

## KUSKOKWIM RIVER RDI HISTORICAL REFERENCE LIST

ITEM	AUTHOR	YEAR	REPORT NAME
1	Bureau of Land Management	1985	Alaska's Kuskokwim Region: A History, M. Brown, Extract.

EXTRACT\* OF

**ALASKA'S  
KUSKOKWIM RIVER REGION**

**A History**

**By**

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**1985**

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\* The original document is over 800 pages in length. This extract was compiled to support the State of Alaska's Recordable Disclaimer of Interest Applications for the Kuskokwim River. The font type and paragraph spacing has been modified to reduce paper. A full version of this document is available through the Alaska Resources Library & Information Services (ARLIS).

## EDITOR'S INTRODUCTION

The U.S. Bureau of Land Management (BLM) is currently transferring title to about 145 million acres of land to the State of Alaska Native corporations in compliance with the Alaska Statehood Act of 1958 and the Alaska Native Claims Settlement Act of 1971, respectively. A serious impediment to the conveyance of land title is the unknown acreage and location of nontidal navigable waters in Alaska.

By authority of the Statehood Act of 1958 and the Submerged Lands Act of 1953, the State of Alaska owns the beds of tidal waters and nontidal navigable waters unreserved as of January 3, 1959, the date of Alaska Statehood. Submerged land acreage of navigable waters unreserved as of this date may not be charged against the State's entitlement under the Statehood Act; and by virtue of the fact that ownership of these submerged lands passed to the State in 1959, may not be included in conveyances of land title. On the other hand, lands underlying nonnavigable waters as well as those submerged lands in a reserved status in 1959, remain in the public domain or in trust for the riparian owner.

During the 1960s the BLM made determinations of navigability for water bodies on lands to be conveyed to the State. After the passage of the Alaska Native Claims Settlement Act and the subsequent promulgation of regulations requiring, among other things, the BLM to make navigability determinations for waterways on lands to be conveyed to the Native corporations and to account for the submerged land acreage, the State quickly asserted its claim to potentially navigable waters on ANCSA-selected lands by two methods. First, the State provided the BLM with its definition of navigable waterways and a set of maps known as Water Delineation Maps illustrating waterways on ANCSA-selected lands that the State considered to be navigable. Second, the State routinely notified Native corporations in the instance of a proposed conveyance that the BLM may be attempting to convey lands underlying navigable waters owned by the State since 1959. Well aware of the differences between the BLM and State definitions of navigability, and the State's position that these differences must one day be resolved by the courts, many corporations excluded in their selection applications most waterways identified by the State as navigable. Consequently, whenever the BLM made a determination of navigability contrary to the State's claim and charged the submerged land acreage to the corporation's land entitlement, the corporation appealed to the Alaska Native Claims

Appeal Board for a ruling on the question whether the submerged lands were in fact Federal lands or State lands in 1959.

In the late 1970s, as the BLM prepared to resume land conveyances to the State and to accelerate conveyances to the Native corporations, the BLM and the State agreed that there was a need for more information about the physical character and history of waterways as routes of travel and transportation. This information would satisfy BLM's need to make timely determinations of navigability; and it would facilitate the BLM's and the State's need to develop test cases of navigability for the courts. Thus, in 1977, the BLM let a major contract to the University of Alaska to research pertinent information from the literature about Alaska waterways. Completing the project in early 1979, the contractor provided BLM with a great deal of valuable information about Alaskan water bodies, information that was and is used to support determinations of navigability in the land conveyance programs. However, the contractor provided insufficient information about many minor waterways, some of them located on lands to be conveyed to the State or the Native corporations. The need for additional documentary research and possibly field investigations was apparent.

In 1979, representatives of the BLM and the State of Alaska met several times to discuss and decide upon methods by which: 1) the BLM could make timely determinations of navigability in connection with the land conveyance programs; 2) the BLM and the State could reach agreement on what waterways were clearly navigable and nonnavigable under BLM and State criteria; and 3) the BLM and the State could identify water bodies that best reflect differences in the BLM'S and the State's criteria of navigability for the purpose of litigation. The decisions that were made then are still valid today, although some have been modified as necessary to take into account unexpected developments.

Three alternatives in establishing priorities for administrative determinations of navigability were identified: 1) make determinations only for water bodies on land to be conveyed to the Native corporations and the State on a township-by township basis; 2) make determinations for all nontidal water bodies in Alaska on a regional or subregional basis; or 3) make determinations for nontidal water bodies on a township-by-township basis as well as on a regional or subregional basis.

It was decided to adopt the third alternative. This entailed the formation of three independent but interacting teams: one in the BLM State Office to make navigability recommendations in connection with the State and ANCSA land conveyance programs; the others in the BLM State Office and State Department of Natural Resources to prepare factual reports on waterways in a region or subregion. These highly detailed reports, based upon the best information available, are useful to the BLM in making recommendations for waterways on land to be conveyed to the Native corporations and the State. Once the final draft of the report has the approval of the State and other parties as a technically adequate document, the BLM will have the means to make reliable and consistent determinations for entire waterways. This in turn will give the State the opportunity to identify waterways that best illustrate differences in BLM and State criteria of navigability for development of test cases. As these differences are settled by the courts, the BLM and State criteria will eventually be the same. Whatever decisions are reached by the courts, the BLM will have a source document on which to rely in reviewing the validity of previous determinations in light of the courts decisions.

While the first alternative would have met the immediate need for determinations in land conveyance programs, it would have in the long run generated many problems of an administrative and legal nature. With an accelerated land conveyance program, it would have been impossible to collect and analyze a great deal of information about water bodies, much less to prepare thoroughly documented and well-reasoned rationales for determinations. The high probability that incorrect and inconsistent determinations would be made, and that disputes over the fact relating to a waterway would be taken to the courts, was all too clear. In this eventuality, the BLM would have been repeatedly forced to research and write reports to defend (or change) determinations of navigability for the use of the Regional Solicitor. On the other hand, the second alternative, which would entail the preparation of reports on a watershed, subregional, or regional basis, would not have met the pressing need for navigability determinations on State- and ANCSA-selected lands. Without a much larger staff, the BLM would not have been able to research, analyze, and synthesize a great deal of information into written reports needed to determine navigable and nonnavigable waters on these lands. These lands are scattered throughout Alaska, and involve many waterways--too many to be covered adequately in a short time frame. Yet it is clear that these reports will be needed

more and more as questions of navigability are brought before the courts, and as land managers reviewing proposed actions on a waterway attempt to determine ownership of the submerged lands.

Alaska's Kuskokwim River Region is the third such report issued by the BLM. Researched and written by the lead historian in the BLM Alaska State Office with the assistance of Joan Antonson, the report summarizes geographic knowledge about the region and its water bodies; traces the history of explorations, mining, hunting, fishing, and trapping activities, as well as communities; describes in detail water and land transportation developments in the region; and finally describes the process by which the BLM reached a determination of navigability for water bodies on land conveyed or in the final stages of being conveyed to the State or Native village and regional corporations. The BLM has relied upon some of the information in this report in making navigability determinations for water bodies on land conveyed or to be conveyed; it will continue to consult the report as needed in future conveyances. Later, the report will be revised to take into account public comments and to include information from the BLM land records pertaining to those water bodies about which little or nothing is presently known.

C. Michael Brown  
Lead Historian

## INTRODUCTION

*(See page 1 of original document)*

This report is designed to aid government land managers in the identification of navigable waters in the Kuskokwim River region. The report describes the geography and history of exploration in the area, presents an historical overview of the mining industry, identifies the principal settlements, and traces the history of water and land transportation developments in the region. In addition, the report summarizes the steps by which the U.S. Bureau of Land Management (BLM) reached navigability determinations for water bodies in the region.

Under the provisions of the Alaska Native Claims Settlement Act, Native village and regional corporations selected most of the land along the Kuskokwim River and Bay. Most of these lands have been conveyed or are in the last stages of being conveyed to the corporations. This means that the BLM has made navigability determinations for title purposes for most tributaries of the Kuskokwim River and rivers and creeks emptying into Kuskokwim Bay. This report identifies the navigable waters in the region; it does not include a discussion of every river, creek, or lake that the BLM considers or determined to be nonnavigable. Only those nonnavigable water bodies about which there is documentary information, is described in the report. Thus, if the water body is located on land selected by or conveyed to a Native village or regional corporation, and if it is not specifically mentioned in Chapter Six of this report, the reader is correct in assuming that the BLM considers the water body to be nonnavigable.

The report incorporates much of the information presented in a report on the upper Kuskokwim basin which the BLM released on May 6, 1980. Researched and written by the lead historian in the BLM Alaska State Office, the upper Kuskokwim report was originally intended to include the entire Kuskokwim basin within its scope. However, following the BLM's decision to convey lands to MTNT, Incorporated and Doyon, Limited, the Native corporations appealed many of the BLM's determinations of navigability in the area to the Alaska Native Claims Appeal Board. This action, together with a recent decision of the Board on the navigability of the Nation and Kandik rivers in central Alaska, which significantly modified Departmental navigability criteria, spurred the BLM to reconsider its position on

the navigability of water bodies in the area. Research on the lower Kuskokwim region was thus suspended and the report on the upper Kuskokwim basin written. This report was used to make additional navigability determinations for water bodies in lands selected by the Native corporations.

From early 1980 to mid-1981, Joan Antonson researched and wrote a draft report on the middle and lower Kuskokwim areas before terminating her employment with the BLM. The lead historian subsequently merged the upper Kuskokwim report with Antonson's report, and expanded the report with information obtained from BLM land records.

This report draws upon a wide variety of sources. Local newspapers, Geological Survey bulletins, records of the Coast and Geodetic Survey, Alaska Road Commission, Corps of Engineers, and the BLM, and the pioneering works of Wendell H. Oswalt, proved to be the most valuable sources of information. The papers of the Territorial governors, the Fish and Wildlife Service, and the Alaska Department of Fish and Game were examined but not researched to completion. These records, in addition to those of the BLM pertaining to Native allotments, headquarters, and trade and manufacturing sites, and small tracts, may yield additional pertinent information about use of water bodies in the region for the purpose of travel.

Many people contributed their time and skills to the preparation of this report. The librarians of the Alaska Resources Library, the Z. J. Loussac Library, and the librarians of the Alaska at Anchorage and Fairbanks, aided the writer in locating rare books. Joan Antonson's research notes and draft report greatly facilitated the writer's task. Chapter Four is largely her work. James Ducker and Dwight Tuttle provided constructive criticisms and encouragement. Last, and most important, the secretarial staffs of the BLM Division of Resources and Division of ANCSA and State Conveyances gave exceptional service in typing the various drafts.

## CHAPTER ONE THE KUSKOKWIM RIVER REGION

*(See page 4 of original document)*

Located in Southwest Alaska, the Kuskokwim River basin occupies an area of 50,000 square miles, or about 11 percent of the total area of Alaska. The basin is drained by the Kuskokwim River and its many tributaries, and includes the streams and lakes along the Bering Sea coast from Cape Newenham in the south to Ninglick River in the north.

The Kuskokwim River originates in a large crescent-shaped basin bordered by the precipitous mountains of the Alaska Range on the south and east, and the lower Kuskokwim Mountains on the north and west. The Alaska Range mountains-Mt. McKinley or Mt. Denali being the most spectacular--reach their highest elevations east of the upper Kuskokwim basin and tend to decrease in elevation in the southwest, where the Nushagak Hills bridge the gap between the Alaska Range and the Kuskokwim Mountains and form the southern border of the Kuskokwim region. The Ahklun Mountains, a subsystem of the Kuskokwim Mountains begin at Cape Newenham on the Bering Sea. They give way in the northeast to the Kilbuck Mountains and then to the Kuskokwim Mountains proper. Bisected by the Kuskokwim River near Sleetmute, the Kuskokwim Mountains extend northeast well into central Alaska. Sometimes described as smooth, rolling hills, the mountains have an average elevation of fifteen hundred feet, only a few exceeding three thousand feet in elevation.

North and west of the Ahklun and Kilbuck mountains is the Yukon-Kuskokwim delta, a vast lowland of countless landlocked and flowing lakes varying in size from less than an acre to thousands of acres, long meandering streams that head in lakes or bog flats, and long interconnected and dead-end sloughs of the Kuskokwim River and its tributaries. Between 40 and 50 percent of this area is covered by water. Just where the Kuskokwim delta ends and the Yukon delta begins cannot easily be determined. 1/

The waters of innumerable lakes and ponds, swift glacial rivers draining the steep slopes of mountains in the Alaska Range, and clearwater streams draining the Kuskokwim Mountains and small lakes, collect to form the Kuskokwim River. The Kuskokwim River is the second longest river in Alaska, flowing 540 miles in a southwesterly

direction to empty its heavily silt-laden waters into the Bering Sea. Much of its length is due to the meandering character of the river. McGrath and Bethel are located about 250 miles in an air line from one another. By river, the distance is about 433 miles.

From McGrath to the mouth of Holitna River, the river follows the base of the Kuskokwim Mountains in a southwesterly direction. In this section, the river current is slow and sluggish as far as the mouth of Swift River, and then tends to increase in strength and speed as it swings to the west. The largest tributaries of the river in this reach enter from the south with moderately swift currents. The Swift and Stony rivers head in glaciers in the Alaska Range; the Selatna, Katlitna, and Tatlawiksuk rivers rise in the foothills of the Alaska Range. The Hohtna River, the largest tributary of the Kuskokwim River, rises in the Nushagak Hills and flows northerly in a wide valley to empty into the Kuskokwim River near Sleetmute. Northern tributaries in this stretch of the Kuskokwim River include the Black and Nunsatuk rivers, both of which head in low hills and meander in a southeasterly direction.

Near the village of Sleetmute, the Kuskokwim River bisects the Kuskokwim Mountains. The river heads northwesterly for forty-six miles before making what is called the "Great Bend" to flow about thirty-four miles in a southerly course. Generally confined to a single channel bounded by steep banks or bluffs, this stretch of the river has attracted attention as a potential dam site. In the 1950s, the U.S. Bureau of Reclamation and U.S. Army Corps of Engineers identified a possible site about eight miles above the village of Crooked Creek for a hydroelectric facility with a potential capacity of 850,000 kilowatts. 2/ Five important streams enter the Kuskokwim River in this reach. George River, Crooked Creek, and Owhat River head in the Kuskokwim Mountains and flow south in shallow valleys. The Holokuk and Aniak rivers enter the Kuskokwim River from the south shortly after the river emerges from the mountains. The former river heads in the Kuskokwim Mountains and flows northwesterly in a narrow valley; the latter river heads in the Kilbuck Mountains and flows northerly in a wide valley.

Upon leaving the mountains, the Kuskokwim River soon resumes its southwesterly course to meander across the Yukon-Kuskokwim delta, at one point near Kalskag Village approaching within twenty-five miles of the Yukon River. Silt and mud islands increase in number; the main channel of the river is less definite; the channel is two miles wide in places; and the current decreases to about four miles per hour. Numerous sloughs branch off the main river,

some of them, like the Gweek River, meandering for many miles across the delta before returning to the Kuskokwim River. Most of the northern tributaries, the Johnson and Pikmiktalik rivers being the principal ones, meander across the delta in sinuous channels with low banks, receiving in their course the waters of many lake-fed creeks. Some of these streams head in a series of interconnected lakes, and some head in other streams that eventually flow into the Yukon River. Southern tributaries, including the Tuluksak, Kisaralik, and Kwethluk rivers, head in the Kilbuck Mountains and generally flow in a northwesterly direction. In the mountains the rivers tend to be swift. In the lowlands the rivers are similar in character to northern tributaries of the Kuskokwim River, flowing sluggishly between low banks in a sinuous course to empty into the Kuskokwim River or, as in the case of the Tuluksak, Kisaralik, and Kwethluk rivers, into large and deep sloughs of the Kuskokwim River. 3/

The Kuskokwim River empties into Kuskokwim Bay from the north through a number of channels dispersed among mud and sand bars extending six to eight miles out from shore. Beacon Point in Eek Channel on the east bank and Popokamiut site, an abandoned village on the west shore, generally mark the points where the river ends and the bay begins.

Extensive tidal flats border the coast of Kuskokwim Bay. Trending to the south, the coast line is occasionally indented by small bays, namely Jacksmith Bay and Carter Bay, both of which are open to the sea, and Goodnews Bay and Chagvan Bay, both nearly enclosed by spits. Extensive mud flats make much of the coast inaccessible to an but small boats. The water along the coast is generally shallow, averaging about eight feet in depth. Deeper channels lead to a number of rivers emptying into Kuskokwim Bay and other smaller bays. Many of the rivers in this area head in the lower limits of the Kuskokwim Mountains. The principal rivers--Kanektok, Eek, Arolik, and Goodnews--head in the Ahklun Mountains, most of them in small lakes, and tend to flow westerly to the sea. Upon reaching the lake-studded lowlands, the rivers meander considerably, sometimes nearly doubling back upon themselves. Eek River empties into Eek Channel in Kuskokwim Bay. Both Kanektok River and Arolik River empty directly into Kuskokwim Bay. Goodnews River empties into Goodnews Bay. 4/

From the mouth of the Kuskokwim River to the mouth of Ninghck River, the Bering Sea coast trends westerly as far as Kinak Bay and then northerly. Tidal flats six or more miles wide border the coast from Kinak Bay to the mouth of Kolavinarak River. Numerous rivers and creeks empty into Kuskokwim Bay and Etohn Strait in this area, the principal ones being Ishkowik, Kongnignanohk, Anohwahk, Kuguklik, Kinia, and Kinak rivers. All of these streams head in lakes of widely varying size, meander in an extremely sinuous course, and are shallow at their mouths. All are fed by numerous lake-fed creeks or rivers.

Nunivak Island is separated from the mainland by Etohn Strait. A series of volcanic benches cover the island; the highest mountains, almost seventeen hundred feet in elevation, are in the center. Etohn Strait is affected by powerful ocean currents and rarely freezes over. Nelson Island, another large island, is cut off from the mainland by Kolavinarak and Ninghck rivers, both of which drain Baird Inlet northeast of the island.

All rivers and creeks emptying into the Bering Sea are tidally affected. The Kuskokwim River itself is reported to be tidally influenced as far as the mouth of Tuluksak River. Tides in the mouth of the river vary from +14.3 feet to -0.7 feet with an average range of 5.2 feet. 5/

Tributaries of the lower reaches of the Kuskokwim River are also tidally affected. The extent of tidal influence in the case of most streams in this area is presently unknown. Because of the tides and ocean currents, the channels in the bay and river can change yearly.

Cold and dry winters and moderately warm and wet summers are characteristic of the Kuskokwim River region. In the delta more precipitation occurs, the summers are somewhat cooler, and the winters are warmer. Summer precipitation in the entire area is low, averaging nineteen inches annually, most of it falling in July, August, and September. Annual snowfall averages fifty-five inches. At Bethel, an average of 244 days a year are cloudy, 66 partly cloudy, and only 55 clear. The growing season for the central and lower Kuskokwim River areas is about ninety days. 6/

The major portion of the annual run-off from streams in the lower and central Kuskokwim River areas occurs in late May and early June when the ice on the Kuskokwim River breaks up. Ice jams are a major problem and flooding of the lowlands is almost an annual event. On several occasions floodwaters threatened Bethel to the extent

that airplanes were used to drop bombs on the ice jams. After this period, stream run-off diminishes dramatically.

The Kuskokwim River usually freezes in late October. 7/

Permafrost, or permanently frozen ground, is extensive in the lowlands. Because of permafrost, low gradients, and poor drainage, the Kuskokwim lowlands are waterlogged, making overland travel in these areas during the summer extremely difficult if not impossible. In the central Kuskokwim River area, river bottomlands and adjacent slopes to an altitude of one thousand feet are forested by white spruce and birch trees. The largest stands of timber along the Kuskokwim River are in this area. Dense willow and alder thickets, and a thick undergrowth of ferns, mosses, and lichens are also found. Lichens and mosses grow on mountain slopes above one thousand feet. High mountain peaks are usually barren of vegetation. 8/

Between Kalskag and Bethel, stands of spruce and birch trees are limited to the banks of the Kuskokwim River. Below Bethel, willow and alder thickets occur sporadically along the river. River islands below Kalskag occasionally support stands of poplars. Grasses, sedges, mosses, lichens, and small scrub willow and alder thickets prevail in the Yukon-Kuskokwim delta. Grasses often grow in the lakes and streams. 9/

Moose, caribou, black bears, wolves, and wolverines are found in the uplands and mountains, rarely on the lowlands. Small animals include beaver, red and Arctic fox, marten, land otter, muskrat, mink, lynx, short-tailed weasel, and snowshoe and Arctic hares. Mink, in particular, are prevalent in the delta. Arctic birds, such as ptarmigan and grouse, are found in the Kuskokwim River region, seasonally joined by large numbers of ducks, geese, and shorebirds. The Yukon-Kuskokwim delta is one of the most important waterfowl habitats on the North American continent. Rivers and lakes in the area teem with fish. All five species of Pacific salmon annually ascend the Kuskokwim River. Blackfish, whitefish, sheefish, rainbow trout, Arctic char, and Dolly Varden are numerous. 10/

Mineral resources in the region include platinum, mercury, gold, antimony, coal, arsenic, lead, silver, copper, zinc, tin, and tungsten. The only significant source of platinum in the United States is found in the Goodnews Bay area. The only significant source of mercury in Alaska is located in the central Kuskokwim River area. Gravel is found on the Kanektok, Goodnews, Kwethluk, Kisaralik, Tuluksak, Holitna, Stony, Swift, and Eek rivers. 11/

Several reserves in the lower Kuskokwim basin have been created to protect wildlife and waterfowl habitats. Executive Order 5095, signed on April 15, 1929, reserved all of Nunivak Island for the protection of waterfowl and furbearing animals for the use of the U.S. Department of Agriculture in conducting reindeer, caribou, and musk ox experiments. Two small islands, Nunivachak and Krigigak near the mouth of Ninglick River in Hazen Bay, were reserved on December 14, 1937 as a migratory waterfowl refuge. On December 6, 1960, the Kuskokwim National Wildlife Refuge--renamed the Clarence Rhode National Wildlife Refuge in 1961--was established to preserve one of the major migratory bird nesting areas in North America. The refuges, encompassing 1.8 million acres, included the area along the Bering Sea coast from Cape Romanzof south to Ninghck River. In 1969, the refuge was enlarged by 1,017,000 acres, including most of Nelson Island and land west of Dall Lake in the Kuskokwim delta. In 1980, the Nunivak Island, Clarence Rhode, and Hazen Bay refuges were combined into the Yukon Delta National Wildlife Refuge encompassing over 13.4 million acres. This large reservation is for the conservation of fish and wildlife populations including whistling swans, emperor, white-fronted, and Canadian geese, black brant, seabirds, shorebirds, salmon, musk ox, and marine mammals.

One other refuge in the Kuskokwim region is the Cape Newenham National Wildlife Refuge. Created on January 20, 1969, this 265,000-acre reserve is, like the others, to conserve fish and wildlife populations and habitats. The refuge includes Cape Newenham and land adjacent to Chagvan Bay. High cliffs provide nesting sites for one of the largest colonies of seabirds in the North Pacific. In 1980, this refuge was incorporated into the Togiak National Wildlife Refuge, which encompasses 4,105,000 acres of land. 12/

Chapter One -- The Kuskokwim River Region

1. Joint Federal-State Land Use Planning Commission, Alaska Regional Profiles: Southwest Region, ed. Lydia L. Selkregg (Anchorage: University of Alaska, Arctic Environmental Information and Data Center, 1976), pp. 37, 106, 109. Lakes in the Yukon-Kuskokwim delta with an area equal to or greater than ten square miles include Kulik Lake, ten square miles; Kayigyalik Lake, nineteen square miles; Nunavakpak Lake, fifty-three square miles; Takslesluk Lake, thirty-one square miles; and Whitefish Lake, thirty-three square miles. Much of the information on the physical characteristics of the Kuskokwim River Region conveyed in the following pages is derived from the U.S. Geological Survey maps issued since the 1950s. River drainage area data come from the above cited Land Use Planning Commission publication.
2. U.S. Army, Corps of Engineers, Alaska District, Interim Report No.7: Yukon and Kuskokwim River Basins, Alaska, 88th Cong., 2d sess., H. Doc. 218 (Washington, D.C.: Government Printing Office, 1964), p. 18.
3. Joint Federal-State Land Use Planning Commission, Alaska Regional Profiles: Southwest Region, p. 105.
4. Ibid.; John B. Mertie, Jr., The Goodnews Platinum Deposits, U.S. Geological Survey Bulletin 918 (Washington, D.C.: GPO, 1940), pp. 4-5; U.S. Department of Commerce, United States Coast Pilot 9 Pacific and Arctic Coasts, Alaska: Cape Spencer to Beaufort Sea, Ninth Ed. (Washington, D.C.: National Ocean Survey, 1979), pp. 311-31.
5. Joint Federal-State Land Use Planning Commission, Alaska Regional Profiles: Southwest Region, p. 31; Richard A. Berg, "The Economic Base and Development of Alaska's Kuskokwim Basin with Particular Emphasis upon the Period 1950 to 1964" (M A. Thesis, University of Alaska, Fairbanks, 1965), p. 26.
6. Francis S. L. Williamson, "Ecological Distribution of Birds in Napaskiak Area of the Kuskokwim River Delta, Alaska," Condor, 59 (September-October 1957): 319-320; Joint Federal-State Land Use

- Planning Commission, Alaska Regional Profiles: Southwest Region, pp. 13, 23, 109; U.S. Department of Commerce, United States Coast Pilot 9, pp. 313-15.
7. U.S. Army, Corps of Engineers, Interim Report No. 7, p. 88; Joint Federal-State Land Use Planning Commission, Alaska Regional Profiles: Southwest Region, p. 143.
  8. Ibid., pp. 154-155, 165; Wallace M. Cady, et al., The Central Kuskokwim Region, Alaska: An Account of Its Geography, Geology, Geomorphology, and Mineral Resources Including the Occurrence and Mining of Quicksilver, U.S. Geological Survey Professional Paper 268 (Washington, D.C.: GPO, 1955), pp. 9, 11-12.
  9. Alaska Geographic Society, The Yukon-Kuskokwim Delta, Robert A. Henning, et al., eds. (Anchorage: Alaska Northwest Publishing Co., 1979), p. 9; Lado A. Kozely, Over-all Economic Development Plan Relating to the Yukon-Kuskokwim River Basins within the Jurisdiction of the Bureau of Indian Affairs, Bethel District Office (Bethel: Bureau of Indian Affairs, 1964), p. 27; John J. Burns, "Pingos in the Yukon-Kuskokwim Delta, Alaska: Their Plant Succession and Use by Mink," Arctic, 17 (September 1964): 203; Joint Federal-State Land Use Planning Commission, Alaska Regional Profiles: Southwest Region, pp. 154-155.
  10. Ibid., pp. 170-171.
  11. Ibid., pp. 92-93; Alaska Geographic Society, The Yukon-Kuskokwim Delta, p. 18.
  12. Executive Order 5095, April 15, 1929; Executive Order 7770, December 14, 1977; Public Land Order 2213, December 6, 1960; Public Land Order 4583, January 20, 1969; Public Land Order 4584, January 20, 1969.

## CHAPTER THREE

### MINING

*(See page 101 of original document)*

Gold, mercury, and platinum were known to exist in the Kuskokwim region long before they were actually developed. The Russian fur traders knew of the existence of cinnabar near Kolmakof as early as 1838, and may have discovered gold as well. Later American prospectors believed that Russian traders had discovered gold in 1832 in a stream known as the Yellow River, perhaps present-day Aniak River or Ophir Creek. In 1914, George A. Fredericks, a trader at Georgetown, said that an old blind Native once told him that the Russians had found gold in both New York Creek and Black River about 1844. 1/ If the Russians in fact discovered gold on any of the streams in the Kuskokwim basin, they did not seriously develop the finds partly because of the official proscription against mining and partly because of the lack of proper mining equipment.

After the purchase of Alaska in 1867, American prospectors investigated Russian reports of cinnabar in the Kuskokwim basin and made desultory tests of potential gold-bearing streams. In the summer of 1881, George C. King with two partners ascended the Kuskokwim River in a small boat to Kolmakof. They found cinnabar deposits, but not in paying quantities. Reinhold Sепare, the first Alaska Commercial Company agent at Kolmakof, subsequently mined the deposit, and reportedly shipped several tons of the ore to a smelter in California. The ore assayed at \$11 of mercury per ton--not enough to warrant the high cost of mining the deposit. A later trader at Kolmakof, Edward Lind, also attempted to mine the deposit, but soon gave it up as an unprofitable venture. 2/

Of the numerous prospecting parties that crossed Chilkoot Pass in the 1880s, only a few ventured into the Kuskokwim basin. Sometime early in the decade, partners George Marks and Benjamin Beach crossed the Yukon-Kuskokwim portage and ascended the Kuskokwim River approximately 250 miles above Kolmakof in a two-place bidarka before the loss of their outfit forced their return to Sепare's post. About the same time, George G. Langtry, a member of the first party of prospectors to cross Chilkoot Pass in 1880, left Nushagak for the Kuskokwim basin, and prospected several southern tributaries of the river, particularly the Holitna River. In 1889, Frank Densmore, a veteran prospector of the upper Yukon River area, led a party of gold seekers from the Tanana River to the upper

Kuskokwim and thence downriver to the Yukon-Kuskokwim portage. Percy Walker, Henry Mellish, and Al King later reached the Kuskokwim River by the same route. They descended the river to its mouth, followed the coast to the Nushagak River, and then ascended that river to the Mulchatna River. 3/

Doubtlessly there were other men who explored the basin for precious metals. Their names are now long forgotten, and their experiences unrecorded. These early prospectors had to travel great distances in a region where trading posts were few and distant, and supplies essential for prospecting were seldom available. Unless they were prepared to spend years in the region, isolated from other white men and subject to many dangers, these prospectors devoted little time to panning the gravels of the numerous streams in the region. Most preferred to work the newly-discovered streams of the Fortymile River and Birch Creek in the Yukon valley, and Turnagain Arm in Cook Inlet where the social amenities of mining camps were available.

The Klondike Gold Rush of 1897-98, more than any other event, set the stage for the development of mining in the Kuskokwim basin. Tens of thousands of men, women, and children rushed to Alaska upon learning of the famous strike on the Klondike River in Canada. While the majority were bound for the Klondike district, and in fact reached their destination, many people simply went to Alaska with the belief that Eldorado was just over the mountain pass. They congregated primarily in the Copper River, Yukon River, and Seward Peninsula regions and with time and much luck discovered rich deposits of gold, copper, coal, and oil. These discoveries sparked a number of stampedes, notably the Nome rush of 1899-1900 and the Fairbanks rush of 1902-03.

There were many gold rushes in Alaska during these years and not all of them were warranted. Oftentimes the appearance of a solitary prospector with a poke of gold in a new mining camp was enough to set off a minor rush. Sometimes it took only a rumor. The first gold rush to the Kuskokwim River basin originated with such a rumor. This gold rush, known variously as the "Yellow River," "Pete McDonald," or "Jack Burke" stampede, began late in the summer of 1900. Upon hearing rumors that someone had found the legendary Yellow River, a number of prospectors left Nome for the Kuskokwim River. News of the rush spread rapidly, and soon men along the Yukon River as far as Rampart were heading for the Kuskokwim basin. It mattered little that the location of Yellow River was unknown. In their search for gold, the prospectors traveled far and wide in the Kuskokwim valley, some

ascending the river as far as Stony River. Experiencing great hardships during the winter of 1900-01, many men returned to Nome with the first signs of spring. An unknown number remained in the region to continue the search for gold. 4/

This rush to the Kuskokwim resulted in a number of gold discoveries. Prospectors found favorable prospects in the foothills of Mount McKinley reportedly not far from the North Fork, on Arolik River in Kuskokwim Bay, and on Ophir Creek on the lower Kuskokwim River. The Hohtna River also attracted a number of prospectors. In 1903, William R. Buckman reported his discovery of placer gold on the Holitna to the U.S. Geological Survey (USGS), including with his letter a hand-drawn map of the area. 5/ With the organization of at least one trading firm, in at Bethel about 1901, the prospectors were able to acquire needed supplies and equipment in return for their winter catch of furs, and thus better equipped, begin the systematic testing of local streams for placer gold.

Not all prospectors confined their search to gold. Some prospected for cinnabar. In 1901, Duncan McDonnell located the cinnabar deposit near Kolmakof that had been mined in earlier years by the fur traders. He sent samples of the ore to Stanford University, which assayed it at \$341 per ton. Samples from an old dump assayed between \$20 and \$720 per ton. In 1904, McDonnell's claims were reportedly bonded to a "well known Milwaukee company," but so far as is known, the property was never developed. 6/

More significant was the discovery of a large cinnabar deposit on the north bank of the Kuskokwim River, not far from the mouth of the Holitna River. In 1905 or 1906, Eugene W. Parks located the deposit, and sent five tons of ore for testing. According to the USGS, the deposit was "of significant value." 7/ Over the next thirty years, prospectors discovered other cinnabar deposits, the majority in the vicinity of Parks' claims. Although some cinnabar was mined after 1906, large-scale mining of the deposits did not occur until the price of mercury rose during World War II.

It was not until 1906 that prospectors finally found a bonanza --- not on the tributaries of the Kuskokwim River but on the head of the Innoko River. In the summer of that year, a prospecting party consisting of Thomas Gane, F. C. H. Spencer, Mike Roke, and John Maki went into the headwaters of the Innoko River, probably by way of Takotna River, and found colors a short distance below the mouth of Ganes Creek. In August or September, they

located the discovery claim on the creek, and returned to a trading post on the Kuskokwim River at the mouth of Takotna River in order to replenish their supplies. Finding a shortage of supplies on the river, the party returned to the Innoko River and followed that stream to the Yukon River. Sometime during the winter of 1906-07, they returned to Ganes Creek with a sled of supplies.

During the trip, the discoverers of the Ganes Creek placers must have encountered a number of other prospectors, for news of the gold strike spread rapidly. The result was a gold rush to the Innoko River in 1907. During the months of February and March 1907, prospectors in the Kuskokwim River basin stampeded to Ganes Creek, followed by a number of men from Nulato on the Yukon River. In the spring of 1907, A. Balke reported the strike to Nome, and the news was quickly telegraphed to Fairbanks. About one thousand people from Nome and Fairbanks, most of them from the latter place, rushed to the new diggings. Ophir, Spruce, and Little creeks, all tributaries of the Innoko River, were staked in the summer of 1907. 8/

The discovery of gold on Ophir Creek in February 1908 sparked a second stampede to the Innoko River basin. In the spring, the Kuskokwim Commercial Company (incorporated about 1909) established two stores on the Takotna River, both at the foot of trails to the head of Innoko River. With the opening of navigation on the Yukon River, half a dozen steamboats left Fairbanks with some five hundred people and several hundred tons of cargo. The steamboats ascended the Innoko River a considerable distance before low water halted their progress. The prospectors then used poling boats and horse-drawn scows to reach Ophir. Several stores were subsequently established at points on the Innoko River where the steamboats were forced by shallow water to discharge passengers and cargo. 9/

With the establishment of various trading posts and riverboat service on the Kuskokwim, Takotna, and Innoko rivers, prospectors were assured a source of supplies and equipment, and thus were able to prospect more intensively than had been possible in earlier years. According to Alfred G. Maddren, a USGS official who made a hurried trip up the Innoko River in the summer of 1908, about 150 people remained at Ophir during the winter of 1908-09, and many more were scattered throughout the Kuskokwim and Innoko basins. 10/ These prospectors were to make numerous gold discoveries, some of them causing relatively large stampedes. The stampedes to Iditarod

River in 1909, George River in 1910, and Tolstoi River in 1916, are among the most notable of the Alaska gold rush era.

The first significant gold discovery in the Kuskokwim basin was made in 1907 by a party headed for the Innoko River. Credited with the actual discovery, William Fisher found gold on Bear Creek, a tributary of the upper Tuluksak River, and with several others staked claims along Bear Creek and at the mouths of nearby Bonanza and Spruce creeks. 11/ When news of these discoveries reached the Innoko area, a number of prospectors rushed to the area, and staked claims on the headwaters of the Tuluksak, Kwethluk, and Kisaralik rivers, and on Ophir Creek.

During the Iditarod gold rush of 1909-10, many stampeders crossed the low divides at the head of the Iditarod to the Kuskokwim basin, and discovered gold on Crooked Creek and George River in 1909, New York Creek in 1910, and Aniak River in 1911. The strike on George River occasioned a stampede from Iditarod. During the summer of 1910, three to five hundred men in the Innoko and Iditarod districts headed for the Kuskokwim River. From the new settlement called Georgetown at the mouth of George River, men set out to discover placer gold on nearby Kolmakof,

Black, Oskawalik, and Holokuk rivers, and on Mission, California, Central, Fuller, and Eightmile creeks. The rush was unwarranted and short-lived. By 1912, the population around Georgetown was less than fifteen. 12/

With World War I many men left Alaska, never to return. The gold rush era came to an end, to be replaced by the corporate mining era. The small panning and sluicing operations were gradually replaced by large hydraulic and dredging operations. In 1918, the Kuskokwim Dredging Company began operations on Candle Creek, a tributary of Takotna River. When, in 1919, hard-rock mining began on Nixon Fork near McGrath, gold production statistics for the Kuskokwim basin surged upward. In 1925, the New York-Alaska Gold Dredging Company introduced a dredge on Bear Creek, a tributary of Tuluksak River, and soon became the leading producer of placer gold in the Kuskokwim basin.

Compared with other mining districts in Alaska, the Kuskokwim basin made a rather minor contribution to Alaska's over-all production of gold. Between 1908 and 1960, placer gold output from the Kuskokwim basin totaled 650,000 ounces, only 3.2 percent of all placer gold produced in Alaska. 13/ Gold mining, however, was very

significant to the local economy. Although far less productive than the U.S. Smelting, Refining and Mining Company in Fairbanks and Nome, the New York-Alaska Gold Dredging Company ranked third in placer gold production in Alaska from 1945 to 1965. 14/

Gold formed the foundation of its mining industry, but the Kuskokwim region is best known for its production of platinum and mercury. In the early 1900s, platinum was found on tributaries of the Salmon and Arolik rivers in the Goodnews Bay area. By the early 1930s ordinary sluicing methods had extracted an estimated three thousand ounces of platinum. 15/ In 1933, the Goodnews Bay Mining Company acquired more than thirty platinum claims in the Salmon River area, and began dragline operations. Eventually leasing or purchasing 150 or more claims, the company expanded operations in 1937 when it introduced a dredge on Salmon River. By 1960, over half a million ounces of platinum had been produced. When, in 1963, gold dredging operations in the Fairbanks area shut down, platinum became the major precious metal mined in Alaska. Since the 1930s, the company has been the only significant extractor of platinum in the United States. 16/

The production of mercury in the Kuskokwim basin was sporadic between 1906 and 1940. Mining was expensive, the price of mercury was usually low, and the market was limited to miners in the immediate area. By 1943, about eight hundred flasks of mercury (one flask equals seventy-six pounds of ore) had been produced. With the rise in demand and prices in World War II, mining for mercury was greatly stimulated, and discoveries of cinnabar deposits were made. In 1943 alone, mercury production in Alaska totaled 783 flasks, the majority of it coming from the Red Devil Mine near Sleetmute. By the mid-1950s, Alaskans were producing 13 percent of the mercury mined in the United States.

By 1965, Alaskan mines had produced 34,602 flasks of mercury. Of this total, the Red Devil Mine had yielded 29,950 flasks. In 1972, the mining of mercury again proved unprofitable, and most of the mines in the Kuskokwim basin ceased operations. 17/

Chapter Three -- Mining

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## CHAPTER SIX WATER TRANSPORT

*(See page 244 of original document)*

Since the days of the Russian fur traders, men with an eye to developing the resources of the Kuskokwim basin to their full potential recognized the important role that the Kuskokwim River as a natural highway would play in that development. The entrance to the river from Kuskokwim Bay was a formidable obstacle to overcome, however. Owing to the navigational hazards of shifting channels, shallow and turbid water, and extensive mud flats, in addition to the absence of harbors in Kuskokwim Bay where one could find protection from frequent storms and fogs, it was extremely risky business for marine vessels to enter the Kuskokwim River. Both Russian and American traders had in fact little success in supplying their posts by way of Kuskokwim Bay. After several attempts to locate a navigable channel to the Kuskokwim River, the Russians proceeded to develop overland routes to the river. The American traders had better success, cautiously descending the river in small Native crafts and following the coast to Warehouse Creek where they awaited ships loaded with trade goods and provisions. However, with the gold rushes to the region in the early 1900s and 1910s, the demands of miners for better transportation services resulted in the federal government initiating a project to survey and chart the navigable channels of Kuskokwim Bay. By 1915, when the government completed the survey of Kuskokwim Bay, 1/ ships usually proceeded to Bethel, where their cargo was transferred to steamboats and barges for shipment to upriver points.

The Russians investigated the feasibility of gaining access to the Kuskokwim River by way of Kuskokwim Bay in the late 1810s and early 1820s. Rejecting the idea, they subsequently relied upon first the Nushagak-Kolmakof overland routes and later the St. Michael-Kolmakof routes to supply their only station on the river. Even Fedor Kolmakov's proposal in 1834 to send goods by ship to Kuskokwim Bay for transshipment up the river by baidarkas was not seriously considered. 2/ Perhaps the company directors did not believe the Kuskokwim trade warranted the expense and danger.

Before 1846 the Russian traders on the Kuskokwim River obtained their supplies from Aleksandrovsk Redoubt at the mouth of Nushagak River. Each winter the traders set out on a long journey up the Holokuk River and

thence to the head of the Holitna River where they crossed a low pass to the headwaters of the Nushagak River. During the summer months they ascended the Holitna and its tributary, the Hoholitna. These trips were usually made in kayaks. After 1846, when Kolmakov Redoubt was transferred to the St. Michael district, the Russian traders obtained their supplies from Mikhailevosk Redoubt by way of the Yukon-Kuskokwim portage. Using large boats of skin caged baidaras, the traders usually required a month for a round trip. At least two round trips were made each summer over the route. In 1862, for example, two transports arrived at Kolmakov Redoubt -- the first in mid-June, the other in late September. Six to eleven tons of goods were annually transported over the portage to the redoubt. 3/

Within the region itself, the Russians relied upon the Kuskokwim River as a route of travel. Not long after the spring break-up, the Russian traders left Kolmakof in boats to trade at the various villages. They ascended the river as far as Vinasale where they met Indians from the upper Kuskokwim basin.

American traders entering the basin after 1867, adopted this practice but relied upon a different route in obtaining trade goods and provisions. Sometime between 1870 and 1884, the Alaska Commercial Company constructed a frame storage building near the mouth of Warehouse Creek on Kuskokwim Bay. Each year the company sent a vessel (usually the Dora) loaded with supplies to Kuskokwim Bay where it was met by the traders who paddled out to the vessel from Warehouse Creek in baidarkas. The goods were then lightered to shore and shipped on small scows up the Kuskokwim River. Beginning in 1885, Moravian missionaries at Bethel also used this method, but a thirty-five-foot sailboat, the Bethel Star, was used to transport supplies to the mission. 4/

Through the years a few attempts were made to enter the Kuskokwim River in marine vessels. The first ocean-going vessel to enter the river was the U.S. Fish Commission's steamer Albatross, a 636-ton ship with a draft of thirteen feet, which ascended the river approximately forty miles in 1889. Sometime before 1910, the Leelanaw (1,923 tons) was taken up the river as far as an island located about forty miles below Bethel. 5/

With the gold rushes in the early 1900s, several steamboats were placed on the Kuskokwim River. Perhaps the first steamboat on the river was the one owned by trader Edward Lind. In 1901, he ascended the river in the steamboat as far as the mouth of the South Fork of the Kuskokwim River. 6/ In 1905 another trader named A. H. Twitchell sailed his boat, the Zenith, with a seven-foot draft, from Nome to Bethel. In August of the same year, E.

Loomis on the steamer Research transported a small party of prospectors, including Eugene W. Parks and William Fisher, from St. Michael to Warehouse Creek where they planned to meet the bark Nicholas Thayer from Nome with a cargo of sixty tons of supplies.

The prospectors intended to transport the supplies to the upper Kuskokwim basin on a knockdown scow. It is unknown whether they were successful. They did succeed in taking the Research up the Kuskokwim River, for in 1906 it was reported to be docked at Bethel. 7/

In 1905, several companies announced plans to establish steamboat service on the Kuskokwim River. Captain W. E. Geiger of Nome organized a trading and transportation company and purchased the Quickstep, a small 225-ton steamboat with a draft of four and one-half feet. According to newspaper reports in Nome, Geiger intended to transport one hundred tons of freight and forty passengers up the Kuskokwim River to the Takotna River. He succeeded in entering the Kuskokwim River with the Quickstep that summer, but it is not known whether the steamboat reached the Takotna River. 8/ In the same year, Captain John J. Healy, the former head of the North American Trading and Transportation Company, organized the Central Alaska Company with plans to establish a string of trading posts along the Kuskokwim River. The company's large steamboat Nunivak left Seattle for the Kuskokwim River in July 1905, and succeeded in entering the river. The steamboat may have been taken as far as the upper Kuskokwim basin, for there is a Nunivak Bar in the area. In the following summer the steamboat was taken to St. Michael, never again to operate on the Kuskokwim River under the Central Alaska Company, for the company was placed into receivership sometime before October 1906. 9/

During the gold rush to the Innoko district in 1907, many people from Nome ascended the Kuskokwim and Takotna rivers to cross the short portages to the headwaters of the Innoko River. How many people and boats went over this route in 1907 is not known. Five schooners and five steamboats docked at Bethel during the summer. 10/ The Hattie B., placed on the Kuskokwim River in 1906, made at least one trip to McGrath at the mouth of the Takotna River with W. A. Vinal, the newly appointed U.S. commissioner, on board. When George and McClaren Gordon reached Bethel in late 1907, they found two sternwheel steamboats there. One had been brought from the Yukon River in the spring, and the other was brought in as a rival to the first. According to George B. Gordon, the

gold rush had proved abortive, and so the two steamboats lay at Bethel all summer. Gordon did not name the boats, but one was almost certainly the Hattie B., the boat that he took passage on from Bethel to Nome. Gordon wrote that the boat was owned by a Norwegian by the name of Houlberg. 11/

Of all the routes to the Innoko district, the Kuskokwim River was probably one of the least used in 1907. Yet few people denied that the river was destined to be the primary route. Analyzing the problems of transportation in the Innoko district, Alfred G. Maddren of the U.S. Geological Survey (USGS) explained that the river had not yet been used extensively as a route for the transportation of supplies primarily because the Kuskokwim basin had not been prospected or developed to any great extent and because the mouth of the river had not yet been charted, presenting a hazard to ocean vessels bound to Bethel. It was known that vessels with a draft of twelve feet could and did ascend the river to Bethel. Once developments in the basin warranted regular steamboat service, and if the mouth of the river was charted and marked, navigation companies may land freight at Bethel by ocean vessel, and then ship the freight upriver by steamboat to the lower Takotna River. The freight could then be transported by road or railroad to the Innoko district at any time of the year. Compared to the other routes, the Kuskokwim River was closer to the Pacific Coast ports, required fewer transfers of freight, and thus offered the possibility of lower rates for the transportation of freight from Seattle to the Innoko district. Summing up, Madden wrote: "There appears to be no question that the Kuskokwim route to the Innoko placer camps affords the most expeditious and satisfactory solution of the transportation problem, that even under present conditions there is no reason why supplies from Seattle may not be delivered at Ophir for \$100 a ton, and that with good management the actual freight cost over this route may be reduced considerably below that figure." 12/

When Maddren visited the Innoko district in 1908, the beginning of a transportation system on the Kuskokwim River was already evident. At Bethel, the Kuskokwim Trading and Transportation Company, incorporated in 1908 at Nome and backed by B. G. Tognazzi of the Golden State Products Company of San Francisco, received several hundred tons of freight from the ocean steamer Charles Hanson (192 tons; 12 feet draft). 13/ Under the management of Frank Joaquin, the company transported about forty tons of freight aboard the steamer Hattie B. to the Takotna River and thence up that river on the small steamboat Star to Takotna. 14/ Sometime later

Joaquin joined with C. H. Fowler and A. H. Twitchell to form the Kuskokwim Commercial Company. This company transported in 1909 about 150 tons of freight to its posts at Georgetown, Takotna, and Forks on the steamboat Quickstep and the Victoria. 15/

At the height of the Iditarod gold rush in 1910, the Northern Commercial Company entered the field with stores at Takotna and Georgetown, and its subsidiary, the Northern Navigation Company, placed the steamboat Lavelle Young on the Kuskokwim River. Fogs, storms, and the threat of storms prevented the captain of the steamboat from entering the Kuskokwim River. The gas schooner Meteor was finally sent about fifty miles into the bay to guide the steamboat into the river. 16/ In 1911, the Northern Commercial Company closed its stores on Susitna River, and transferred the steamboat Alice and barges Susitna No.1 and Susitna No. 2 to the Kuskokwim River. 17/ The Lavelle Young operated in 1911, but was subsequently replaced by the Alice as it was too large and expensive to operate for the Kuskokwim trade. 18/ The Lavelle Young was later converted into a cold-storage barge, which sank at its moorings near Bethel in 1930. The Alice operated on the Kuskokwim River until 1915. 19/

The steamboats of both navigation companies made connections with ocean-going vessels at Bethel. In 1910, the Monterey, A. G. Lindsay, P.J. Adler, Arcata, and Anvil were among the many vessels that docked at Bethel. 20/ In 1911, the Alaska Steamship Company announced plans to run the Santa Ana from Seattle to Bethel, and the Northern Navigation Company placed the Melville Dollar (2,000 tons) on the run to Bethel. 21/

The peak year in the Kuskokwim River trade was 1911. About 2,500 tons of merchandise valued at \$198,500 was shipped to the river that year. Tonnage figures sharply declined subsequently. Only about five hundred tons of freight was transported from Bethel to McGrath in 1914. In the spring of that year, the Northern Navigation Company closed its stores at Georgetown and Kolmakof, and transferred the stock to its station at Takotna. Steamboats on the Bethel-McGrath run seldom made more than three or four round trips a season. 22/

A pattern to water transportation service on the Kuskokwim River emerged in 1914 that continued until 1940. Small gas schooners with a capacity of about one thousand tons, such as the Ozmo and the W.H. Tupper, operated on the Seattle-Bethel run. From 1923 to 1952, the Santa Ana Steamship Company provided service between

Seattle and Bethel. A steamboat hauling about three hundred tons of freight made two or three trips each summer from Bethel to McGrath. The upriver trip usually took ten days with stops at Aniak, Crooked Creek, and Sleetmute.

In the years between the two world wars, a number of individuals provided transportation services from Bethel to outlying villages and mining camps. However, the Alaska Rivers Navigation Company dominated the Kuskokwim trade. In June 1916, Wallace C. Langley and his brother Horace brought the steamboat Tana and the barge Delta from the Yukon River to the Kuskokwim River. <sup>23/</sup> Captain Omar J. Humphrey, part-owner of the steamboat, had organized the Westward Navigation Company and planned to operate the steamboat out of Bethel, where connections were to be made with the newly-constructed Kuskokwim River (150 tons). The company soon failed as numerous problems with the new ship were experienced. The ship lost its propeller on its maiden voyage and had to be towed to Bethel. On its second voyage the ship developed engine problems in Southeast Alaska, and was forced to port for the remainder of the season. <sup>24/</sup> The Langley brothers subsequently purchased the Tana and the Delta, and in 1917 leased the Kuskokwim Commercial Company's steamboat, the Quickstep. <sup>25/</sup>

Sometime in the late 1910s, the Alaska Rivers Navigation Company was incorporated with Wallace C. Langley as president. Langley was in charge of the Tana and Captain George A. Green operated the Quickstep. <sup>26/</sup> Through the years, the company expanded operations. In 1920, the company purchased the Lavelle Young and two barges for \$7,500 from the American-Yukon Navigation Company. <sup>27/</sup> In 1923, the small steamboat Tacotna was added to the fleet; and in 1925, the Argonaut. <sup>28/</sup> In 1936, the company replaced the Tana with the Wallace Langley, a wood-burning steamboat 110 feet long with a twenty-inch draft. Constructed at Bethel, this steamboat was the largest boat on the Kuskokwim River for many years. <sup>29/</sup>

During the 1920s and 1930s, upriver tonnage consisted primarily of fuel, dredge material, and foodstuff. Downriver tonnage consisted of ore from the Nixon Fork mines. During the 1940s and 1950s, tonnage increased dramatically as military communication facilities were constructed in the region. In 1952, diesel tugs replaced the Wallace Langley, the last wood-burning steamboat to operate on Alaska rivers. Three motor tugs, namely the Peyaka, Chelan, and Hella, were used on the river. About twelve thousand tons of freight were transported on the river.

About two thousand tons were shipped to McGrath and vicinity. Downriver shipments consisted primarily of timber.

30/

During these years several navigation companies began to compete with the Alaska Rivers Navigation Company. In 1954, the Northern Commercial Company, then owning about 50 percent of Alaska Rivers stock, purchased the remaining stock, and effected a merger with an independent firm owned by Harlan J. Eggleston. The new Alaska Rivers Navigation Company, managed by Eggleston, operated five tugboats and eight barges on the Kuskokwim River. Competitors included J. P. Snow's lightering service at Bethel; C. F. Swan, Jr., who served communities below Bethel with the Sandra Lou; and the McGrath-Kuskokwim Freight Service on the upper Kuskokwim River. In 1957, about 45,000 tons of cargo, much of it consisting of gas and oil, was landed at Bethel. About one-third of the cargo was destined for upriver points. 31/

In the early 1960s, at least ten boats ranging in length from fifty to 125 feet and twenty barges operated out of Bethel. Companies operating on the river at that time included the Alaska Puget United Transportation Company at McGrath; the Snow Transportation Company at Crooked Creek; and the McGrath-Kuskokwim Freight Service, which in 1964 purchased most of the equipment of the Alaska Rivers Navigation Company. 32/

Beginning in the late 1970s the BLM made navigability determinations for sections of the Kuskokwim as the need arose in the conveyance of land to Native village and regional corporations. However, on May 6, 1980, the BLM determined that the entire length of the Kuskokwim River was navigable. This determination was based upon a BLM report entitled "Navigable and Nonnavigable Waters in the Upper Kuskokwim Basin." 33/

Chapter Seven -- Roads and Trails

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