III. ALASKA'S RAIL SYSTEM

The vastness of Alaska, coupled with its abundant natural resources, sparse settlement, severe climatic extremes, and large native and State and federal government land holdings, place unusual and challenging requirements upon its transportation system. Seventy percent of the State's population of approximately 500,000 people are concentrated within an area known as the "Railbelt," which extends from Seward on the Kenai Peninsula north to Anchorage and then to Fairbanks in the interior. The general economy of Alaska reflects its large federal, state, and native land holdings, governmental employment, military importance, natural resources, construction, and tourism. Little manufacturing occurs within Alaska, and most industrial goods and consumer products must be imported from other states and foreign places. Agriculture is still in its infancy and the State is attempting to develop an agriculture industry.

There are two railroads in Alaska: the Alaska Railroad and the White Pass and Yukon Railway, both of which are depicted on Figure 3-1. Neither of these railroads interconnect with each other or with railroads in the "lower 48" except via rail barge service to/from Seattle and Prince Rupert, B.C. Until recently, the Alaska Railroad was owned and operated by the Federal Railroad Administration, U.S. Department of Transportation. It is now owned and operated by the Alaska Railroad Corporation, a public corporation of the State of Alaska. The Alaska Railroad operates freight and passenger services on 480.7 miles of mainline track extending from the deep-water ports of Seward and Whittier through Anchorage to Fairbanks. Additional active branch lines serve the Eielson Air Force Base, Anchorage and Fairbanks International Airports, and Palmer. An inactive branchline extends to the Suntrana coal fields.

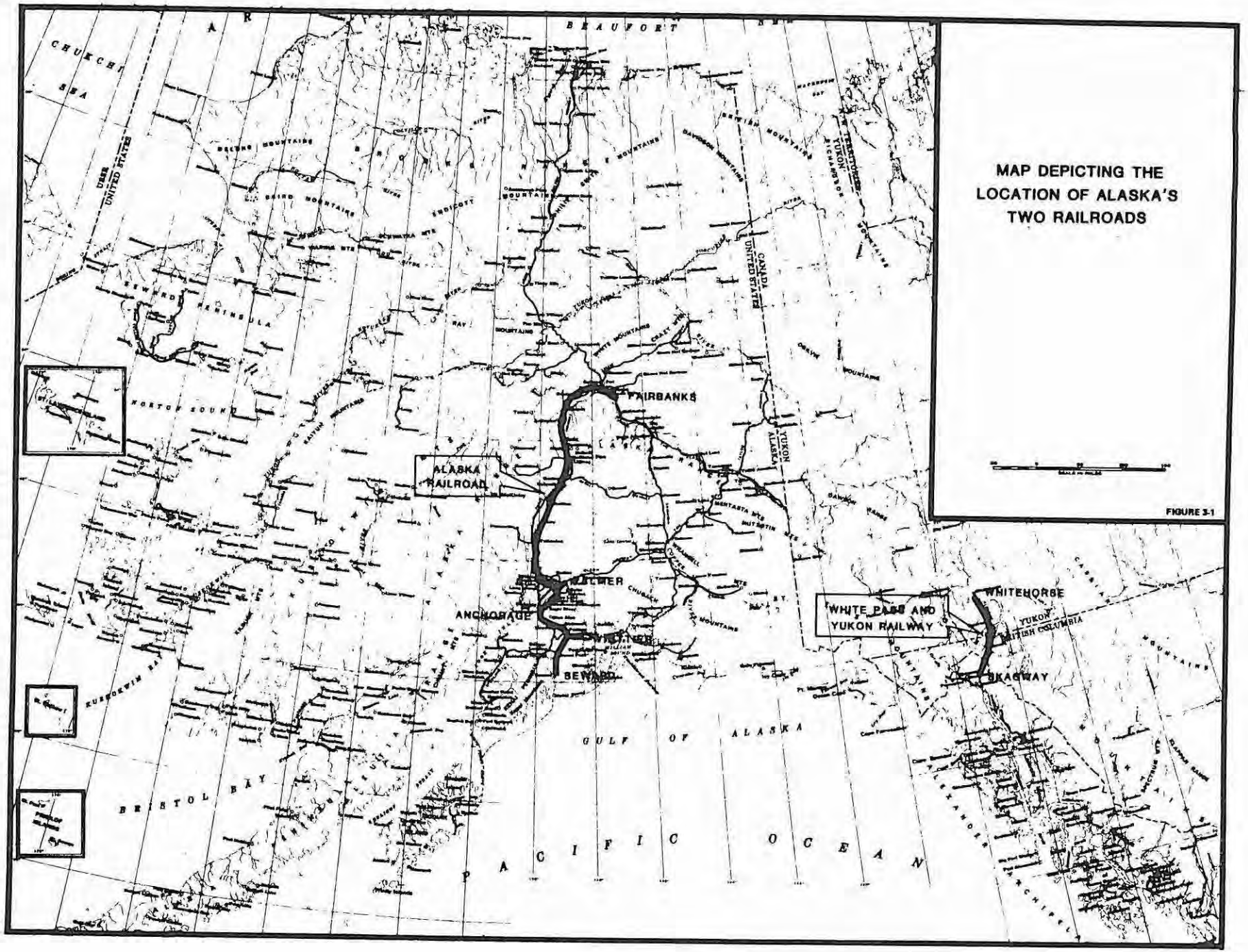
The second railroad is the White Pass and Yukon Railway, which until recently provided freight and passenger rail service from Skagway through British Columbia to Whitehorse in the Yukon Territory of Canada. This narrow gauge railroad was constructed during the "gold rush" period around the turn of the century. It is owned by Federal Industries Limited of Winnepeg, which halted service over the line in the fall of 1983 as a result of declining Canadian mineral concentrate traffic and accumulating deficits. Its future is uncertain.

The purpose of this Report Section is to describe the rail system in Alaska as it existed in mid-1985. As such, it updates and extends the description originally included in the Alaska Statewide Rail Systems Study report prepared in December 1980 for the Department of Transportation and Public Facilities.(1) It begins with a chronology of legislation and events surrounding the recent change in ownership of the Alaska Railroad and then concludes with updated profiles for the two railroads.

A. State Acquisition of the Alaska Railroad

1. Introduction

The Alaska Railroad (ARR) was authorized by an Act of Congress in 1914, and completed in 1923. With minor changes, the system has remained much the same over the intervening time period, although its role and source of traffic has changed significantly. Originally constructed to serve resource development activities in the interior, it moved defense-related materials during World War II. Thirty years later, it transported considerable portions of the materials needed to build the Trans Alaska Pipeline and to develop the Prudhoe Bay oil fields. More recently, it has supported the continuing development of the Anchorage area through sand and gravel shipments from the north,


MAP DEPICTING THE
LOCATION OF ALASKA'S
TWO RAILROADS
FIGURE 3-1
ALASKA RAILROAD
WHITE PASS AND YUKON RAILWAY
FAIRBANKS
PALMER
ANCHORAGE
WHITTIER
SEWARD
WHITEHORSE
SKAGWAY
BEAUFORT SEA
CHUKCHI SEA
GULF OF ALASKA
PACIFIC OCEAN
BRISTOL BAY
NORTON SOUND
SEWARD PENINSULA
UNITED STATES
CANADA
YUKON
ALASKA
BRITISH COLUMBIA

general freight shipments from ports in the south and, most recently, the carriage of export coal to the Port at Seward.

2. Transfer of the Alaska Railroad to the State

The enactment of the federal Alaska Railroad Transfer Act (ARTA) was the culmination of years of discussions between the Federal and State governments regarding the possible transfer of the Alaska Railroad to the State. Built originally to serve the transportation and development needs of the Territory of Alaska, Congress found that the Railroad was providing freight and passenger services that primarily benefited the residents and businesses of Alaska, and that continued Federal control and financial support was no longer necessary to accomplish these purposes. Congress also found the transfer of the Alaska Railroad to be consistent with the Federal interest in shifting to the states those activities more appropriate for state ownership and operation. Because of the critical role played by the railroad in the State's transportation system and economy, the State of Alaska had a direct interest in preserving the Alaska Railroad as an operating entity. These efforts culminated in Congressional passage of a bill in December 1982 authorizing the transfer of the ARR to the State of Alaska.

3. The Alaska Railroad Transfer Act (P.L. 97-468)

The Alaska Railroad Transfer Act of 1982 was signed into law by President Reagan on January 14, 1983. It authorized the transfer of the ARR to the State subject to several conditions, including the requirement to compensate the federal government for the fair market value of the rail properties involved. Other conditions included state commitments to continue railroad operations, provide employee protection for at least two years, and protect retirement benefits. The Act established an orderly

process for State consideration of the transfer offer. Key provisions included:

* Within six months from the date of enactment, an "Alaska Railroad Transfer Report" had to be prepared by the Governor and the U.S. Secretary of Transportation and be submitted to the Alaska State Legislature and the Congress. The purpose of this document was to provide a detailed description of the rail properties, assets, and liabilities of the railroad.(2)

* The Act required that the United States Railway Association (USRA) determine the fair market value of the Alaska Railroad within nine months of the date of enactment of ARTA. Subsequently, USRA's Board of Directors established the value of the Railroad to be $22.3 million.(3)

* The Act gave the State up to 12 months after delivery of the transfer report to decide whether to accept the offer and obtain certification by the Secretary of Transportation that it had agreed to all specified conditions. Actual transfer was to take place "as soon as practical" after this certification.

* In the event that the State declined acceptance of the railroad, or the State was unable to satisfy the transfer conditions within the specified time period, the Act then directed the U.S. Secretary of Transportation to dispose of the Railroad by other means. The Secretary was mandated to give preference to a buyer or transferee who would continue to operate rail services.

4. Initial Actions Taken by the State

Early in the process, the Governor established an Alaska Railroad Transfer Team to (1) represent the State in working with the U.S. Department of Transportation, USRA and others, and (2) advise whether the Railroad was important enough to the State to warrant acquisition, and if so, the best means for acquiring and managing the railroad. The Transfer Team presented its collective analysis and recommendations in a report which (1) examined ARTA's terms and conditions, (2) evaluated USRA's Valuation Report, (3) determined the liabilities and financial

exposure involved with the potential acquisition, and (4) benefits of the payment options offered.(4) The Transfer Team was instrumental in preparing the legislation required at the state level to take over the AAR (i.e., Alaska Railroad Acquisition Act, Alaska Railroad Corporation Act).(5)

On July 15, 1983, Governor Sheffield and U.S. Transportation Secretary Dole signed the Alaska Railroad Transfer Report prepared jointly by the U.S. Department of Transportation and the Transfer Team.(2) However, the report did not constitute an agreement between the two agencies to complete the transfer. On September 23, 1983, the United States Railway Association released its inventory and condition assessment of fixed facilities and equipment and analysis of operating expenses and capital requirements for the Railroad's continuing operation.(3)

On December 15, 1983, the Alaska Railroad Transfer Team completed and forwarded its comprehensive analysis of the major issues surrounding the acquisition of the Alaska Railroad to Governor Sheffield.(4) The resulting report was prepared in consultation with the State Departments of Transportation and Public Facilities, Administration, Law, and Natural Resources, and the Office of Management and Budget. The Transfer Team also used the services of private engineers, appraisers, and accountants, where appropriate, to review specific aspects of the ARR's assets, operations and finances.

In September 1983, the Department of Transportation and Public Facilities commissioned Sverdrup & Parcel and Associates, Inc. to assess the physical condition of the ARR. This assessment included the track structure, bridges, tunnels, docks, signals, communications, rolling stock, and motive power. Sverdrup delivered its condition assessment in February, 1984.(6)

The Transfer Team then turned its attention to the question of acquisition law, then an appropriate management entity to operate the ARR after purchase. This culminated in the preparation and passage by the Alaska Legislature of an Act entitled: "An Act Establishing the Alaska Railroad Corporation to Manage and Operate the Alaska Railroad" [the short title was the Alaska Railroad Corporation Act].(5) Governor Sheffield signed the legislation on July 5, 1984. On July 12, 1984, Governor Sheffield and U.S. Transportation Secretary Dole exchanged documents necessary to obtain certification, the last federal milestone prior to transfer. In so doing, the state agreed to:

* Operate the railroad as a rail carrier in intrastate and interstate commerce;
* Assume all rights, liabilities, and obligations of the Alaska Railroad on the date of transfer, with some limited exceptions regarding claims and causes of action;
* Protect employment and retirement benefits and to establish acceptable arrangements for continued employment during a two-year period following the date of transfer;
* Allow representatives of the Secretary of Transportation adequate access to railroad employees and records when needed in relation to the period of Federal ownership; and
* Compensate the United States at the value determined by the USRA.

The formal transfer occurred at Nenana on January 5, 1985 with the Governor and the Federal Railroad Administrator signing official transfer documents and exchanging a ceremonial $22.3 million check and a symbolic railroad gold switch key. Starting January 6, 1985, the ARR began operations under the Alaska Railroad Corporation (ARRC).

5. <u>Alaska Railroad Corporation Act</u>

The Act established a public corporation (i.e., the Alaska Railroad Corporation) within the Department of Commerce and Economic Development to operate the Alaska Railroad. The powers

of the corporation were vested in a seven-member Board of Directors. The Act empowers the Board to:

* Be responsible for the management of the financial and legal obligations of the Alaska Railroad;
* Operate the Alaska Railroad as a common carrier subject to the jurisdiction of the Interstate Commerce Commission;
* Generally manage the corporation on a self-sustaining basis;
* Provide for safe, efficient, and economical transportation to meet the overall needs of the State;
* Raise needed capital by issuing bonds upon approval by the Legislature while ensuring that the corporation does not directly or indirectly endanger the State's own borrowing capacity;
* Review state and other land disposal proposals to aid in planning for future development or expansion of transportation services;
* Ensure that the procurement procedures of the corporation meet accepted railroad industry standards; and
* Ensure that the accounting procedures of the corporation meet generally accepted accounting principles consistent with industry standards for comparable railroads.

The Act specifies that the Board appoint a chief executive officer who is responsible for managing the daily affairs and operations of the Corporation, including:

* Leasing and granting easements which do not constitute a transfer of the Corporation's entire interest in land;
* Establishing specific rates, tariffs, divisions, and contract rate agreements;
* Making routine changes in service levels;
* Establishing procurement and accounting procedures; and
* Performing procurement activities.

The Act further specifies that the Board is responsible for the review and approval of the following:

* Issuing bonds with approval by the Legislature;
* Mortgaging or pledging Corporation assets;
* Donating property or assets belonging to the Corporation;
* Acting as a surety or guarantor;
* Adopting a long-range capital improvement program;
* Adopting annual reports;

* Effecting general, comprehensive increases or decreases in rates;
* Expanding or reducing services in a major way;
* Expanding the main or branch lines including spur, industrial, team, switching, or side tracks, other than performing routine track alignment as necessary to maintain existing service levels;
* Selecting independent auditors and accountants;
* Entering into collective bargaining agreements;
* Adopting annual budgets;
* Beginning a capital project with an estimated completion cost of more than $500,000 or an estimated completion time of more than one year;
* Exchanging, donating, selling, or otherwise conveying its entire interest in land subject to approval by the Legislature; and
* Exercising the power of eminent domain. (Exercise of the power of eminent domain requires the prior approval of the Governor.)

In addition to the exercise of routine powers and duties, the Act also conveys to the Corporation the right to:

* Acquire personal property, rights, rights-of-way, franchises, easements, and other interests in land, taking title in the name of the Corporation;
* Hold, maintain, use, operate, improve, lease, exchange, donate, convey, encumber, or otherwise grant a security interest in, or authorize use or disposal of, land or personal property;
* Contract with and accept transfers, gifts, grants, or loans of funds or property from the United States and the State or its political subdivisions;
* Recommend to the Legislature and the Governor any tax, financing, or financial arrangement the Corporation considers appropriate for expansion or extension and operation of the Alaska Railroad;
* Apply to the State, the United States, and foreign countries or other proper agencies for the permits, licenses, rights-of-way, or approvals necessary to construct, maintain, and operate transportation and related services;
* Enter into contracts, leases, and other agreements with connecting carriers, shippers, and other persons concerning the services, activities, operations, property, and facilities of the corporation, including agreements that contain provisions to expand the railroad's traffic base;
* Plan for and undertake expansion of the railroad and railroad activities, including extension of the rail system, and contract with other modes of transportation service connecting to the rail system; and

* Undertake and provide for the acquisition, construction, maintenance, equipping, and operation of connecting, switching, terminal, or other railroads and railroad facilities;

The Legislature specifically retains for itself the right to approve:

* Raising capital through the issuance of tax-exempt bonds;
* Appropriations to be used to provide a particular service that is not otherwise self-sustaining, if a subsidy is required to maintain that service;
* Exchange, donate, sell, or otherwise convey its entire interest in land;
* Extend railroad lines other than for spur, industrial, team, switching, or side tracks; and
* Lease land for a period in excess of 35 years without a termination clause.

Acquisition of the Alaska Railroad is viewed by the State as a present necessity in order to retain rail service, and not as a long-term responsibility of the State to directly provide continuing rail service. The Act requires the Corporation to include in its annual report every five years an analysis of potential sale arrangements whereby the corporation may be transferred into private ownership. The Act requires that this analysis include documentation of at least three offers to sell the corporation initiated by the Corporation during the five year period.

The Act prohibits the state-owned railroad from applying for a right-of-way across, or exercise eminent domain in, the western (Kobuk River) unit of the Gates of the Artic National Preserve.

Upon receiving Legislative approval, the Corporation may issue bonds to provide funding to carry out its purposes. However, these bonds are not to be backed by the credit of the State or its subdivisions. Bonds and notes, and the interest and income from them, are exempt from Federal and State taxation except for inheritance, transfer, and estate taxes.

The Governor may provide for the sale or lease of the Alaska Railroad and dissolve the Corporation if it can be assured that the railroad will continue to operate after the sale or lease and the State will receive the amount of money it has spent in connection with the Alaska Railroad. Any sale, however, is subject to legislative approval.

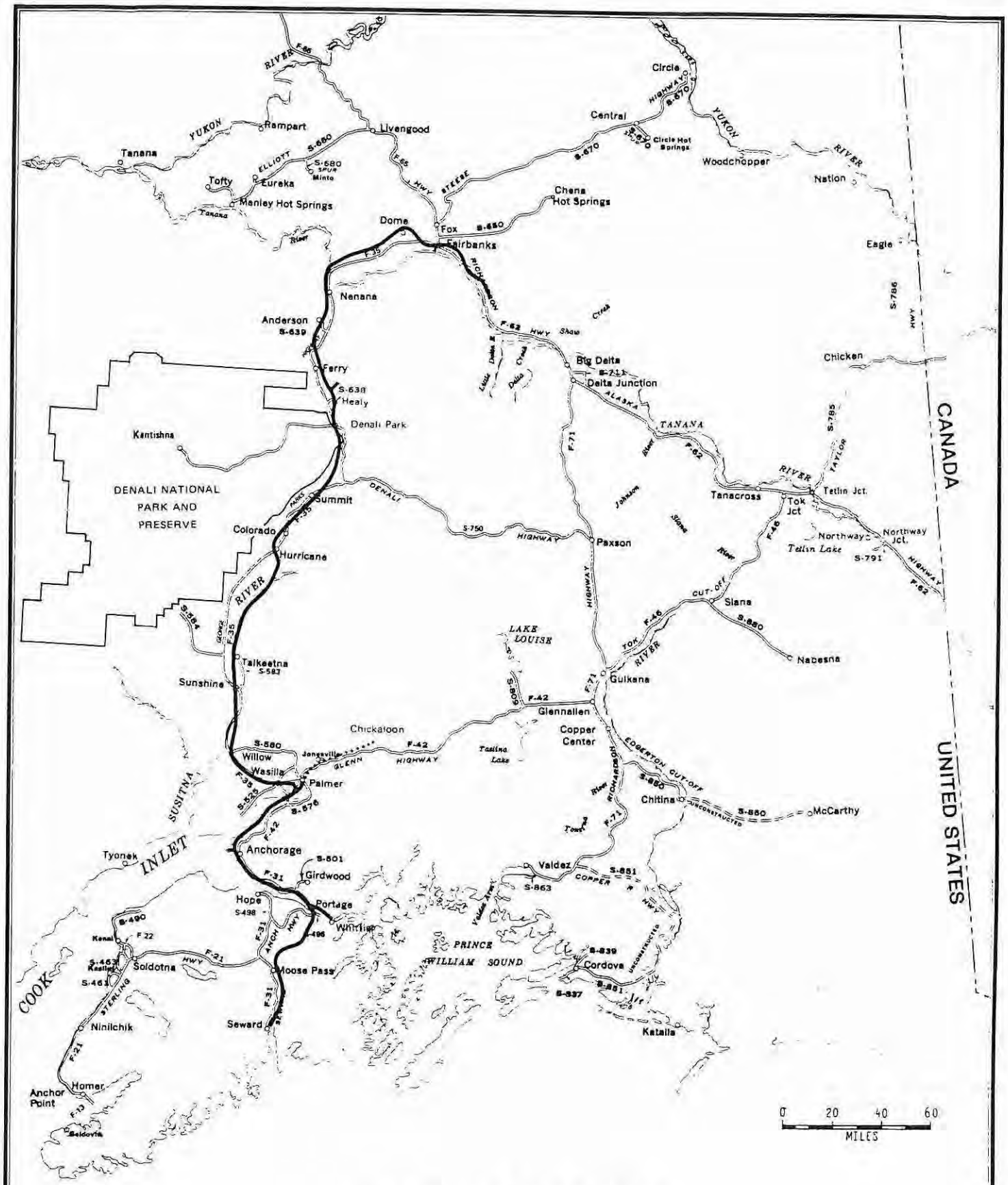
B. Profile of the Alaska Railroad

The following describes the Alaska Railroad as it exists in mid-1985.

1. The Physical Plant

a. Route Structure

The route structure of the Alaska Railroad has not changed in recent years; the railroad's single track mainline extends 480.7 miles from the ports of Seward and Whittier through Anchorage to Fairbanks. Passing sidings are spaced generally at 5 to 10 mile intervals, although sidings long enough to accommodate most freight trains are less frequent. Additionally, there are five branches having an aggregate length of 52.2 miles. These include the 28.0 mile spur from Fairbanks to the Eielson Air Force Base, (24.5 miles of which are owned by the ARR), the 10.0 mile spur from Ft. Wainwright to the Fairbanks International Airport, a 4.8 mile coal branch from Healy to Suntrana (the last 3.7 miles of this line are not presently being operated since relocation of the tipple to the mainline in 1983), the 6.7 mile branch from Matanuska to Palmer, and the 2.7 mile Anchorage International Airport spur. Additional trackage is used for passing sidings and serves on-line industries; resulting in a system comprised of 655 track miles operated. The ARR retained the former rail right-of-way extending eastward



THE ALASKA RAILROAD

Wilbur Smith and Associates

FIGURE 3-2

up the Matanuska Valley approximately 30 miles past Sutton, Eska, and Jonesville to Chickaloon. This right-of-way provides access to coal resources and thus would be an important asset if an opportunity develops in the future for exporting or otherwise utilizing coal from the Matanuska area. Figure 3-2 is a map showing the present route structure of the Alaska Railroad.

b. Operating Conditions and Constraints

The speeds at which trains operate depend upon (1) the severity of horizontal curvature, (2) ruling grades, (3) the presence of track signals, and (4) the level of maintenance of the track structure. The constraint imposed by gradient is illustrated in Table 3-1, which shows maximum grades in both directions along the ARR. As the controlling grade increases, the tonnage rating of a locomotive decreases. On the ARR, relatively flat gradients are encountered in the southbound direction between Anchorage and Portage and between Potter and Anchorage. Steep gradients are encountered between (1) Seward and Divide, where the ruling grade is 2.2 percent northbound, (2) Grandview and Spencer, where the ruling grade is 3.0 percent southbound, (3) Hurricane and Honolulu, where the ruling grade is 1.1 percent northbound and 1.5 percent southbound, and (4) Gold Creek and Hurricane and Honolulu and Summit where the ruling grade is 1.8 percent northbound. The lack of a blocked signal system places an upper speed limit of 49 mph on freight trains and 59 mph on passenger trains in areas not further constrained by the alignment. The ARR has very few slow orders resulting from deferred maintenance, but does have to impose restrictions due to frost heaves, slides, the necessity of installing shims, and on-going track and bridge work.

Economic considerations play a major role in railroad determination of the train speeds actually used and tonnage limits

Table 3-1

MAXIMUM GRADES ON THE ALASKA RAILROAD
1985

SEGMENT	MILEPOSTS		MAXIMUM GRADE IN PERCENT	
	From	To	South Bound	North Bound
Mail Line				
Seward-Divide	2.9	12.0	0.0	2.2
Divide-Primrose	12.0	18.4	2.3	1.7
Primrose-Hunter	18.4	40.0	1.2	1.1
Hunter-Grandview	40.0	44.9	0.0	2.0
Grandview-Spencer	44.9	55.8	3.0	0.0
Spencer-Portage	55.8	64.2	1.0	0.5
Whittier-Portage	0.0	12.4	0.5	0.6
Portage-Potter	64.2	100.6	0.5	0.7
Potter-Anchorage	100.6	114.3	0.8	1.0
Anchorage-Matanuska	114.3	150.7	0.5	1.0
Matanuska-Gold Creek	150.7	263.2	1.1	1.0
Gold Creek-Hurricane	263.2	281.4	0.0	1.8
Hurricane-Honolulu	281.4	288.7	1.5	1.1
Honolulu-Colorado	288.7	288.7	0.0	1.8
Colorado-Summit	288.7	312.5	0.8	1.0
Summit-Healy	312.5	358.7	1.1	0.9
Healy-Nenana	358.7	411.7	1.2	1.0
Nenana-Fairbanks	411.7	470.3	1.2	1.0
Branch Lines				
Matanuska-Palmer	0.0	6.7	0.0	1.4
Healy-Sutrana	0.0	4.8	2.0	1.0
Fairbanks-Eielson	0.0	28.0	1.0	0.5
Eielson Br.-Fairbanks I.A.	0.0	10.0	0.3	0.1
Anchorage Int'l Airport	0.0	2.7	0.4	0.0

SOURCE: Alaska Railroad Track Chart, Revised 1985 Alaska Railroad Timetable No. 118, effective May 12, 1985.

per carload. The rugged topography traversed by the ARR adds significantly to operating costs. Curves increase wheel resistance, which in turn increases fuel usage and rail and wheel wear. Grades likewise increase fuel usage and power requirements. To illustrate, a conventional 3,000 horsepower diesel-electric locomotive can haul a load of 4,560 tons from Portage to Potter, but only 730 tons from Spencer to Grandview on the mainline to Seward. A hypothetical 3,000 ton load, which would require a single 3,000 horsepower locomotive between Matanuska and Anchorage, would require five locomotives (or three if the train were "doubled" over the mountain pass) to reach Seward.

The ARR is able to handle virtually all traffic that can be handled by "lower 48" railroads without imposing weight and car size restrictions. Loads up to 11 feet wide and 15 feet 9 inches above the top of rail can be carried on all mainline tracks and the Whittier Branch. Taller loads can also be accomodated, but the maximum allowable width progressively decreases above 15 feet 9 inches. Between Portage and Whittier, the maximum height restriction of 19 feet 6 inches is decreased one foot between October 1 and April 15 because of tunnel icing conditions.

Maximum allowable tare weight and load is 263,000 lbs. on the mainline and Whittier Branch. Somewhat lower load limits of 220,000 and 240,000 lbs. are imposed on the Eielson and Suntrana branches. In 1985 the ARR placed two weigh-in-motion scales on the freight mainline in Anchorage, which give the Railroad the opportunity to weigh all traffic entering or leaving Anchorage. A certified weigh-in-motion scale is located within the Usibelli coal tipple near Healy. As indicated earlier, the Suntrana Branch is out of service and all coal loading, with the exception of a minor amount of domestic coal at mile one of the Suntana Branch, now occurs at the mainline tipple.

The railroad operates and maintains a number of yards to serve local industries, sort cars, and maintain its equipment. These vary appreciably depending on the purpose for which they are used. The yard at Seward serves the railroad-owned port facilities at that location and includes a number of car marshalling tracks, a small equipment maintenance facility, the dock facilities, and several tracks to local industries. Whittier is the interchange point for railcar service, and is designed to serve the two railroad-owned car-barge slips, the Whittier-Portage passenger-auto shuttle service, and the military dock and petroleum terminal. Anchorage has the ARR's major classification yard, locomotive and car maintenance shops, headquarters offices, some car storage facilities and serves the area's industrial community. The yards also serve a number of major and minor industries, including the Port of Anchorage, the International Airport, Elmendorf Air Force Base, and Fort Richardson. Healy has a small yard to serve the nearby Usibelli coal mine. The Healy yard and rail service will be retained, but the ARR has closed the local crew facilities. The Nenana yard serves the small river port operated by the city, the Yutana Barge Lines, Chevron and Nenana Fuel Service. Fairbanks has a small classification yard, limited locomotive and car shops, and trackage to serve such local rail users as Fort Wainwright, the Eielson Air Force Base, the Mapco oil refinery, Spenard Building Supply, the University of Alaska, Fairbanks Coal Bunkers, and several other local industrial and the TOFC yard at Fairbanks.

c. Track Structure

Table 3-2 shows major accomplishments of the maintenance of way and structures program in recent years.

Table 3-2

ALASKA RAILROAD MAINTENANCE-OF-WAY ACCOMPLISHMENTS
1980-1985

YEAR	CROSSTIE RENEWALS	RAIL REPLACE. (feet)	BALLAST PLACED (cubic yds.)	TRACK ALIGNED & SURFACED (miles)	BRIDGES UPGRADED
1980	19,500	n/a	62,300	142	12
1981	13,000	29,500	141,200	182	25
1982	26,000	26,900	139,000	181	67
1983	25,300	11,700	143,300	207	29
1984	25,700	49,100	143,000	211	50
1985	26,000	94,500	109,100	180	36
Total	135,500	211,700	737,900	1,134	

SOURCE: Alaska Railroad Annual Reports, 1980-1985

The majority of the rail on the main line and the Whittier Branch was relaid by the Federal Government with bolted 115 lb. RE rail during the period 1949-1954 as a consequence of heavy traffic volumes and deferred maintenance during World War II. Branch lines are constructed with a mixture of rail weights ranging from 70 to 115 lbs. A sampling of rail head wear measurements taken by USRA on both the mainline and branches indicated relatively light wear except on sharper curves where flange wear was detected. However, since that time (1983) the increase in traffic and the greater use of heavier cars has begun to wear the rail significantly, especially on curves between Matanuska and Anchorage. The ARR has begun the use of 78 foot rails and over 60 percent of the new rail laid in 1984 was premium alloy rail to help reduce wear on curves.

Tie renewals have not kept pace with emerging needs. The Sverdrup study noted that a large number of ties were installed on the ARR at about the same time the 115 lb. rail was laid, and are reaching the end of their useful life rather than having a uniform age distribution. Based on an estimated 1.95 million

crossties on the ARR, and the approximately 25,000 installed annually, the implied replacement cycle is far greater than the 30-40 years usually considered desirable.

d. Motive Power and Rolling Stock

At the end of 1985, ARR's locomotive fleet consisted of 51 diesel-electric locomotives, as listed on Table 3-3.

Table 3-3

ALASKA RAILROAD DIESEL-ELECTRIC LOCOMOTIVES
1985

TYPE	MFG.	HP	YEAR BUILT/REBUILT	NO OF UNITS
GP-40-2 (road)	EMD	3000	1975-1978	15
GP-40 (road)	EMD	3000	1967 rebuilt 1983	5
GP-40-2 (GP-35)	EMD	3000	1964 rebuilt 1980	1
GP-35 (road)	EMD	2500	1964	3
GP-49 (road)	EMD	2800	1983	4
GP-49 (road)	EMD	2800	1985	5
E-9 (passenger)	EMD	2400	1956 rebuilt 1974	2
GP-7 (road)	EMD	1600	1951 rebuilt 1977	9
FP-7 (passenger)	EMD	1500	1951	7
Total Locomotives				51

SOURCE: Alaska Railroad 1984 Annual Report, Table VII, updated to December, 1985.

ARR's passenger fleet at the end of 1985 consisted of 48 cars, as listed on Table 3-4. The ARR acquired 28 of the cars from the Union Pacific Railroad in 1971, and eight from the Southern Railway in 1980. Ten of the Union Pacific cars were converted to electric heat and power in 1982.

Table 3-4

ALASKA RAILROAD PASSENGER ROLLING STOCK
1985

CATEGORY	TOTAL SEATS	YEAR BUILT/REBUILT	NO OF UNITS
Coach/Dome Car	1,024	1950-1954 (5 in 1982)	20
Dome Chair Car	600	1948-1955 (1 in 1982)	9
Diner	96	1942-1959 (1 in 1982)	2
Lunch, Cafe-Lounge	135	1959 (1 in 1982)	3
Baggage Car		1961 (2 in 1982)	6
Power Car		1943-1951 (1 in 1975)	5
Recreation Car		1961	1
Rail Diesel Cars	96	1953 (2 in 1985)	2
Total Passenger Cars			48

SOURCE: Alaska Railroad 1984 Annual Report, Table VII, updated to December, 1985.

Given expanding passenger traffic volumes, additional passenger equipment will ultimately have to be modernized or replaced. The railroad has recently purchased two self-propelled passenger cars (RDC's sometimes called Budd cars) to use between Anchorage and Hurricane, and Anchorage and Fairbanks during winter months when patronage is low, and possibly on the Portage-Whittier route.

ARR's freight car fleet at the end of 1985 consisted of 1,493 cars comprised of the types listed on Table 3-5.

ARR's freight car fleet is considered to be an old fleet, with a growing number of cars prohibited in interchange due to their extended age. Since commodities in interline service are mainly inbound, the ARR interlines relatively few of its own cars with railroads located in the contiguous U.S. However, the cars which are most extensively used by the railroad in freight

Table 3-5

ALASKA RAILROAD FREIGHT ROLLING STOCK
1985

CATEGORY	CAPACITY (tons)	YEAR BUILT/REBUILT	NO OF UNITS
Commercial Service			
Box Cars	50-70	1943-1965	143
Flat Cars, Owned	50-70	1943-1985	435
Flat Cars, Leased	60-77		38
Gondolas	50-70	1943	275
Hoppers, Covered	100	1965-1970	19
Hoppers, Open Top	50-100	1952-1982	301
Refrigerator	65	1966	10
Tank Cars	10000-20000 gal.	1920-1974	85
Total			1,306
Non-Commercial Service			
Ballast Cars	70	1955	81
Air Dump Cars	28-40 yds	1934-1958	66
Caboose Cars		1943-1976	22
Power Cars		1943	7
Repeater Air Cars	50	1943	3
Locomotive Fuel Cars	10000 gal.	1923	6
Way Freight Cars	70	1943	2
Total			187
TOTAL			1,493

SOURCE: Alaska Railroad 1984 Annual Report, Table VII, updated to December, 1985.

service (e.g., open top hoppers for hauling coal, sand, and gravel and flat cars used for pipe transport and TOFC/COFC) are comparable in age and design with similar cars used by other railroads. Unlike railroads located in the "lower 48," the ARR does not enjoy convenient access to the nation's car fleet. In recent years, the ARR has been reducing the size of its fleet by retiring equipment no longer required for freight service, and adding specialized equipment as new business opportunities develop. An example of this are the articulated intermodal platform cars presently in service for use in expedited trailer service between Anchorage and Fairbanks and to serve roll-on roll-off traffic entering Alaska through the ports of Seward and Whittier.

With the ARR being directed to be operated on a self-sufficient basis rather than as a traditional governmental entity, it will be easier to acquire necessary equipment either through lease or purchase than it was under Federal ownership. The important point is that previous concern stemming from the age, lack or condition of rolling stock can now be resolved through actions taken by the Corporation.

2. The Freight Traffic Base

The ARR essentially provides a specialized transport service focusing on a small number of commodities moving between a limited set of origins and destinations. ARR's traffic logically divides into local and interline movements. Local movements (traffic that originates and terminates on the ARR) generate high tonnage, but relatively low levels of revenue per ton-mile. Interlined traffic is (1) carload traffic originating from Seattle or Prince Rupert and interchanged between the ARR and either Alaska Hydro-Train or the Canadian National Railway through the car-barge facility at Whittier and (2) trailer and

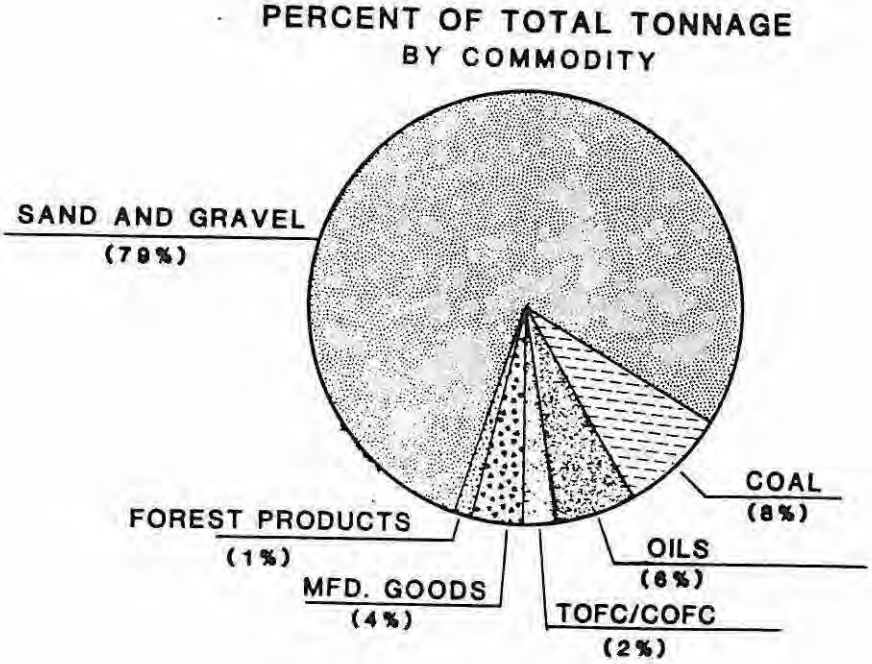
container movements through the ports of Whittier, Seward, and Anchorage that are forwarded by the railroad to interior destinations. Table 3-6 provides a summary of freight tonnage and associated revenues for the period 1980-1984, inclusive.

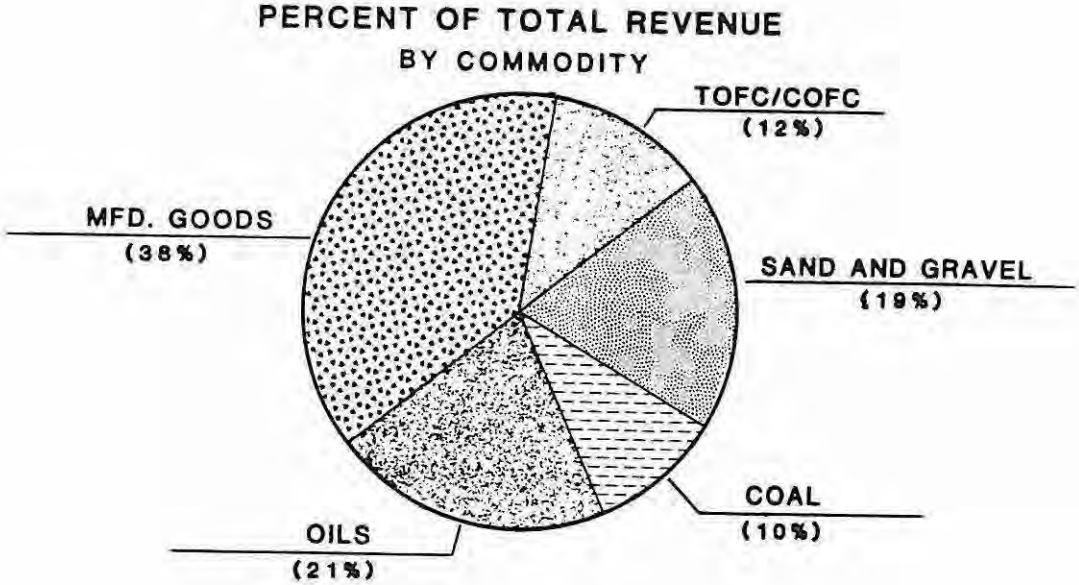
Figure 3-3 compares tonnage by commodity type with ARR revenue by commodity type, for 1984. Sand and gravel dominates the tonnage, but not the revenue. The following provides additional background on the major cargo categories.

a. Sand and Gravel

The seven large and 25 smaller pits in south-central Alaska produced 10.1 million tons of aggregate in 1984. The majority of this sand and gravel is shipped by unit train to Anchorage, as indicated in Table 3-6. Pits operated by Anchorage Sand and Gravel accounted for just under half of this total, followed by Alaska Gravel Sales, Big Lake Sand and Gravel, Stephen and Sons, and other companies. In addition to the rail hauls, approximately one million tons of aggregate were trucked from the Palmer and Eagle River areas to Anchorage, and 300,000 tons of aggregate were mined from the Pioneer pit in Anchorage.(12)

The rail movement of sand and gravel from Palmer to South Anchorage represents the single largest commodity movement on the ARR. This relatively short-haul movement has grown from virtually nothing in 1975 to 79 percent of the ARR's total tonnage in 1984. It reflects (1) the virtual termination of extraction activities in the Anchorage area and the necessity of utilizing deposits from outside the Borough to supply local needs, and (2) the high growth rates in residential, commercial and highway construction occuring since 1980. The ARR utilizes several 60-80 car unit trains which collectively make up to eight round trips per day during the summer months. In 1984,





TONNAGE AND REVENUE COMPARISIONS

ALASKA RAILROAD

1984

FIGURE 3-3

Table 3-6

ALASKA RAILROAD FREIGHT TONNAGE AND REVENUES BY MAJOR COMMODITY
1979-1985

	FREIGHT TONNAGE (000)						
MAJOR COMMODITY	1979	1980	1981	1982	1983	1984	1985(1)
Sand and Gravel	524	396	1797	2754	4398	6537	n/a
Coal	638	590	653	654	626	642	n/a
Petroleum, Oil, Lubricants	277	252	379	439	462	498	n/a
Manufacturers and Misc.	220	292	312	450	323	301	n/a
TOFC/COFC	55	92	113	122	98	212	n/a
Products of Forests	89	109	101	77	105	82	n/a
Products of Agriculture	7	10	8	7	7	n/a	n/a
Total Tonnage	1809	1741	3362	4503	6018	8272	n/a

	REVENUES ($000)						
MAJOR COMMODITY	1979	1980	1981	1982	1983	1984	1985(1)
Sand and Gravel	3207	556	2712	4556	6647	9430	7819
Coal	1009	3717	4637	5072	5007	5297	8078
Petroleum, Oil, Lubricants	6738	4691	6700	8376	9723	10287	9605
Manufacturers and Misc.	3877	8225	13631	22512	15704	18879	14022
TOFC/COFC	886	3054	4414	4915	3625	5860	5998
Products of Forests	2327	1253	1734	2301	2955	n/a	n/a
Products of Agriculture	114	168	181	145	126	n/a	n/a
Total Revenues	18158	21664	34009	47877	43787	49753	45522

(1) Eight months January through October, 1985

SOURCE: Alaska Railroad Annual Reports, 1980-1984

the sand and gravel shipments accounted for 19 percent of the ARR's total freight revenues.(7) Sand and gravel movements are closely related to the amount of construction in progress in the Anchorage area, which in 1985 decreased somewhat from the high levels of previous years.

b. Coal

Another important local movement is coal from the Usibelli Coal Mine near Healy to military power plants (Clear Air Force Station, Fort Wainwright, and the Eielson Air Force Base), the GVEA power plant at Healy, the Municipal Utilities System power plant at Fairbanks, and the University of Alaska at Fairbanks. This mine is the only major operating coal mine in Alaska, and produced 849,161 tons of subbituminous coal in 1984 from a drag-line-strip-mine operation in the Late Miocene Suntrana Formation.(12) Coal shipments accounted for eight percent of the ARR's total tonnage and 10 percent of its freight revenue.

In late 1984, Usibelli began exporting coal to KEPCO, a public utility in Korea, using facilities in Seward contracted by the State and Suneel Alaska Corporation. Under a contract which extends through 1992, the ARR expects to ship 660,000 tons in 1985 and 880,000 tons per year thereafter.

Thus, the near-term outlook for coal is good; stable rail movements of approximately 880,000 tons southbound and 600,000 short tons northbound are expected annually within the next several years. Longer term prospects depend upon further development of coal resources in the Railbelt area to serve export markets. Potential projects include (1) reinstituting coal mining in the Matanuska Valley and developing an export market for this high BTU coal and (2) the possible use of rail service to access coal resources in the Beluga and Yentna

leases. In connection with the former, Rocky Mountain Energy is presently conducting subsurface exploration on its State leases for its Wishbone Hill project. This work in being done coincidentally with the Matanuska Power Project, a proposed mine-mouth power plant that could produce 170 megawatts of electricity per year. Rail transport of coal from the latter fields is uncertain and potentially a distant possibility.

c. Petroleum, Oil, Lubricants

Another substantial local rail movement is that of petroleum products; in 1984, this movement accounted for six percent of ARR's tonnage and 21 percent of its freight revenues. The principal movement has been gasoline from refineries located at Nikiski (and delivered to Anchorage by pipeline) to Fairbanks. In recent years, the percentage of southbound jet and diesel products have been increasing. With completion of the expansion presently taking place at the North Pole Refinery near Fairbanks, the region will ship southbound movements of petroleum distillates (e.g., #1 and #2 fuel oils, asphalt) for distribution in the Anchorage area. Thus, the outlook for movements of petroleum products is very promising. MAPCO recently completed modifications to its track facilities at its Anchorage terminal in anticipation of increased shipments of asphalt, and is presently considering the acquisition of additional 20,000 gallon tank cars to handle the distillates. The net result is that northbound shipments of petroleum will reduce or cease, but southbound movements will increase to potentially double the petroleum products that perviously were moved northbound.

d. Manufacturers and Miscellaneous

This category includes local and interline rail carload movements of commodities such as cement from Anchorage to Fairbanks, iron and steel pipe and fittings either from Seward or Anchorage to Fairbanks for the the North Slope, machinery, and all types of consumer and industrial goods, such as building products, furniture, vehicles, and foodstuffs. In 1984, these commodities accounted for four percent of ARR's traffic base and 38 percent of its freight revenue. Consequently, it represents traffic which is very important to the ARR.

Interline carload service for cars with west coast origins is provided by Crowley Marine's Alaska Hydro-Train using rail and trailer barges between Union Pacific and Burlington Northern facilities at Seattle and the Port of Whittier under rates jointly published by Alaska Hydro-Train and the ARR. Similarly, Alaska Hydro-Train is included in through rates from "lower 48" railroad points to points on the AAR.

Interline carload service is also provided from Prince Rupert, B.C. to Whittier via the Canadian National Railway, which operates a tug-hauled barge service. CNR has basically the same through-rate tariff arrangements as Alaska Hydro-Train. The CNR typically handles cars from eastern, mid-western, and Canadian origins. It also handles hazardous materials shipments, which are prohibited from passage through Seattle.

Manufacturers and miscellaneous traffic has varied in recent years, partly in response to changes in the Alaskan economy. Over the long term, it will probably decline in volume as a consequence of the increasing use of trailers and containers through Whittier, Seward and Anchorage in place of carload movements.

e. Trailer-on-Flatcar and Container-on-Flatcar (TOFC/COFC)

Other components of interline traffic are (1) containership service between Seattle and Anchorage via Sea-Land, (2) roll-on, roll-off trailer ship service provided by Totem Ocean Trailer Express between Tacoma, WA and Anchorage, and (3) roll-on, roll-off trailer ocean-going barge service between Seattle and Whittier/Seward provided by Alaska Hydro-Train and Seaway Express, respectively. While such taffic generated less than three percent of the ARR's total tonnage, it accounted for nearly 12 percent of its freight revenues in 1984. Traffic destinations are primarily Anchorage and Fairbanks.

In May, 1985, the ARR instituted non-stop overnight trailer service between Anchorage and Fairbanks using articulated intermodal platform cars. The "Arctic Fox," which is a pair of all-piggyback trains having the capability of carrying 30 trailers apiece, leave Anchorage and Fairbanks at 8:30 and 6:45 PM, respectively, each evening except Sunday and are scheduled to arrive in Anchorage and Fairbanks at 5:15 and 7:00 AM, respectively, the following day. As of mid-1985, traffic on these trains had increased to the point that, on average, 86 percent of available capacity was being utilized. Expecting further increases in traffic, the ARR is considering adding similarly equipped trains to this service. The Arctic Fox basically serves local traffic which in the past would most likely have gone by highway between these two cities.

With a highway distance of 356 miles between Anchorage and Fairbanks, Arctic Fox piggyback service has already proven that it can provide door-to-door transit times comparable with motor carriers as well as maintain a high degree of service reliability, particularly in inclement weather. The service epitomized by the Arctic Fox represents the type of traffic having the

greatest growth potential in the near term for the ARR, particularly in terms of freight revenues.

f. Products of Forests

Even though Alaska has vast timber resources, some of which are accessible from the ARR, the state nevertheless imports nearly all of the dimension lumber and plywood used in the state from the Pacific Northwest and Canada. Lumber production costs are such that it is generally cheaper to import lumber than to utilize native timber. Furthermore, Alaska timber is usually inferior in quality. This in turn limits the market potential of local sawmills. Coupled with this is the fact that virtually all timber is located on Federal and State lands, and that governmental policies towards timber sales from these lands have not been such to guarantee a long-term supply of stumpage, even though sustainable yields are high. As a result, the local forest products industry can do little to make investments in state-of-the-art sawmills needed to create a viable sector capable of competing in the local, as well as foreign, markets. Thus, the short-term potential for a substantial increase in ARR lumber traffic beyond that induced by fluctuations in the economy and general level of construction activity is minimal.

Until 1981, the ARR benefited from a sizeable export log movement from Nenana through the Port of Seward. This traffic ended with the collapse of the Japanese housing market. Prospects for its resurrection are minimal at this time, although the potential remains.

g. Products of Agriculture

As can be seen, the movements of agricultural products by the ARR are small and relatively insignificant in terms of

freight tonnage and revenues. While increased agricultural development has been talked about for years in the Matanuska Valley, the Tanana Valley, and at Delta Junction, the amount of land in agricultural production, the feed grain orientation of the crops raised, the lack of export markets, and the generally depressed conditions in the national agriculture sector limit agriculture's potential as a railroad traffic base in the near term.

3. The Passenger Traffic Base

The passenger service provided by the ARR is unusual in that it is directed toward serving tourist and social needs rather than satisfying more traditional transport demands.

For a four month period between mid-May and mid-September, the railroad operates a daily passenger train in each direction between Anchorage and Fairbanks that is heavily used by tourists and others visiting Alaska. During the winter, this service is suspended, and in its place a once or twice weekly local service is provided, especially to homesteaders located east of the Susitna River between Talkeetna and Hurricane who do not have access to the Parks Highway. In early 1986 the ARR will be instituting winter service to the Talkeetna/Hurricane area with two rehabilitated self-propelled diesel passenger cars. This project will enable continued winter services at a lower cost to the railroad.

The ARR also operates the Whittier shuttle, which during the same four month summer period, provides once-a-day round trip service between Anchorage and Whittier and three to five round trips per day shuttle service between Portage and Whittier, which does not have highway access. As indicated earlier, Whittier is one of Alaska's principal ports, not only for

freight movements, but also as a port-of-call for cruise ships and the Alaska Marine Highway System. An extensive number of railbelt and locally-owned small craft are also based in Whittier. During the winter, shuttle service is limited to three round trips per week between Anchorage and Whittier plus the Portage-Whittier service. The shuttle accomodates automobiles, trucks, and buses on special quick-loading flatcars and carries passengers in coaches (passengers are allowed to remain in their vehicles) on the 35 minute trip through three and one half miles of tunnels between Portage and Whittier.

The ARR also runs a number of special trains each year which include (1) land extensions of cruise ship itineraries, (2) cross country ski trains, and (3) event-related trains (e.g., the State Fair at Palmer). The number of specials run each year have been increasing.

Table 3-7 provides a summary of patronage and associated revenues for the period 1980-1985, inclusive.

Table 3-7

ALASKA RAILROAD PASSENGER VOLUMES
1979-1985

SERVICE	TOTAL PASSENGERS (000)						
	1979	1980	1981	1982	1983	1984	1985 (1)
Anchorage-Denali-Fairbanks	61	54	54	61	62	78	82
Anchorage-Portage-Whittier	85	87	93	95	118	120	143
Special Trains	5	9	13	19	32	39	26
Total Passengers Handled	151	151	161	175	211	237	251
Total Revenue ($000)	1564	1549	1999	2627	3305	3877	3885 (1)

(1) Through October 31, 1985

SOURCE: Alaska Railroad Annual Reports, 1980-1984

Table 3-7 indicates an overall growth in patronage, which reflects the continuing promotional work being done by the Alaska Department of Commerce and Economic Development and the ARR to encourage tourist vacation travel to Alaska along with a sightseeing ride on the Alaska Railroad.

4. Traffic Density

Figure 3-4 presents the traffic density by direction for the ARR (expressed in gross ton-miles per mile per year) on the mainline and branches in 1984. Densities on the mainline segments between (1) Matanuska and South Anchorage and (2) Healy and Fairbanks are above three million gross ton-miles per mile per year due to the sand and gravel movements between Palmer and Anchorage and coal movements into the Fairbanks area. Although densities on the mainline segment between Healy and Matanuska are presently less than three million gross ton-miles per mile, they are expected to exceed this amount in 1985 as a result of unit coal train movements between Healy and Seward. Table 3-8 depicts traffic density by segment between 1979 and 1984 and reflects the considerable increase on some segments during the last three years.

5. The Financial Picture

This section focuses largely on the financial situation during the last six years of Federal ownership of the Alaska Railroad. It is still too early to determine how well the Alaska Railroad Corporation is doing financially, since it has been in operation for a period of less than one year.

Historically, the ARR has been a marginal enterprise. If it were not for Federal ownership, the railroad's importance to the military, and the railroad's ability to obtain governmental

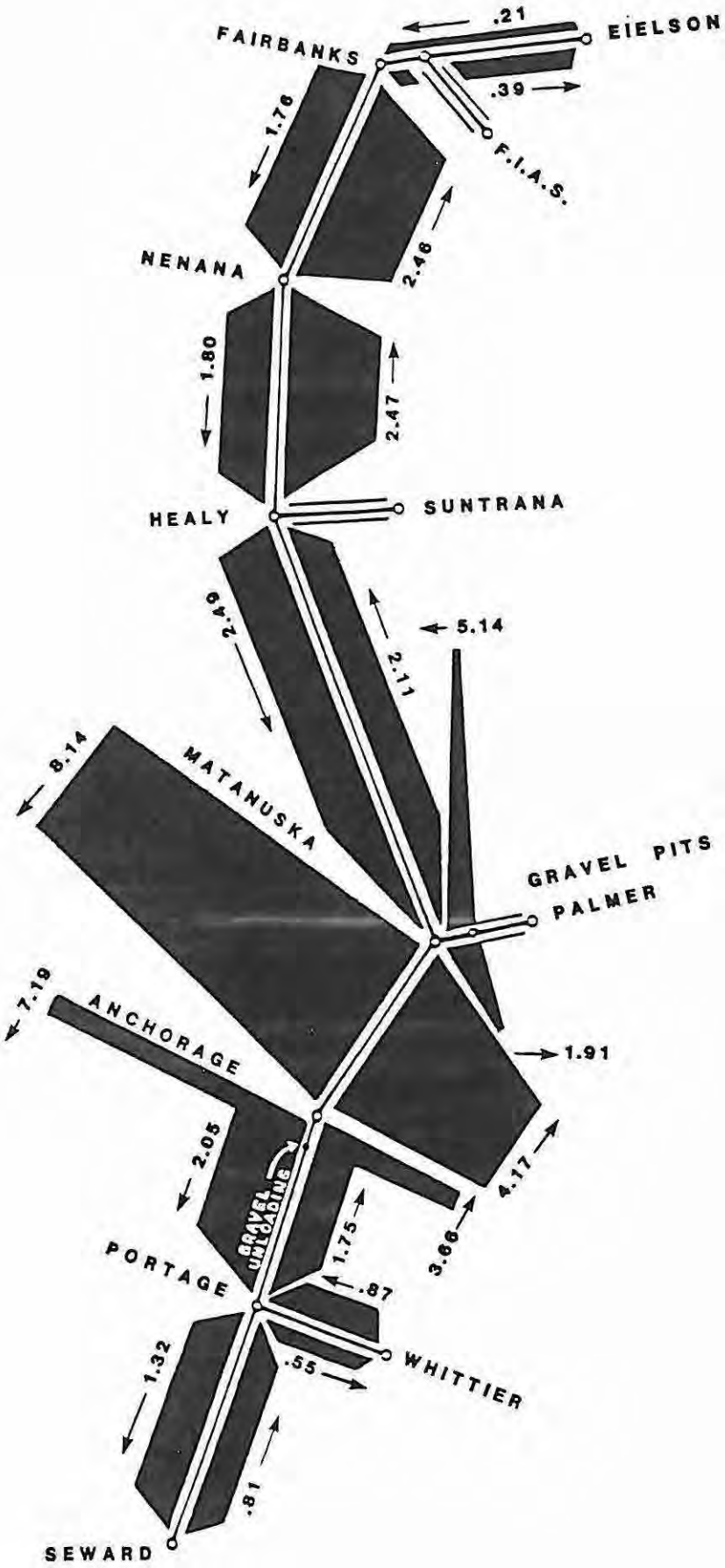
Table 3-8

ALASKA RAILROAD TRAFFIC DENSITY TRENDS
1979-1984

SEGMENT	MILEPOST	MILLION TON-MILES PER MILE PER YEAR					
		1979	1980	1981	1982	1983	1984
Seward-Portage	0.0-64.8	0.15	0.30	0.28	0.52	0.29	0.75
Whitter-Portage	0.0-12.4	0.89	0.88	1.01	1.20	1.21	1.29
Portage-Anchorage	64.8-114.3	0.99	1.87	1.82	2.50	1.79 9.19	2.41 11.95
Anchorage-Matanuska	114.3-150.7	3.88	2.68	5.88	7.90	10.57	13.90
Matanuska-Palmer	0.0-6.7	1.48	0.32	1.31	2.17	3.43	9.54
Matanuska-Healy	150.7-358.7	1.76	1.98	2.84	2.60	2.23	2.65
Healy-Suntrana	0.0-4.8	1.04	1.05	1.07	0.57	0.26	
Healy-Nenana	358.7-411.7	2.67	2.93	3.88	3.74	3.80	2.79
Nenana-Fairbanks	411.7-470.3	2.80	2.78	3.09	3.68	3.21	3.87
Fairbanks-Eielson	0.0-88.0	0.34	0.41	0.44	0.36	0.43	0.59

NOTE: Line segments with 0-3 MGTM are eligible for LRSA assistance.

SOURCE: Alaska Railroad



ALASKA RAILROAD
TRAFFIC DENSITY CHART
1985

LEGEND:
FIGURES REPRESENT MILLIONS OF GROSS TONS-MILES PER MILE

FIGURE 3-4

appropriations to use in meeting its capital needs, there is serious doubt that the railroad would have survived. In the past, its financial strengths and weaknesses have been tied to the boom-bust cycles typical of the Alaska economy.

Financially, the ARR did rather well during the building of the Alaska pipeline, but returned to a deficit operation during the late 1970s. Recently the ARR has done better by having a positive cash flow in its last four consecutive fiscal years. However, if extraordinary expense items (ARR transfer costs, deferred outlays, loss on inventories) are considered, then the ARR has increased its retained earnings in only two of its last six fiscal years. Table 3-9 presents an abbreviated income and expense statement for the ARR during the 1979-1984 period.

Table 3-10 shows the capital and major maintenance program expenditures made over this period. Funding of major maintenance expenditures was partly by appropriations and partly by retained earnings. As can be seen, the ARR depended heavily on governmental appropriations for capital improvements up until 1982. Although not shown, this dependence extends back as far as 1977.

By being owned by the federal government, the railroad enjoyed financial advantages not available to private enterprise. In addition, the Alaska Legislature in 1984 appropriated for the ARRC $4.9 million to be used for working capital and $6.0 million to be used for capital expenditures to complete projects which began under Federal ownership. Additionally, certain transfer-related costs including Whittier shuttle equipment to approximately $1 million were funded by the state of Alaska. By being fully owned, there was no outstanding indebtedness. Consequently, it did not have to pay dividends to stockholders. It

Table 3-9

ALASKA RAILROAD INCOME AND EXPENSE STATEMENT
FY 1979-1984

REVENUES/EXPENSES	($000) 1979	1980	1981	1982	1983	1984
Operating Revenues						
Freight	18,158	21,664	43,009	47,877	43,787	49,753
Passenger	1,564	1,549	1,999	2,627	3,305	3,877
Other (1)	3,378	3,524	4,774	4,941	5,305	4,286
Non-Operating Rev(2)	2,081	2,155	3,159	3,352	3,697	4,236
Total Revenues	25,181	28,892	43,941	58,797	56,094	62,152
Operating Expenses (includes depreciation)						
Maint of Way & Struc	5,235	5,109	6,307	8,554	11,128	12,745
Maint of Equipment	7,845	9,118	10,005	11,702	12,746	13,525
Transportation	11,821	13,146	16,072	18,685	19,555	22,112
Traffic Management	470	530	580	757	953	1,299
Incidental	1,937	2,456	2,855	4,152	2,718	2,826
General & Admin	3,977	4,021	4,539	5,128	5,893	7,448
Total Operating Exp	31,285	34,380	40,358	48,978	52,993	59,955
Non-Operating Exp(3)	204	344	273	258	277	363
Total Expenses	31,489	34,724	40,631	49,236	53,270	60,318
Net Profit (Loss)	(6,308)	(5,832)	3,310	9,561	2,824	1,834
Less Extraordinary Items (4)	(319)	(692)	(204)	(4,154)	(5,646)	(6,578)
Retained Earnings	(6,627)	(6,524)	3,106	5,407	(2,822)	(4,744)

(1) Other revenues are those that were neither freight or passenger (e.g., reimburseable services, sale of non-invested property; Whittier shuttle vehicle charges; reimbursements for real estate, utilities, and equipment; wharfage and handling charges; switching; equipment rentals; and mail)

(2) Non-operating revenues include miscellaneous rentals, interest earned, and other revenues.

(3) Non-operating expenses include buildings, depreciation, equipment, and other.

(4) Extraordinary items in 1984 included the loss on excess current inventories, deferred outlays, and costs associated with the transfer to the State.

SOURCE: Alaska Railroad Annual Reports, 1980-1984

Table 3-10

ALASKA RAILROAD CAPITAL AND MAJOR MAINTENANCE EXPENDITURES
1979-1984

	($ MILLIONS)					
	1979	1980	1981	1982	1983	1984
Buildings	0.1	0.2	1.8	1.5	3.3	1.5
Railbed, Track, & Other Fac.	2.2	3.3	4.5	4.3	3.0	3.7
Equipment	0.7	1.8	6.2 (1)	6.6	9.2	2.0
Other Projects	6.4 (2)	0.2	0.9	0.3	1.1	0.2
Total	9.4	5.5	13.4	12.7	16.6	7.4
Funded by:						
Appropriations	9.3	5.0	12.6	6.2	7.6 (3)	-
Railroad Earnings	0.1	0.5	0.8	6.5	9.0	7.4

(1) $4.24 million for the rehabilitation of ten passenger cars.
(2) $6.3 million for Seward and Whittier Dock Facilities.
(3) $1.0 million for Railroad Transfer evaluation.

SOURCE: Alaska Railroad 1984 Annual Report, Table V.

did not have to make a return on its investment in track structure, equipment, land, buildings, and the like. Finally, it always had the option of seeking Congressional appropriations for capital needs which could not be met out of retained earnings.

On January 5, 1985, Alaska formally acquired the ARR from the Federal Government for the "fair market value" of $22.271 million established by the USRA. In addition, the Alaska Legislature in 1984 appropriated for the Alaska Railroad Corporation $4.9 million to be used for working capital and $6.0 million to be used for initial capital expenditures. Thus, Alaska's investment in the ARR to date amounts to $33.2 million.

6. Overall Assessment

There is no question that the ARR does provide a vital service to Alaska. Its overall value can best be approximated by considering what additional costs would be incurred locally and to the state as a whole if the railroad ceased to exist.

a. Impact on the State Highway System

The Department's Division of Design and Construction, Central Region, has made a conceptual estimate of the impacts resulting from abandonment of rail service, which totals a capital expenditure of some $1.7 billion plus an annual expenditure of over $400 million, described as follows:

* If present sand and gravel movements between Palmer and South Anchorage were shifted from rail to highway, the impact of this traffic, along with current Anchorage to Fairbanks rail tonnage, would force immediate construction of six lanes to Eklutna, and four lanes to Palmer, at an approximate construction cost of $150 million (in 1983 dollars). Another $500,000 per year would be incurred in increased highway maintenance costs. This does

not include traffic congestion and public safety impacts from increased truck traffic on the Glenn and Parks Highways.

* To provide access for homesteaders living along the railroad north of Talkeetna, it would cost approximately $120 million to convert the existing railroad right-of- way into a 40 foot wide highway extending 37 miles to the Susitna River, and building a 1200 foot bridge. Extending this highway to Hurricane would cost an additional $57 million. Additional highway maintenance costs of $470,000 and $250,000 per year, respectively, would also be incurred.

* The cost of converting the existing Portage to Whittier line to a two-lane highway, including converting the railroad tunnels to highway use, would be approximately $75 million. Additional maintenance costs would be in excess of $500,000 per year.

b. Reduction in Tourist Traffic

The loss of rail passenger service, especially the daily trains to Denali National Park, would result in fewer tourists and fewer tourist dollars spent in the State. Further losses would occur through the multiplier effects of this income loss on service industry jobs and gross state product.

c. Loss of Present Export Traffic

The recently initiated coal export movement would be lost without rail service. Likewise, future opportunities for the export of hard rock minerals from the Railbelt area would be thwarted.

d. Higher Transport Costs

The costs of transporting bulk commodities (e.g., sand and gravel to Anchorage, coal to Fairbanks, petroleum products, cement, etc.) would increase due to the distances involved in loving these commodities by truck. Cost increases could extend

as well to merchandise traffic transported by motor carriers due to the loss of rail competition. This would increase living costs in the interior and building costs in the Anchorage area.

e. Greater Energy Consumption

Greater amounts of petroleum products would be consumed by the transportation sector substituting motor carrier movements for rail transport.

f. The ARR's Challenge

State government presently feels that the ARR should be operated on a self-sustaining basis. The challenge facing the Alaska Railroad Corporation (and ultimately the State) is threefold:

* To increase the ARR's traffic base. This requires high service levels and resourcefulness and flexibility in pricing to capture the traffic reasonably available to the ARR. It must be recognized that there is a finite amount of traffic potential in the Railbelt and the railroad must maintain a minimum breakeven level if it is to achieve its legislated mandate.
* To manage and operate the ARR as efficiently as possible, not only to avoid deficit operations, but to make the ARR financially attractive for purchase by private enterprise for continued operation as a rail carrier. The ARR's profit and loss picture is highly sensitive to changes in revenue, operations today are not appreciably above the break-even point, and further cost savings are important.
* To use the rail line to access mineral resources in proximity to its right-of-way when this is economically feasible.

C. Profile of the White Pass and Yukon Railway

The White Pass and Yukon Railroad (WP&Y) is owned by the White Pass and Yukon Corporation, Ltd., a holding company for a

number of subsidiary companies providing specialized water, highway, rail, and pipeline transportation. Three of these subsidiary companies comprise the Rail Division: 1. The British Yukon Railway Company, Limited; 2. The British Columbia-Yukon Railway Company Limited; and, 3. White Pass Transportation Inc., the railroad subsidiary of which is the Pacific and Artic Railway and Navigation Company. The WP&Y links Skagway, Alaska with Whitehorse, Yukon Territory, Canada.

1. WP&Y History

Built largely in response to the gold rush in Yukon Territory, the WP&Y was constructed in 1898-1900 as a three-foot, narrow-gauge line. Its original purpose was to haul passengers and freight into the interior. Constructed under speculative conditions, the original design standards were minimal so as to keep costs as low as possible. Its remote location coupled with its non-standard gauge have kept it apart from rail systems in the United States and Canada.

The WP&Y's history has been one of boom-bust cycles related to economic conditions in the Yukon. Recent history starts with October 1, 1942 when the WP&Y was taken over and operated by the U.S. Army to haul materials and equipment used in the construction of the Alaska Highway. The WP&Y was returned to civilian management on May 1, 1946 with its equipment worn out and its business at a low ebb. In 1951, a new Canadian company, the White Pass and Yukon Corporation, was formed to operate the WP&Y. The White Pass and Yukon Corporation, Ltd. is owned by Federal Industries Limited of Winnepeg, a public company whose stock is primarily held by several Winnepeg families. Through extensive use of containerization of all commodities (with the exception of petroleum products), the company provided an integrated transportation system between Vancouver, British Columbia

and interior Yukon. The company then proceded to upgrade the WP&Y during 1950's for a new role in hauling Canadian-produced zinc and lead concentrates from a centralized transfer point near Whitehorse to Skagway for further line-haul transport by water to smelters for further processing. The WP&Y also provided transportation for various other goods, including petroleum products, destined to Whitehorse and other Yukon points.

2. WP&Y Closure

The South Klondike Highway (Alaska Route 7, British Columbia Highway 4, Yukon Highway 3) between Skagway and Whitehorse was opened to through traffic during the summer of 1979 (although segments of the route had been completed earlier). Canadian Treasury Board funds used in constructing the Canadian portion of this highway were justified on the basis of: (1) facilitating local traffic, (2) encouraging tourism, and (3) providing a competitive means of shipping general freight between Skagway and Whitehorse. It was felt that the new highway would provide competition with the WP&Y for moving inbound passengers and general freight which it was hoped would lower personal transportation costs and consumer prices in Yukon. At no point was the South Klondike highway intended to become a facility for transporting ores to tidewater and, although not designed to carry such traffic, could do so based on its current condition.

In probable response to the anticipated opening of the South Klondike Highway, the corporation in 1977 sought governmental approval to close down the WP&Y, arguing that trucking the ore to tidewater would cost less. A 1979 Canadian Transport Commission (CTC) inquiry into the matter concluded that whether or not the road option was economic, opening the road would destroy the WP&Y to the long-term detriment of the Yukon and the mining sector. Instead, a program of recapitalization for the WP&Y based

on $6 million in Federal and Yukon Government interest free loans, legal requirements for freight rates on ore haul movements to be compensatory, improved railroad management, and anticipated volume increases from new mine development was chosen as the means of restoring the WP&Y's economic viability.(16) The WP&Y accepted the recommendations of the CTC Inquiry in good faith, and proceeded to improve the railroad by upgrading the physical plant, improving operating efficiency and on-time reliability and reducing employment.

Unanticipated events, combined with compromises in implementing CTC recommendations, did not solve the WP&Y's financial problems. In 1979, one of WP&Y's major shippers, Cassiar Asbestos, signed an agreement with a trucking firm to transport asbestos fibre, a commodity which heretofore had traditionally been transported by rail. Traffic volumes from new mine development and the northern gas pipeline proposal did not materialize. The final blow occurred in June 1982 when the WP&Y's principal shipper, the Cyprus Anvil Mining Corporation (CAMC), closed its open-pit lead-zinc-silver mine and mill near Faro, Yukon. Despite major increases in freight rates, the WP&Y had not become profitable and subsequently reported total operating losses exceeding $8.5 million during years 1980-1982. The closure of the CAMC mine forced the WP&Y to suspend its rail and most of its trucking operations in the Yukon. Rail operations were suspended on October 8, 1982 at the end of the 1982 tourist season.

In 1983, the Yukon Government requested that the CTC conduct an evaluation of territorial surface transportation in the short, medium, and long term to assist the Yukon in making economic and development decisions.(17) As part of a thorough investigation of transportation requirements, the inquiry undertook an in-depth comparative analysis of the cost of transporting CAMC concentrates by highway/rail or rail only via

the WP&Y, the South Klondike Highway, Haines Highway, and the Stewart Highway. It included highway capital and maintenance costs as well as motor carrier operating costs. In its draft report dated December 15, 1983, the Inquiry officers recommended that the WP&Y, in effect, be rail-banked while awaiting for the CAMC to resume operations and decide what mode of transportation to use for its concentrate shipments. If after resuming operations the CAMC chose not to use WP&Y rail services, or if CAMC did not resume operations within a two year period, the Inquiry officers further recommended that the Canadian Government should exempt the WP&Y from those provisions of the Canadian Railway Act which restrict WP&Y from abandoning its mainline railway.(17)

The panel also recommended against (1) making improvements to the South Klondike Highway or acceleration of improvements to other highways to accomodate CAMC ore trucks, (2) using public funds to purchase or lease the WP&Y, or subsidize the WP&Y for operation of a seasonal tourist train, and (3) extending further grants, loans, or subsidies to the WP&Y until the CAMC, WP&Y, and affected unionized employees of the WP&Y have "clearly demonstrated to the Government their conscientious and expeditious desire to co-operate among themselves, in their own self-interest, towards the resolution of a mutually acceptable and reasonable term agreement with respect to the transport of CAMC traffic by the WPY Railway with respect to the pricing of that transportation service and conditions related thereto - without Governmental financial intervention." If the latter was not possible (or until CAMC resumes shipments), the panel recommended that the Canadian Government and the State of Alaska compensate the WP&Y for certain unavoidable costs incurred in the complete shutdown of the WP&Y, with the compensation ending after two years if CAMC has no firm plans to utilize the WP&Y and there are no other major shippers willing or able to provide the traffic and revenue needed for the WP&Y to at least break-even.

Since the Inquiry, the status of the WP&Y has not changed. The State of Alaska did not participate in the previously proposed joint program for compensating the railroad for its unavoidable costs because the State felt that the WP&Y would likely not become self-sustaining and because the benefits of operation are more Canadian than Alaskan. The WP&Y has served Alaska primarily as an employer located in Skagway and, during summer months, as an attraction for tourists seeking a scenic ride, but not as a freight transportation service. The railroad does maintain at Skagway its shops and engine facilities; its general offices are located in Whitehorse.

3. The Physical Plant

The following describes the White Pass and Yukon Railway as it existed in mid-1985.

a. Route Structure

The White Pass and Yukon Railway owns, and operated up until the fall of 1982, 110.4 miles of mainline track between Skagway, Alaska and Whitehorse, Yukon Territory, Canada, of which 59.1 miles are in Yukon, 30.9 miles in British Columbia, and 20.4 miles in Alaska. The WP&Y has no branches.

From milepost 0.0 at Skagway to milepost 26.5, the line rises on an average grade of 3.5 percent to reach its summit east of the Alaska-British Columbia border. From milepost 26.5, the WP&Y descends on a 3.8 percent grade for one mile and then gradually descends for the next eight miles to a point just south of Lake Bennett. The railroad then follows the shore of Lake Bennett to Carcross at milepost 67.5. From Carcross, the WP&Y proceeds to Utah at milepost 105.5, which is the loading point for ore traffic containers. After leaving Utah, the WP&Y

descends on a 3.9 percent grade into Whitehorse. Figure 3-5 presents a map showing the route of the White Pass and Yukon Railway.

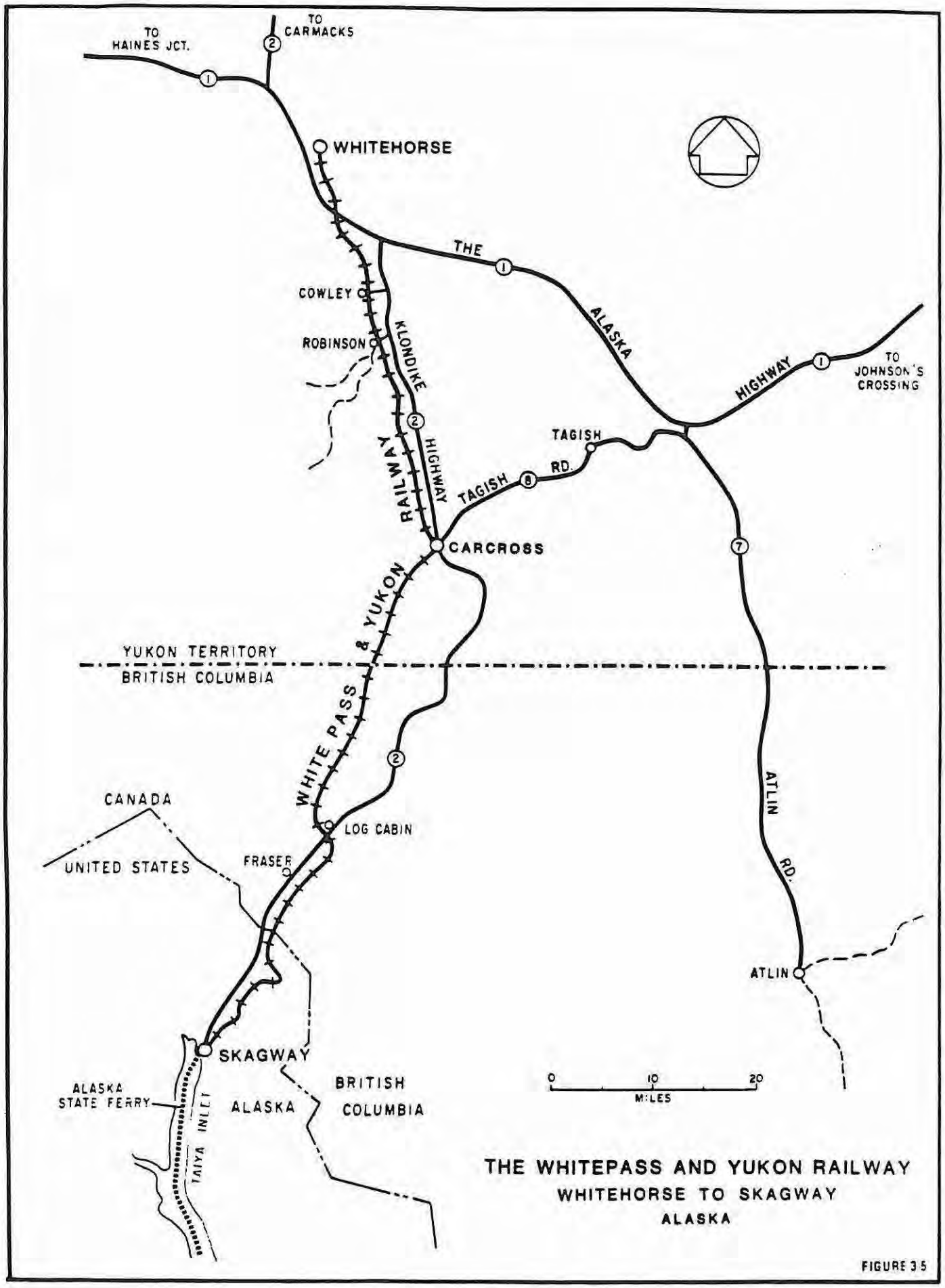
b. Operating Conditions and Constraints

The mountainous terrain in which the WP&Y is located coupled with the route's steep gradients and curvature, the severe weather conditions encountered during the winter, the limitations imposed on the maximum tonnages which can be hauled per carload as well as per trainload, until recently the existence of a full crew law in Alaska (for all except yard crews and switching) which is incorporated into the labor agreements with U.S. unions, and the narrow-gauge character of the line which makes supplies and equipment far more difficult and costly to obtain, result in an operation which inherently has been more costly than that of other railroads. Maximum speed is 25 miles per hour, with further speed restrictions at various locations.

c. Track Structure

The WP&Y has rail of varying weights. Over half of the line consists of the original 72 lb. rail. In 1977-1978, 100 lb. rail was installed between mileposts 42.0 and 56.5 and 97.0 and 104.0. There is also 65 and 85 lb. rail at some locations.

Because the WP&Y has been out of service for nearly three years, little or no maintenance has occurred since 1982. The WP&Y continues to patrol the line on a weekly basis and its tunnels and bridges are intact. However, there are three washouts and, if the railroad remains closed, brush will continue to grow, ties will deteriorate, and additional washouts will likely occur.



THE WHITEPASS AND YUKON RAILWAY
WHITEHORSE TO SKAGWAY
ALASKA

FIGURE 3.5

d. Motive Power and Rolling Stock

Motive power on the line consists of 23 diesel-electric locomotives of various ages, including 4 in Montreal that were not delivered due to service elimination.

Freight rolling stock consists almost exclusively of flatcars each capable of carrying one or more containers. The WP&Y has 306 flatcars and 37 tank cars. Passenger equipment consists of 34 coaches dating from when the WP&Y was originally constructed; some of these cars have since been modernized.

4. The Freight Traffic Base

In recent years, freight traffic on the WP&Y has consisted of three major commodities: general cargo and bulk petroleum products northbound from Skagway and lead and zinc concentrates southbound from Whitehorse. In 1981, the last full year of operations, 416,000 tons of mineral concentrates, 69,900 tons of other freight, and 44,500 tons of petroleum products moved over the WP&Y. Through its trucking subsidiary, the White Pass and Yukon Corporation provided a feeder service connecting the lead/zinc/copper mines with its receiving point at Utah spur. At one time, the WP&Y handled sizeable amounts of asbestos; this traffic was lost in the late 1970s-early 1980's due to competitive highway transportation to Stewart, British Columbia. The WP&Y has a very narrow traffic base, and its economic survival is (or was) tied to the fortunes of the three firms described as follows:

a. Cyprus Anvil Mining Corporation

CAMC has operated its open pit mine and mill located near Faro since 1970. It is one of the largest such mines in the

world, and produced about three percent of the world's production of lead and zinc and 13-15 percent of Canadian production. CAMC has extensive proven and potential ore reserves at its several Yukon deposits.

In early 1982, Hudson Bay Oil and Gas Limited acquired CAMC, and shortly thereafter HBOAG was acquired by Dome Petroleum. In June 1982, Dome closed down CAMC's mining operations at Faro for financial and productivity reasons. There are, however, actions intended to reactivate the mining operation; whether a reactivated mine would use the railroad is unknown at this time.

Prior to shutdown, CAMC determined that reductions in the cost of management, electricity, transportation, and labor were necessary. In addition, a recovery in world metal prices, particularly lead, is needed in order for the mine to resume operations. CAMC concluded that trucking from Faro to Skagway, or alternatively Haines, offered transport cost reductions beyond that possible using truck/rail via the WP&Y. (The truck and truck/rail distance to Skagway is virtually identical.) In addition to economic advantages, CAMC viewed truck as offering management control over freight charges through institution of a competitive bidding process and an ability to scale the size of trucking operations at any point in time to the needs of the firm and the market for mineral concentrates. It felt that operation over the South Klondike Highway with 134,500 lb. gross vehicle weight 7-axle, 70 foot truck-trailer combinations was technically feasible without major upgrading, did not create safety problems, and that additional costs were limited to keeping the road open during the winter. However, such large trucks are currently illegal in Alaska. CAMC did indicate that existing truck/rail was an acceptable method so long that costs were competitive with an all-truck alternative.

In 1981, CAMC concentrates represented 68 percent of WP&Y's total tonnage and 47 percent of its revenues. CAMC's other traffic, comprised of grinding media, chemicals, explosives, supplies, and fuel, represented 20 and 23 percent of the northbound tonnage and revenues, respectively.

The WP&Y, therefore, has been economically captive to the CAMC. There cannot be a viable rail operation without the traffic generated by the CAMC mine.

b. The United Keno Hill and the Whitehorse Copper Mines

The United Keno Hill Mine is a precious metals operation located at Elsa, Yukon; the Whitehorse Copper Mine is located near Whitehorse. Both of these mines also closed in 1982 (although the United Keno Hill Mine reopened in August 1983).

In 1981, these two mines accounted for five percent of the WP&Y's tonnage and three percent of the railroad's revenues.

c. Cassiar Asbestos' Brinco Mine

The Brinco Mine is located at Cassiar, British Columbia. In 1981, it accounted for five percent of the WP&Y's tonnage and one percent of its revenues. This level of traffic is far below the amount traditionally furnished to the WP&Y.

In 1979, Cassiar Asbestos signed a five year agreement with Arrow Transportation Services, Inc. to truck 80,000 tons of asbestos fibre annually from Cassiar to Stewart, British Columbia. (Cassiar is located 346 miles from WP&Y's railhead near Whitehorse and 326 miles from the Port of Stewart.) The stipulated rate was appreciably below that offered by the WP&Y. Although Arrow was not at first able to meet its tonnage commitments for

a variety of reasons, and rate escalations did occur bringing the rates approximately up to that which would have been charged by the WP&Y, the diversion of this traffic appears to be permanent. In the course of accomodating this traffic, the British Columbia government budgeted and spent over $100 million to upgrade Highway 37 to accomodate this movement.

5. The Passenger Traffic Base

The WP&Y typically carried around 40,000 passengers per year before the opening of the South Klondike Highway, and around 15,000 thereafter, as shown on Table 3-11. Most passengers were tourists using the railroad during the summer months.

A major Alaskan concern is the effect that cessation of WP&Y's rail passenger traffic has had on tourists visiting Skagway. Table 3-11 shows the number of persons traveling between Skagway and Whitehorse between 1975-1984 by mode. Only a portion of this traffic can be considered as being tourists, however. The table shows the impact that the South Klondike Highway has had on modal usage. Total crossings increased from 45,000 before the highway (1975-1978) to 64,000 afterwards (1979-1984). The percent using buses has increased from a negligible amount before the South Klondike Highway to approximately 25 percent afterwards. The percent of persons using rail has decreased from near total dominance of 95 percent before the highway to 25 percent afterwards (through 1981 only). The total number and the proportion of persons using rail or bus has been decreasing, as use of the private car increases. During this period, Skagway's proportion of persons entering the Yukon has remained approximately constant, at about 17 percent of the total. Thus, the opening of the South Klondike Highway has been the major factor in Skagway retaining its gateway share of transients (presumably a large portion of this is tourists).

Table 3-11

SKAGWAY TO WHITEHORSE TRAFFIC BY MODE OF TRAVEL
1975-1984

YEAR	NUMBER OF PERSONS (000) AND PERCENT OF TOTAL				PERCENT OF YUKON (1)
	Pers. Vehicle	Bus	Train	Total	
1975	2,300-5.6%	100-0.3%	38,600-94.1%	41,100	12.9
1976	2,700-5.9%	-0.1%	42,900-94.1%	45,500	14.8
1977	2,500-4.8%	100-0.1%	48,600-95.1%	51,100	17.0
1978	3,300-7.7%	100-0.3%	39,200-92.0%	42,700	11.8
1979	25,600-35.3%	15,700-21.6%	31,300-43.1%	72,600	20.0
1980	24,500-43.9%	15,400-27.5%	16,000-28.6%	55,900	16.4
1981	31,900-49.1%	16,100-24.8%	17,000-26.1%	65,100	16.8
1982	32,100-52.8%	13,600-22.4%	15,100-24.9%	60,800	16.7
1983			0-0.0%		
1984			0-0.0%		

(1) Percent of persons entering Yukon via Skagway.

SOURCE: Canadian Transport Commission, "An Inquiry into the Transport Requirements of Yukon," December 15, 1983. Tables 5.4 and 5.5.

In summary, the major factor affecting the WP&Y's passenger business was the opening of the South Klondike Highway. Although done with the intention of providing competition, it effectively killed the WP&Y's passenger business by diverting patronage to private vehicles which would otherwise have gone by rail. By using buses to transport tour groups between Skagway and Whitehorse, tour operators likewise contributed to the demise of WP&Y passenger use. Given the diversion of rail passengers to bus even when the WP&Y operated, the fears over the impact that the loss of WP&Y's tourist train might have on the magnitude of the tourist trade now seen unfounded. Skagway is a tourist attraction on its own besides functioning as an entry point into the Yukon. The WP&Y was a beneficial adjunct

to tours, but not a major factor in determining whether to stop off at Skagway in the first instance. The tour operators have simply substituted buses for WP&Y passenger service. The tour operators prefer using buses because of the greater scheduling control possible through integrated operations. Most tourists visiting Skagway and using bus or rail transport are utilizing a tour package and thus are not particularly sensitive to whether or not rail passenger service is provided on the WP&Y, although most would probably feel that their tour experience would be enhanced were WP&Y passenger service available between Skagway and Whitehorse.

6. Overall WP&Y Assessment

Although Alaska would like to see the White Pass and Yukon Railway resume operations from the standpoint of promoting tourism and creating jobs through Skagway, the economic rationale for the line more properly lies with meeting the freight transportation needs of Canadian extractive industries located in the Yukon and to a lesser extent in the northern portion of British Columbia.

Presently, the line is, in effect, rail-banked. A rail-banked line is one that is not operated but is also not officially abandoned. It could be brought back in operation as demand warrants. If it were to be brought back in operation, it would likely be due to improvements in world mineral prices. Should this occur and operations be resumed at mining properties which are presently shut down (perhaps along with the development of some of the mineral potentials listed in Table 3-12), then resumed operations over the WP&Y might make economic sense. The longer the rail line is shut down, however, the more difficult it will be to reopen, due to line deterioration and lack of maintenance. If rail operations do resume, they must be

Table 3-12

YUKON MINERAL PROPERTIES

MINERAL	PROPERTY	DEPOSIT SIZE (MM tonnes)	AVE. GRADE OF ORE (%)	ANNUAL MINING RATE (M tonnes)	ANNUAL CONCENTRATE (M tonnes)	MILES TO SKAGWAY	FIRST PROB. OPER. YEAR
Lead/Zinc	Jason	10+	14.0	666	125	464	1990+
	Tom	10+	14.0	666	125	464	1990+
	Howard's Pass	125	8.0	1000	186	595	1990+
	Goz	12	8.0	666	125	518	2000+
	Midway	4	10.0	300	40	272	1990+
	Mel	4	8.0	300	32	425	2000+
	Cyprus Anvil	87+	8.0	4000	383-520	353	1985
Copper	Minto	7	1.9	666	45	265	1989
	Casino	180	0.4	9100	133	308	2000
Molybdenum	Logtung	187	0.05	9100	18	231	1990+
	Red Mountain	180	0.17	9100	14	162	1990+
Tungsten	Canada Tungsten	4	1.5	400	20	567	1984
	Mac Tungsten	8	1.3	400	18	503	1989
	Dublin Gulch	4	1.0	400	16	415	1995+
	Risby	3	0.8	400	10	415	2000+

SOURCE: Canadian Transport Commission, "An Inquiry into the Transport Requirements of Yukon," December 15, 1983, Appendix 3.

conducted under long-term contractual arrangements (or the equivalent) by mine operators with the WP&Y. The WP&Y is highly dependent upon a handful of users, and its traffic base has to be broadened and secured against actions that would undermine its future viability. While the use of highway transport at times does appear to be more attractive to mine operators due to lower operating costs than truck/rail, such decisionmaking typically does not include any incremental highway capital and maintenance costs required to sustain such a decision, costs which are typically paid for by government, and may wind up costing more when all are evaluated as a total system. Highway expenditures by government needed to sustain trucking the output of a particular mine (expenditures beyond those required for access purposes) represent an indirect subsidization of that operation, and should be avoided if other modal alternatives, such as the WP&Y, are available and can reasonably be expected to remain available.

The long term picture is also important in considering the future of the WP&Y. The greatest tonnage potential seems to lie in lead/zinc concentrates, minerals for which there has been low market prices and an oversupply on world markets. Also, most of the lead/zinc deposits are located at appreciable distances from the WP&Y, and there may be more realistic transport routes available. Copper prices have also been low during recent years. The potential of molybdenum and tungsten is relatively limited, both because the market is small and the concentrate tonnages are low. Futhermore, the tungsten deposits are located at a considerable distance from the WP&Y. If the mineral has to move 300-400 miles to reach the WP&Y railhead at Utah Spur, transporting the mineral an additional 110 miles to Skagway and avoiding the mode change does make operational sense.

The WP&Y was built to provide passenger access to the Yukon interior. Today's needs are to transport minerals to supply the U.S. and Canada as well as to compete in international markets. It is too short a railroad and its route structure does not have the orientation required for domestic freight. It is not well located to serve future mining activities in the Yukon, which are dispersed over a wide area. Consequently, its future freight potential must be considered as being limited. If a sizeable mineral concentrate business were to develop in the future, it would seem more appropriate to serve this business by extending the British Columbia Railway line which presently terminates at Fort Nelson, British Columbia, northward to a centralized location in the southern portion of the Yukon, or by utilizing the Klondike Highway to maximize economies offered by marine access.

Action to restore freight service on the WP&Y must be initiated by the Canadian Federal and/or Provincial Governments and minerals producers, and include an appropriate financing package. Alaska cannot be placed in the position of being asked, in effect, to subsidize Canadian minerals producers. (It would appear that there is little hope for reinstituting passenger service due to the loss of the traffic base to other modes, although a 24 mile run from Skagway to Lake Bennet might be possible especially in the Summer.) Hence, the finding that WP&Y's present and future direct economic benefits to Alaska are insufficient to justify State expenditures on this line.

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