AN ECONOMIC SURVEY OF THE TERRITORY OF ALASKA

A THESIS

Approved:

Approved:

Dean of the College

A THESIS

Submitted to the Faculty of
Sam Houston State Teachers College
in Partial Fulfillment of the Requirements

For the Degree

MASTER OF ARTS

By
Elwood James Wolfe

Huntsville, Texas January, 1954

ESTILL LIBRARY

Dr. L. A. McGee for the patient and helpful guidance given me during the preparation of this thesis. I am also grateful to Mr. Arthur Curry and to Mrs. Myrtle St. Claire for their assistance in helping me to locate much of the necessary information. To my wife, Lurine, and my sons, David and Roger, I also wish to express my gratitude for their patience and understanding during trying times.

TABLE OF CONTENTS

CHAPTER		PAGE
I.	INTRODUCTION AND INFORMATIONAL DATA ON	
	GENERAL AREA UNDER STUDY	1
II.	THE GEOGRAPHY OF ALASKA	10
III.	THE NATURAL RESOURCES OF ALASKA	20
IV.	ALASKAN AGRICULTURE	39
V.	TRANS PORTATION	62
VI.	DEVELOPMENT OF INDUSTRY AND COMMERCE	84
VII.	COMMUNITIES OF ALASKA: THEIR ECONOMY	
	AND OTHER PROBLEMS	100
VIII.	SUMMARY AND CONCLUSIONS	133
	BTBLTOGRAPHY	143

CHAPTER I

INTRODUCTION AND INFORMATIONAL DATA ON GENERAL AREA UNDER STUDY

Purpose and Plan of Study

Alaska to be a land of ice and snow and of little or no significance in world affairs. Since Pearl Harbor and World War II there has been a continuous barrage of propaganda extolling Alaska as a veritable land of milk and honey, capable of supporting millions of inhabitants.

Tales brought back by servicemen who were stationed in Alaska during World War II, told of a land of suprabundant resources, of invigorating and mild climate, and of untold opportunity. According to a United States government publication.

... Alaska offers opportunities - opportunities for homesteaders, businessmen, professional people, and workmen. More and more people each year are making their permanent homes in the Territory, investing their capital, and taking part in the development of the country's natural resources. These resources, many of which are becoming scarce in more industrialized areas, need to be developed to a greater extent. Millions of new citizens are sought to aid in developing Alaska's forests, oil, and mineral resources; to fabricate timber, furs, and nonmetallic minerals; to cultivate lands; to build roads, airports, and homes; to develop hydroelectric power potentialities; to build a tourist industry. The Territory's development is moving forward but much remains to be done. We need Alaska - it is vital to our national defense we need its wealth of natural resources.

great country should continue to exemplify the American idea already set forth in every state of the Union by our unprecedented march across the continent.

Mid-Century Alaska, Department of the Interior, p. 1.

What are Alaska's resources? Are these resources easily attainable? Are they economic resources or physical resources? Is Alaska's geography conducive to development of the area? Can Alaska support millions of new citizens? What is the status of its agriculture? Many such questions can be asked concerning the resources of the Territory.

Alaska's area stated in square miles is very impressive, but size alone does not determine the economic importance of an area. Alaska may have huge reserves of oil, but unless that oil can be put to a proper and profitable use it has little economic value. This study is, therefore, an effort to establish the true economic worth of the Territory of Alaska, and provide a basis for an opinion of its present and future importance in the world community.

In order to formulate a true economic picture of Alaska it is necessary to be familiar with many aspects of the land. A knowledge of its history, government, geography, climate, and natural resources is essential. Thus the first major division of this study is based on these factors. It follows that it is necessary to know and properly weigh

what has been accomplished to date with the factors available. The second major division sets forth in detail

Alaska's accomplishments in industry, commerce, and agriculture, and presents a survey of selected Alaskan cities.

The final phase of the study sets forth an evaluation and summary of the entire survey.

The information for this study was obtained from numerous sources. Governmental publications were the primary sources of information. Current periodicals provided an excellent source for current information. Much first-hand information pertaining to the various areas of Alaska was received from the chambers of commerce of the communities of Alaska.

During this study the writer found that governmental publications concerning Alaska tend to be more optimistic and more apt to exaggerate than the chambers of commerce. Furthermore, there appears to be a tendency for Alaskans not to desire to have "outsiders" invade their economy. The chambers of commerce invariably stated that high-calibre, hard-working pioneers are needed, but that anyone seeking a fortune quickly should not attempt to come to Alaska.

Historical Background

Alaska's written history began over 200 years ago in Russia during the reign of Peter the Great. Czar Peter commissioned Vitus Bering, a Dane, to explore the northwest coast of the North American Continent. Bering made two trips, one in 1728, and the other in 1741, and Russia's claims to Alaska were based on these two trips. In 1799

The Russian-American Company, a Russian trading corporation, took absolute control over everything in Alaska under a 20-year concession which was renewed periodically.

2 <u>Ibid.</u>, p. 5.

In 1855, during the Crimean War when it was feared that the British might seize the country, Russia tried to sell Alaska to the United States, but the transaction was not completed until 1867 when Secretary of State William H. Seward successfully persuaded the United States Congress to purchase the area for \$7,200,000. The Treaty of Purchase was signed on March 30, 1867.

3 Ibid., p. 6.

When Alaska was purchased from Russia little thought was given to the wealth of the land itself. From 1867 to 1884 the territory was almost completely neglected. From 1867 to 1877 the United States Army was in charge of Alaska; from 1877 to 1879 the Treasury Department was charged with

Alaskan administration; from 1879 to 1884 the Navy Department

4
was administrator of the area.

Jeannette P. Nichols, Alaska. This book is a history of Alaska's administration, exploitation, and industrial development during its first half century under the rule of the United States. It is a chronicle of those times taken from the Alaskan newspapers and editorials of the era.

An act of Congress in 1884 finally provided for the appointment of a governor and the organization of a government in the District of Alaska with the temporary capital at Sitka. The Secretary of the Interior was empowered by this act to regulate the enforcement in Alaska of the United States laws relating to mining claims and to provide for the education of the population.

5 Mid-Century Alaska, p. 6.

In quick succession other acts were passed giving breadth and depth to the Territorial Government. The Act of July 24, 1896 provided for the appointment of a surveyor general; the Act of June 6, 1900 greatly broadened the powers of the courts; the Act of May 7, 1906, authorized a delegate to Congress; and finally, the Organic Act of August 24, 1912 created the incorporated Territory of Alaska and established

a bicameral legislature.

6 <u>Ibid.</u>, p. 6.

Today Alaska is a fully organized territory with all laws passed by Congress applying to the Territory as a matter of course. The governor is appointed by the President of the United States and the Legislature is composed of two chambers, a senate and a house of representatives. The upper house

William B. Munro, The Government of the United States, p. 532.

consists of sixteen members elected for four year terms, and the lower house consists of twenty-four members elected for a term of two years. The legislature has the usual legis-

8
The Statesman's Yearbook, 1951, p. 751.

lative powers, but its acts must not be inconsistent with 9
the Constitution and laws of the United States. The

⁹ Munro, op. cit., p. 532.

legislature cannot pass a law regulating the sale of land in the Territory, form any county governments, establish courts, or control the fish and wildlife. Any of its acts may be 10 vetoed by the United States Congress.

Richard L. Neuberger, "What's Wrong With Alaska?"

The Washington Post Magazine, September 30, 1946.

There being no county government, the Territory is divided into four judicial divisions which serve as the basis for the allotment of members of the Territorial Legis-lature. Four senators are chosen from each judicial division, and the twenty-four representatives are apportioned among the divisions in accordance with the population.

11 Mid-Century Alaska, p. 33.

The judicial power of the Territory of Alaska is vested in the District Court of the United States for the District 12 of Alaska, and in the probate and justices' courts. The

12 Ibid., p. 33.

District Court is divided into four divisions, each presided over by a judge appointed by the President of the United

States for a term of four years. These courts have general jurisdiction in civil, criminal, equity and admiralty cases. The probate and justices' courts have limited original jurisdiction in probate, insanity, and minor civil and criminal matters arising under both the Territorial laws and the 13 Federal statutes.

13 Ibid., p. 33.

Finance and Taxation

The expense of operating the Territorial Government of Alaska is estimated to be \$2,750,000 a year. Proponents of statehood for Alaska believe that the additional cost of statehood would amount to only between \$1,000,000 and \$2,000,000 annually. As a state, Alaska would get at least \$10,000,000 in road funds annually under the Federal Highway Aid Law. It would have control of its fisheries, mining, 14 certain public lands and some of its forests.

Alaska has a Territorial income tax on individuals and corporations equal to 10 percent of the Federal income tax. There is also a system of license taxes on businesses. All

Associated Press Release, Houston Post, Oct. 6, 1946.

adults gainfully employed, between the ages of 21 and 55, pay a school tax of \$5 per year. Taxation is considered light; the salmon industry, with an output of \$100,000,000, paid taxes in 1948 totaling only \$671,205.

The Statesman's Yearbook, 1951, p. 753.

CHAPTER II

THE GEOGRAPHY OF ALASKA

The Alaska Territory totals 586,400 square miles, an area approximate one-fifth the size of the United States. It is a blunt peninsula with two long necks. At the southwest, the Aleutian Islands run out 1,200 miles to the International Date Line. At the southeast, Alaska's panhandle runs several hundred miles down the Canadian Pacific coast. There are east and west mountain ranges with a vast plateau in the middle, and a great plain extending to the Arctic Ocean on the north.

Information Please Almanac, 1947, p. 160.

For the purpose of this geographic study, Alaska is divided into three geographical regions: (1) the south coast region; (2) interior Alaska; and (3) southwestern Alaska.

South Coast Region

The south coast region includes the coastal fringe of Alaska from Ketchikan in the south, to Anchorage in the north, and penetrates inland to a depth of from fifty to one

hundred miles. The south coast region which includes approximately 10 percent of the area of the Territory 2 contains 75 percent of the population. This area includes

B. Frank Heintzleman, "Forests of Alaska," Yearbook of Agriculture, 1949, p. 362.

most of the cities of Alaska; Juneau, Anchorage, Ketchikan, Sitka, Skagway, Wrangell, and Petersburg.

The land is mountainous throughout and rises abruptly from the water's edge to heights of from 4,000 to 8,000 feet. A few peaks reach the awe-inspiring height of 15,000 to 18,000 feet. It is a fiord-dented region with many

3 Ibid., p. 362.

irregular shaped offshore islands that are actually the tops of submerged mountain ranges. These offshore islands form a protecting barrier against the Pacific Ocean and the northwesterly winds. The Inside Passage, a narrow passage between the mainland and the islands, is a relatively calm body of water.

Colliers Encyclopedia, Volume I, p. 311.

The mountain slopes are covered by huge coniferous trees and Sitka Spruce. The south coast owes its well-timbered condition to a moist, warm climate. A warm ocean current, known as the Japanese Current, touches the coast of North America from Kodiak Island to southern Oregon along a distance of 2,000 miles. Winds moving landward from this warm ocean water greatly modify the winter temperatures. They also produce a heavy rainfall, as much of their moisture is dropped as they ascend the high coastal mountains. The

average annual precipitation for the south coast area varies from 70 to 155 inches at sea level and rapidly increases with elevation on the exposed western slopes of the mountains.

Cloudy days constitute two-thirds of the days of the year.

The vegetation of the Alaskan south coast region is luxuriant. The forests have a thick undergrowth of berry-yielding bushes, such as cranberries, huckleberries, and raspberries. The forests are almost completely coniferous.

The whole area abounds with wildlife.

⁵ Heintzleman, op. cit., p. 362.

Heintzleman, op. cit., p. 362.

7 Colliers Encyclopedia, Volume I, p. 312.

The agriculture of the region is limited to a few small truck farms and family-type vegetable gardens. The land is glaciated, mountainous, heavily timbered, and the large amount of precipitation is a great deterrent to any extensive agricultural development in this region.

Informational Pamphlet published by the Chamber of Commerce, Ketchikan, Alaska, 1952.

The south coast region includes the two national forests of Alaska. The Tongass National Forest, located in the Juneau area, has a total area of 16,040,000 acres. The Chugach National Forest consists of 4,800,000 acres along Prince William Sound and the eastern half of the Kenai Peninsula. The heavy rainfall and the availability of many high mountain lakes for storage reservoirs, give this region excellent waterpower resources. This area has the two prerequisites for pulp manufacture; suitable and plentiful 9 timber and tremendous sources of undeveloped waterpower.

⁹ Heintzleman, op. cit., p. 367.

Interior Alaska and the Arctic Slope

Interior Alaska lies between the Brooks Range, which forms the Arctic Divide on the north, and the crest of the coastal range, which borders the Pacific Ocean on the south. It embraces about 70 percent of the area of Alaska, an area one and one-half times the size of Texas, and comprises the watersheds of the Yukon, Kuskokwim, Copper, Susitna and other 10 large rivers.

Interior Alaska can be divided into three distinct major physiographic provinces: (1) the Rocky Mountain province is formed by a northward extension of the Canadian Rockies curving sharply to the west to form the Brooks Range in northeast and north central Alaska and the Baird Mountains in northwestern Alaska; (2) the great flats and low plateaus south of Brooks Range consist of thousands of square miles of swampy muskeg, with thickets of stunted spruce, alder, and willow trees; and (3) the series of extensions of the Coastal Range consisting of St. Elias, Wrangell, and ll Nutzotin Mountains.

¹⁰ Heintzleman, op. cit., p. 361.

¹¹ Colliers Encyclopedia, Volume I, p. 311.

Interior Alaska is typical of the popular conception of Alaska. The summers are short but warm, and during May, June, and July daylight lasts twenty hours or more each day. The winters are long and intensely cold and much of the area has permanently frozen ground (permafrost) to within a foot or two of the surface. The annual rainfall is exceedingly light, but permafrost and short summers prevent the development of desert conditions. This region is classified as a forested area, but the forests occur only as scattered islands among the extensive areas of swamp and tundra in the valleys and along the foothills.

A vast domain of swamps, tundra, and majestic mountains, make interior Alaska a sportman's paradise. Its fauna includes herds of caribou and moose, black and brown bear, wolves, fox, muskrats, welverines, rabbits, red squirrels.

The Arctic Slope, the area north of the Brooks Range, is a low-lying area of tundra which slopes gently from the Brooks Range to the Beaufort Sea and Arctic Ocean. It is

¹² Heintzleman, op. cit., p. 361.

Colliers Encyclopedia, Volume I, p. 312.

an area inhabited by Eskimos and has little, if any, commercial importance. It is truly the land of ice and snow.

Southwestern Alaska

Southwestern Alaska is comprised of the narrow Alaska
Peninsula and the Aleutian Chain. It also includes the
islands of Kodiak, Trinity, and Shumagin. It is a sparsely
14
populated area inhabited chiefly by Aleuts.

14 Ibid., p. 313.

The area is very mountainous but not forested. The lack of forests is caused by the nature of the prevailing winds of the area. The seed-bearing winds of winter are damp instead of dry, and come from the ocean to the south 15 instead of from the forests of the north and northeast.

15 <u>Ibid.</u>, p. 312.

Although devoid of forest, the cool, wet, marine climate gives the region a luxuriant growth of grass, and in many 16 valleys cattle could possibly forage the year around.

¹⁶ Ibid., p. 312.

The waters adjacent to southwestern Alaska are valuable fishing grounds. Whales, walruses, and sea otter are abundant and have become the main source of income for the native population of the area.

The climate of southwestern Alaska is comparatively mild. Summers are somewhat cooler than in southeastern Alaska, but the winters are much the same. Winter temperatures never reach zero. The mean average temperature of Unalaska is 38 degrees fahrenheit.

17 Heintzleman, <u>op</u>. <u>cit.</u>, p. 364.

This region has been extremely handicapped by its lack of transportation facilities and its distant location from the United States. Little effort has been made to develop either the natural resources or the agricultural possibilities of this region.

Climatic Data

Alaska is a country of vast distances. The distance from Ketchikan, in southeastern Alaska, to Attu, western-most of the Aleutian Islands, is greater than that from New York to San Francisco. From Ketchikan to Point Barrow, northernmost settlement, the distance approximates that from 18 Seattle to the Mexican Border. Such a wide range of

18
Alaska, 1951, U. S. Department of the Interior, p. 3.

latitude causes Alaska to be a land of climatic extremes. The following table illustrates the wide variation of temperatures within the Territory of Alaska:

THE THIRD	Janua ry Averag e	June Average	Record Maximum	Record Minimum
Anchorage	11.2	57.0	92	-36
Cordova		54.8	87	-19
Fairbanks	11.6	60.0	99	-66
Juneau	27.5	56.6	89	-15
Ketchikan	32.6	57.5	96	- 8
codiak	29.8	54.3	85	-12
Tome	-	49.8	84	-47
Seward	22.4	55.3	82	-20
Sitka	32.4	54.9	87	- 5
kagway	21.1	57.7	92	-19
Valdez	19.1	53.3	83	-24
rangell	29.0	58.2	92	- 6

Table 1

Temperature Variations in Principal Alaska Towns (in Fahrenheit degrees)

19 Mid-Century Alaska, pp. 10-11.

Alaska's vast area also causes a wide variation in length of the growing season and average annual rainfall. The following table illustrates the extent of the variations in growing season and precipitation within Alaska.

Locali ty	Length of Growing Season	Average Annual Precipitation
ell Island	173 days	110.06 inches
Maines	122 days	56.43 inches
luneau	172 days	83.25 inches
e tchikan	165 days	150.89 inches
e tersburg	129 days	106.45 inches
i tka	159 days	87.13 inches
kagway	111 days	26.85 inches
rangell	169 days	82.95 inches
lew Cove	192 days	155.52 inches
odiak	160 days	61.48 inches
eward	132 days	73.73 inches
aldez	116 days	60.38 inches
nchorage	110 days	14.32 inches
a tanuska		15.61 inches
ome	52 days	17.82 inches
airbanks	89 days	11.87 inches
arrow	17 days	4.34 inches

Table 2

Average Length of Growing Season and Average Annual Precipitation of Selected Stations in Alaska

20 <u>Ibid., pp. 10-11.</u>

CHAPTER III

THE NATURAL RESOURCES OF ALASKA

Much has been written during the past decade about the natural resource wealth of Alaska. The list of resources constituting Alaska's natural wealth is long, varied and impressive, but a fact frequently overlooked is that very often these resources exist in low-grade quality in locations far removed from market.

Some minerals, such as coal, which are bulky and of low value, cannot be transported great distances because of the cost of transportation. In the past, the "big three" resources of Alaska have been gold, salmon and furs. Gold has a high unit value in comparison with its weight, and thus can be transported great distances. The great demand for salmon, plus the fact that Alaska has a virtual menopoly on this type fish, has made salmon fishing profitable. The reasons fur trapping has been undertaken are similar to goldmining - a high unit value in comparison to weight, a great demand, and often the animal trapped is a source of food.

Information concerning Alaska's mineral resources is weefully inadequate. This fact is generally realized in this period of intense interest in Alaska, and consequently

funds have been provided and facilities have been increased for intensified research. Before World War II about \$100,000 per year was spent in mineral research, but since the war this amount has averaged about \$1,125,000 per year. The program is still inadequate to provide the fundamental information needed by all the various interests, public and private, that have an interest in the Territorial development.

The present research program for Alaska includes work in general, military, and engineering geology, geophysics, the study of permafrost, and investigations of coal, petroleum, metals and non-metals. A systematic water resources investigation was initiated in 1946 and is now making excellent progress. Most research has been concentrated in the Alaska Railroad Belt and in southeastern Alaska.

The known resources of Alaska are listed below:

imony bismuth molybdenum omium sinc tinum nickel oury iron ore
or t:

John C. Reed, "Alaska and the Geological Survey," Scientific Monthly, October, 1949, p. 247.

² <u>Ibid., p. 247.</u>

(Non-metals)	asbestos barite garnet graphite	sulfur coal oil
Fisheries	salmon herring halibut	lobsters crabs shrimp
Furs	mink fox beaver muskrat lynx marten	land otter ermine wolf seal marmot
Forests with	Two National Fores a combined area of	
*a terpower hors	An estimated poten epower is available	

Alaska.3

Minerals

The total value of mineral production of Alaska since it has been a possession of the United States, is estimated to be \$900,000,000 of which gold alone has accounted for more than 50 percent of the total value. In 1949 the

[&]quot;Untapped Resources," Science News Letter, May 19, 1945, p. 310.

The Encyclopedia Americana, Volume 1, p. 313.

total value of mineral output amounting to \$15,302,000 was composed of the following minerals:

Antimony ore	74 short tons 455,000 short tons
Copper	4 short tons
Gold	229,416 troy ounces
Lead	51 short tons
Mercury (76 lb. flasks)	100 flasks
Silver	36,056 ounces
Tin	57 short tons_
Zine	2 short tons5

Minerals Yearbook, 1949, Part III, p. 1345.

The adverse economic conditions which plague the goldmining industry and the high wages offered on defense projects make it extremely difficult for mining companies to compete for the available labor supply. The Alaska

6 Annual Report of the Governor of Alaska, 1951, p. 60.

Juneau Gold Mining Company discontinued operations at a large low-grade gold mine near Juneau in April, 1944 because of high costs. This mine, which extracted about 4,700,000 tons of ore annually, reached a peak of 179,532 ounces of gold in 1931. The ore averages about one ounce of gold to 30 tons of ore. Large scale operation is needed for profitable exploitation.

Standard Listed Stock Reports, Volume 19, No. 200, Oct. 16, 1952, Standard and Poor's Corp., New York, N. Y.

Some prospectors still wander through the expanses of Alaska hoping to strike it rich, but the day of the individual miner is gone. The fact that 29 percent of Alaskan gold production in 1941 was obtained from lode mines, 44 percent was recovered by huge floating dredges. and 27 percent was obtained by the use of dragline and dryland dredges, bull-dozers, sluices, and other placer methods, is proof that mining in Alaska has become a capitalistic process. Approximately three-fourths of all placer gold is mined in the Fairbanks-Circle-Hot Springs District of the Yukon Basin, while two-thirds of the lode gold comes from the Juneau-Ketchikan-Chicahgof Island District and other mining centers of southeastern Alaska. Gold production also occurs on the Seward Peninsula near Nome, in the Cook Inlet-Susitna District, in the Copper River area, and on the Kenai Peninsula.

J. Russell Smith and M. Ogden Phillips, Industrial and Commercial Geography, p. 31.

Even with modern equipment, placer mining in Alaska encounters difficult problems. Placer mining requires a tremendous amount of water, and a dry, hot summer may prove

to be a serious handicap. Another obstacle is encountered in thawing the earth so that the gold-bearing gravel can be reached. The greatest concentration of gold usually occurs just above the bed rock, in gravel that never thaws. This problem is solved by forcing cold water down to the bed rock through pipes that are spaced about 20 or 30 feet apart. The thawing process requires from two to four months in the Nome and Fairbanks area. One mining company near Fairbanks which obtains its water from a source 100 miles away uses about 200 miles of pipe at the mines. The mine employs 500 men and operates only during the summer. Each summer it removes about 800,000,000 tons of mud and water by the thawing process, and then moves about 900,000,000 tons of gravel to obtain its gold.

Most of Alaska's coal is remote from transportation facilities. About 50 percent of the known fields are lighite, 43 percent are bituminous, and 7 percent are high grade anthracite and semi-anthracite. The main coal fields are the Bering River field, the Matanuska field, and the 10 Kenai field.

^{9 &}lt;u>Ibid.</u>, pp. 340-341.

The Encyclopedia Americana, Volume 1, p. 315.

The recent increased local demand for coal caused by the sudden increase of population after World War II, has made coal mining the second mining industry of Alaska. The production of coal during the calendar year 1950 was 11 405,969 tons.

Annual Report of the Governor of Alaska, 1951, p. 60.

Investigations by the Geological Survey in the Homer District, Kenai Peninsula, in 1950 and 1951 indicated that more than 64 million tons of sub-bituminous coal in beds more than three feet thick are present within five miles 12 of tidewater or a road. One estimate credits Alaska with

E. H. Cobb, <u>Coal Investigations in the Homer District</u>, Kenai <u>Coal Field</u>, <u>Alaska</u>, <u>Geological Survey</u>, p. 1.

probable coal reserves of 3,600,000,000 metric tons. It

J. Russell Smith and M. Ogden Phillips, Industrial and Commercial Geography, p. 81.

is possible that this tremendous coal reserve, especially the fields located near tidewater, may be profitably exploited. It is probable that in the future the coal might be profitably transported to the industrial areas of

the United States' west coast by freighter, or become the basis for a steel industry in Alaska. Alaska is endowed with a sufficient supply of coal, iron ore, limestone, and antimony, and could someday develop a substantial steel 14 industry.

Copper production in Alaska which, in the past, has been considerable, dropped to four tons in 1949. In the years from 1900 to 1930 nearly 214,000,000 pounds of copper was produced at Latouche and Ellamar by the Kennecott Copper Company and the Ellamar Mining Company. Exploitation of the richest deposits of copper were profitable, in spite of the high transportation cost involved. Since 1930 the expense of working the remaining low-grade ores has greatly curtailed copper production. The once great copper companies are no longer in existence and their property lies in ruin.

Benjamin H. Kizer, <u>The U.S. - Canadian Northwest</u>, p. 36.

Pred H. Moffitt and Robert E. Fellows, Copper Deposits of the Prince William Sound District, Alaska, Geological Survey Bulletin 963-B, pp. 50-51.

The only producing tin mine on American soil is located in southwestern Alaska. The mine's output averages only 50 tons per year, but it is believed that if the Malayan and

Bolivian sources of tin were cut off from the United States 16 the production would be greatly increased.

J. Russell Smith and M. Ogden Phillips, Industrial and Commercial Geography, p. 214.

Platinum, another scarce and critical mineral, is found in Alaska. In 1941 the United States mined only 27,000 ounces of this mineral, most of which was derived from the placer deposits of the Goodnews District in southwestern 17 Alaska.

17 Ibid., p. 237.

The Naval Petroleum Reserve No. 4, established in 1923, consists of 37,000 square miles located between the Brooks Range and the Arctic Ocean. An indicated shortage of oil, particularly on the west coast during World War II, caused the United States Navy to undertake the intensive exploration of this reserve. After the war the exploratory work was continued under a contract with a civilian firm - Arctic Contractors, Incorporated. This firm carries out, under Navy administration and supervision, all phases of the exploratory work. The geological work is performed for the Navy by the United States Geological Survey, Department of 18 the Interior.

18 Mid-Century Alaska, pp. 97-98.

Recent drilling of thirty-one test wells in the area north of Brooks Range, within the Naval Petroleum Reserve No. 4, has shown that this area may be one of the great oil basins of the world. At Umiat explorers found a large

Science News Letter, May 3, 1952, p. 277.

oil field by drilling only four test wells. The drilling of two test wells at Simpson revealed a small field. The Umiat Field is the richest and biggest discovered to date. On the basis of oil already produced, geologists estimate a pool of 20 30,000,000 to 100,000,000 barrels.

20 Ibid., p. 277.

In this extrme northern latitude the "pour point" of oil is very important, particularly if the oil is to be transported by pipeline. Oil found at Umiat is still pourable at minus 15 degrees fahrenheit; that at Simpson 21 at plus 25 degrees fahrenheit. A reconnaissance survey

²¹ Ibid., p. 277.

for a pipeline from the reserve to the ice-free port of 22 Seward has been made.

22 Mid-Century Alaska, p. 98.

The Territorial interest in the development of its mineral resources is reflected in the recent enactment of the Alaska Legislature which allows a three and one-half year exemption from territorial taxes for any new mining operation in the base metals field. Also in 1951 the Territorial Legislature increased interest in uranium prospecting by authorizing a \$10,000 bonus for a bona fide 23 discovery of an Alaskan uranium deposit.

Annual Report of the Governor of Alaska, 1951, p. 60.

Pisheries

The total wholesale value of fish products prepared for market since Alaska was purchased by the United States in 1867 passed the \$2,000,000,000 mark in 1950. The 1950 production was 260,122,531 pounds, valued at \$100,156,141 24 wholesale. Of the numerous fisheries, the salmon catch is

24 <u>Ibid.</u>, pp. 32-33.

by far the largest, accounting for approximately 90 percent of the value. Other fish taken are halibut, herring, sablefish, clams, crabs, shrimp, and cod. The fisheries are the 25 source of livelihood for approximately 30,000 people.

25 Mid-Century Alaska, p. 85.

Despite many years of research, the complete life history of the salmon still remains an unsolved mystery. Little is known about the salmon from the time they leave the fresh water lakes and streams for the open ocean until 26 they return to spawn.

Alaska's Salmon Industry, a pamphlet published by the Alaska Salmon Institute, Ketchikan, Alaska.

In an effort to safeguard and possibly increase the salmon runs in Alaskan waters, the salmon industry in 1946 inaugurated a scientific study of the salmon migration by the Fisheries Research Institute of the University of Washington. The objectives of these studies are to insure the perpetuation and to enhance the utilization of this

27

great natural resource.

27

Ibid.

Furs

Alaska's "wild life on the hoof" has an estimated value of \$100,000,000, of which approximately \$4,000,000 is taken annually by trappers and hunters. Fox, mink, beaver, muskrat, lynx, marten, land otter, ermine, wolf, seal and marmot are among the seventeen different kinds of commercial furs found 28 in Alaska.

The Statesman's Yearbook, 1945, p. 665.

Scientific fur farming is a paying and thriving industry in Alaska and the raising of blue foxes has become the chief industry of the Aleutian Islands. The natives release the animals on small islands and leave them to breed for a period of about three years and then return and trap them.

O. J. Murie, "My Friends, the Aleuts," Rotarian, February, 1943, Volume 42, p. 23.

About 80 percent of the world's fur seals are in the Pribilof Islands of southwestern Alaska. The breeding ground of these mammals, a species distinct from that of any other seal, is almost exclusively confined to these four 50 barren islets in the middle of the Bering Sea. In 1888-

1889 the average number of pelts taken was 136,000. The annual average for the years 1904-1908 fell to less than 29,000 pelts. This reduction in annual take was caused by the pelagic or open sea sealing which destroyed thousands of seals with unborn. In 1911, the governments of Great Britain, Japan, Russia, and the United States agreed to a convention regulating sealing under which the Pribilof Island herd increased from 130,000 animals in 1911 to approximately 2,185,136 in 1940. Experts say that this was the greatest feat of conservation through international 31 cooperation in history.

During 1951, two public auction sales of fur-seal skins were held at St. Louis, Missouri, at which a total of 51,437

Al Laughrey, "Refugees on a Rock," <u>Rotarian</u>, March, 1945, Volume 42, p. 23.

The Encyclopedia Americana, Volume 1, p. 312.

skins were sold for a gross sum of \$5,046,284.

Annual Report of the Governor of Alaska, 1951, p. 36.

Forests

Alaska's forests are believed to be its greatest potential source of power and income. Timber fringes the shores of southeastern Alaska to a depth of about five miles. The estimated timber stand is 78,500,000,000 board feet in the Tongass National Forest, and 6,260,000,000 board feet in the Chugach National Forest. It is estimated that this timber stand consists of 73% Western Hemlock, 21% Sitka Spruce, 3% Western Red Gedar, and 3% Alaska Cedar. Approximately 75% of the commercial timber is located within two and one-half miles of tidewater along 12,000 miles of shore-

33 Ibid., p. 36.

According to estimates of the National Resources

Committee, the Tongass National Forest of southeastern Alaska
with proper management can produce at least 1,500,000 cords
of pulpwood annually in perpetuity. Such a yield would be

equivalent to one-tenth of the annual newsprint requirements 54 of the United States.

National Resources Committee, Regional Planning, Part VII, Alaska, Its Resources and Development, pp. 100-101.

In addition to the 20,840,000 acres of forests confined to the Chugach and Tongass National Forests, the United States Government has placed certain other areas in public ownership. These government protected areas are McKinley National Park, Katmai National Monument, Glacier Bay National Monument, and Sitka National Monument. Although these areas contain forest resources, the timber is not subject to 35 commercial development.

35 Mid-Century Alaska, p. 111.

The large, dry interior of Alaska supports only a stunted and sparse tree growth which consists of small white spruce, Alaska white birch, and cottonwood. These tree growths occupy the better drained valley bottoms, lower slopes, and low benchlands. The mature tree is between 10 and 12 inches in diameter and reaches a height of from 40 to 50 feet. The interior forest has been seriously reduced by forest fires and by utilization of the timber by

the local populace.

B. Frank Heintzleman, "Forests of Alaska," Yearbook of Agriculture, 1949, p. 363.

Production of lumber in Alaska for the period 1940-1949 totaled 540,000,000 board feet. The following table shows annual lumber production and the type of timber used?

		Sawed (thousand board feet)			
Year	Total	Spruce	Hemlock	Cedar	Other
1940	27,792	22,137	4,635	1,020	100 100
1941	36,547	28,064	7,515	933	35
1942	30,590	34,832	4,635	1,088	35
1943	62,603	48,633	13,355	603	12
1944	67,414	55,237	11,314	842	21
1945	59,056	51,623	6,258	1,175	***
1946	57,506	47,487	8,710	1,296	13
1947	80,480	69,105	9,872	1,497	6
1948	58,181	43,967	12,432	1,008	765
1949	49,608	42,159	6,579	867	3

Table 3

Production of Lumber in Alaska

37 Mid-Century Alaska, p. 116.

The characteristics and uses of the principal types of timber of the Alaska coastal forest are as follows:

- (1) Western Hemlock: It is an excellent wood for all types of lumber uses. The wood is strong, light in weight, fine-grained, and light in color. It serves as flooring, pulpwood, and is used extensively in the bleached and unbleached sulfite pulp industry of Oregon and Washington.
- (2) Sitke Spruce: It is nonporous, has a fine texture, and is easy to work or glue. It is used as a pulping wood, usual forms of lumber, and for airplane stock. It was in great demand during World War II.
- (3) Western Red Cedar: It is high in decay resistance and is very easy to work. It is light in weight, close-grained, and fine-textured. It is used for siding, sulfate pulp, shingles, and poles.
- (4) Alaska Cedar: It is an excellent wood to use for clothes closets and cedar chests. Alaska Cedar has a fine texture and is extremely durable. The growth of Alaska Cedar is scattered and, unfortunately, entails high logging costs. 38

38 Mid-Century Alaska, pp. 115-116.

In 1951 the United States government received \$143,600 for timber stumpage in the national forests of Alaska.

Settlers, miners, and residents may take, free of charge, green or dry timber for their personal use. In 1951 approximately 346,000 board feet of timber was cut under this 39 privilege.

Annual Report of the Governor of Alaska, 1951, p. 37.

Waterpower

The waterpower available for development in southeastern Alaska is estimated to be one million horsepower. There is only 22,000 horsepower developed at the present time. Two hundred power projects with a potential capacity of 534,000 horsepower have been under study for future use.

Annual Report of the Governor of Alaska, 1951, p. 37.

CHAPTER IV

ALASKAN AGRICULTURE

One of the most controversial of Alaskan subjects concerns the agricultural possibilities of the Territory. Estimates by experts as to the amount of arable land available varies considerably. The late C. C. Georgeson, who was in charge of the Alaska Agricultural Experiment Stations from their establishment until 1928, estimated that 41,600,000 acres could be tilled and an additional 22,400,000 acres could be pastured. A closer and more thorough study made during the past decade has caused authorities to believe that this estimate is much too high, and that probably about one million acres is suitable for profitable farming under the present circumstances.

Report on Exploratory Investigations of Agricultural Problems of Alaska, U. S. Department of Agriculture, Miscellaneous Publication No. 700, page 7.

The high level of local prices has made farming in Alaska profitable. The Alaskan retail price of food is the Seattle wholesale price, plus transportation charges, plus the retailer's mark-up for handling. The higher the transportation charges, the higher the price of the imported

article. It is the present farmer's good fortune to be able to sell his produce at the prices set by the merchant for imported products, even though he does not pay freight charges from Seattle. Thus high Seattle-to-Alaska freight rates serve as a protection from outside competition much the same as a protective tariff protects domestic producers from competition with foreign producers. The Alaskan farmer can lose this advantage either by expanding his production to the point where importation would be unnecessary, or by transportation costs being lowered, however, the farmers of Alaska are in no immediate danger of losing the advantage they enjoy because Alaskan agriculture would have to be increased four or five fold before importation would be

Wilford J. Eiteman and Alice B. Smuts, "Alaska, Land of Opportunity - Limited," Economic Geography, Volume 27, 1951, p. 38.

Alaskan farming is expensive. Much has been said about the vast amount of free land available in Alaska, and under the various homestead laws land is available for little or no initial cost. Little is said about the fact that much of the available land suitable for farming is a great distance from a market and without easy access to transportation facilities. One of the cheapest commodities in Alaska is

land, but labor, equipment, fuel, feed, fertilizer, and all the other necessities for making a farm productive are scarce and expensive. For example, in the Matanuska Valley it costs from \$75 to \$150 to clear one acre of land. Contrary to

Agriculture and Living Conditions in the Matanuska Valley of Alaska, a pamphlet published by the Alaska Rural Rehabilitation Corporation, Palmer, Alaska.

popular opinion, newly cleared land in Alaska requires much more fertilizer than old fields. These and many other reasons have resulted in unrealistic financial backing, and accounts for many difficulties encountered by homesteaders trying to expand Alaska's agricultural economy.

Annual Report of the Governor of Alaska, 1951, p. 7.

Farming in Alaska presents many problems with which those who have farmed elsewhere are unfamiliar. The long winters, the short growing season with its long daylight, the relatively raw soils resulting from the climatic complex, and the effect of all these factors, not only on growing crops but on their food and feed value, are problems that must be solved before agriculture in Alaska can obtain a high degree of success. Some information has been collected on crop possibilities for limited areas, but this must be expanded

to include all of the areas potentially adapted to settle-5 ment.

Report on Exploratory Investigations of Agricultural Problems of Alaska, pp. 11-12.

The United States Government, realizing the importance of agricultural research in Alaska, provided funds in 1946 to the Agricultural Research Administration for special exploratory investigations of Alaska to determine the basic problems underlying potential agricultural development in certain areas of Alaska. The results of the investigations are to be the basis or guide for development of future agricultural feresearch in the region.

6 <u>Ibid.</u>, pp. 10.

As a result of these exploratory investigations conducted by the Agricultural Research Administration, it was determined that future research should dwell on the problems of soil, forage and range, horticulture, livestock, farm engineering, and economics of marketing. A thorough classification of the soils and their capabilities is very necessary. Development of hybrids to withstand Alaska's climate is another important phase of needed research. The adverse climatic conditions

that prevail in Alaska have impressed the United States
Department of Agiculture with the need for experimentation
for proper housing of farm families and livestock. It is
obvious that Alaskans do not have the great backlog of
knowledge gained through experience and research that is
vailable in Continental United States.

7 Mid-Century Alaska, p. 99.

There is a great need for proper regulation and advisement of novices desiring to go to Alaska to homestead farms. The Agricultural Research Administration stresses the importance of the prospective homesteader knowing the truth about Alaskan agriculture.

...Ill-advised and glowing accounts of Alaska, emphasizing its potentialities and omitting the handicaps, are encouraging many veterans and other settlers to take up land of uncertain quality, often far from markets. Further, some of these people have had no experience in farming, either in Alaska or with crops adapted to the soils of Alaska. Settlement by such families, or by any families, on poor soil, can lead only to waste, disillusionment, and bitterness.

The Alaska Rural Rehabilitation Corporation in the foreword of a pamphlet concerning the agriculture and living

Report on Exploratory Investigation of Agricultural Problems of Alaska, p. 3.

conditions of Matanuska Valley writes the following:

...It is emphasized that persons coming to Alaska to be financially able to carry themselves for at least three months and still be able to return to the States. No written information can substitute for personal experience. Alaska wants and needs permanent residents, but the requirements in the way of finances, ambition, and resourcefulness are high.

9
Agriculture and Living Conditions in the Matanuska
Valley of Alaska, p. 1.

Most students of Alaskan agriculture, believing that farming is sure to continue to expand as a basic industry, agree that livestock must occupy a greater part in farming operations in the future if stability and success are to be achieved. They believe that Alaska can produce from 80 to 90 percent of its own requirements for agricultural products, instead of the 15 percent it now produces.

Report on Exploratory Investigation of Agricultural Problems of Alaska, p. 3.

In 1950 Alaska, with a total area of 365,481,600 acres, had only 525 farms totaling 421,799 acres. The average size of the farm was 803 acres with an average value of \$15.51 per acre. The value of all farm products sold from these 11 farms was \$1,571,931.

11
1950 United States Census of Agriculture, Volume 1,
Part 34, Chapter 1, p. 1.

Developed Agricultural Areas of Alaska

Tanana Valley

Tanana Valley, located in central Alaska near the city of Fairbanks, has an established and active agriculture community. The valley has an elevation of from 520 feet in the bottom lands to 1400 feet in the benchlands. The growing season on the high slopes of the valley averages 105 days for frost-tender plants, such as potatoes, and 123 days for hardy plants, such as pasture grasses. In the valley bottom lands the growing season is 10 to 15 days shorter, largely because of the air drainage. The Tanana Valley has relatively good top soil of from 6 to 10 inches in depth. In fields that have been continuously cultivated the permafrost is over 12 four feet below the surface.

E. Willard Miller, "Agricultural Developments in Interior Alaska," Science Monthly, Oct., 1951, pp. 245-254.

The yield per acre, with proper fertilization, has been established to be about 18 tons of potatoes, 30 bushels of wheat, 40 bushels of barley, and 50 bushels of oats.

This area may well become the granary of Alaska. Several varieties of wheat are ripened every year in the short span of from 80 to 90 days.

13
Fairbanks, Golden Heart of Alaska, a pamphlet published by the Chamber of Commerce, Fairbanks, Alaska

Farming in the Tanana Valley is the main source of livelihood for only 30 or 40 families. Farms average about 160 acres, but they may vary from a few to 320 acres. Slightly less than 20 percent of the average holding is cleared, and about one-third of the cleared land is normally idle or fallow each year. In 1950 about 75 percent of the farmers had owned their farms for less than six years. By 14 the end of 1950 about 2,400 acres had been cleared.

E. Willard Miller, "Agricultural Developments in Interior Alaska," Science Monthly, Oct., 1951, p. 246.

The average temperature in the Tanana Valley in July is 60 degrees Fahrenheit; January average is 11.6 degrees below zero. The area enjoys short, but warm summers. Temperatures of 90 degrees are not uncommon. Although the summers are short, the long, sunny summer days accelerate crop growth greatly. The great annoyances of summer are the mosquitoes and the ever-present dust.

Mid-Century Alaska, p. 107.

The annual rainfall is usually adequate for the production of crops on most soil in the area, but conservation of moisture is an important aspect of Tanana Valley farming.

Many persons irrigate their vegetable gardens. The average annual rainfall is 11.67 inches; average winter snewfall is 16 to inches.

16 Ibid., p. 107.

All the hardier vegetables thrive in Tanana Valley.

Cabbage, cauliflower, celery, broccoli, brussels sprouts,

lettuce, peas, radishes, and squash are commonly grown.

Corn, cucumbers, and tomatoes can be grown in the open

garden only if given extra attention. Small fruits, such as

raspberries and strawberries, do well in the garden or as a

17

field crop.

Fairbanks, Golden Heart of Alaska, a pamphlet published by the Chamber of Commerce, Fairbanks, Alaska.

A few modern dairy farms, a few flocks of sheep and goats, and some hogs and poultry constitute the present livestock

industry of the Tanana Valley. The estimated cost of

18 <u>Ibid.</u>, p. 6.

establishing a twelve cow dairy in the Tanana Valley area in 19 1950 was from \$45,000 to \$50,000.

E. Willard Miller, "Agricultural Developments in Interior Alaska," Science Monthly, Oct., 1951, p. 247.

The annual value of food imported into the Fairbanks region is well over \$1,000,000. The Tanana Valley farming area produces about \$150,000 worth of farm products. These figures indicate that there is abundant opportunity to extend the local production to meet the demands of the available 20 market.

20 Ibid., p. 247.

A unique method of raising the surface soil temperature has been developed in the Tanana Valley. About April 1st the farmers spread coal dust over the snow-covered fields. By applying about one pound of coal dust per square yard, the snow melts in 12 to 14 days. Fields adjacent to a dusted

area will have a snow covering of 12 to 20 inches until the end of April. The black covering of the coal dust absorbs and holds the heat of the sun and causes the snow to melt. Coal dust placed between rows of vegetables increases the soil temperature sufficiently to speed maturity as much as 21 ten days.

21 Ibid., p. 252.

The Matanuska Valley

The Matanuska Valley is the best known and the most promising agricultural area in Alaska. The Matanuska Valley colonization, a phase of a nation-wide program to rehabilitate depression-stricken families, began in 1934. The Federal Relief Administration and the Department of the Interior undertook the colonizing of the valley. In 1935 two hundred families from Wisconsin, Michigan, and Minnesota were transported to Alaska. These first colonists had a difficult time because of inadequate planning, "red tape", and lack of information. Most of the mistakes of these first settlers were the result of haste in planning the operation. It is estimated that the establishment of the Matanuska Colony cost the United States \$5,500,000.

Clarence C. Hulley, "The Matanuska Colony," Geographical Review, Volume 41, pp. 490-492.

The Matanuska Valley is located in south central Alaska, 45 miles northeast of Anchorage. It is surrounded by lofty mountains on three sides. The Chugach mountains to the south ward off rain clouds, but their height does not shut off mild winds from the Pacific Ocean. The Talkeetna Mountains are to the north and beyond is the Alaska Range which affords the valley protection from the extreme cold and heat of the interior. The climate of the valley, therefore, is relatively 23 dry, but not extremely cold.

23 Ibid., p. 491.

The Matanuska Valley is a plain with a base of gravel and stones, covered with wind-blown, very fine sand to depths up to six feet. The soil is not permanently frozen, except under peat, but still the subsoil is too cold for the extension of the roots of crop plants.

Report on Exploratory Investigations of Agricultural Problems of Alaska, pp. 7-8.

The Matanuska Valley has milder winters than does the Tanana Valley; summers are not so warm and sunny, rainfall is slightly higher, and the growing season is longer. The average July temperature is 57.7 degrees Fahrenheit; the average January temperature is 12.6 degrees. The average annual precipitation is 15.6 inches, and the average growing 25 season is 108 days.

25 Mid-Century Alaska, p. 104.

In 1946 there were about 250 families in the valley;

140 of them in the Matanuska Valley Project area. These included 52 of the original 200 families settled there in 1935. The use of bulldozers has facilitated the clearing of 26 land. At present some 8,000 acres have been cleared.

Report on Exploratory Investigations of Agricultural Problems of Alaska, p. 50.

The major types of farming prevalent in the valley are dairying, vegetable growing, general farming and poultry.

Many varieties of potatoes, many kinds of vegetables, cranberries, blueberries, huckleberries, strawberries, and 27 raspberries grow in abundance. The average yields per

Agriculture and Living Conditions in the Matanuska Valley, p. 3.

acre in the Matanuska Valley are as follows: oats, 43
bushels; wheat, 24 bushels; barley, 35 bushels; hay, 1.7
tons; silage, 6.0 tons; potatoes, 6.0 tons; cabbage, 10 tons;
28
carrots, 5.0 tons; lettuce, 6.0 tons.

28 Mid-Century Alaska, p. 105.

Dairying is the foremost industry of the Matanuska
Valley. There are 42 grade-A dairies in operation, shipping
an average daily total of 10,000 pounds of milk to Anchorage,
the Matanuska Valley's chief market. The supply of fluid
milk is still insufficient to meet the demand in Anchorage
and Fort Richardson, the adjacent Army post.

The Matanuska Valley, a pamphlet published by the Matanuska Valley Chamber of Commerce, Palmer, Alaska.

The Matanuska Valley has the agricultural resources to maintain a larger population. It has the most highly developed agriculture in Alaska and supports more full-time farmers than any other area in the Territory. Its nearness to the thickly populated Anchorage area assures it of a

continued market for its produce. The Matanuska Valley has a good transportation system consisting of the Alaska Rail-road and the Richardson Highway. The region is endowed with a suitable climate and good soils. The combination of location, transportation, climate, and soils make Matanuska 30 Valley the most promising agricultural area of Alaska.

Report on Exploratory Investigations of Agricultural Problems of Alaska, p. 41.

Kenai Peninsula

Some of the best agricultural land in Alaska is in the western section of the Kenai Peninsula between Kachemak Bay and the Kasilof River. On the basis of reconnaissance surveys it has been estimated that 204,708 acres of bench and bottom land in the Kenai Peninsula are sufficiently smooth and well-drained to be used for crop production.

The agricultural development of the Kenai Peninsula has been handicapped in the past by lack of transportation, but the completion in 1952 of the Sterling Highway, connecting the road system of the Kenai Peninsula with Anchorage, assures

Mid-Century Alaska, p. 108.

32

the area of a good market for its farm products.

Personal letter received from the secretary, Chamber of Commerce, Homer, Alaska, dated March 9, 1953.

The soils in the Homer area of the Kenai Peninsula are fair to good for crop use. They are medium textured, dark colored, and moderately well-drained. The most promising agricultural enterprises for the Homer area appear to be stock raising, dairying, and the production of vegetables. Stock raising would thrive on the grasses and legumes which 33 are the crops best suited to this climate.

Report on Exploratory Investigations of Agricultural Problems of Alaska, p. 52.

Maximum temperatures in the Kenai Peninsula in summer range between 55 and 65 degrees - winter temperatures usually range between 5 to 20 degrees above zero. The average

growing season is 104 days. The average annual rainfall at Homer is 32.9 inches, decreasing from Homer up the Cook 35 Inlet. The annual snowfall averages 98.7 inches.

³⁴ Pamphlet, Chamber of Commerce, Homer, Alaska.

35 Mid-Century Alaska, p. 109.

More exact and concise information regarding the climate and soils, the adaptability of crops, and the responses of the various soils to management practices is necessary before a reliable estimate of the agricultural 36 capabilities of the Homer area can be made.

Report on Exploratory Investigations of Agricultural Problems of Alaska, p. 56.

Permafrost

One of the hazards to the development of Alaskan agriculture is the condition known as permafrost. Permafrost is
a short term for the expressions "permanently frozen ground",
37
"ever frozen soil", and "ever frozen subsoil". Permafrost

37 <u>Ibid.</u>, p. 74.

is soil that remains perpetually frozen to a depth of from one to several hundred feet. It exists in most of Alaska north of the Alaska Range.

38 Mid-Century Alaska, p. 100.

Recent studies made of oil wells drilled by the United States Navy reveal that in certain localities permafrost extends to a depth of 1,000 feet. Scientists and engineers believe that a close study and observation of these oil well drillings will give them a more complete understanding of the problem of permafrost.

Science News Letter, November 18, 1950, p. 238.

Above the permafrost the soil thaws in summer and freezes again in the winter. In spring the soil thaws from the surface downward, and the depth to which it thaws early in spring and summer affects its agricultural use. Since the permafrost layer is impervious, it retards drainage. Surface water must either evaporate or escape by surface run-off. Improved drainage conditions would permit greater 40 agricultural development in Alaska.

Report on Exploratory Investigations of Agricultural Problems of Alaska, pp. 74-75.

The presence of permafrost greatly complicates the ground-water supply situation and often makes it impossible for farmers to locate wells that have a dependable supply of satisfactory water. Often wells sunk through permafrost will freeze, even in summer. This condition is particularly true of the farm water supplies of the Fairbanks area.

41 Ibid., p. 77.

Permafrost results in a peculiar type of erosion in cultivated fields. After a field has been in cultivation several years, the soil temperature increases and forces the permafrost level downward. This reaction causes ice blocks to melt in the permafrost which eventually results in gullies forming in the land surface. The gullies superficially resemble ordinary gullies but there is no deposition of soil. The history of a field located near Fairbanks illustrates the effect of cultivation on the permafrost level and the erosion that it causes.

1908: Cleared of spruce and alder and then broken.

1909: First year cropped.

1918: First signs of surface soil settling.

1921: Field had become undulating (hummocky) but could be cultivated with difficulty.

1927: Several caverns and caves had formed, resulting in loss or damage to farm equipment. The field was then converted to pasture and has remained so since.42

42 Ibid., p. 77.

Permafrost is not only a detriment to agriculture, but is also a problem in constructing highways, airfields, and buildings, and therefore, is a problem that is very vital to the military defense of Alaska. The United States Army and the United States Geological Survey are conducting extension surveys of permafrost conditions as a basis for determining location and design of structures and roads to be constructed upon surfaces resting upon permafrost.

43 Ibid., p. 74.

Insects

Alaska, lying in the northern latitudes, is not usually considered to have an insect problem. This is not true. Inhabitants of Interior Alaska are tormented every summer by swarms of mosquitoes, blackflies and sand flies. These insects not only impede farming operations, but affect those engaged in mining, lumbering, fishing, and the tourist

business. The insects are also troublesome to the livestock, fur-bearing animals, and reindeer.

Preliminary research indicates that the mosquitoes breed over large areas, but with the development of such highly effective insecticides as DDT it may be possible to give protection to a whole community. Effective methods must be found in controlling the insects if the agriculture and other resources of Alaska are to be properly developed.

44 Ibid., p. 19.

Acquisition of Land by Individuals In Alaska

Since more than 90 percent of the land area of Alaska is under the jurisdiction of the United States Department of the Interior, and is classified as public lands, acquisition of land by individuals is possible under the homestead laws. Some of the best public lands have been withdrawn from homesteading for use by the military, the natives, and for other special purposes. Most of the remaining public lands suitable for farming are distant from towns and highways. The labor and the costs of clearing land, constructing roads, and building homes requires determination, stamina and sizable savings to carry the homesteader through the first years.

45

Fairbanks, Golden Heart of Alaska, a pamphlet published by the Chamber of Commerce, Fairbanks, Alaska.

The usual procedure for homesteading is as follows:

- (1) Qualifications: To be eligible to apply for land under the homestead laws a person must be either 21 years old, or be the head of a family.
- (2) If you meet the qualification, determine what sections of land are unoccupied from the regional land management office and inspect and choose the tract desired.
- (3) File a homestead entry, accompanied by a filing fee and commission.
- (4) Establish residence on the land within six months and live thereon for seven months of each year for three years. No crops are required the first year. The second year one-sixteenth of the land must be farmed, and the third year at least one-eighth of the land must be farmed.
- (5) Build a habitable house. It is required before title may be obtained.
- (6) Apply for a patent to the Bureau of Land Management and if the application is approved, the land belongs to you. 46

46 Ibid., p. 3.

There is a substantial acreage of homestead land available in Matanuska Valley, but it is not good farm land.
Good farms can frequently be purchased from private owners,
or from the Alaska Rural Rehabilitation Corporation. The
prices of developed, completely equipped farms in the

Matanuska Valley range from \$8,000 to \$50,000. The number of homesteads that have been developed into profitable farms is very small. To a great extent this is the result of inadequate financing. There are no provisions as yet in Alaska for long term, low interest financing for agricultural 47 development.

⁴⁷

Agriculture and Living Conditions in the Matanuska Valley of Alaska, a pamphlet published by the Alaska Rural Rehabilitation Corporation, Palmer, Alaska.

CHAPTER V

TRANS PORTATION

The early settlements of Alaska were situated at tidewater mainly because of the extent of the Alaskan Range,
the northern extension of the U. S. and Canadian Rocky
Mountains, which closely parallels the Pacific Ocean and
the Gulf of Alaska westward to the Aleutian Chain. Prior
to the introduction of modern roadbuilding equipment, overland transportation between towns was difficult, if not
impossible, and thus the only people who ever attempted to
surmount the inland barriers were the ever-present trappers
and prospectors.

Only in the last decade has any real progress been made in the development of a modern transportation system. Less than twenty-five years ago the only transportation available in Alaska was the open streams in summer, or the dog team trails in winter.

World war II, more than anything else, has made the United States Government realize the importance of Alaska to its national defense and, therefore, the urgency of creating an adequate transportation system. Oddly enough, the Federal Government is not thinking of the development of a rich territory, but is thinking in the terms of the

importance of the Territory in the defense plans of the United States. Thus World War II has made Alaska an important defense outpost of the United States, and, at the same time, has given it the stimulus needed for its proper development in the future by providing it with Federal funds to build a modern transportation and communication system. Population and transportation are the basic ingredients for building any frontier empire - Alaska is no exception.

Rail Transportation

The railroad system of Alaska is composed of the Alaska Railroad, operated by the United States Department of the Interior, and a short line railroad in southeastern Alaska that connects Skagway, Alaska, and Whitehorse in the Yukon Territory. The latter railroad, the Yukon and White Pass Railway, a narrow gauge, privately owned railroad is of minor importance.

The Alaska Railroad serves the "rail-belt" of 471 miles from Seward on the Alaska Gulf, to Fairbanks in the heart of the Territory. It maintains year-round connections with steamer sailings and affords comfortable travel through much of Alaska's scenic wonderland.

Louis Jacobin, Tourists and Sportsmen's Guide to Alaska, 1947, p. 15.

The Alaska Railroad was built in 1915 by the United States Government. Lack of interest in the 1920's, and the depression of the 1930's combined to cause the railroad to depreciate badly. World War II and the sudden increase in population, caused the United States Government to become cognizant of the railroad's importance. Since 1947 the Alaska Railroad has entered upon the largest improvement program in its history.

2 Ibid., p. 193.

The railroad is undergoing a complete rehabilitation, including modernization of plant and equipment. Tracks and right-of-ways have been rejuvenated with new ties and rails, and wooden bridges have been replaced by steel structures. All locomotives have been replaced by modern diesels. A new streamliner is serving the rail-belt passengers at speeds never attained on the railroad before. Increased schedules and accelerated speeds are providing better freight service.

3 <u>Ibid</u>., p. 193.

Passenger fares of the Alaska Railroad are comparable to those in effect in the United States. The following table

sets forth the fares and schedule currently in effect on the Alaska Railroad:

Schedule and Fares

Adult Passenger Fares: (One-way)

Between Seward and Anchorage -- \$ 6.85 Between Seward and Fairbanks -- 28.20 Between Seward and Palmer ---- 9.40

Thirty day round trip tickets are sold for one and one-third times the one-way fare.

Schedule:

Seward-Anchorage: "Boat Trains" are operated between Seward and Anchorage to connect with passenger ships arriving and departing Seward.

Anchorage-Fairbanks: Leave Anchorage 8:30 a.m. each Monday, Wednesday, Friday. Arrive Fairbanks 9:15 p.m. same day. Leave Fairbanks 8:30 a.m. each Tuesday, Thursday, Saturday, and arrive at Anchorage at 9 p.m. same day.

Table 4

Schedule and Fares, Alaska Railroad

From information furnished by the Alaska Steamship Company, Seattle, Washington.

The "rail-belt" is well served by the Alaska Railroad, but the freight rates are high compared to the rates in the United States. This is caused by the one-way haul entailed in Alaska. The loaded freight trains go north to Fairbanks and return to the coast practically empty. Not until Alaska develops an export traffic of sizable importance and a healthy competition, can the residents of the Territory look for freight rates comparable to those now in effect in the United States.

5 Herbert H. Hilscher, Alaska Now, p. 89.

The freight tonnage hauled annually by the Alaska
Railroad has increased steadily since 1940. The following
table shows the amount of freight hauled in 1951 and the
estimated freight for 1952 and 1953:

	1951 Ac tual	1952 Estimated	1953 Es tima ted
Tons of Revenue Freight	1,093,726	1,097,000	1,200,000
Non Miles of Freight	178,983,391	180,000,000	190,000,000

Table 5

Tons of Revenue Freight and Ton Miles of Freight
Alaska Railroad

United States Budget, 1953, p. 822.

The Alaska Railroad, prior to World War II, never made a profit and was dependent upon Congressional appropriations to continue operations. During World War II the railroad commenced making a profit and has continued to do so until the present year. The following table shows the earnings for 1951 and the estimated earnings for 1952 and 1953;

	1951 Ac tual	1952 Estimate	1953 Estimate
revenues:			
Rail Line River Boats. Total	\$15,304,258 76,025 \$15,380,283	\$15,345,000 80,000 \$15,425,000	\$15,840,000 80,000 \$15,920,000
EXPENSES:			
Rail Line River Boats. Total	\$15,036,950 243,457 \$15,280,407	\$15,000,000 225,000 \$15,225,000	\$15,500,000 220,000 \$15,720,000
EARNINGS	\$ 99,876	\$ 200,000	\$ 200,000
Cumulative Deficit Since 1916	\$ <u>-612,753</u>	\$ -412,753	\$212,753

Table 6
Alaska Railroad Operation

⁷ United States Budget, 1953, p. 822.

The future of rail transportation in Alaska depends on the projection of the present system. Using the present Alaska Railroad as its basis, rail connections should be made throughout Central Alaska, particularly to the Kuskokwim River section. Feeder lines are necessary to complete the system.

Above all else, Alaska desperately needs rail connections with the United States. A suitable and practical route exists following the north side of the Alaska Range down to Prince George, British Columbia, where the Alaska Railroad could connect with the Canadian National Railways. The Army and Navy consider such a railroad imperative to national defense. Until such time as the growth and development of Alaska can produce enough freight to make these proposed rail extensions pay their way, construction and maintenance must be charged to hemispheric defense. The cost of such a project would be cheap insurance against aggression from the West.

Water Transportation

Alaska has always been dependent on water transportation from the United States, and even today, with the Alaska Highway and the air routes connecting Alaska with the United

⁸ Herbert H. Hilscher, Alaska Now, p. 293.

States, the steamship lines are the main carriers of the freight between the United States and Alaska. Three steamship lines maintain regular passenger and freight service out of Seattle to Alaska; the Alaska Steamship Company, the Northland Transportation Company, and the Alaska Transportation Company.

Louis Jacobin, Tourists and Sportsmen's Guide to Alaska, 1947, p. 15.

The Alaska Steamship Company controls 90 percent of the 10 water transportation between the United States and Alaska.

"Arctic Antitrust," Business Week, June 17, 1950, p. 20.

Its ships lave Seattle on a regular ten day schedule and traverse the Ircide Passage, making stops at Ketchikan, Wrangell, Peter arg, Juneau, Cordova, Valdez, and Seward. Travel is very heavy and there is a continuous shortage of boats. The Alaska Steamship Company is the only line regularly serving the Alaska Peninsula, Aleutian Islands, and the Bering seaports. The Alaska Transportation

Louis Jacobin, Tourists and Sportsmen's Guide to Alaska, 1947, p. 17.

Company carries passengers, freight and refrigerator service to southeastern Alaska, and the Northland Transportation

12

Company has a sailing once a week from Seattle to Juneau.

12 Ibid., p. 17.

In addition to the above listed companies, the Berger Distributing Company of Anchorage operates two freight and passenger boats between Seattle and Cook Inlet. Also Juneau has a cooperative line operating to southern Alaska coastal 13 cities.

13 Ibid., p. 17.

The Alaska Freight Lines, Incorporated, a truck line operator in Alaska, has asked the Interstate Commerce Commission for permission to operate a regular barge service from Alaska to the Great Lakes. The route would traverse the Inside Passage to Pacific coast ports, then south to the Panama Canal, through the Canal to New Orleans, and up the Mississippi River System to the Great Lakes. The Alaska

[&]quot;Barge Service on a Timetable," <u>Business Week</u>, November 22, 1952, p. 33.

Preight Lines desires to operate a monthly scheduled trip,
plus any unscheduled trips whenever the demand warrants them.
The barges would carry lumber to the United States and return
to Alaska with manufactured goods and processed foods.

15 Ibid., p. 33.

The Maritime Act of 1920, known as the Jones Act, is considered by proponents of Alaska to be one of the main causes of the high cost of living in Alaska. For decades Alaska has been bound to the Seattle Waterfront. Other West Coast cities, particularly Portland and Tacoma have tried to operate services to Alaska, but all met failure because of Seattle's tight hold and political connections. The Jones Act (named for Senator Wesley L. Jones of Seattle) made it un'awful to ship freight into Alaska except from a 16 United States port. Section 27 of this act specifically

prohibits any goods originating in the United States from being shipped to Alaska in a foreign vessel, thus giving Seattle ironclad control over transportation to Alaska. Such discrimination occurs nowhere else under the American flag. However, by decision of the United States Supreme

¹⁶ Herbert H. Wilscher, Alaska Now, p. 285.

Court, the day Alaska becomes a state, this undesirable section of the Jones Act will be eliminated. This action would definitely lower the freight rates and would be a boon to the businessmen and consumers of Alaska.

17 Ibid., p. 285.

Air Transportation

The advent of the airplane has affected Alaska more than any other method of transportation. The aircraft has defeated those geographic barriers which make travel by land so tedious. Per capita, Alaska has more airplanes than any other political sub-division in the world. More than 580 commercial planes were registered within the Territory in 181947, as compared to only 99 registered in 1940.

The airplane has brought Alaska closer to the United States. From Seattle to Ketchikan it is only a four and one half hour flight, to Fairbanks an eight hour flight, and to Nome (a distance comparable to San Francisco to

Louis Jacobin, Tourists and Sportsmen's Guide to Alaska, 1947, p. 25.

Chicago) an eleven and one half hour flight.

19 Ibid., p. 26.

A surprising number of Great Circle Routes between large population centers in the Northern Hemisphere pass through or near Alaska - New York to Tokyo, San Francisco to Shanghai, Minneapolis to Calcutta, London to Honolulu, Moscow to Vancouver, New Orleans to Manila. Alaska is served by the Northwest Airlines on a regular schedule from Minneapolis to Anchorage and Shemya in Alaska, and on to ZO Japan, China, and the Philippines.

John C. Reed, "Alaska and the Geological Survey," Scientific Monthly, October, 1949, p. 244.

In 1947 the Territory had 27 major airports and 20 secondary landing strips, 43 radio ranges, and 46 weather observation stations. Approximately 7,000,000 air miles are flown each year in Alaska. The United States Budget for

Louis Jacobin, Tourists and Sportsmen's Guide to Alaska, 1947, p. 26.

¹⁹⁵³ earmarks \$2,185,000 for maintenance, operation and

construction of public airports in Alaska.

There are two main airlines operating between the United States and Alaska. The Northwest Airlines operates daily schedules from Seattle to Anchorage. The Pan American Airways operates nineteen flights weekly to Ketchikan, 22 Juneau, Whitehorse, Fairbanks, and Nome.

22 <u>Ibid.</u>, p. 25.

The coastal area and interior of Alaska are well served by competant airlines; both charter and scheduled service is available. The airlines serving Alaska includes the following:

Pacific Northern Airlines
Northern Consolidated Airlines
Wien Alaska Airlines
Aho Flying Service (charter service)
Peninsula Flying Service (charter service)
Mount McKinley Airways, Inc.
Arnold Air Service.23

23 Ibid., p. 25.

The airplane has enjoyed an important role in opening new territory in Alaska. Important mining and trapping operations, far from available land transportation, have been supplied with machinery and equipment, maintenance materials, and labor; and their output has been delivered to

civilization solely by air transportation. Such operations are costly in the present state of aviation development, but many types of activity in Alaska can support them.

M. L. Fair and W. W. Williams, Economics of Transportation, p. 122.

The airplane is used to fly seasonal workers into Alaska from the United States. One salmon canning company in 1947 contracted to have 4,000 fishermen and cannery workers flown from Seattle to the fishing grounds - a nine hour flight over a distance that once took 30 days by boat.

Louis Jacobin, Tourists and Sportsmen's Guide to Alaska, 1947, p. 25.

The north-bound movement of thousands of "cat-skinners", mule operators, carpenters, and machinists for military and airfield construction is a yearly occurence. The mass migration of skilled and unskilled laborers to Alaska is giving the charter airlines a landslide business.

When Pan American Airways was the only operator of regular airplane service from the United States to Alaska, the established air express rate was 95 cents per pound.

Today, with the increase in demand for the service and an increase in competition, the rate of air-freight from Seattle

to Anchorage and Fairbanks is 18 cents per pound.

26
Herbert H. Hilscher, Alaska Now, p. 95.

Highway Transportation

The Alaska Road Commission, an agency of the Department of the Interior, is charged with construction and maintenance of roads, tramways, ferries, bridges, trails, and related works in the Territory of Alaska. The total amount of expenditures for roads and facilities since 1905 to the end of the fiscal year 1951, totaled \$121,020,514. Of this amount \$109.661,296 has been appropriated by acts of Congress, \$6,447,093 has been made available from Territorial tax receipts and \$4,912,125 has been contributed by the Territory and other benefiting agencies or individuals. The total expenditures during the fiscal year 1951 amounted to \$27\$ \$30,862,643. Expenditures for the fiscal year 1951

Annual Report of the Governor of Alaska, 1951, p. 71.

accounted for one-fourth of the total expenditures of the forty six preceding years, 1905-1950.

The work accomplished during 1951 included numerous surveys of future roads, new construction, and reconstruction and improvement of existing roads. The Alaska Road Commission forces completed 162.5 miles of new grading, 147.5 miles of gravel surfacing. Also during 1951 the Sterling Highway from Homer to Anchorage was completed. Construction of a highway connecting the Richardson Highway with the road system in Mt. McKinley National Park was 28 commenced in 1951.

28 Ibid., p. 73.

At present there is an extensive and intensive project underway to hard surface all the roads of Alaska. The United States plans to spend \$23,690,000 for construction, 29 maintenance and operation of highways in Alaska in 1953.

United States Budget, 1953, p. 822.

During the winter of 1951, for the second time in history, the major cities of Anchorage, Valdez, and Fairbanks were accessible to each other and to the United States.

During the spring thaw and breakup, it becomes necessary to limit truck travel for a short period of time on the Alaska Highway between Tok Junction and Johnson River. No

Interference results to essential services since the public is always forewarned and expects these short interruptions in order to protect the improved highways of Alaska during 50 the spring breakup.

Annual Report of the Governor of Alaska, 1951, p. 73.

The Alaska Highway System is now developed into an integrated net of substantial proportions. The Haines Cutoff connects the coast at Haines in southeastern Alaska with
the Alaska Highway in the Yukon Territory. The Richardson
Highway connects Fairbanks with Valdez. A resident of
Anchorage can now drive to Fairbanks by way of the Glenn
Highway to Glenn Allen and thence over the Richardson
Highway, or to the United States by using the Tok Cut-off
from Gulkana on the Richardson Highway to Tok Junction on
the Alaska Highway. Seward is now the terminus of a road
leading through Kenai to Homer. The new Sterling Highway
Si

John C. Reed, "Alaska and the Geological Survey," Scientific Monthly, October, 1949, p. 242.

An official count in 1950 at the Alaska Border revealed that 4,813 vehicles carrying 12,439 persons entered the

Territory by the Alaska Highway. This was an increase over the previous year of more than 600 vehicles and 1,700 32 persons.

32 Mid-Century Alaska, p. 82.

There are several franchised bus lines operating within Alaska. A summary of the area of operation of the territorial bus lines follows:

O'Harra Bus Lines operates twice a week over the 371 miles of the highway from Valdez to Fairbanks, and maintains service as long as the road is open to traffic. It also operates between Anchorage and Fairbanks over the Glenn Highway. Beyond Fairbanks it operates over the Steese Highway to Circle Hot Springs and the villages on the Yukon River.

University Bus Lines operates between Fairbanks and Anchorage. It also serves the University of Alaska at College and Ladd Field, both near Fairbanks.

Matanuska Valley Lines serves Anchorage and Palmer. It also has a schedule to East Anchorage, City Airport, and Lake Spenard, a pleasure resort near Anchorage.

Channel Bus Line operates between the cities of Juneau and Douglas. 35

Louis Jacobin, Tourists and Sportmen's Guide to Alaska, 1947, p. 16.

There is now bus service from the United States to

Alaska. The Northwest Greyhound Lines of Seattle, Washington,
operates only to the Canadian Border in Idaho. Three

Canadian bus lines provide transport service from the Border
to Whitehorse, Yukon Territory. Two Alaskan bus lines operate
34
between Whitehorse and points in the Territory.

Associated Press Release, Houston Chronicle, June 9, 1948.

Canada is constructing a \$300,000,000 Trans-Canadian Highway which, when completed in 1956, will intersect the Alaska Highway and thus bring Alaska and the Eastern United States closer in time and mileage. The highway is expected to be a big boon to the Alaskan tourist industry.

Britannica Book of the Year, 1951, p. 605.

The following table shows the highway mileage between selected points in Alaska, Canada, and the United States:

Prom		To	Miles
Great Fall	s. Wontana	to Fairbanks	. 2,500
		8	. 1,170
		rage	
Dawson Cre	ek to Feirh	anks	. 1,523
Haines to	Milohorage .		
		n	
naines to	TOK JUNG 610		. 400
Tok June 61	on to Fairo	anks	. 205
		0	
Tok June ti	on to Ancho	rage	. 338
Fairbanks	to Circle .		. 368
Fairbanks	to Anchorag	e (via Paxson's)	. 439
Fairbanks	to Anchorag	e (via Tok)	. 543
Anchorage			
		lls, Montana	
Anchorage	co attest ha	TTO MOH CHIER	. E,000

Table 7

Highway Mileages to and Within Alaska

36 Mid-Century Alaska, pp. 19-20.

There are eight first-class highways with a total mileage of 1,518 miles within Alaska. The following table sets forth the location and mileage of the highways;

Highway Designation Miles Alaska Highway: Northwestward from Alaska-Canadian Border to Big Delta Junction where it joins Richardson Highway 202 Richardson Highway: Due north from Valdez on Prince William Sound to Fairbanks 365 Glenn Highway: Northeast from Anchorage to Tok Junction, connecting with the Alaska Highway 342 Sterling Highway: Northeastward from Homer on the Kenai Peninsula to Anchorage 120 Steese Highway: Northwestward from Fairbanks to Circle on the Yukon River 162 Haines Highway: Northwest from Haines and connects with the Alaska Highway in the Yukon Territory. Length of road is 154 miles, but only 40 miles are within Alaska 40 Seward-Anchorage Highway: Connects Anchorage with road system on Kenai Peninsula 127 Taylor Highway: North from near Tok Junction to Eagle 160

Table 8

Designation and Mileage of Principal Alaska Highways

37 Ibid., pp. 13-14.

The writer has attempted to briefly outline the present status of Alaskan transportation. The development of a dependable transportation system is vital to the future of Alaska. Much of the Territory is uninhabited and undeveloped and will remain a frontier until a railroad or a highway opens the way for settlement. Great progress in transportation has been made since 1940, and from all indications still greater progress will be made during the next decade.

CHAPTER VI

DEVELOPMENT OF INDUSTRY AND COMMERCE

Alaska has only two industries with which to balance its imports from the parent country. One of them, mining, has been declining as a population-supporting activity. The other, the fisheries, uses transient labor and is dependent upon outside sources for its operating supplies. The present commerce and industry of the Territory is in the nature of services to these two dominant industries.

Dependence on manufacturing and industry in the United States and Canada has seriously affected the economy of Alaska. Because of the long distance from the suppliers of the tools, equipment, food, and other necessities of a normal economy, Alaska has had to depend on the long lines of water communication, with the result that the cost of transport of the finished product often exceeds the cost of fabrication. The result has been a high-priced, inflated economy. Because of the high-priced labor and the great distances from the world markets, Alaska has

Will F. Thompson, Jr., "Observations in Kamishak, Alaska," The Geographical Review, Vol. 39, 1949, p. 450.

found it difficult to fully develop its natural resources.

For example, Juneau, Sitka, and Ketchikan have lumber mills, but the market for the lumber is limited to the locality where it is produced. Residents of Seward find it less expensive to import lumber 1,200 miles from Seattle than to buy it at Juneau, only 600 miles away. The cost of shipping lumber from Seattle is slightly higher, but the cost of production in Juneau is greater than in Seattle. Consequently local mills are forced to limit their production to the needs of the vicinity in which they are located.

Gold, salmon, and furs are the basis of the Alaskan economy and represent the bulk of its exports. Gold and furs are high in value in comparison to their weight and bulk, and a great world demand exists for them. Salmon represents a natural monopoly of Alaska, and the constant demand permits prices sufficiently high to absorb the cost.

The Territory has a few processing industries such as lumber mills, dairies, and canneries, but all other processed

Filford J. Eiteman and Alice B. Smuts, "Alaska, Land of Opportunity - Limited," <u>Economic Geography</u>, Vol. 27, 1951, p. 35.

³ lbid., p. 36.

consumer goods on which the population is dependent must be brought to the Territory at a great transportation cost.

This often entails a one-way pay load; the freight carriers usually returning to their home port without cargo.

In 1950 the United States Government brought eleven anti-trust suits against twenty-three corporations, 138 individuals, and one trade association, charging them with monopoly and restraint of trade. Behind the guise of high prices due to transportation costs, certain factions were charged with fixing prices by monopolizing the Alaskan markets and eliminating competition. It was revealed that the Alaska Steamship Company, with a \$16,000,000 a year business, controlled 90 percent of the water transportation between the United States and Alaska: that the Healy River Coal Corporation and two other coal companies controlled. produced, and sold 95 percent of Alaska's \$5,000,000 annual production of coal and lignite; and that five liquor wholesalers in Seattle and Anchorage controlled 98 percent of Alaska's \$10,000,000 annual liquor business. Alaskans hope that the outcome of the anti-trust suits will stimulate the growth of small business.

⁴ Business Week, June 17, 1950, p. 20.

In 1950 Alaska's two basic industries, mining and

fishing, employed approximately 32,000 people. A total of 2,262 persons were employed to operate 329 active mining properties. The fisheries were the source of livelihood

Annual Report of the Governor of Alaska, 1951, p. 60.

for approximately 30,000 people.

6 Mid-Century Alaska, p. 85.

The number of inhabitants of Alaska is limited by the quantity of imported goods that can be acquired in exchange for the two principal export products - gold and salmon. To expand the production of either of these would hasten the exhaustion of the supply. The economic salvation of Alaska cannot be attained by the expansion of its existing industries, but it depends entirely upon the development of new industries.

Wilford J. Eiteman and Alice B. Smuts, "Alaska, Land of Opportunity - Limited," Economic Geography, Vol. 27, 1951, p. 35.

The Alaska Development Board

In 1945 the Territorial Legislature, recognizing the importance of developing new industries in Alaska, created the Alaska Development Board. This board cooperates with the Federal Departments and Agencies operating in Alaska in the preparation of plans for promotional and developmental activities. Major efforts are made by the board to attract large basic industries to Alaska, expand the use of industrial, agricultural, recreational and economic resources, present a true picture of Alaska's resources and development possibilities, and furnish current information and publications on industrial and business opportunities.

8 Mid-Century Alaska, p. 81.

The Alaska Development Board has been instrumental in locating in the Territory a pulp mill, an aluminum plant, and a plywood mill. It also was primarily responsible for an oil company undertaking large-scale investigations of the petroleum possibilities of the Katalla-Yakataga Field.

Annual Report of the Governor of Alaska, 1951, p. 24.

markets for Alaska coal and iron. Special attention is given to stimulating the production of tin, bismuth, nickel, and sulfur. During 1951 several mining operations which will produce minerals needed in defense production were established with the board's assistance.

10 Ibid., p. 25.

Ketchikan Pulp and Paper Company

In 1951 the Ketchikan Pulp and Paper Company, a subsidiary of the Puget Sound Pulp and Timber Company of Bellingham, Washington, was awarded a contract for the production of 1,500,000,000 cubic feet of timber in the Tongass National Forest in southeastern Alaska. The cutting contract is for a period of fifty years and calls for the establishment of a large modern pulp mill, at an expenditure of nearly \$40,000,000, with an ultimate capacity of 525 tons per day. The mill is located at War Cove, six miles north of Ketchikan, and will employ about 1,200 persons when completed. The plant will be in operation by August, 1954.

¹¹ Ibid., p. 37.

The sale contract provides for the handling of the timber on a sustained yield cutting plan, safeguarding of salmon spawning streams, prevention of water pollution, and 12 preservation of significant scenic values.

Britannica Book of the Year, 1951, p. 295.

The Talya Project

The Aluminum Company of America is preparing to build a huge aluminum smelter at Taiya, near the town of Skagway.

13
The initial cost of the project will be \$400,000,000.

3 U. S. News and World Report, Sept. 5, 1952, p. 34.

The company plans to harness the Yukon River near the village of Whitehorse in the Yukon Territory. A dam is to be built across a steep-walled gorge. A tunnel, thirteen miles long, will be driven through the Rocky Mountains and will carry the water from the dam to a lower altitude and drop it onto generators with a capacity of 800,000 horsepower. From this power plant a second tunnel will carry the water to another generating station of similar capacity on a lower level.

Both of these power plants will be underground.

14 Ibid., p. 35.

Project the Aluminum Company of America has many legal obstacles to overcome. One obstacle that will have to be hurdled is the fact that the government cannot sell more than 160 acres of land at one time to any individual or corporation. The United States Government will have to provide by law permission for Alcoa to buy approximately 15

15
<u>Business Week</u>, August 30, 1952, pp. 30-32.

The major obstacle confronting the proposed Taiya

Project is the Canadian Government's recent refusal to

permit the diversion of the Yukon River waters. Canada's

Minister of Resources and Development refused Alcoa's

request, basing his decision on a 1907 act of Parliament

which requires that all such water rights must be developed

for the maximum benefit of Canada.

¹⁶Business Week, January 10, 1953, p. 29.

It is believed that the Candian Government would reverse its decision regarding the diversion of the Yukon River waters if the United States would offer one of the following agreements in return: (1) A United States contract to buy Canadian aluminum for its stockpile; (2) the lifting of the one and one half cent per pound U. S. tariff on Canadian aluminum; or (3) United States participation in the St. Lawrence Seaway. All these proposals have been mentioned in Canadian newspaper editorials, which, according to Business Week, very often reflect the government's opinion.

17 Ibid., p. 29.

The Taiya Project finds strong support among some prominent Canadians. It is believed by many that the project would provide a valuable source of cheap power for the mining industry in the Yukon Territory, and could bring a Canadian boom in nickel, copper, and cobalt mining in the area.

Another argument that finds support in Canada is that the Yukon River as a source of power is useless to Canada.

Alaska blocks Canada's access to the Pacific Ocean, therefore, development at tidewater farther south would have to be linked to the Yukon by enormously expensive and hard to an another transmission lines.

18 Ibid., p. 29.

The Aluminum Company of America's interest in the Taiya Project is caused by the tremendous amount of hydroelectric power available. To smelt one pound of aluminum requires ten kilowatt hours of electric power. The United States is the world's biggest user of aluminum, but it is not a particularly favorable place to manufacture it. Alcoa plans to expand its existing steamship line and transport the bauxite ore from its sources in South America to its Taiya Project. The great need for power is usually the deciding factor in the location of an aluminum smelter.

Eklutna Power Project

The Eklutna Project, located north of Anchorage, will be a stimulus for growth of industry in that area. Eklutna, the first Bureau of Reclamation project to be authorized for construction in the Territory of Alaska, was approved by the United States Congress on July 31, 1951, and \$1,100,000 was immediately appropriated to initiate construction. Estimated final construction cost of the Eklutna Project is

<sup>19
&</sup>lt;u>Business Week</u>, August 30, 1952, pp. 30-32.

\$20,365,400, and when completed in 1954, the power plant will add 30,000 kilowatts of capacity to the Anchorage-Matanuska Valley area. It is now believed that a supplemental hydroelectric project will also be needed to keep pace with the 20 phenomenal growth of the Anchorage area.

Annual Report of the Governor of Alaska, 1951, p. 70.

Katalla-Yakataga Area Oil Exploration

A recent contract, approved by the Department of the Interior, authorized the Phillips Petroleum Company to drill at least twelve exploratory wells in the next ten years in the Katalla-Yakataga area. This region is located on the Gulf of Alaska, northwest of Sitka.

The gas and oil exploration will involve one million acres of land. Phillips Petroleum Company agreed to spend at least \$1,200,000 for exploration before June 30, 1956.

After 1956 it must spend at least forty cents per acre

(\$400,000) per year on the land in the district. It must drill two wells before June 30, 1956. During the next two year period, the company must start drilling at least two more wells, and after that, from July 1, 1959, through June 30, 1963, it must drill at least two wells a year.

The Wall Street Journal (Southwest Edition), February 13, 1953, p. 12.

The Tourist Industry

Alaska is one of the greatest potential tourist areas of the world, and the possibilities for the growth of the tourist industry are practically unlimited. The Territory has much to offer for recreational development and this source of revenue may eventually prove to be greater than the returns from minerals, furs, or fishing.

22 Mid-Century Alaska, p. 82.

During the summer season of 1949, approximately 67,000 tourists visited Alaska. Total travel expenditures, including transportation, food, lodging, and miscellaneous expenses, 23 were estimated at \$25,000,000.

23 Ibid., p. 82.

Opportunity to make a livelihood in Alaska for many individuals is provided by establishing hotels and lodges

in outlying areas, auto courts, filling stations, and roadside cafes. Opportunities also exist for those interested in operating curio shops, photographic services and tourist 24 guide services. In 1948 Alaska had 13 tourist courts

24 Ibid., p. 82.

with 129 units and 74 hotels with 2,546 rooms. In 1951 a

U. S. Census of Business, 1948, Bulletin No. 1-RWS.

\$3,000,000 hotel, Alaska's newest and biggest, was opened 26 in Fairbanks.

Brittanica Book of the Year, 1951, p. 682.

In 1951 a group of Alaskans, convinced of the importance of the tourist industry to Alaska's economy, founded a non-profit public purpose corporation known as the Alaska Visitors Association. As an aid in financing the project the Territorial Legislature appropriated \$40,000 to which the association will add a like sum. The sole purpose of the Alaska Visitors Association is to promote and expand the 27 tourist industry of the area.

Annual Report of the Governor of Alaska, 1951, p. 24.

Retail, Wholesale, and Service Trades

There is one retail store for every 99 persons in Alaska, and for every 12 of the retail stores there is one wholesale establishment. The importance of these business establishments to the economy of Alaska is illustrated in the following table:

Ty pe	Number	Total Sales	Total Payroll
Retail Stores	1,311	\$ 96,748,000	\$10,991,000
Wholesale Stores	111	32,216,000	1,451,000
Service Trades	371	9,579,000	1,559,000
Total	1,793	\$138,543,000	\$14,001,000

Table 9

Number of Business Establishments, Total Sales, Total Payroll, Alaska, 1948

U. S. Census of Business, 1948, Bulletin No. 1-RWS.

The retail sales for 1948 were approximately three times greater than the sales of the wholesalers. Even with an

retail price of the merchandise purchased from a wholesale house) the retail sales are still two times greater than the wholesale sales. It is obvious, therefore, that approximately 50 percent of the merchandise of the retail stores was purchased for stock from wholesale houses in the United States or elsewhere.

The annual per capita purchases from Alaska business establishments, based on the statistics in Table 9, was approximately \$817.90. This figure is computed on an estimated population of 130,000 and the total sales of retail and service trades only.

Anchorage is the only city in Alaska with more than 200 retail stores. In 1948 it had a total of 208 stores 29 with total sales of \$29,323,000. The total sales of

29 Ibid.

Anchorage stores represented 30.3 percent of the total retail sales in Alaska in 1948. Computations, based on U. S. Census statistics, reveal that Anchorage had 21 liquor stores with total sales in 1948 of \$2,062,000, and 32 drinking establishments, dispensing beer, wine, and other alcoholic beverages, with a total sales of \$2,490,000. In 1948 Alaskans bought \$4,552,000 worth of alcoholic beverages in Anchorage, while,

in	comparison,	Anchorage	grocery	stores	had	total	sales	of
		30						
on.	ly \$4,462,000	0.						

30 Ibid.

CHAPTER VII

COMMUNITIES OF ALASKA: THEIR ECONOMY AND OTHER PROBLEMS

The population density of Alaska is less than one-half person per square mile. Alaskan towns are widely scattered throughout the Territory, separated by vast distances made difficult to traverse by geographic barriers. In a vast and sparsely populated area such as Alaska, small communities maintain a position of importance which cannot be ascertained solely by the number of their inhabitants.

Because of the popular idea that Alaska is a land of ice and snow, it is often assumed that Alaskans suffer many hard-ships and lack the luxuries and conveniences of life in the United States. Residents of Alaska's towns, however, are accustomed to normal comforts and many luxuries and live as leasily as the average American. In 1951 Alaska had twenty

eight incorporated towns with a total assessed valuation of \$119,600,000. Most of the towns, particularly those of the

Mid-Century Alaska, p. 35.

² Annual Report of the Governor of Alaska, 1951, p. 51.

churches, theaters, bowling alleys, baseball parks, night clubs, department stores, dress shops, bus lines, taxis, hospitals, clinics, banks, radio stations, and other modern services and institutions familiar to all Americans.

3 Ibid., p. 35.

The purpose of this chapter is to outline briefly the social and economic background of seven of Alaska's towns. The communities selected for summary according to location are: In the south coast region, Ketchikan, Juneau, Homer, Anchorage; in the interior, Palmer and Fairbanks; in southwestern Alaska, Kodiak.

Ketchikan

Ketchikan, Alaska's southern-most city, has a population of 6,000, with an additional 5,000 in the surrounding census area. The city is completely modern with respect to stores, schools, churches, housing, and municipal facilities.

According to a cross section survey of food, clothing, housing, transportation, medical costs, and other items, living costs are estimated to be 22 percent higher than in Seattle, Washington.

Information Sheet, Ketchikan Chamber of Commerce, Ketchikan, Alaska.

The two principal industries are based on the fish and timber resources which abound in the surrounding area.

Ketchikan is known as "The Salmon Capital of the World".

Its commercial fishing fleet numbers over 2,000 vessels of all types. There are six canneries located within the city 5

limits, with many more in the surrounding area.

King Salmon Derby, 1953, Chamber of Commerce, Ketchikan, Alaska.

Alaska's largest lumber mill, the Ketchikan Spruce
Mill, is located at Ketchikan. The city has also been
fortunate in being chosen as the location of the Territory's
first pulp mill, which is to be completed in 1954.

Information Sheet, Chamber of Commerce, Ketchikan, Alaska.

Servicing the tourist trade is another important local industry. Among the attractions for tourists is the annual "King Salmon Derby", which has become the largest of its kind, both from standpoint of widespread participation by

fishing enthusiasts and the number and size of fish caught.

The Ketchikan area has three resort areas, - Bell Island Hot

Springs, Clover Pass Resort, and Mirror Lake Resort. Many

attractive business opportunities exist in this field.

7
King Salmon Derby, 1953, Ketchikan Chamber of Commerce.

Ketchikan can boast of two daily newspapers, The

Ketchikan Daily News and the Ketchikan Alaska Chronicle.

It is also the home of The Alaska Sportsman, a nationally circulated magazine. Radio stations KTKN and KABI provide entertainment and informational service to the city and surrounding area.

8 Ibid.

Ketchikan is located on Revillagigedo Island and is accessible only by air or water. However, it is only ninety miles from Prince Rupert, which is the terminal of the Cariboo Trail and Skeena Highway System of British Columbia. The ninety miles from Prince Rupert to Ketchikan may be traveled by Canadian Steamship or by airlines with headquarters located at Prince Rupert. Regular steamship passenger service is maintained between Seattle and Ketchikan by the Alaska Steamship Company. Also the Pan American

Airways operate daily flights between Seattle and Ketchikan.

9 Ibid.

Juneau

Juneau, the capital of the Territory of Alaska, is situated on the mainland side of Gastineau Channel, northeast of the group of islands known as the Alexander Archipelago. It is the geographical center of an area rich in natural resources. The most important of these resources are salmon, timber, minerals, waterpower, wildlife, and recreation. Some of these resources have been partially developed, and all have tremendous potentialities. In addition to being the seat of the Territorial Government, Juneau is also the headquarters for most of the Federal 10 Agencies in Alaska.

Juneau, Capital of Alaska, Chamber of Commerce, Juneau, Alaska.

Juneau is a modern, up-to-date city with a population, including those residing in adjacent areas, of approximately 8,400. It has a stable, energetic citizenry, and, in

contrast with many Alaskan communities, has a metropolitan atmosphere. Juneau has everything essential to a typical American city, - modern department, grocery, and jewelry stores, theaters, public library, municipal playgrounds, hotels, restaurants, telephone system, electric lighting system. Juneau has a daily newspaper, The Daily Alaska Empire, and radio station KINY. Telegraph and long-distance telephone services are available to any part of the world.

Three banks serve greater Juneau and other nearby towns.

Il Ibid.

The most striking feature of the climate in Juneau is its typical marine weather, with its southwesterly winds, large total annual precipitation and mild temperatures of slight variability. The U.S. Weather Bureau records indicate the average annual temperature for January is 28.1 and for July it is 56.7 degrees. There is an average of two days of sub-zero temperature per year, and the average annual rainfall is approximately 65 inches.

12 Ibid.

Pederal payrolls constitute a large portion of Juneau's income. Outfitting of boats, providing cold storage

facilities and canneries for the salmon industry are important sources of income. Many of the boats in the fishing fleet were built and rigged in Juneau. Southeastern Alaska's virgin forest produces a perpetual supply of spruce and hemlock for the local sawmill which is being expanded to manufacture plywood. Gold mining, formerly the area's principal industry, is now inactive because of the disparity between the price of gold and the cost of production.

13 Ibid.

Homer

Homer is located on the extreme southern tip of the district known as the Kenai Lowland, in south central Alaska, at the terminus of the new Sterling Highway. The town, at the foot of Kachemak Bay, is scattered over an area twelve miles long and two miles wide. The settlement of Homer began over fifty years ago, but growth was retarded by lack of overland transportation. This situation has now been remedied by the intensified road program in Alaska. In the past ten years the population has increased from 325 to 1,000. There is no crowded central village because many of the homes have been built on five acre homesites

provided under the Homestead Laws of Alaska.

14 Ibid.

Homer has one of the best climates in Alaska; being neither too dry or too wet, nor too cold or too hot. The average yearly rainfall is about 27 inches, and the snowfall is about 50 inches. The climate is more temperate than in some of the northern states. It is located in one of the few areas of Alaska adaptable to agriculture. The climate, rainfall, and soil are conducive to the production of good garden and field crops. Although agricultural development in the area is of recent origin the new Sterling Highway, which opens up the Anchorage marketing area, may stimulate 15 the industry and cause an influx of new settlers.

15 Ibid.

The community has a large, centrally located grade school and high school combined which is served by a school bus system. The school has a student body of 102 and employs 5 teachers. The quality of education is comparable to that available in the United States.

l6 Ibid.

Two non-denominational churches and various clubs and social organizations are active in the community. The possibilities for sport and recreation are practically unlimited. Boating, clam-digging, crab-catching, hunting duck, geese, moose and bear, and salt and fresh water fishing are all available recreational activities. In winter there is skating and skiing in the hills above the town.

Ibid.

A first-class airport, suitable for planes as large as a DC-3, is located at Homer, and air mail service is available daily. It is regularly served by two major airlines from Anchorage, and several smaller charter planes are based there. Seaplanes operate from the one and one-half mile long lake close by the town. In addition to being the southern terminus of the Sterling Highway, the community has about forty miles of local roads, maintained by the Alaska 18 Road Commission.

18 Ibid.

Homer is presently being considered by the Federal Government as a possible site for a coal distillation plant because of the extensive coal beds underlying all of the

area. Such a plant would cost millions of dellars and would provide year around employment for hundreds of residents. The business men of the community have also been considering the building of a critically needed cement plant. At present Homer's major industry consists of a salmon and crabmeat cannery and a cold storage and quick-freeze plant for 19 seafood.

19 Ibid.

Anchorage

Anchorage, "The Chicago of Alaska", is located at the north end of Cook Inlet. It is the Territory's largest and fastest growing metropolis. The population of the city on January 1, 1953, was 16,500. The Greater Anchorage Area has 20 an estimated population of 35,000.

Anchorage owes its growth to several factors. First, it is ideally located to be the hub of transportation for Alaska. It is one of the few cities in the Territory that

News Letter, January, 1953, Chamber of Commerce, Anchorage, Alaska.

can be reached by air, sea, highway or rail. In 1953 more than 200,000 passengers passed through Anchorage on their way to or from the Far East. The citizens of Anchorage possess 2,000 pilot locenses and own 350 airplanes. The Federal Government plans to spend \$9,000,000 in 1953 for an international airport. In 1952 a \$300,000 private airplane hangar was built. These developments provide a bright future for Anchorage as a transportation center.

21 Life, November 10, 1952, pp. 46-47.

Another factor contributing to Anchorage's growth is the \$240,000,000 spent in the Anchorage area by the Federal Government in strengthening the Defense Establishment. The great influx of seasonal workers and government employees 22 has given Anchorage the air of a boom-town.

22 Ibid., p. 46.

A third factor contributing to Anchorage's success is its proximity to Matanuska Valley - the largest farming area in Alaska. Availability of Alaska-grown food gives Anchorage a feeling of permanency.

The fourth factor is Anchorage's dream of a bright future. The city is centrally located in an area rich in

natural resources, and the potential in hydroelectric power, 25 copper, timber, coal, agriculture, and oil is great.

23 <u>Ibid.</u>, p. 46.

Anchorage is a growing city, and like all fast growing cities where opportunities are abundant and money turn-over is high, it is suffering from inflation. Money is easy to get and, therefore, prices are astronomical. Carhops on good days receive \$50 in tips, plus their \$10.80 in wages. Carpenters are paid \$30 a day. New homes can be bought for \$24,000. Apartments in the fourteen-story McKinley Apartment Building rent for \$170 per month. Haircuts cost \$2.50; shaves \$2.00. Shoe shines are 50 cents for clean shoes;

24 Ibid., pp. 46-47.

The climate of Anchorage is comparable to that of
Minneapolis, Minnesota. The annual rainfall averages 14.52
inches. Temperatures range from near zero to 75 degrees.

25
The growing season varies from 110 to 130 days.

<sup>25
&</sup>lt;u>Information Sheet</u>, Chamber of Commerce, Anchorage, Alaska.

A well developed social and community life exists in Anchorage. There are churches of almost every standard denomination. Its schools compare favorably with those in the United States and new school buildings to care for the rapid increase in population are in the process of construction. Recreation facilities include theaters, swimming, a community chorus, a little theater group, a little symphony, a figure skating and ski club, several hiking clubs, and a photographic club. There are two daily newspapers, -

26 Ibid.

Anchorage has all the appearances of a boom town, but its leaders have great plans for its future. Anchorage is assured of a future because it is being built by young, vigorous pioneers who came, not to exploit a boom town, but to establish permanent homes in a land where it is now possible to work and live the year around.

Palmer (Matanuska Valley)

Palmer, located fifty miles north of Anchorage, is the gateway to the great interior of Alaska and the center of

activity in Matanuska Valley. The town, whose population is estimated at 1,000 with an additional 3,500 in the surrounding area, is favored by one of the best transportation networks of any community in Alaska. It is served by numerous farm-to-market roads, the Glenn Highway, and the Alaska 27 Railroad.

The Matanuska Valley, Chamber of Commerce, Palmer, Alaska.

The average annual precipitation in the Matanuska Valley is 15.27 inches. Temperatures are mild with long winters and short summers. The summer mean temperature is 52.8 degrees and the winter mean is two degrees above zero. The coldest winter temperature on record in the Matanuska Valley is minus 36 degrees fahrenheit, and the warmest summer reading 28 on record is 91 degrees.

28 Ibid.

Agriculture is the big business of Palmer. The Matanuska Valley Farmers' Co-Operating Association (MVFCA) was organized in 1936 to assist the residents in marketing their farm products. In 1950 the MVFCA, employing eighty people, did a gross sales business of nearly \$2,500,000.

29 Ibid.

The Matanuska Valley Farmers' Co-Operating Association maintains a garage, owns a warehouse which handles sales of feed, seed, and hardware, and operates a department store. It also has a creamery which manufactures ice cream, cottage cheese and buttermilk; in addition it handles all the fluid milk for the Anchorage market. The creamery recently installed the first paper bottling machinery in the Territory. The MVFCA has its own hotel, dwelling houses, office 30 building and power plant.

30 Ibid.

Mining constitutes the Matanuska Valley's chief yearround payroll. Several gold mines in the nearby mountains
are in operation and employ a limited number of men all
year around. The coal fields, located 12 miles from the
town, employ about 100 miners.

31 <u>Ibid</u>.

Congress has appropriated funds to build a hydroelectric power project at nearby Eklutna Lake, which, when completed

will greatly benefit the community. Several enterprises in the industrial field await the development of this cheap 32 source of power.

32 Ibid.

There are approximately 100 retail businesses in the town of Palmer. Many of these businesses are small one-man or family operations. The town has five grocery stores, two drug stores, a bank, six restaurants, four hotels, eight garages and service stations, two cleaning establishments, a men's furnishing store, a women's ready-to-wear shop, two department stores, three variety stores, and two hardware 33 stores.

33 Ibid.

Palmer has the usual civic and fraternal organizations typical of all small American cities. Recreational opportunities are unlimited in the Matanuska Valley. The area is rich in wildlife, such as moose, mountain goat, sheep, caribou, bear, small game, and game birds. Fishing is excellent. Cross-country skiing, lake skating, and hiking opportunities are excellent.

34 Ibid.

The Palmer Chamber of Commerce, commenting about prospective settlers, offers the following advice:

No one should come to the Matanuska Valley today, or to any place in Alaska, without definite assurance of a job, and without enough money to pay his passage back to the states again, should the job fail to materialize. The high cost of living is very real in Alaska and a return to the states is very expensive. Life in Alaska is little different from life in a small Pacific coast town. There is very little romance and a great deal of hard work to earning a living in the Matanuska Valley. If you are prepared to accept the bad with the good, and would like the fun of watching a raw, young country grow up, then we think you will like living in Palmer.

35 Ibid.

Fairbanks

Fairbanks, with an estimated population in 1952 of 10,000 and a trading area population of 30,000 is the second largest city in Alaska. Once a rough-and-tumble gold mining camp, Fairbanks is now a modern, bustling city with paved streets, modern buildings and a \$4,500,000 public utility system. Serving as the center of a 227,000

square mile trade area, the city constitutes a strategic link in both transcontinental air routes and in Territorial 56 defense.

Fairbanks, Golden Heart of Alaska, Chamber of Commerce, Fairbanks, Alaska.

While still known primarily for gold mines, the future of Fairbanks is believed to rest upon the steady growth of many industries. Many branches of industry have not been developed simply because of the lack of working capital. The most active fields of industry are mining, agriculture, aviation, fur trapping, army construction, retail trade and 37 allied industries.

37 Ibid.

Enormous government construction, an increase in air travel and tourist trade, a growing market with high per capita purchasing power, development of outlying villages, low taxes and no stringent regulations, are some of the numerous advantages that await the new business establishment in Fairbanks. Authorities estimate that at least \$5,000 is required to launch the average small business in the community. The businessmen who have come to the area

to invest their capital have established 11 automobile agencies and repair shops, 19 general contracting firms, 16 grocery stores and meat markets, 5 dry cleaners, 19 restaurants, 5 taxicab companies, 14 airlines, 7 beauty shops, 25 bars and taverns, 2 newspapers, 2 radio stations, 38 14 hotels, 5 jewelers, and 8 bakery shops.

38 Ibid.

Employment in Fairbanks is highly seasonal, reaching a peak in spring and early summer, and wages follow closely those of the Seattle, Washington region. Civil Service salaries carry a 25 percent differential over like ratings in the United States to cover the higher costs of living.

A typical listing of wages is: Accountants, \$400 to \$600 per month; heavy duty mechanics, \$2.90 per hour; automobile mechanics, \$2.63 per hour; carpenters, \$2.84 per hour; plumbers, \$3.50 per hour; painters, \$2.85 per hour; and 39 electricians, \$5.15 per hour.

39 Ibid.

The optimism of big business toward the future growth of Fairbanks is reflected in the largest construction boom the city has ever known. Excluding residential building

almost \$11,000,000 worth of construction had either been completed or was under way by the end of 1950. Fairview Manor Apartments, largest of the projects, will cost an estimated \$3,800,000 and will comprise four buildings each housing 68 units. Second largest project is the Northward Building located in the heart of the downtown business district. The ground floor of the \$3,000,000 steel and concrete building will be used to house commercial business establishments and the other seven stories will be apartments. When completed the Northward Building will be the largest single building in Alaska.

40 Ibid.

Fairbank's future as an inter-continental air center is excellent. With New York 1500 miles and San Francisco 431 miles closer to Tokyo via Alaska than by other routes, the inter-continental airlines are making Fairbanks a base of operations. Pairbanks is also ideally located for transpolar flights which have been proved feasible. The Federal Government, in recognizing the importance of Fairbanks as a center of aviation, is now completing a modern, multi-million dollar airport near the city. As a transportation center, Fairbanks, in addition to being a great air center, is also the northern terminus of the Alaska Highway and the Alaska

Railroad.

41 Ibid.

The climate of interior Alaska is similar to that of northern Minnesota. The average winter minimum temperature is 11 degrees below zero, and the average summer maximum is 60 degrees. Rainfall averages 8.5 to 16 inches. There is virtually no wind in the Fairbanks area. Except for midwinter, ordinary clothing is sufficient.

42 Ibid.

The schools and churches in Fairbanks are similar in number and classification to those of any city of like size in the United States. There are 12 churches, representing all the major denominations. The city has a modern high school and several elementary schools. The school enrollment is approximately 1,450 students, and the school district 43 employs 66 teachers.

43 Ibid.

Two newspapers are published in Fairbanks; Jessen's

Weekly and the <u>Daily-News Miner</u>. The city's two radio stations, KFAR and KFRB, are modern, well-equipped stations which make a special effort to slant many of their programs to fit the needs of the isolated communities far beyond the 44 city.

1bid.

Kodiak

Kodiak, Alaska's Naval port, is located on sheltered
St. Paul Harbor near the northeast corner of Kodiak Island.
Its year around ice-free harbor, plus is comparatively mild
climate, has caused the United States Navy to choose it as
its base of operations in Alaska. In 1952 Kodiak's civilian
population was estimated at 1,500, with an additional 3,500
45
Navy personnel stationed at the nearby Naval Base.

Matanuska Valley Record, Volume 11, Number 9, December, 1952, p. 1.

Kodiak, jokingly referred to as "The Alaska Banana Belt", is considerably influenced by the Japanese Current and by

its island location. Summers are mild with the temperature ranging from 60 to 80 degrees. In winter the temperature usually ranges from 30 to 40 degrees, and very seldom drops 46 below zero. The annual precipitation averages 60 inches.

46 Ibid.

Rodiak is the oldest town in Alaska. In 1791 Alexander Baranov, a great Russian trader and governor, founded the town at its present site. During the following decade it was the trading center and administrative capital of the Russian Empire in the North Pacific. Baranov shifted his headquarters to Sitka shortly after 1800, and for the next century Kodiak was a picture que but unimportant fishing village. With the advent of World War II work was started on a naval base on nearby Women's Bay. Overnight the village became a boom town, jammed first by thousands of construction workers and then by military and navy

When the war ended it appeared that Kodiak might again be relegated to the role of an unimportant fishing village. Progressive citizens, however, visioned the commercial

⁴⁷ Kodiak, Chamber of Commerce, Kodiak, Alaska.

possibilities of the town. New industries were encouraged, including a large cold storage plant which is expected to provide a stimulus to the handling of fishing products in the area. Salmon fishing has long been the leading industry, but a large proportion of the world's supply of herring and halibut are also caught by Kodiak's fishermen. Many former servicemen returned to make their homes in Kodiak and some went into business. Since 1946 the city has had a steady growth with every evidence that its expansion will continue

48 Ibid.

Modiak Island has three beef cattle ranches, three dairy farms, and several chicken and truck farms. The future of agriculture, particularly of cattle, is very promising. The mild climate and the abundant grasslands could make this area the future cattle center of the North Facific.

49 Tb1d.

There is unlimited opportunity in Kodiak for the development of the tourist industry. The people have hardly begun to develop possibilities for the entertainment of tourist visitors. Unparalleled scenic attractions, hunting,

fishing, hiking, boating, and swimming are all available.

50 Ibid.

The Kodiak school system consists of 325 students and 14 instructors. The school building, now old and dilapidated, was originally built to accommodate 200 students. A new independent school district has been organized, however, and plans are under way for the construction of a new 51 educational plant.

51 Ibid.

In addition to the school faculty, the professions are represented by one doctor, one dentist, two attorneys, six religious leaders, and one recreational director. Kodiak's business establishments total 72, and include two large merchandising firms, two hotels, one bank, one movie, two bus lines, two accounting services, three service stations, 52 and one bowling alley.

52 Thid.

The cost of living in Kodiak is higher than in the

United States, largely because of the expense of transporting practically all merchandise by air or water. Rents are also higher and a serious housing shortage exists. There is every prospect that a large new housing project will be completed in the near future to alleviate the housing 53 shortage.

53 Ibid.

Social Problems

the critical housing shortage, public works, and public education are matters of extreme importance to Alaskan communities. The final phase of this chapter, therefore, briefly outlines the current status of these social problems.

Housing

A critical housing shortage has existed in Alaska since World War II, and has caused many prospective settlers to leave Alaska and return to the United States. Congress, realizing that a solution to the housing problem was necessary if Alaska was to grow, created the Alaska Housing Authority. The Authority's purpose is to subsidize the

building of housing units and to aid private contractors in 54 securing critical building materials.

Annual Report of the Governor of Alaska, 1951, p. 49.

During the fiscal year 1951 the Alaska Housing Authority extended financial assistance in excess of \$4,500,000 to nine corporations for the construction of 78 single-family dwellings, 16 duplex units, and 273 apartment units. These units are seriously needed to meet the existing housing 55 shortage due to the sudden increase in population.

55 Ibid., p. 49.

In 1952 the Authority planned to extend financing in excess of \$6,000,000 for construction of 309 single-family homes, 20 duplex units, and 108 apartment units. Of the single-family houses 150 are to be constructed in Fairbanks, 137 are scheduled for Anchorage, and 10 will be constructed at Douglas. An apartment of 108 units is planned at 56 whittier.

^{56 &}lt;u>Ibid.</u>, p. 49.

The Alaska Housing Authority manages and operates the veterans' project of 96 family units in Ancherage, the Cheechako Hotel of 72 dormitory units in Fairbanks, and 317 leased Lanham War Housing units located in Juneau, 57 Fairbanks, and Anchorage.

57 <u>Ibid.</u>, p. 50

Alaska Public Works Act

Public Law 264, the Alaska Public Works Act, authorizes a program of useful public works for the development of the Territory of Alaska.

... The purpose of this act is to foster the settlement and increase the permanent residents of Alaska, stimulate trade and industry, encourage internal commerce and private investment, develop Alaskan resources, and provide facilities for community life, through a program of useful public works. 58

Public Law 264 authorizes the General Service Administration to carry out a five year, \$70,000,000 Public Works Program. Sewers, water systems, schools, and hospitals will

Public Law 264, 81st Congress, Chapter 504, 1st Session, August 24, 1949.

The Pederal Government will build the facilities and sell them to individual communities at prices ranging from 25 percent to 75 percent of actual cost. This arrangement was made because it was felt by the sponsors of the bill, Delegate Bartlett and Governor Gruening, that the costs of administration alone would be prohibitive to most small 59 Alaskan communities.

John C. Reed, "Alaska and the Geological Survey," Scientific Monthly, October, 1949, p. 248.

Public Education

Alaska supports 94 public schools, a junior college, and a university with a total student body of 13,908 and an aggregate teaching staff of 653 teachers. The Territorial

public school system consists of 68 rural schools and 26 city schools. A city school is defined as one within an incorporated town, independent school district, or an incorporated school district. In addition to the public

The Statesman's Yearbook, 1951, p. 752.

61 Mid-Century Alaska, p. 51.

schools, the United States Bureau of Indian Affairs maintains 62 schools in 100 native villages.

Annual Report of the Governor of Alaska, 1951, p. 26.

The two institutions of higher learning in the Territory are the Sheldon Junior College at Sitka, and the University of Alaska, located at College, near Fairbanks. More than 5,000 Alaskans have attended special five week courses in mining at the University of Alaska. Its archeologists have collected 75,000 specimens of Eskimo handiwork and have contributed much to our knowledge of prehistoric monsters. The University's scientists have made important research for the government pertaining to magnetism and the upper 63 atmosphere. Its facilities and personnel have been active

in Arctic research, particularly in the field of agriculture.

The University has become a training ground for mining engineers and a clearinghouse of information for farmers 64 and prospectors. The University of Alaska, in cooperation

⁶³ Time, December 16, 1946, p. 45.

64 <u>Time</u>, July 18, 1949, p. 41.

with the Department of Agriculture, operates experiment 65 stations at Fairbanks, Matanuska, and Petersburg.

Alaska, 1951, W. S. Department of the Interior, Office of the Territories, p. 11.

Tuition at the University of Alaska is free for residents of Alaska. Students from the United States are entitled to admission to the University, but are required to pay a reasonable tuition.

66 Ibid., p. 11.

In 1949 salaries for Alaskan school teachers were increased. The new salary range is from \$3,300 to \$4,700 in southeastern Alaska; \$2,540 to \$4,940 in south central and southwestern Alaska; and \$3,700 to \$5,100 in central and northern portions of Alaska.

⁶⁷ <u>Ibid.</u>, p. 11.

67 Ibid., p. 11.

During 1951 the Territorial Department of Education carried into effect an over-all supervisory program with the following objectives:

- (1) To maintain throughout the Territory the minimum standards as set up in the course of study for the elementary grades and high school subjects;
- (2) To give help through a supervisory program in developing a program to meet the standards as set up in a course of study;
- (3) To encourage reasonable uniformity among the various schools in the Territory so that pupils do not suffer loss of grade in the elementary school, or credits in high school, on transfer from one school to another;
 - (4) To extend and improve the program of studies;
- (5) To maintain a high quality of teaching through enforcement of present high standards of certification, an attractive salary scale, an adequate supervisory program, and a fair retirement allowance.68

Inadequate schoolroom facilities is the main problem confronting the Territorial Department of Education. This problem will be greatly lessened by the present program being initiated by the Alaska Public Works Act. Plans have been approved and construction has begun on new schools in

Annual Report of the Governor of Alaska, 1951, p. 26.

Anchorage, Fairbanks, Juneau, Ketchikan, Kodiak, Petersburg, 69 Chugiak, Dillingham, Homer, Naknek and Ninilchik.

69 <u>Ibid.</u>, p. 26.

CHAPTER VIII

SUMMARY AND CONCLUSIONS

In the previous chapters the writer has outlined certain important phases of Alaska's economy, setting forth both its assets and liabilities. The purpose of this chapter is to summarize and evaluate the economy of the region.

Alaska's geography is a definite handicap to the development of the area's economy. The Territory is expansive and the terrain is an obstacle to free and easy communication. Modern road-building techniques and equipment and the advanced forms of transportation have somewhat overcome this deterrent to settlement. The rivers in most instances flow toward Western Alaska and the Bering Sea instead of toward the more favorable south. In many sections of Alaska the extremely cold climate causes the people of the region to expend most of their time and energy fighting the elements, rather than developing the region's resources.

The Territory has an impressive list of natural resources, many of which are of such poor grade that exploitation is not profitable, however, the basic resources necessary for a modern industrial economy do exist and these make promising the future of Alaska.

During the past century the United States has proceeded

as though its resources are without limit. The United States now imports raw materials that were once in plentiful supply from domestic sources. The future security and economic growth of the United States is seriously threatened by its lack of domestic resources to meet the hunger of its gigantic industrial machine. Every other nation also has a program for industrial expansion. The U.S. cannot depend on other countries to supply it with raw materials to meet its industrial capacity. When the Mesabi Range in Minnesota is worked out; when the coal fields of Pennsylvania are no longer productive; when the oil wells of the Mid-Continent Field are dry-holes; then the United States will have to turn elsewhere. Perhaps in the future Alaska's resources will provide us with the necessary raw materials for our industrial plants. In spite of the cost of transportation, oil derricks and collieries may become a common sight on the Alaskan landscape.

The agricultural economy of Alaska is a critical problem that needs to be solved in the near future. Research and experimentation is necessary to solve the many problems confronting farmers of Alaska. Data pertaining to climate, soils, seeds, fertilization, clearing of land, insects, permafrost, and marketing is needed. Alaska's agriculture is too expensive and at present can compete only with United States produce that is burdened by expensive transportation charges.

An industrialized Alaska is a dream of the future.

Meager inroads have been made toward the industrialization of the Territory. It has been the victim of continual exploitation by outside interests, a situation favored by past government policy. Capital must be invested in the Territory, and the profits from these investments must be reinvested and expended within the Territory. The area must develop manufacturing to enable it to balance its economy and lower its high cost-of-living.

Tremendous advances have been made in the transportation system of the region during the past decade, and from all indications this progress will continue. Alaska's strategic location guarantees the area a promising future as an air center in an air age.

The cities of Alaska are small and few in number. They compare favorably in most respects to towns of similar size in the United States. It must be remembered, however, that towns of like size in the United States are usually satelites or suburbs of larger neighboring cities and are dependent on the larger cities for much of their commerce and industry. The Alaskan towns serve vast areas or hinterlands. Fairbanks is the trade center of an area the size of Texas. Anchorage serves a large area, and from all indications its growth and importance in the future will be tremendous. Its position as the metropolis of Alaska seems most of all assured by the fact that it is the only city on the Pacific Coast of Alaska

that has both the terrain and the climate suitable for the extensive air traffic that has become so vastly important to the Alaskan economy. Important rail and highway routes to the interior also pass through Anchorage. It seems inevitable that any economic organism which may grow up as a basis for full and permanent American settlement in Alaska will have to center on Cook Inlet and Anchorage.

Alaska Versus Sweden

Alaska is very often compared to Sweden because of the similarity of climate, latitude and physical resources. However there are significant differences. More than 100,000,000 people live within a 700 mile radius of Stockholm, while less than 1,000,000 people live within 700 miles of Ketchikan. The people located near Stockholm live in highly industrialized countries which lack particular raw materials that are found in Sweden; the people that live near Alaska are in Vancouver and the Seattle region, the resources of which are of the same type as those found in Alaska. There are also several factors in the geography of Sweden and

Will F. Thompson, Jr., "Observations in Kamishak, Alaska," The Geographical Review, Vol. 39, 1949, p. 450.

Alaska that are different. Sweden's interior valley is in southern Sweden and opens toward the markets, but Alaska's interior valley is in northern Alaska and points westward away from the markets. Sweden's mountains act as a protection from bad weather, but Alaska's mountains act as a barrier to transportation.

Statehood

Ever since Alaska became a Territory, the question of statehood for the area has been a continual point of contention in the United States Congress. World War II and Alaska's prominent defense position, have again revived the hopes of the proponents of statehood. On October 8, 1946 the voters of Alaska, on a referendum voted by 9,650 to 6,822 in favor of statehood. On May 21, 1948 President

Truman sent a message to Congress in which he urged the

Wilford J. Eiteman and Alice B. Smuts, "Alaska, Land of Opportunity - Limited," <u>Economic Geography</u>, Vol. 27, 1951, pp. 33-42.

The Statesman's Yearbook, 1951, p. 751.

prompt enactment of necessary legislation to admit Alaska to statehood. In his message he declared:

...Some 94,000 people now reside in the Territory, and the population is growing. Alaska residents deeply desire statehood. A large proportion of them are from the States and share our long tradition of self-government. Alaska has a larger population than did many of our present States when they were admitted to the Union. It has had Territorial government for more than thirty-five years, surely a sufficient period of preparation for its admission as a state.

Quoted in <u>Colliers Encyclopedia</u>, p. 317.

A bill to admit Alaska into the Union as the forty-ninth state passed the House of Representatives on March 3, 1950.

The Senate shelved the bill on February 27, 1952 when a motion to recommit it to committee was approved by a vote of 5

45 to 44. In July, 1952 the Annual Governors Conference

5 Facts-on-File, 1952, p. 63.

adopted a resolution advocating early statehood for Alaska.

6 Ibid., p. 208.

Also in July, 1952 the Republican Party in its Platform

promised "immediate statehood for Hawaii....statehood for 7
Alaska....eventual statehood for Puerto Rico."

7 <u>Ibid.</u>, p. 217.

Opposition to statehood for Alaska comes primarily from the politicians of the Southern States who fear that state-hood would give the Senate two more pro-civil rights members. Some Senators oppose the issue on the basis that Alaska is not economically ready for statehood.

8 Ibid., p. 63.

The writer does not believe that statehood is the panacea to the ills of Alaska and is inclined to agree with those who think the Territory is not economically ready to assume the burden of a State Government. During the past fifty years the entire economy and standard of living in the United States has changed considerably. The air and atomic age has changed the past aspect of distance and vulnerability. Before statehood can be justified, Alaska will have to become more self-sufficient and less reliant on the agricultural and manufacturing capacity of the United States.

The Strategic Position of Alaska

Alaska holds an extremely strategic location in the defense of Continental United States. In 1935 General Billy Mitchell declared before a Congressional Committee that

...Alaska is the most central place in the world for aircraft. And that is true either of Europe, Asia, or North America, for in the future I think whoever holds Alaska will hold the world, and I think it is the most important strategic place in the world.

Ninety percent of the people of the world live north of the Equator. Many prominent cities are nearer the Arctic Circle than the Equator - New York, Philadelphia, Washington, London, Paris, Berlin, Moscow, Tokyo, and Peiping. The

land mass of the Northern Hemisphere is essentially grouped around the North Pole and a strong land-based air force and army near the North Pole would be suitably located to strike with equal ease any potential enemy in any part of Europe or Asia. General H. H. Arnold stated in an address on

Quoted in G. Etzel Pearcy and R. H. Fifield, World Political Geography, p. 514.

Pearcy and Fifield, World Political Geography, p. 514.

December 6, 1945 that the strategic center of a future war ll will be the area of the North Pole.

11 Ibid., p. 514.

Because of the strategic location of Alaska to defense, the United States Air Force has established a "Heartland Concept", based upon the Anchorage-Fairbanks Area. In this area are located the three principal Alaskan air strips - Elmendorff Air Force Base at Anchorage; Ladd Air Force Base near Fairbanks; and Eielson Air Force Base, 26 miles from Fairbanks. Each base is responsible for its own defense, and each base is more or less self-sufficient.

Security is thus one of the dominant interests in Alaska. The efforts to achieve security have already brought great changes to Alaska, but greater changes are necessary. To make this area strategically strong it must be made stronger economically, more self-sufficient, and more readily accessible. A degree of sensible exploitation of resources, occupancy of the land, expansion of industry, and improvement of transportation are all necessary to

Hanson W. Baldwin, "Alaska: Rampart We Must Watch,"
The New York Times Magazine, April 23, 1950.

enable Alaska to become a strong bulwark and defense outpost of the United States.

Ernest Gruening, former governor of Alaska, commenting upon the importance of Alaska to the defense of the United States posed the following questions:

... Shall Alaska remain undefended and undeveloped or at best slightly defended and little developed, and through its weakness imperil our national safety? Or shall Alaska become the great northern and western bulwark of defense for our Western Hemisphere and the outpost and fortress of the American May of Life?13

Ernest Gruening, "Alaska, Another Pearl Harbor,"

<u>U. S. News and World Report</u>, November 18, 1949, p. 32.

On the basis of the important advances made since 1940, the writer believes that the United States Government is cognizant of Alaska's importance; however, a well-organized, long-range program for future development is badly needed. Alaskans are entirely dependent upon the Federal Government for guidance. In many instances this guidance has been difficult and contradictory. Congress, because of its great distance from Alaska, lacks proper knowledge and understanding of the area's economic and social problems. Alaska, although a Territory, should be given more control of its internal affairs.

BIBLIOGRAPHY

BOOKS

- Bateman, Alan M., Economic Mineral Deposits, John Wiley and Sons, New York, 1952.
- Brown, Nelson C., Forestry in the United States, John Wiley and Sons, New York, 1935.
- Fair, Marvin L. and Ernest W. Williams, Economics of Transportation, Harper and Brothers Publishers, New York, 1950.
- Hilscher, Herbert H., Alaska Now, Little, Brown and Co., Boston, 1950.
- Jacobin, Louis, <u>Tourists and Sportsmen's Guide to Alaska</u>, Alaska Tourist Guide Co., <u>Juneau</u>, Alaska, 1947.
- Kizer, Benjamin H., The U.S. Canadian Northwest, Princeton University Press, Princeton, N. J., 1944.
- Munro, William B., The Government of the United States, The Macmillan Company, New York, 1946.
- Nichols, Jeannette P., Alaska, The Arthur H. Clark Company, Cleveland, 1924.
- Pearcy, C. Etzel and Russell H. Fifield, World Political Geography, Thomas Y. Crowell Company, New York, 1951.
- Smith, J. Russell, North America, Henry Holt and Company, New York, 1940.
- Smith, J. Russell, and M. Ogden Phillips, <u>Industrial and Commercial Geography</u>, Henry Holt and Company, New York, 1950.
- Steinberg, S. H., Editor, The Statesman's Yearbook, 1951, The Macmillan Company, New York, 1951.

MAGAZINE ARTICLES

- Allen, Edward W., "Salmon on the Peace Table," Rotarian, 42:25-27, February, 1943.
- Baldwin, Hanson W., "Alaska, Rampart We Must Watch,"

 New York Times Magazine, April 23, 1950.
- Critchfield, Howard J., "Seward Peninsula, Threshold of the Hemisphere," Economic Geography, 25:275-84, 1949.
- Duffus, R. L., "Alaska Begins to Hit Her Stride," New York Times Magazine, November 2, 1952.
- Eiteman, Wilford J., "Economic Basis of Prices in Alaska,"

 The Economic Review, 34:351-53, 1944.
- Eiteman, Vilford J., and Alice Boardman Smuts, "Alaska,
 Land of Opportunity Limited," Economic Geography,
 27:33-42, 1951.
- Gruening, Ernest H., "Alaska, Another Pearl Harbor?" U. S. News and World Report, 27:32-36, November 18, 1949.
- Hulley, Clarence C., "The Matanuska Colony," Geographical Review, 41:490-92, 1950.
- Laughrey, Al, "Refugees on a Rock," Rotarian, 62:22-24, March, 1943.
- Lloyd, Trevor, "Activity in the Northwest," The Journal of Geography, 42:22-26, May, 1943.
- Reed, J. C., "Alaska and the Geological Survey," Scientific Monthly, 69:242-48, October, 1949.
- Miller, E. W., "Agricultural Developments in Interior Alaska," Scientific Monthly, 73:245-54, October, 1951.
- Murie, O. J., "My Friends the Aleuts," Rotarian, 62:22-24, February, 1943.
- Thompson, Will F., Jr., "Observations in Kamishak, Alaska," The Geographical Review, 39:450, 1949.

MAGAZINES

Business Week: June 17, 1950; Sept. 5, 1952; Jan. 10, 1953.

Life: November 10, 1952.

Newsweek: Sept. 10, 1951; March 10, 1952.

Science Digest: October, 1952.

Science News Letter: May 19, 1945; Oct. 12, 1949; May 3, 1952; Aug. 19, 1952.

Time: Dec. 16, 1946; July 18, 1949; March 10, 1952; April 14, 1952.

U. S. News and World Report: Sept. 5, 1952.

GOVERNMENT PUBLICATIONS

- Cobb, E. H., Coal Investigations in the Homer District, Kenai Coal Field, Alaska, Geological Survey, U. S. Government Printing Office, Washington, D. C., 1952.
- Department of Agriculture, Report on Exploratory Investigations of Agricultural Problems of Alaska, Misc.
 Publication No. 700, U. S. Government Printing Office, Washington, D. C., 1949.
- Department of Commerce, United States Census of Agriculture, 1950, Volume I, Part 34, Chapter 1, Territories and Possessions, Washington, D. C., 1951.
- Department of Commerce, United States Census of Business, Retail, Wholesale, and Service Trades, Bulletin No. 1-RWS, U. S. Government Printing Office, Washington, D. C., 1949.
- Department of the Interior, Annual Report of the Governor of Alaska, 1951, U. S. Government Printing Office, Washington, D. C., 1951.
- Department of the Interior, Mid-Century Alaska, U. S. Government Printing Office, Washington, D. C., 1951.

- Heintzleman, B. Frank, "Forests of Alaska," Yearbook of Agriculture, 1949, U. S. Government Prining Office, Vashington, D. C., 1950.
- Moffitt, Fred H., and Robert E. Fellows, Copper Deposits of the Prince William Sound District, Alaska, Geological Survey Bulletin 963-B, U. S. Government Printing Office, Washington, D. C., 1950.
- National Resources Committee, 75th Congress, 3rd Session, House Document No. 485, Alaska: Its Resources and Development, U. S. Government Printing Office, Washington, D. C., 1950.
- Ransome, Alfred L., "The Mineral Industry of Alaska,"

 Minerals Yearbook, 1949, Part III, State Reviews,

 U. S. Government Printing Office, Washington, D. C.,

 1951.
- Stone, Kirk H., Alaskan Group Settlement: The Matanuska Colony, U. S. Department of Interior, Bureau of Land Management, U. S. Government Printing Office, Washington, D. C.
- Twenhofel, W. S., and Others, Some Mineral Investigations
 in Southeastern Alaska, Geological Survey Bulletin
 No. 963-A, U. S. Government Printing Office, Washington,
 D. C., 1949.
- United States Budget, 1953, Bureau of the Budget, U. S. Government Printing Office, Washington, D. C., 1952.

ENCYCLOPEDIAS

- Britannica Book of the Year 1951, Encyclopaedia Britannica, Inc., Chicago, Illinois, 1952.
- Collier's Encyclopedia, Volume IX, Collier & Son Corp., New York, 1950.
- The Encyclopedia Americana, Volume I, The Encyclopedia Americana Corp., New York, 1938.

NEWS PAPERS

Houston Post, Oct. 6, 1946.

Matanuska Valley Record, December, 1952.

The Houston Chronicle, June 9, 1948; March 4, 1953.

Wall Street Journal (Southwest Edition), Feb. 13, 1953.

CHAMBERS OF COMMERCE AS SOURCES OF INFORMATION

Chamber of Commerce, Anchorage, Alaska.

Chamber of Commerce, Fairbanks, Alaska.

Chamber of Commerce, Homer, Alaska.

Chamber of Commerce, Juneau, Alaska.

Chamber of Commerce, Ketchikan, Alaska.

Chamber of Commerce, Kodiak, Alaska.

Chamber of Commerce, Matanuska Valley (Palmer), Alaska.

MISCELLANEOUS SOURCES

Alaska Salmon Institute, Ketchikan, Alaska.

Facts-On-File, 1952, Vol. 12, Facts-On-File, Inc., New York, 1952.

Standard Listed Stock Reports, Oct. 16, 1952, Vol. 19, No. 200, Standard and Poor's Corporation, New York, 1952.