MODEL SALE 109
 MEDIUM IMPACT PROJECTIONS

Non-Native Resident Employment

Year	Base Case	Impact Case	Sale 109 Impact	Percent Impact
1981	668	668	0	0
1982	717	717	0	0
1983	831	831	0	0
1984	839	839	0	0
1985	1136	1136	0	0
1986	903	903	0	0
1987	901	901	0	0
1988	791	795	4	0
1989	754	759	6	1
1990	723	729	6	1
1991	727	743	16	2
1992	733	752	19	3
1993	711	732	21	3
1994	712	734	22	3
1995	708	729	21	3
1996	698	744	46	7
1997	691	801	110	16
1998	680	828	147	22
1999	670	722	51	8
2000	668	733	65	10
2001	682	747	65	10
2002	655	728	73	11
2003	645	727	82	13
2004	619	714	95	15
2005	602	712	109	18
2006	587	708	121	21
2007	546	678	132	24
2008	525	666	140	27
2009	506	654	147	29
2010	487	641	153	31

SOURCE: North Slope Model Projections, Variable EMNN, Medium Base Case and Sale 109 Medium Impact Case (DSETS NSLP.861 and NSLP.18).

TABLE P-1.9
 NORTH SLOPE MODEL SALE 109
MEDIUM IMPACT PROJECTIONS
 (000)

Total North Slope Borough Operating Revenues

Year	Base Case	Impact Case	Sale 109 Impact	Percent Impact
1981	57200	57200	0	0
1982	114100	114100	0	0
1983	120200	120200	0	0
1984	132500	132500	0	0
1985	117700	117700	0	0
1986	107324	107324	0	0
1987	100659	100659	0	0
1988	90360	90886	526	1
1989	85751	86498	748	1
1990	84072	84818	746	1
1991	84613	86775	2163	3
1992	85364	87929	2565	3
1993	82623	85226	2602	3
1994	82789	85416	2627	3
1995	82298	84819	2521	3
1996	80999	86667	5669	7
1997	80189	94358	14169	18
1998	78853	97812	18960	24
1999	77601	83747	6147	8
2000	77285	85068	7782	10
2001	79139	86955	7816	10
2002	75863	84684	8821	12
2003	74600	84575	9975	13
2004	71298	82957	11659	16
2005	69161	82691	13530	20
2006	67095	82212	15118	23
2007	62010	78483	16474	27
2008	59282	76881	17599	30
2009	56746	75284	18538	33
2010	54300	73606	19305	36

SOURCE: **North Slope Model Projections, Variable RVOPT0, Medium Base Case and Sale 109 Medium Impact Case (DSETS NSLP.B61 and NSLP.181).**

TABLE P-1.10
 NORTH SLOPE MODEL SALE 109
 MEDIUM IMPACT PROJECTIONS
 (000)

North Slope Borough Property Values

Year	Base Case	Impact Case	Sale 109 Impact	Percent Impact
1981	5723582	5723582	0	0
1982	6621652	6621652	0	0
1983	8186986	8186986	0	0
1984	9996289	9996289	0	0
1985	12261421	12261421	0	0
1986	13420000	13420000	0	0
1987	14730000	14730000	0	0
1988	15510000	15550000	40000	0
1989	16100000	16138667	38667	0
19' 30	16290000	16327333	37333	0
1991	15990000	16026000	36000	0
1992	15680000	15714667	34667	0
1993	15340000	15373333	33333	0
1994	14980000	15012000	32000	0
1995	14550000	1493066-?	380667	3
1996	14070000	14814116	744116	5
1997	13550000	14640292	7090292	8
1998	12950000	14378374	1428374	11
1999	12280000	13636955	1356955	11
2000	11500000	12785536	1285536	11
2001	10720000	11934118	1214118	11
2002	9940000	11082699	1142699	11
2003	9160000	10231280	1071280	12
2004	8380000	9379862	999862	12
2005	7600000	8528443	928443	12
2006	6820000	7677024	857024	13
2007	6040000	6825606	785606	13
2008	5260000	5974187	714187	14
2009	4480000	5122768	642768	14
2010	3700000	4271350	571350	15

SOURCE : North Slope Model Projections, Variable VATO, Medium Base Case and Sale 109 Medium Impact Case (DSETS NSLP.861 and NSLP.181).

TABLE P-2.1
NORTH SLOPE MODEL SALE 109
HIGH IMPACT PROJECTIONS

Resident Population

Year	Base Case	Impact Case	Sale 109 Impact	Percent Impact
1981	4149	4149	0	0
1982	4307	4307	0	0
1983	4552	4552	0	0
1984	4664	4664	0	0
1985	5156	5156	0	0
1986	4864	4864	0	0
1987	4892	4892	0	0
1988	4788	4795	7	0
1989	4809	4819	10	0
1990	4824	4834	11	0
1991	4 9 2 9	4960	30	1
1992	5042	5080	38	1
1993	5072	5141	68	1
1994	5111	5206	95	2
1995	5117	5232	115	2 "
1996	5084	5292	209	4
1997	5021	5488	467	9
1998	4902	5641	739	15
1999	4746	5394	648	14
2000	4614	5329	715	15
2001	4503	5264	761	17
2002	4225	5122	897	21
2003	4035	5013	978	24
2004	3799	4873	1074	28
2005	3624	4753	1129	31
2006	3487	4645	1158	33
2007	3244	4472	1228	38
2008	3084	4355	1271	41
2009	"	4257	1294	44
2010	2868	4168	1300	45

SOURCE : North Slope Model Projections, Variable PORE, High Base Case and Sale 109 High Impact Case (DSETS NSLP.B71 and NSLP.182).

TABLE P-2.2
 NORTH SLOPE MODEL -SALE 109
 HIGH IMPACT PROJECTIONS

Native Population

Year	Base Case	Impact Case	Sale 109 Impact	Percent Impact.
1981	3275	3275	0	0
1982	3370	3370	0	0
1983	3468	3468	0	0
1984	3570	3570	0	0
1985	3673	3673	0	0
1986	3699	3699	0	0
1987	3746	3746	0	0
1988	3759	3761	2	0
1989	3815	3818	3	0
1990	3862	3866	4	0
1991	3935	3944	9	0
1992	4012	4023	12	0
1993	4044	4082	38	1
1994	4060	4120	60	1
1995	4052	4131	79	2
1996	4019	4149	130	3
1997	3955	4226	271	7
1998	3848	4305	457	12
1999	3709	4208	499	13
2000	3580	4119	539	15
2001	3473	4049	575	17
2002	3270	3952	682	21
2003	3109	3862	754	24
2004	2925	3761	836	29
2005	2777	3664	887	32
2006	2660	3575	914	34
2007	2481	3454	973	39
2008	2343	3356	1013	43
2009	2240	3275	1035	46
2010	2160	3202	1042	48

SOURCE : North Slope Model Projections, Variable PONA, High Base Case and Sale 109 High Impact Case (DSETS NSLP.B71 and NSLP.182).

TABLE P-2.3
 NORTH SLOPE. MODEL SALE 109
 HIGH IMPACT PROJECTIONS

Non-Native Population

Year	Base Case	Impact Case	Sale 109 Impact	Percent Impact
1981	875	875	0	0
1982	937	937	0	0
1983	1085	1085	0	0
1984	1094	1094	0	0
1985	1484	1484	0	0
1986	1164	1164	0	0
1987	1146	1146	0	0
1988	1029	1035	5	0
1989	994	1001	7	1
1990	962	969	7	1
1991	994	1016	22	2 "
1992	1030	1057	26	3
1993	1028	105B	31	3
1994	1051	1086	34	3
1995	1065	1101	37	3 "
1996	1065	1144	78	7
1997	1066	1262	196	18
1998	1054	1336	282	27
1999	1037	1187	149	14
2000	1034	1210	176	17
2001	1030	1215	185	18
2002	956	1170	214	22
2003	927	1150	224	24
2004	874	1112	238	27
2005	848	1090	242	29
2006	827	1071	244	29
2007	763	1018	255	33
2008	740	999	258	35
2009	723	982	259	36
2010	709	967	258	36

SOURCE: North Slope Model Projections, Variable P0NN, High Base Case and Sale 109 High Impact Case (DSETS NSLP.B71 and NSLP.182).

TABLE P-2.4
 NORTH SLOPE MODEL SALE 109
 HIGH IMPACT PROJECTIONS

Native Migration

Year	Base Case	Impact Case	Sale 109 Impact	Percent Impact
1981	-29	-29	0	0
1982	0	0	0	0
1983	0	0	0	0
1984	0	0	0	0
1985	0	0	0	0
1986	-79	-79	0	0
1987	-58	-58	0	0
1988	-89	-87	2	-2
1989	-42	-41	1	-3
1990	-49	-49	0	-1
1991	-18	-13	5	-28
1992	-10	-7	3	-27
1993	-49	-23	26	-53
1994	-66	-44	22	-33
1995	-89	-72	17	-19
1996	-113	-63	50	-44
1997	-139	0	139	-100
1998	-180	0	180	-100
1999	-212	-179	33	-16
2000	-199	-169	30	-15
2001	-177	-151	26	-15
2002	-272	-177	95	-35
2003	-230	-173	57	-25
2004	-250	-185	66	-26
2005	-213	-182	32	-15
2006	-180	-173	7	-4
2007	-241	-204	37	-15
2008	-196	-180	16	-8
2009	-158	-161	-2	2
2010	-132	-150	-18	14

SOURCE : North Slope Model Projections, Variable MGNA, High Base Case and Sale 109 High Impact Case (DSETS NSLP.871 and NSLP.182).

TABLE P-2.5
 NORTH SLOPE MODEL SALE 109
 HIGH IMPACT PROJECTIONS -

Native Employment

Year	Base Case	Impact Case	Sale 109 Impact	Percent Impact
1981	1160	1160	0	0
1982	1328	1328	0	0
1983	1379	1379	0	0
1984	1444	1444	0	0
1985	1500	1500	0	0
1986	1359	1359	0	0
1987	1292	1292	0	0
1988	1146	1150	4	0
1989	1114	1119	6	0
1990	1056	1062	6	1
1991	1053	1069	16	2
1992	1053	1072	19	2
1993	1026	1049	23	2
1994	1014	1041	27	3
1995	994	1023	29	3 "
1996	961	1019	58	6
1997	926	1063	137	15
1998	877	1081	204	23
1999	828	970	142	17
2000	799	950	150	19
2001	790	950	160	20
2002	704	923	219	31
2003	685	907	222	32
2004	634	881	248	39
2005	617	864	248	40
2006	603	848	245	41
2007	531	805	273	51
2008	517	792	276	53
2009	505	778	273	54
2010	496	764	267	54

SOURCE: North Slope Model Projections, Variable EMNA, High Base Case and Sale 109 High Impact Case (DSETS NSLP.871 and NSLP.182).

TABLE P-2.6
 NORTH SLOPE MODEL SALE 109
 HIGH IMPACT PROJECTIONS

Total Oil Industry Employment

Year	Base Case	Impact Case	Sale 109 Impact	Percent Impact
1981	6703	6703	0	0
1982	7228	7228	0	0
1983	7791	7791	0	0
1984	6939	6939	0	0
1985	6014	6014	0	0
1986	7191	7191	0	0
1987	6696	6696	0"	0
1988	4919	5052	133	3
1989	5090	5279	189	4
1990	5141	5330	189	4
1991	4973	5522	549	11
1992	5086	5735	649	13
1993	4289	4938	649	15
1994	4203	4852	649	15
1995	4080	4700	620	15
1996	3844	5271	1427	37
1997	3749	7399	3650	97
1998	3526	5413	4887	139
1999	3344	4949	1605	48
2000	3344	5386	2042	61
2001	3203	5245	2042	64
2002	2438	4597	2159	89
2003	2438	4630	2192	90
2004	2077	4269	2192	106
2005	2077	4269	2192	106
2006	2077	4269	2192	106
2007	1461	3653	2192	150
2008	1461	3653	2192	150
2009	1461	3653	2192	150
2010	1461	3653	2192	150

SOURCE: North Slope Model Projections, Variable EMBAOI, High Base Case and Sale 109 High Impact Case (DSETS NSLP.B71 and NSLP.182).

TABLE P-2.7
 NORTH SLOPE MODEL SALE 109
 HIGH IMPACT PROJECTIONS

Native Oil Industry Employment

Year	Base Case	Impact Case	Sale 109 Impact	Percent Impact
1981	70	70	0	0
1982	30	30	0	0
1983	30	30	0	0
1984	30	30	0	0
1985	30	30	0	0
1986	79	79	0	0
1987	100	100	0	0
1988	142	141	-1	-1
1989	151	149	-1	-1
1990	173	171	-1	-1
1991	175	171	-4	-2
1992	179	174	-5	-3
1993	188	186	-3	-2
1994	191	189	-1	-1
1995	193	" 193	0	0 "
1996	192	190	-2	-1
1997	187	182	-6	-3
1998	176	183	7	4
1999	167	209	42	25
2000	167	204	37	22
2001	160	200	40	25
2002	122	203	81	66
2003	122	200	78	64
2004	104	199	95	92
2005	104	196	92	89
2006	104	192	88	85
2007	73	183	110	150
2008	73	183	110	150
2009	"73	179	106	145
2010	73	175	102	139

SOURCE: North Slope Model Projections, Variable EMNAOI, High Base Case and Sale 109 High Impact Case (DSETS NSLP.871 and NSLP.182).

TABLE P-2.8
 NORTH SLOPE MODEL SALE 109
 HIGH IMPACT PROJECTIONS

Non-Native Resident Employment.

Year	Base Case	Impact Case	Sale 109 Impact	Percent Impact
1981	668	668	0	0
1982	716	716	0	0
1983	829	829	0	0
1984	836	836	0	0
1985	1134	1134	0	0
1986	889	889	0	0
1987	876	876	0	0
1988	786	790	4	0
1989	759	765	6	1
1990	734	740	6	1
1991	760	776	16	2
1992	787	807	20	3
1993	785	809	23	3
1994	803	830	26	3
1995	814	841	28	3
1996		814	60	7
1997	814	964	150	18
1998	805	1021	216	27
1999	792	906	114	14
2000	790	924	135	17
2001	787	928	142	18
2002	730	894	164	22
2003	708	879	171	24
2004	668	849	181	27
2005	648	832	185	29
2006	632	818	186	29
2007	583	777	194	33
2008	566	763	197	35
2009	552	750	198	36
2010	541	738	197	36

SOURCE : North Slope Model Projections, Variable EMNN, High Base Case and Sale 109 High Impact Case (DSETS NSLP.B71 and NSLP.182).

TABLE P-2.9
 NORTH SLOPE MODEL SALE 109
 HIGH IMPACT PROJECTIONS
 (000)

Total North Slope Borough Operating Revenues

Year	Base Case	Impact Case	Sale 109 Impact	Percent Impact
1981	57200	57200	0	0
1982	114100	114100	0	0
1983	120200	120200	0	0
1984	132500	132500	0	0
1985	117700	117700	0	0
1986	102632	102632	0	0
1987	98054	98054	0	0
1988	89163	89693	531	1
1989	85728	86483	755	1
1990	84436	85193	757	1
1991	85542	87733	2191	3
1992	86897	89508	2611	3
1993	84439	87356	2917	3
1994	84614	87801	3187	4
1995	83857	87145	3288	4
1996	82028	88997	6969	8
1997	80401	97501	17099	21
1998	77826	101717	23891	31
1999	74994	86641	11646	16
2000	73161	86890	13729	19
2001	72995	87398	14403	20
2002	67626	83640	16014	24
2003	65243	82089	16846	26
2004	61285	78917	17632	29
2005	59132	77200	18068	31
2006	57445	75716	18272	32
2007	52782	71555	18773	36
2008	50926	70007	19082	37
2009	49496	68716	19220	39
2010	48329	67526	19198	40

SOURCE: North Slope Model Projections, Variable RVOPT0, High Base Case and Sale 109 High Impact Case (DSETS NSLP.B71 and NSLP.182).

TABLE P-2.10
 NORTH SLOPE MODEL SALE 109
 HIGH IMPACT PROJECTIONS
 (000)

North Slope Borough Property Values

Year	Base Case	Impact Case	Sale 109 Impact	Percent Impact
1981	5723582	5723582	0	0
1982	6621652	6621652	0	0
1983	8186986	8186986	0	0
1984	9996289	9996289	0	0
1985	12261421	12261421	0	0
1986	13420000	13420000	0	0
1987	14730000	14730000	0	0
1988	15510000	15550000	40000	0
1989	16100000	16138667	38667	0
1990	16290000	16327333	37333	0
1991	15990000	16026000	36000	0
1992	15680000	15714667	34667	0
1993	15340000	15373333	33333	0
1994	14980000	15012000	32000	0
1995	14550000	14930667	380667	3
1996	14070000	14814116	744116	5
1997	13550000	14640292	1090292	8
1998	12950000	14378394	1428374	11
1999	12280000	13636955	1356955	11
2000	11500000	12785536	1285536	11
2001	10720000	11934118	1214118	11
2002	9940000	11082699	1142699	11
2003	9160000	10231280	1071280	12
2004	8380000	9379862	999862	12
2005	7600000	8528443	928443	12
2006	6820000	7677024	857024	13
2007	6040000	6825606	785606	13
2008	5260000	5974187	714187	14
2009	4480000	5122768	642768	14
2010	3700000	4271350	571350	15

SOURCE : North Slope Model Projections, Variable VATO, High Base Case and Sale 109 High Impact Case (DSETS NSLP.B71 and NSLP.182).