THE STATE of ALASKA
GOVERNOR BILL WALKER

Department of Natural Resources
DIVISION OF MINING, LAND & WATER
PUBLIC ACCESS ASSERTION AND DEFENCE
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December 28, 2017

Ms. Karen Mouritsen
Acting State Director
Bureau of Land Management
222 West 7th Avenue, #13
Anchorage, Alaska 99513-7504

Subject: FF-94269 Final recordable disclaimer of interest application for a portion of the Egegik River, Becharof Lake, Unnamed outlet of Ruth Lake[1] and Ruth Lake.

Dear Ms. Mouritsen:

Pursuant to 43 CFR § 1864, the State of Alaska (State) files this application for a recordable disclaimer of interest (RDI) for the lands underlying the herein-described portions of the Becharof Lake and Egegik River system.

I. Description of Waterway

This application is submitted for the submerged lands as follows:

1) Becharof Lake: All submerged lands between the ordinary high water lines of Becharof Lake upstream from its outlet within Sec. 08, T. 25 S., R. 46 W., S.M., Alaska.

2) Egegik River: All submerged lands between the ordinary high water lines of the left and right banks of the Egegik River beginning at the outlet of Becharof Lake downstream to the limit of tidal influence.

[1] The outlet of Ruth Lake is officially unnamed in the USGS Geographic Names Information System and National Hydrography Dataset. For the purpose of this application it will be referred to as Unnamed Outlet of Ruth Lake.

3) Unnamed outlet Ruth Lake: All submerged lands between the ordinary high water lines of Unnamed outlet of Ruth Lake upstream from its outlet at Becharaof Lake within Sec. 05, T. 30 S., R. 42 W., S.M., Alaska, upstream to Ruth Lake.

4) Ruth Lake: All submerged lands between the ordinary high water lines of Ruth Lake upstream from its outlet within Sec. 09, T. 30 S., R. 42 W., S.M., Alaska.

This application includes the submerged lands and beds of all anabranches, braids and channels that carry water from the navigable lake and river and thus are a part of the navigable lake and river. Maps highlighting the pertinent waterbodies of the Becharof Lake and Egegik River system and Unnamed outlet of Ruth Lake and Ruth Lake along with a legal description of the townships and ranges underlying each waterbody are enclosed as Exhibit 1.

II. Waiver Requests

A. Survey Requirements

As previously discussed with the Bureau of Land Management (BLM) Alaska State Director, the State requests a waiver under § 1864.1-2(d) of the requirement of 43 CFR § 1864.1-2 (c)(1) for a description based on a public land survey or certified metes and bounds survey. The map and legal description submitted with this RDI application sufficiently identify the land subject to this application, but if not the recordable disclaimer can be worded appropriately to fit the circumstances without requiring a public land survey. The submerged lands for which this RDI is sought are identified by name or, if unnamed, readily identified as Becharof Lake, Egegik River, Ruth Lake and Unnamed Outlet of Ruth Lake. Navigable waterways, such as these, are typically ambulatory, thus making a public survey of them problematic and unnecessary. The U.S. Department of the Interior has issued RDIs to the State for the beds of navigable water bodies in the past without requiring a public land survey of the system or any part of it, and judgments, decisions, and decrees of the U.S. District Court, Ninth Circuit Court of Appeals, and U.S. Supreme Court finding title in the State to the beds of navigable waters have not required a public land survey.[2]

III. Basis of the State's Request for a Recordable Disclaimer of Interest

A. Navigable Waterway

[2] *See, e.g., Alaska v. United States*, 546 U.S. 413, 415-17 (2006): *Alaska v. Ahtna, Inc.*, 891 F.2d 1401 (9th Cir. 1989); *Alaska v. United States*, 662 F. Supp. 455 (D. Alaska 1987).

The State's RDI application for the submerged lands of the previously described portions of the Becharof Lake and Egegik River system is supported by the Equal Footing Doctrine, the Submerged Lands Act of 1953, the Alaska Statehood Act, the Alaska Right of Way Act of 1898, and other title navigability law. The BLM may disclaim interest in the submerged lands on any or all of those grounds.

Because these waterbodies were navigable on January 3, 1959, when Alaska became a state, the State of Alaska owns the river beds by virtue of the Equal Footing Doctrine and the Submerged Lands Act. *Alaska v. Ahtna, Inc.*, 891 F.2d 1401, 1404 (9th Cir. 1989), *cert. denied*, 495 U.S. 919 (1990). The constitutional Equal Footing Doctrine "guarantees to newly-admitted States [like Alaska] the same rights enjoyed by the original thirteen States and other previously-admitted States." *Id.* (citing *Utah v. United States*, 482 U.S. 193, 196 (1987)). "One of these rights is title ownership to the lands underlying navigable rivers." *Id.* The Submerged Lands Act of 1953 confirmed and extended "title to and ownership of the lands beneath navigable waters within the boundaries of the respective States." *Id.* (citing 43 U.S.C. § 1311(a)). "Congress explicitly provided for this rule to apply to Alaska when Alaska became a State in 1959." *Id.* (citing 48 U.S.C. Chapter 2 ("the Statehood Act") note 6(m) prec. sec. 21 (1982)). The rule includes state ownership of tidelands and the beds of marine waters up to three miles seaward of Alaska's coastline. *Id*; 43 U.S.C. §§ 1301(a), 1311(a); *United States v. California*, 436 U.S. 32, 35 n.7, 37 (1978). In addition, in the Alaska Right of Way Act of May 14, 1898, 30 Stat. 409, 43 U.S.C. §§ 942-1 to 942-9, Congress recognized application of the equal footing doctrine to Alaska. It expressly reserved, as a matter of federal law: "the title of any State that may hereafter be erected out of the Territory of Alaska, or any part thereof, to tidelands and beds of any of its navigable waters, . . . it being declared that all such rights shall continue to be held by the United States in trust for the people of any State or States which may hereafter be erected out of said Territory."

IV. Reason for the State's Request for a Recordable Disclaimer of Interest

Title to these lands vested in the State of Alaska at statehood without any particular conveying document. The lack of any title document or judgment creates a cloud on the State's title. A RDI for this land will help lift the cloud on the State's title stemming from the lack of any permanent determination of ownership and correct any conflict and uncertainty in the public's understanding of title and use, without the time, expense and trouble of engaging in quiet title litigation.

V. Determining Navigability of Water Bodies under Current Law

The question of navigability for the purpose of state ownership is decided according to federal law. *Ahtna, Inc.*, 891 F.2d at 1404 (citing *Holt State Bank*, 270 U.S. 49, 55-56 (1926)). The Supreme Court expressed the basic test for navigability in *The Daniel Ball*, 77 U.S. (19 Wall) 557, 563 (1870), as follows:

> Those rivers must be regarded as public navigable rivers in law which are navigable in fact. And they are navigable in fact when they are used, or are susceptible of being used, in their ordinary condition, as highways for commerce, over which trade and travel are or may be conducted in the customary modes of trade and travel on water.

Id. This test is applied in multiple situations, including when answering questions of title to river or streambeds under the equal footing doctrine. *See PPL Montana, LLC v. Montana*, 132 S. Ct. 1215, 1228 (2012).

Case law subsequent to *The Daniel Ball*, including *Ahtna, Inc.* and the U.S. Department of the Interior's decision in *Appeal of Doyon, Ltd.*, 86 Interior Dec. 692, 698 (ANCAB 1979), explained the meaning of that basic test. The physical character of the waterway, and in particular its capacity to be navigated, is an important factor when considering navigability for title. In the Supreme Court's most recent decision regarding navigability for title, *PPL Montana, LLC v. Montana*, it again emphasized that rivers and streams are not only navigable if they were *used* for commerce, but also if they were *susceptible* of being used as highways of commerce at the time of statehood. 132 S. Ct. at 1233. And, as previously stated by the Ninth Circuit in *Ahtna, Inc.*: "Although the river must be navigable at the time of statehood, . . . *this only means* that, at the time of statehood, *regardless of the actual use of the river*, the river must have been *susceptible* to use as a highway of commerce. * * * [I]t is not even necessary that commerce be in fact conducted . . . 'The extent of existing commerce is not the test.'" 891 F.2d at 1404 (quoting *United States v. Utah*, 283 U.S. 64, 75, 82-83 (1931) (emphasis added)). Rather, it is enough to show:

> the capacity of the rivers in their ordinary condition to meet the needs of commerce as they may arise in connection with the growth of the population, the multiplication of activities, and the development of natural resources. And this capacity may be shown by physical characteristics and experimentation as well as by the uses to which the streams have been put.

Utah, 283 U.S. at 83. Present-day recreational use is relevant to determining whether a river was susceptible to commercial use at the time of statehood if: "(1) the watercraft are meaningfully similar to those in customary use for trade and travel at the time of statehood; and (2) the river's poststatehood condition is not materially different from its physical condition at statehood." *PPL Montana, LLC*, 132 S. Ct. at 1233.

Although lengthy portages, or the need to bypass a river segment, may defeat navigability for title for that particular river segment, *id.* at 1231–32, the presence of rapids, sandbars, and other obstructions, which may make navigation difficult, but not impossible, does not destroy title navigability, *see Utah*, 283 U.S. at 86. In *Utah*, a case addressing navigability for title, the Supreme Court stated "the mere fact of the presence of . . . sandbars causing impediments to navigation does not make a river nonnavigable." 283 U.S. at 86. Although "the presence of sandbars must be taken in connection with other factors making for navigability," the "essential point is whether the natural navigation of the river is such that it affords a channel for useful commerce." *Id*; *see also Oregon v. Riverfront Protection Ass'n*, 672 F.2d 792, 795 (9th Cir. 1982) (relying on the use of the McKenzie River in Oregon for log drives to determine the river navigable for title and stating that the "use of the river need not be without difficulty, extensive, or long and continuous."); *Doyon, Ltd.*, 86 Interior Dec. at 697 ("Although rapids, shallow waters, sweepers, and log jams make navigation difficult on both [the Kandik and Nation Rivers], the evidence shows that these impediments do not prevent navigation.").

Boat use is not the only method for proving a river or stream's ability to serve as a highway for useful commerce. In *Oregon v. Riverfront Protection Association*, the Ninth Circuit considered evidence of the transporting of logs (downstream traffic) on the McKenzie River relevant to determining the river's potential use for commerce. 672 F.2d at 794–96. The court further found that the seasonal and sometimes difficult nature of these log drives did not destroy navigability. *Id.* at 795–96 (holding that "notwithstanding [the] difficulties, thousands of logs and millions of board feet of timber were driven down the river" and this use was not "occasional" as it occurred over a three-month period for over seventeen years).

Applying these standards to Alaska, the courts and U.S. Department of the Interior have found waterways navigable for title based on their susceptibility to use for navigation by river boats, inflatable rafts, or canoes having a capacity for "commercial" loads of about 1000 lbs. of supplies or

recreationists. *Ahtna Inc.*, 891 F.2d 1401 (Gulkana River); *Appeal of Doyon*, 86 Interior Dec. 692 (Kandik and Nation Rivers); Feb. 25, 1980 Memorandum from Regional DOI Solicitor John ("Jack") Allen to BLM Alaska State Director re "Kandik, Nation Decision on Navigability." *See also Alaska v. United States*, 201 F.3d 1154 (9th Cir. 2000); August 18, 1983 Recommended Decision by DOI Administrative Law Judge Luoma in *Appeal of Alaska*, Interior Board of Land Appeals No. 82-1133 (recommending that the Matanuska River be determined navigable) & July 19, 1990 Memorandum of BLM Alaska State Director E. Spang (Matanuska River is navigable), BLM Files AA-11153-23, -31; *Appeal of State of Alaska & Collier*, 168 IBLA 334 (2006) (noting navigability standards).

VI. Evidence of the Navigability of the Becharof Lake, Egegik River, Ruth River and Ruth Lake system.

Documentation and reports by the BLM and other federal sources regarding pre- and post-statehood boat use, susceptibility of use as a highway of commerce, historical routes, and activities in the Becharof Lake, Egegik River, Unnamed Outlet of Ruth Lake and Ruth Lake area confirm and establish that the Becharof Lake, Egegik River, Unnamed Outlet of Ruth Lake and Ruth Lake system named in this document are navigable from the Egegik Bay to and through Becharof Lake, Unnamed Outlet of Ruth Lake and Ruth Lake as described above.[3]

A. Federal Navigability Determinations Demonstrating Navigability, including Use and Susceptibility to Use in Commerce

The BLM has evaluated the Becharof Lake and Egegik River, Ruth River and Ruth Lake that are the subject of this application. The BLM determined the full extent of Becharof Lake and Egegik River navigable-for-title. In a determination, dated January 24, 1984 (Exhibit 2, enclosed), the BLM stated the Becharof Lake served as a highway of commerce pre and post-statehood for transporting heavy equipment and supplies. In the same determination the Ruth River and Ruth Lake were used for trapping and was used as part of the Kanatak portage with 18 foot skiffs delivered to Ruth Lake from Kanatak that then traveled down the Ruth River. Egegik River, Becharof Lake, Unnamed

[3] The exclusion of other portions of the Becharof Lake and Egegik River system from this application is not an admission that those submerged lands did not pass to the State at statehood, but merely recognizes that they are not part of this application.

Outlet of Ruth Lake and Ruth Lake served as a route to trapping grounds and prior to its closure commercial fishing. In 1978 the Arctic Environmental Information and Data Center (AEIDC) provided the BLM with a report for the Egegik River that documented the use of Becharof Lake and Egegik River as a portage route between Kanatak on the Pacific Coast and Egegik Village, Army Corps improved the navigable channel to decrease lining in rapids and documented fur trapping along the entire length of the river and lake (Exhibit 3, enclosed).

In making this determination, the BLM stated "It appears from the available information that these water bodies were used as highways of commerce by commercial waterborn crafts (i.e., wood skiffs) at the time of Statehood. The rivers and lakes provided access to trapping cabins and trapping areas and transportation for the sale of these furs; they also served as a travel and trade route across the Alaska Peninsula probably from time immemorial."

The US Department of Commerce National Oceanic and Atmospheric Administration in United States Coast Pilot 9, 2012 (30th) Edition indicates further description of Egegik River (Exhibit 4). Indicating that the "Egegik River is navigable to small boats for its entire length into and across Becharof Lake." This description includes an upper limit of tidal influence as being approximately ¼ mile below the Becharof Lake outlet at the base of the rapids.

The US Fish and Wildlife Service (USFWS) provided substantial information to the BLM and the State in the pre-application meeting associated with this application. The USFWS graciously provided WRB 96-12, Egegik River /Becharof Lake Watershed Navigability Research Report by Margaret Wilson and Warren Keogh. This 263-page report extensively documents the pre and post statehood use of the Egegik River, Becharof Lake, "Ruth River"[4] and Ruth Lake for travel, trade and commerce. As the BLM has been supplied with a paper and electronic copy of this report a second paper copy will not be provided with this application. The state will post the report on its RDI webpage (http://www.dnr.state.ak.us/mlw/nav/rdi/) with this final application and staff are happy to provide an electronic (PDF) version to any interested party.

Specifically extended discussions of use of the applied for waterbodies may be found on these pages:

[4] Within the USFWS report the Unnamed Outlet of Ruth Lake is called Ruth River.

Egegik River – page 50 – 82.
Becharof Lake – page 95 – 98 and page 102 – 117.
Becharof Lake – Island Arm – page 125 – 126 and 141 - 145
Unnamed Outlet of Ruth Lake and Ruth Lake – page 134 – 135 and page 141 – 164.

Many times the portage from either Ruth Lake or Becharof Lake are described. Within the above reviewed Egegik River/Becharof Lake Watershed Navigability Research Report, several references were made to Osgood, W. H. 1904 (Exhibit 5, enclosed). In 1902 Osgood, accompanied by A. G. Maddren and W. Fleming, engaged in biological investigations of the Alaska Peninsula. Much of Osgood's travels are accurately described in the Navigability Research Report. One important point overlooked in Osgood's original report of the portage is "Two days of hard work in stormy weather sufficed to transport impedimenta to Kanatak." The portage distance from Ruth Lake to Kanatak over the ridge is approximately 3.5 miles. Making several assumptions; 3 people hauling (it may have been more, or less), 3 hours per round trip, approximately 11 hours of daylight, and 85 lbs/load; a low rough estimate of 850 lbs of "impedimenta" were transported over the portage. In 1902 the canoes usually utilized by the federal government were Peterborough Canoes, in the range from 17 feet to 19 feet with carrying capacity from 950 lbs to 1700 lbs with 10 to 12 inches of draft.[5]

VII. Other Known Interested Parties

The State knows of no other claims on the subject submerged lands. There are no known adverse claimants or occupants on the subject submerged lands. The United States does not dispute the State's title to the subject submerged lands.

VIII. $100.00 Application Fee

The State submitted the $100.00 application fee on September 14, 2016 by receipt no.3658965.

[5] Peterborough Canoe flyer from 1909 and A Chapter on Canoes certified, both provided as Exhibit 6. The 1909 flyer was provided by the Canadian Canoe Museum, Peterborough, Ontario, Canada. A Chapter on Canoes certified flier from the Peterborough Centennial Museum and Archives, Peterborough, Ontario, Canada. This second document mentions on page 3 the canoes sold at Dyea, ...

IX. Conclusion

The BLM has determined there is sufficient evidence to conclude the water bodies of the Egegik River, Becharof Lake, Unnamed Outlet of Ruth Lake and Ruth Lake, as described in section I of this application are navigable waterways. Therefore, the submerged lands and beds underlying these water bodies are owned by the State of Alaska and should be disclaimed by the BLM on behalf of the federal government.

The State agency responsible for this application is the Alaska Department of Natural Resources, Division of Mining, Land and Water, 550 W. 7th Avenue, Suite 1070, Anchorage, Alaska 99501, Attention: James H. Walker (907) 269-4755. Please start the application process for this river and forward the estimate of cost of administration.

Sincerely,

James H. Walker
Public Access Assertion and Defense Unit

Enclosures: Exhibit 1: Maps and Legal Description
Exhibit 2: January 24, 1984 BLM Navigability Determination
Exhibit 3: AEIDC Report
Exhibit 4: United States Coast Plot 9, excerpts
Exhibit 5: Osgood, W. H., USDA, NAF No. 24, excerpts
Exhibit 6: Peterborough Canoe Flyer 1909 and Undated A Chapter on Canoes Certified by the Peterborough Centennial Museum and Archives.

cc:Gregory Siekaniec, Regional Director, U. S. Fish and Wildlife Service
Susan Alexander, Refuge Manager, U. S. Fish and Wildlife Service
Sam Cotten, Commissioner, Alaska Department of Fish and Game
Jason Metrokin, President, Bristol Bay Native Corporation
Robert Williams, Director, President, Becharof Corporation, also known as Egegik Village

Egegik River, Becharof Lake, Unnamed Outlet of Ruth Lake and Ruth Lake
RDI Application: Legal Description

Ruth Lake and the Unnamed Outlet of Ruth Lake, Becharof Lake and the Egegik River from the outlet of Becharof Lake downstream to the location the river is influenced by the tide within the State of Alaska, more particularly described as follows:

Becharof Lake:

All submerged lands between the ordinary high water lines of the bank of Becharof Lake, as determined from Alaska USGS 1:63 360 series topographic map Ugashik C-1, (1951, minor revisions 1975); Ugashik D-1, (1951, minor revisions 1975); Ugashik D-2, (1951, minor revisions 1973); Ugashik D-3, (1951, minor revisions 1973); Karluk C-6, (1951, minor revisions 1975); Karluk D-6, (1951, minor revisions 1988); Naknek A-3 (1951, minor revisions 1970); Naknek A-2 (1951, minor revisions 1970); and Naknek A-1 (1951, minor revisions 1982):

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S024S044W33	S026S042W12	S027S041W29
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S024S045W16	S026S042W15	S027S041W32
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Exhibit 1

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Exhibit 1

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S025S045W35	S026S045W27	S028S041W19
S025S045W36	S026S045W28	S028S041W20
S025S046W08	S026S045W29	S028S041W21
S025S046W09	S026S045W30	S028S041W22
S025S046W10	S026S045W31	S028S041W27
S025S046W11	S026S045W32	S028S041W28
S025S046W12	S026S045W33	S028S041W29
S025S046W13	S026S045W34	S028S041W30
S025S046W14	S026S045W35	S028S041W31
S025S046W15	S026S045W36	S028S041W32
S025S046W16	S026S046W01	S028S041W33
S025S046W17	S026S046W02	S028S041W34
S025S046W19	S026S046W03	S028S042W01
S025S046W20	S026S046W04	S028S042W02
S025S046W21	S026S046W05	S028S042W03
S025S046W22	S026S046W06	S028S042W04
S025S046W23	S026S046W07	S028S042W10
S025S046W24	S026S046W08	S028S042W11
S025S046W25	S026S046W09	S028S042W12
S025S046W26	S026S046W10	S028S042W13
S025S046W27	S026S046W11	S028S042W14
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S030S042W06
S030S042W07
S030S043W01
S030S043W12

The precise location may be within other sections and townships due to the ambulatory nature of water bodies.

Egegik River

All submerged lands between the ordinary high water lines of the left and right banks of the Egegik River from the outlet of Becharof Lake within Section 8, Township 25 South, Range 46 West, Seward Meridian to the extent of tidal influence as noted by NOAA and as determined from Alaska USGS 1:63 360 series topographic maps Naknek A-3 (1951, minor revisions 1970):

MTRS

S025S046W08	S025S046W07	
S024S046W19	S024S046W31	S024S046W30

Unnamed Outlet of Ruth Lake

All submerged lands between the ordinary high water lines of the left and right banks of the Unnamed Outlet of Ruth Lake from the outlet of Ruth Lake downstream to Bacherof Lake all within Township 30 South, Range 42 West, Seward Meridian as determined from Alaska USGS 1:63 360 series topographic maps Ugashik C-1 (1951, minor revisions 1975):

MTRS

S030S042W05	S030S042W08
S030S042W09	

Ruth Lake

All submerged lands below the ordinary high water line of the banks of Ruth Lake within Township 30 South, Range 42 West, Seward Meridian as determined from Alaska USGS 1:63 360 series topographic maps Ugashik C-1 (1951, minor revisions 1975):

MTRS

S030S042W09	S030S042W16	S030S042W17
S030S042W20	S030S042W21	S030S042W29
S030S042W30	S030S042W31	S030S042W32

IN REPLY REFER TO

United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Alaska State Office
701 C Street, Box 13
Anchorage, Alaska 99513

Ugashik-SS-FY'84-#1
AA-12647 (2620)
AA-12648 (2620)
AA-12649 (2620)
AA-12686 (2620)
AA-12687 (2620)
AA-12688 (2620)
AA-21840 (2620)
2628 (962) NAV

reviewed Jan 30, 84 no comment

JAN 24 1984

Memorandum

To: Chief, Branch of State Adjudication (964)

From: Deputy State Director for Conveyance Management (960)

Subject: Final Navigability Determination for State Selections - Ugashik Quadrangle

This is the final navigability determination for water bodies on lands encompassed by State selection serial numbers AA-12647, AA-12648, AA-12649, AA-12686, AA-12687, AA-12688, AA-21840. For reporting convenience, all water bodies within the following townships were reviewed:

Seward Meridian, Alaska

AA-21840	T. 32 S., R. 41 W.
AA-12687	T. 30 S., R. 42 W.
AA-12648	T. 31 S., R. 42 W.
AA-21840	
AA-12648	T. 32 S., R. 42 W.
AA-21840	
AA-12688	T. 30 S., R. 43 W.
AA-12649	T. 31 S., R. 43 W.
AA-12686	T. 29 S., R. 44 W.
AA-12647	T. 31 S., R. 46 W.

These townships are located approximately 45 miles east of Pilot Point. The principal named water bodies in the report area are: Becharof Lake, Bellim Bay, Lower Ugashik Lake, Ruth Lake, Ruth River, Kanatak Lake, Summit Lake, Black Creek, Ugashik Creek, Big Creek, Kanatak Lagoon and Portage Bay. There are numerous small named and unnamed creeks and streams in the report area. As depicted on USGS Ugashik Quadrangle maps B-1, B-3, C-1, C-2 and C-3 (1:63,360 of 1951,

AA094269

minor revisions 1973, 1975, and 1981), the gradients are steep, approximately 50 feet per mile in the lower reaches of the creeks. The majority of the report area lies within the Becharof, Alaska Peninsula and the Alaska Maritime National Wildlife refuges. Only one Native allotment (AA-8243-B) is located within the report area; it fronts on Lower Ugashik Lake in Section 10, T. 31 S., R. 46 E., Seward Meridian.

Past Determinations

On September 17, 1980, in connection with the Ugashik Village conveyance, the BLM determined Lower Ugashik Lake to be navigable. Navigability determinations have not yet been made for other water bodies in the report area.

General Information

Some information relating to the water bodies in the report area was provided in "Alaska's Kodiak Island - Shelikof Strait Region: A History," by Dwight Wm. Tuttle, a historian with the BLM - Alaska State Office. Mr. Tuttle wrote:

> The only extensive description of travel on the portage stemmed from a biological reconnaissance of the Alaska Peninsula made in the summer and fall of 1902 by Wilfred H. Osgood of the U.S. Department of Agriculture. From Nushagak, Osgood took a small schooner to Egegik Village, and then ascended Egegik River to Becharof Lake in a canoe. Upon reaching the lake, Osgood and his party followed the south shore to the head of an arm and then ascended a small stream to a lake, probably Ruth Lake. At the mouth of the stream he spotted several barabaras. From the lake they then crossed Kanatak Pass to Portage Bay. Later recounting his trip, Osgood wrote: "The portage trail runs from the east side of the small lake across a half mile of swamp, and thence up about 1,000 feet, traversing a rocky pass and continuing on down over more rocks to the native village of Kanatak, situated just above high-water mark on the bay of the same name." Upon reaching the coast the men loaded their equipment in a small rowboat, and followed the rocky shoreline to Puale Bay where they secured passage on a southbound mail steamer.

Osgood also noted barabaras on the small lake (probably Ruth Lake). Many other travelers used the Kanatak-Egegik route year-round in the early 1900's. Walter R. Smith and Arthur A. Baker of the USGS wrote in 1924 that villagers of Kanatak traveled each summer to Egegik to work in the local cannery. Presumably they used the portage. Anthropologist Ales Hrdlicka wrote that under favorable conditions (tides, etc.), one could

reach Kanatak by this route in ten hours and that many people in the past with small skin boats could easily have passed through here to the Pacific. The mail was also transported by this route after a post office was established at Kanatak in 1922.

An oil find in the early 1920's prompted the Associated Oil Company and the Standard Oil Company to build a wagon road from Kanatak to the southeastern tip of Becharof Lake and then westward to their oil wells. The Alaska Road Commission (ARC) improved the road to Becharof Lake between 1923 and 1925. J. H. Lee also used the ARC road in the 1920's to haul lumber and supplies to his mink ranch on the lake.

Wilson F. Erskine, a prominent resident of Kodiak, recalled in 1960 that many fishermen traveled to the rich red salmon grounds on the Bering Sea by way of Kanatak Pass. Erskine wrote in his book, White Water, An Alaskan Adventure, that Portage Bay earned its name as the terminus of the most feasible overland route to the northern side of the peninsula. The route included "Botcharov" (Becharof) Lake, which covers two-thirds of the route distance. According to Erskine, Becharof Lake and its outlet were navigable by small boats.

Water Body Specific Information

Becharof Lake

Interviewed by Dot Tideman on December 7, 1983, Warren Seybert (243-7701), pilot and owner of Peninsula Airways, stated that he had flown over the report area extensively, and that the local Natives of Egegik have traditionally used skiffs and fishing boats on Becharof Lake to travel to trappers' cabins around the lake. He added that the Natives still use Becharof Lake today for access to trapping, hunting, and salmon fishing areas.

Aleck Griechen (243-7877), a resident of Pilot Point for 60 years, a board member of the Pilot Point Native Corporation and a member of the Fish and Game Advisory Committee for Lower Bristol Bay, related to Tideman on December 8, 1983 that trappers, hunters, and fishermen ascended Egegik River, crossed Becharof Lake to Bellim Bay, and then ascended Ruth River to Ruth Lake. Thirty-two foot boats were the largest used by trappers and sport fishermen on Becharof Lake before 1959. Billy Nekeferofs, an old trapper, had a trapping cabin on the northeast end of Becharof Lake; local trappers have reported him as missing. Today, according to Mr. Griechen, the State Department of Fish and Game no longer allows commercial fishing on the lake or beyond the lagoon on Egegik River. Although the oil companies did not use Becharof Lake for transporting

equipment in the 1920's, one company used a barge on Becharof Lake in the late 1950's and 1960's for transporting heavy equipment and supplies.

In a telephone conversation with Dot Tideman on December 6, 1983, Jerry Yeiter (246-4277), general manager for Paug-Vik Inc., a registered Alaska hunting and fishing guide and pilot, owner of Mount Pewlik Lodge on Lower Ugashik Lake, and a former BLM trespass officer, stated that he has traveled the report area extensively. He said that he has seen boats on Becharof Lake. In the fall of 1983 he saw a good-sized wooden fishing boat, about 28 feet in length, on the lake.

Mike Joseph (246-3430), a commercial fisherman from Egegik, informed Dot Tideman on December 7, 1983, that Becharof Lake is now off limits to commercial fishing; however, it is used for sport fishing. Years ago the lake was used in the spring and fall by Native trappers as a route of boat travel to cabins on the lake. In the winter they used dog teams. The boats and skiffs were 16 to 18 feet in length.

On behalf of Tideman, Janice Ball, a resident of Pilot Point and the telephone operator for the village of Pilot Point (797-8001), interviewed and translated for an elder of the village, Nefotie Neketa. According to Ms. Ball, Mr. Neketa said that 28 foot double-ended, wooden boats and skiffs were used on Becharof Lake to transport people to what he believed to be Ruth Lake in the Kanatak Pass area. These people trapped as well as fished for trout, silvers and reds. Ms. Ball added that these types of boats are still in use in the Pilot Point area.

Dick Russell (246-3340), the Egegik/Ugashik Area Division Biologist for State Fish and Game at King Salmon, noted in a telephone conversation with Dot Tideman on December 7, 1983, that Becharof Lake is the second largest lake in Alaska. He said that Fish and Game took a 32-foot Bristol Bay gillnetter up the Egegik River and onto the lake for research purposes. Trappers used boats on the lake to access their cabins. A famous trapper named Billy Nekeferofs, now deceased, had a cabin on the east end of the lake. Billy also claimed a trapping cabin on Featherly Creek, on the southeast end of Becharof Lake. Former Governor Jay Hammond also has a cabin where Kejulik River enters Becharof Lake. Mr. Russell mentioned numberous trappers' cabins and owners who claimed these cabins, some of which are at the mouth of Ruth River, and at the mouth of Cleo Creek (Jake Gregory's, deceased, a former member of the Board of Fisheries). The State Fish and Game built a cabin near Cleo Creek. A Bible camp cabin is located north of Severson Peninsula, and a cabin is west of Gas Rock Creek.

Interviewed by Tideman on December 7, 1983, Randy Wilk, Biological Technician for the U.S. Fish and Wildlife (246-3339), said that the villagers from Egegik use Becharof Lake in the summer and fall for recreation (fishing and photographing). Commercial guides use the lake for sport fishing and hunting.

John Merrick, Realty Specialist for BLM (271-3573), said in an interview with Tideman on December 6, 1983, that he has flown over the area several times. He was familiar with the old portage road from Portage Bay to Becharof Lake, but described it as now overgrown with alders and little used. The town of Kanatak was abandoned about 1975. He did not know of anyone living there from 1965 to 1975.

Ruth River

According to Aleck Griechen, Ruth Lake was used before 1959 for trapping. Old sailboats and power skiffs were used by trappers to reach Ruth Lake. He claimed that a 32-foot vessel can be taken up Ruth River to Ruth Lake when the water is high. Two years ago, he saw a party use Ruth Lake for access to trapping areas. They were flown in and were using a skiff and canoe which was brought up Ruth River earlier and left on Ruth Lake. There is an old fish camp at the northeast end of Ruth Lake. Mr. Griechen noted that Standard Oil built a road in the area about 1927. The company used the road rather than the lakes to transport goods. Mr. Griechen said that Kanatak Pass was the main route from Kanatak Village to Bristol Bay. This pass is no longer used for transportation purposes. Years ago people dragged 18-foot skiffs by horse-drawn trailers from Kanatak Village to Ruth Lake. Trappers traveled down Ruth River with supplies and furs which were picked up at Bellim Bay.

Warren Seybert said that Ruth River and Ruth Lake were used traditionally by the Natives for about 50 years. He said he got his information from talking to the Natives through the years. He has not seen boats on Ruth Lake, however.

Ruth River is "not entirely navigable," claimed Randy Wilk. He described the river as being shallow and rocky, and recalled that he once saw a 15-foot, flat-bottom Boston Whaler about one-third the distance up the river. He added that travelers could probably effect portages on the river.

Dick Russell described Ruth Lake as deep and very windy. State Fish and Game personnel once used an Avon raft with a small motor on Ruth Lake for netting operations. Visiting the area one year with a friend, he noticed the remains of an old village on the northeastern corner of Ruth Lake. Only big

collapsed piles remained. Commercial sport fishing guides now fly people to the lake, he said.

Mr. Russell described Ruth River as being a good-sized body, approximately 250 feet wide with a large volume of water. The river is shallow, however. He saw the remains of an old wooden fishing boat hull, less than 20 feet in length, in the grass on the lower 100 yards of the river. Mr. Russell commented on the "old mail route trail" which runs near Ruth Lake and Ruth River, saying that he saw an old anchor on the trail.

Jerry Yeiter said that in his opinion Ruth Lake is navigable. He claimed that the old portage from Bristol Bay to Kanatak included Ruth River and Ruth Lake. Mr. Yeiter stated that he transported sportsmen to Ruth Lake by airplane for trout and salmon fishing and caribou hunting. He said that the people walked along Ruth River to Bellim Bay where he met them with his plane. He thought that one could get boats up Ruth River at certain times of the year but he has never seen any on the river. Mr. Yeiter described Ruth River as being about 150 feet wide and flowing at about 5-1/2 miles per hour. The bay at the mouth of Ruth River is deep. He said there are only a few cabins standing in the Bellim Bay area: two guide cabins and three or four trappers' cabins. Mr. Yeiter said he got his information from talking to different people from Pilot Point and Ugashik..

Other Water Bodies

Mr. Griechen said that most of the streams in the report area are used by local trappers. Natives can go up some of the creeks possibly two or three miles or further with a jet boat. With a skiff they can ascend some creeks about one-half mile. John Merrick doubted that the creeks in the report area were navigable. He said one could possibly get canoes up the creeks a short distance but he was not aware of such incidents. Mr. Russell stated that he was unaware of any boat use on Kanatak and Summit lakes. Mr. Yeiter said that most of the creeks in the area, like Black Creek, which is about six miles from his lodge, are probably not navigable. One could probably get one-half mile up some of these creeks but no further as they are very shallow. It is possible to get up some of the streams when the water is high. Randy Wilk did not believe anyone uses the creeks intensively or regularly. One could, however, get up a few streams for recreation purposes.

Some of the other water bodies are probably used in their frozen state, as they offer the most expedient route for winter travel and some may be used in their liquid state by recreational boaters in kayaks, canoes, and small inflatables. In addition, some of the other lakes may be used by float or

ski planes for access into this area. Under existing criteria, floatplane use, frozen state use, and recreational use by themselves do not make a water body navigable.

Determinations

Based on this report, I determine Becharof Lake, Bellim Bay (because of lateral extent), Ruth Lake, and Ruth River to be navigable. It appears from the available information that these water bodies were used as highways of commerce by commercial waterborne crafts (i.e., wood skiffs) at the time of Statehood. The river and lakes provided access to trapping cabins and trapping areas and transportation for the sale of these furs; they also served as a travel and trade route across the Alaska Peninsula probably from time immemorial. Also, I affirm the determination that Lower Ugashik Lake is navigable. I determine all other named and unnamed water bodies within the report area to be nonnavigable. Note: Portage Bay and Kanatak Lagoon are tidally influenced and are therefore navigable.

Tidal

Line of mean high tide will be determined at time of survey.

/s/ Robert W. Arndorfer

Enclosures:
Summary of Determinations
Map

cc:
Retained Lands Unit - Navigability
Division of Land and Water Management
Alaska Department of Natural Resources
Pouch 7-005
Anchorage, Alaska 99510

Title Administration
Division of Technical Services
Alaska Department of Natural Resources
Pouch 7035
Anchorage, Alaska 99510-7035

Summary of Determinations
Ugashik-SS-FY'84-#1

Seward Meridian	Case File Number
T. 32 S., R. 41 W.	AA-21840

All freshwater bodies are nonnavigable.

T. 30 S., R. 42 W. — AA-12687

Becharof Lake, Ruth Lake and its outlet ("Ruth River") are navigable. All other freshwater bodies are nonnavigable.

T. 31 S., R. 42 W. — AA-12648, AA-21840

All freshwater bodies are nonnavigable.

T. 32 S., R. 42 W. — AA-12648, AA-21840

All freshwater bodies are nonnavigable.

T. 30 S., R. 43 W. — AA-12688

Becharof Lake is navigable. All other water bodies are nonnavigable.

T. 31 S., R. 43 W. — AA-12649

All freshwater bodies are nonnavigable.

T. 29 S., R. 44 W. — AA-12686

All water bodies are nonnavigable.

T. 31 S., R. 46 W. — AA-12647

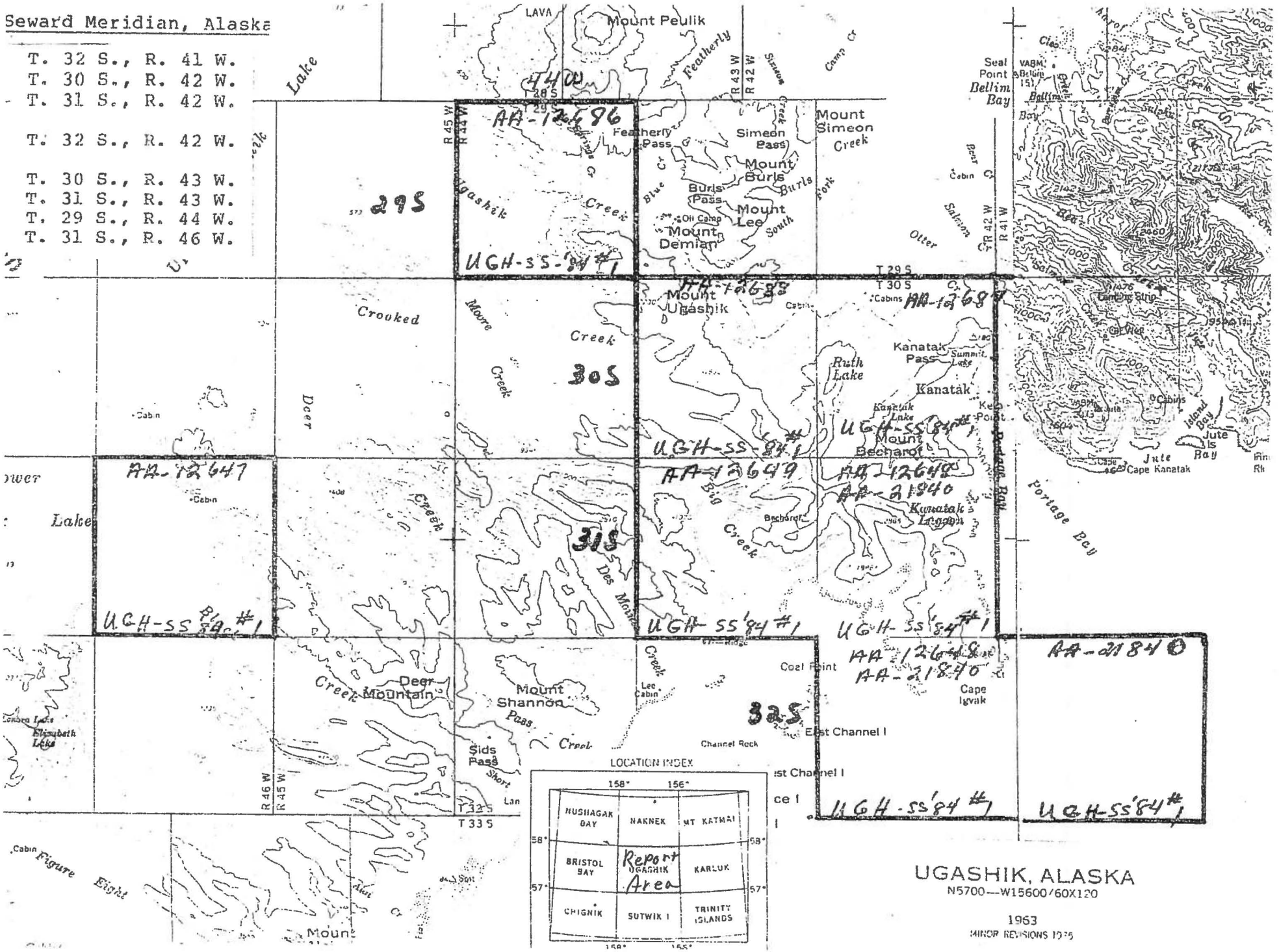
Lower Ugashik Lake is navigable. All other water bodies are nonnavigable.

Seward Meridian, Alaska

T. 32 S., R. 41 W.
T. 30 S., R. 42 W.
T. 31 S., R. 42 W.

T. 32 S., R. 42 W.

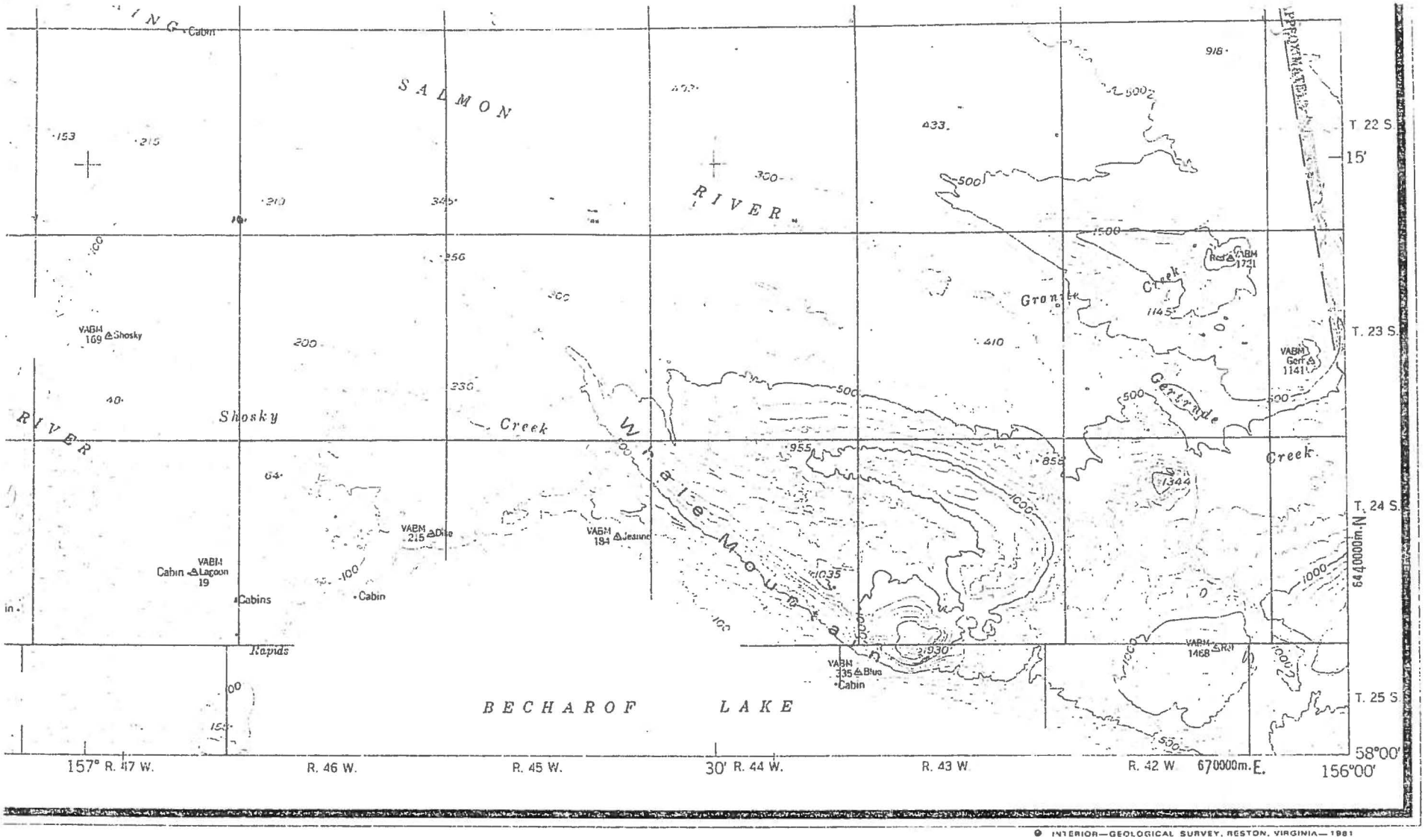
T. 30 S., R. 43 W.
T. 31 S., R. 43 W.
T. 29 S., R. 44 W.
T. 31 S., R. 46 W.



UGASHIK, ALASKA
N5700—W15600/60X120

1963
MINOR REVISIONS 1975

AA094269



© INTERIOR—GEOLOGICAL SURVEY, RESTON, VIRGINIA—1981

SCALE 1:250000

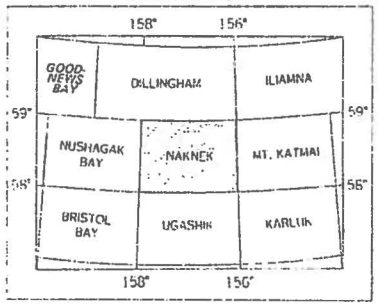
10 15 20 25 MILES

10 15 20 25 KILOMETERS

TOUR INTERVAL 100 FEET
GEODETIC VERTICAL DATUM OF 1929
U FEET-DATUM IS MEAN LOWER LOW WATER
PRESENTS THE APPROXIMATE LINE OF MEAN HIGH WATER

AT SOUTH EDGE OF SHEET VARIES FROM 21° TO 22° EAST
IN BOTH SHADED RELIEF AND CONTOUR EDITIONS

LOCATION INDEX



ROAD CLASSIFICATION

LIGHT DUTY ..... UNIMPROVED DIRT .....

TRAILS ----------

NAKNEK, ALASKA

N5800—W15600/60X120

1952

2650 (932)

Mr. William J. Wilson
Project Coordinator
Arctic Environmental Information and Data Center
707 A Street
Anchorage, AK 99501

Dear Mr. Wilson:

We have reviewed the report on navigation of the Egegik River which your office submitted to the Bureau on October 18, 1978, in compliance with Contract No. YA-512-CT7-256. It is our opinion that the Contractor has researched a sufficient amount of historical information about the main channel of the Egegik River from tidewater to Becharof Lake; and therefore has satisfied the requirements of Phase II-A, and Phase II-B in part, of the subject contract for this particular stretch of the river. The Contractor will have satisfied the requirements of Phase II-B when it provides the Bureau with a description of physical characteristics data in existing computer banks and when it provides the Bureau with a stream profile, consisting of physical characteristics data not in existing computer banks, in the modified STORET format. The Contractor need not collect additional historical and physical characteristics information about the main channel of the Egegik River from tidewater to Becharof Lake.

In accordance with contract provision Phase II-A, the Contractor should continue to collect historical information about tributaries, including sloughs, of the Egegik River, as well as historical information about the main channel of the Egegik River which is or may be relevant to a discussion about the navigability of tributaries and sloughs of the main channel of the Egegik River. In this case, inforamtion about crafts used on the Egegik River is relevant.

The inclusion of photographs with this report contribites to its over-all effectiveness. The inclusion of an historical map of the river is recommended.

The Contractor's written summary of relevant information about the Egegik River to Becharof Lake is a satisfactory product. Please defer revisions to the summary until draft reports on tributaries and sloughs of the Egegik River have been prepared and submitted to this office.

Sincerely yours,

/s/ Sherman F. Berg

Sherman F. Berg
COAR

cc:
Ron Swanson, Land Management Officer
Alaska Division of Land and Water Mgt.
323 E. 4th Avenue
Anchorage, AK 99501

EGEGIK RIVER

Storet Number	1605281
L.U.P.R	4.2
Latitude	58° 12' 04"
Longitude	157° 24' 44'
Meridian	Seward
Township	23 South
Range	50 West
Section	11

I. Activity At/Near Statehood

A. Commercial Activity

In the Interim Report published in 1954, the Army Corps of Engineers wrote about the lack of commercial traffic in the period near statehood. A former resident of Becharof Lake (at the head of the Egegik River) said that lake residents had left because a rock removal project had not alleviated the navigation problems. The Corps agreed that there was still a navigation hazard. However, they felt that lake residents had moved due to the changed economic conditions of the Bristol Bay area. The quantity and price of furs had decreased considerably and natives had to depend on commercial fishing. There was no longer any point in living on the lake or at Kanatak on the Pacific Coast, and the population moved close to the mouth of the river at Egegik village. (3056-1)

B. Physical Data

The Army Corps report of 1954 stated that the 1935-41 project had succeeded in clearing a channel 100 feet wide and 3 feet deep. However, there were still two right-angled turns near the outlet, in water with a velocity of 6-8 miles per hour. More boulder removal was seen as necessary for safe navigation, especially the four large boulders inside the first turn below the outlet. (3056-1)

C. Other Historic Uses

The documents researched did not yield any further information regarding other historic uses.

II. Historical Uses and Physical Data at Times Other Than Statehood

A. Commercial Activity

The U.S. Fish Commission Bulletin of 1900 mentioned commercial fishing boats on the river. They were 25 feet long with a 7-8-foot

beam, 2-1/2-foot depth, and 300-cubic-foot capacity. (892)

The 1901 Report on Alaskan Fisheries cited the existence of the Alaska Packers Association cannery, 6 miles upriver. Fishing was carried on in the river 5 miles above and below the cannery. Two steamers operated on the river with a capacity of 69 tons between them.

In a fisheries report of 1906, two canneries were listed: North Alaska Salmon Company and the Alaska Packers Association. Fishing took place from the mouth to 3 miles above the canneries, which was probably 9 miles above the mouth. (4264-906)

The 1908 Coast Pilot stated that cannery steamers could enter the river at half to full tide. If the channel were properly buoyed, vessels of moderate draft could enter at high water. The cannery vessel was a bark of 554 tons. (898)

In 1925, the Alaska Packers Association and Libby, McNeill and Libby had canneries on the Egegik. (4264-925)

In a 1932 examination of navigation, the Army Corps of Engineers found that 25 motor boats and 20 sail boats of 2-4-foot draft and 26-32-foot length used the river. The traffic was principally local from the Pacific to Bristol Bay for the fishing and seining season. Use of this route saves six days in the time required to travel around the peninsula. Four hundred trips are made annually over the entire course. The users consisted of citizens of small Indian communities, owners of trading posts at Kanatak and Egegik, operators of a saltery at Egegik, and agents of the Bureau of Fisheries.

Ninety percent of the total freight is household goods and winter supplies of Indian laborers and their families, totaling 100 people. The permanent population of Egegik is 100, increasing to 300 during fishing season. Kanatak, on the Pacific Coast, is an Indian village of 90 people, most of whom travel by water to Egegik to work at commercial fishing.

Documents mentioned the use of a portage from Kanatak to Egegik village through Becharof Lake and down the Egegik River. Use of this portage was documented in 1932 (4552), 1930 (1161), and 1941 (7187-318). The Army Corps files cited the existence of a nine-mile wagon road connecting Portage Bay, on the Pacific, with Becharof Lake. (7187-317)

The two canneries packed $300,000 annually. The saltery packed $22,000 annually beyond the time of operation of commercial steamers on Bristol Bay. Barrels weighing 200 pounds each were shipped on the Egegik River to Kanatak using a scow towed by three power boats. (7187-317)

The wealth of the river in terms of salmon was frequently cited. (729, 2358, 2706)

Trapping was the only other local industry. The catch totaled $15,000 in 1930. Considerable traffic was generated in distributing

equipment and supplies over the length of the trap lines.

Evans owned a trading post at Egegik and Kanatak and used the river to shuttle merchandise between stores.

The document includes a list of boats and owners operating on the Egegik. The boats range from 26-32 feet in length, 2 1/2-4-foot draft, and use Palmer or Red Wing engines of 6-24 horsepower. Most boats make two trips per season. Six boats make four or more trips per year. One boat makes two trips per month.

The route around the peninsula is run by the S.S. STARR, operated by the San Juan Fishing and Packing Company. This is the only commercial steamer with a regular schedule. The trip takes seven days and costs $65.00. The route via the Egegik is only one day, saving $50 per passenger and $30 per freight ton. (7187-317)

B. Systematic Use

The river was patrolled in a rowboat by a fisheries agent in 1926. He was stopped at the rapids below Becharof Lake. (4264-925) In the 1932 Army Corps reconnaissance, the U.S. Bureau of Fisheries was noted to travel frequently over the length of the river. The fisheries boat was 23 feet long, 6 1/2 feet wide, drawing 18 inches with a 10-horsepower Red Wing engine. It was decked with a tent and used for transporting two men and supplies to the counting weir, which was at the outlet of the lake. (7187-317)

Mail was carried on the nine-mile wagon road between Kanatak and Lake Becharof. This road was built by the Alaska Road Commission in 1925. The mail was then carried by water. The lake extends 43 miles to the river which continues 34 miles to Bristol Bay. The wagon road was "rough, steep, and good for light loads in dry weather." (7187-317)

C. Incidental Uses

A 1942 field diary of the Army Corps described a trip in an open gas-boat towing a 16-foot dory. (4072-12)

From 1923-26, exploration and test drilling for oil was carried on by Standard Oil Company and the Associated Oil Company. Indications of oil were abundant, but none was found. (7187-317)

D. Physical Data

As early as 1895, it was noted that rapids 10 miles from the outlet of the lake necessitated portaging. (4282-3)

In 1906, this same section of rapids was listed with a portage necessary for passage. The length of the river was given as 80 miles which must include the lake. (4264-906)

The 1908 Coast Pilot estimated the length of the river as 50 miles and said that tidewater extended for 25 miles. Navigable channels through the shoals at the mouth did exist. The channel was described as

wider and deeper than the Naknek and Kvichak, and passable for vessels of moderate draft, if buoyed properly. (898)

The river is frozen from October to May. A 1940 Corps file mentioned that the river and lake are navigable before breakup and after freezeup in Bristol Bay. (7187-317)

A 1932 survey recommended boulder removal to create a channel through the rapids, 100 feet wide and 5 feet deep. (4552) These boulders were in a 1/2-mile stretch of rapids close to the lake outlet. An Army Corps file of 1940 stated that several boats were broken and one life lost in the previous three years while lining a boat through the rapids. Sometimes a boat would hit a submerged rock and fill with water, losing the winter food supply. The district engineer requested the rock removal despite the low volume of commercial traffic because the river is a "natural route for trade and transportation across the Alaska Peninsula." A controlling depth of 4 feet exists from the mouth to the rapids. The depth in the rapids is 10 feet with many boulders 1-4 feet below the surface. (7187-317) The project was completed in 1941 to a depth of 3 feet which was the controlling depth for the river beyond the limit of the project. (3056-1)

In a 1951 survey of navigation problems, it was stated that two right-angled turns still existed in the rapids of 6-8 mile per hour velocity. It was recommended that more rocks be removed. (7187-161)

In 1973, the Egegik was further improved to allow easier passage for boats of 3-foot draft. (6337)

E. Conclusions

Commercial fishing took place on the river as early as 1900 as far as 11 miles above the mouth. Boats averaged 25 feet in length, and 2 1/2-foot depth. Canneries have been situated on the river since the early 1900's at a point 6 miles from the mouth and cannery steamers traveled from here to the mouth.

Traffic along the full length of the lake and river occurred from the early 1900's through the early 1940's during the fishing season to supply labor from small lake communities and the village of Kanatak. Boats of 2-4-foot draft easily navigated the river except for lining through the rapids. Fur trapping also generated traffic on the full length of the river.

An Army Corps project was completed in 1941 which removed submerged boulders in the rapids. Access was easier and possible without lining, but the fur industry was in decline so that traffic decreased. Population moved to Egegik village because commercial fisheries provided the employment base.

In 1973, the Army Corps did further boulder removal to facilitate passage through the rapids. Although no traffic was indicated in the researched documents, it is doubtful that this project would have been undertaken if there had been no need.

UNITED STATES

Coast Pilot®

9

Pacific and Arctic Coasts Alaska: Cape Spencer to Beaufort Sea

2012 (30th) Edition

This edition cancels the 29th Edition, 2011, and has been corrected through 17th Coast Guard District Local Notice to Mariners No. 27/12, and includes all previously published corrections.

Changes to this edition will be published in the Seventeenth Coast Guard District Local Notice to Mariners, and the National Geospatial-Intelligence Agency (NGA) Notice to Mariners. The changes also are available at http://nauticalcharts.noaa.gov/nsd/cpdownload.htm.

U.S. Department of Commerce
Dr. Rebecca Blank, Acting Secretary

National Oceanic and Atmospheric Administration (NOAA)
Jane Lubchenco, Ph.D., Under Secretary of Commerce for Oceans and Atmosphere, and Administrator, NOAA

National Ocean Service
David M. Kennedy, Assistant Administrator, National Ocean Service

although the lights on this bluff and on Red Bluff are small structures not easily seen from offshore. **Johnston Hill**, 357 feet high, is not readily identified by a stranger approaching from the SW, but abeam of the hill and thence to the NE a sharp tip on the N side is very prominent.

Chart 16323

(109) **Kvichak Bay**, the large arm at the head of Bristol Bay, extends NE from a line between the S entrance point of Egegik River and Etolin Point. The bay is an important fishing area for red salmon and has several canneries in its N part. Kvichak Bay is navigable for deep-draft vessels as far as the anchorage about 270° from the entrance to the Naknek River. The approach from the SW is restricted to a channel about 4 miles wide by **Big Flat**, an extensive tide flat extending off the E shore, and by **Dead Man Sands**, the large shoal in the middle of the bay NW of Johnston Hill. This shoal uncovers about 8 feet, and the area N of it is very foul. Fishing boats and collecting barges use the area at half tide or higher. Caution is necessary as a number of fishermen have been lost when trapped by the tides.

(110) About midway between Middle Bluff and Johnston Hill are two low spits which, while not discernible visually from a vessel in midchannel, are quite prominent on a radarscope and hence are valuable landmarks during periods of low visibility.

(111) N of Naknek River are numerous shoals and uncovered banks. The best water is on the E side of the bay between Naknek River and Koggiung, but local knowledge is needed to avoid the shoals. The land is low and flat, but the tanks and buildings of the canneries and the lights, which are maintained during the canning season, are good landmarks.

(112) Kvichak River, which empties into the head of Kvichak Bay, is the outlet for Lakes Iliamna and Clark, on the W side of the mountain system that borders Cook Inlet. At maximum ebb, the confluence of discharges from Naknek and Kvichak Rivers is apt to cause overfalls that are dangerous to small boats. Winds in excess of 20 knots, opposed to currents, make the bay quite rough for vessels of light draft.

(113) Good holding ground is available any place in Kvichak Bay where depths are suitable for anchorage. The bottom appears to consist of a layer of coarse gravel, sand, and stones, with mud beneath. The shoal depths permit a generous scope of chain, which is necessary because of the strong currents and frequent blows. Only one anchor is recommended because a vessel tends to swing to the direction of the current, despite wind direction, with consequent fouling if moored with two anchors. Experience has shown that a scope of 8 or 10 to 1 will withstand the effects of a 60-knot wind and a 3.5-knot current. With a strong wind opposed to current, a vessel will usually lie broadside to both, and while such a condition sometimes causes an anchor to walk, no such tendency has been experienced in this area.

(114) Navigators are reminded that the great range of tide in this bay must be considered when selecting an anchorage.

Currents

(115) In Kvichak Bay and River the current is very strong, and consequently the channel shifts more or less each year. The current velocity is 3.5 knots in the lower part of the bay and 2.5 knots in the main ship anchorage off Naknek. In Naknek River at the hole off Morakas Point, 4 miles above the entrance, the current velocities are about 1 knot on the flood and 2 knots on the ebb. (See the Tidal Current Tables for predictions.)

(116) It is recommended that vessels anchor against the current, when it is at maximum strength, so that engines may be used to offset the sudden strain when the anchor is let go. Caution must also be exercised, on flood current, to keep the vessel from being carried beyond the anchorage area while maneuvering. Since the currents usually follow the axes of the bay channels, navigators should make ample allowance when proceeding between Kvichak and Nushagak Bays; otherwise they are apt to be set to the N or to the S when they are on an E or W course.

Weather, Kvichak and Nushagak Bays Vicinity

(117) The best weather in Kvichak and Nushagak Bays appears to be from the latter part of May through July. The bays are frozen over during the winter, and the ice usually does not break up until May. Vessels approaching the bays during this time of the year, which they frequently do in preparation for the fishing season, are cautioned to do so during daylight because of possible ice.

(118) Storms have a tendency to move into this area from the Aleutian Islands during August and September, and, while their intensity usually is diminished, their rate of movement is decreased and at times they remain stationary while the depressions fill, thus causing extended periods of poor weather. Fog is not as prevalent in these bays as farther to the SW in Bristol Bay proper. Storms S of the Alaska Peninsula at times cause strong winds to draw through the valleys, such as that of the Egegik River, thus giving the effect of williwaws near the valley entrances.

(119) Mirages are seen frequently in the Kvichak Bay area during periods of calm, and particularly at low tide. They distort the appearance of bluffs and shorelines and make tanks and other elevated structures visible at greater distances than their altitudes warrant.

(120) **Egegik River** empties into Kvichak Bay 30 miles N of Cape Greig; **Cape Chichagof** is the N entrance point. It is a large river, 1 mile wide at the canneries, and is the outlet of **Becharof Lake**. (See also chart 16011.) It flows in a W direction for more than 28 miles.

(121) The lower part of the river forms **Egegik Bay**. A large part of its area is bare at low water. At the entrance, shoal water extends 6 miles offshore and should be given a wide berth by passing vessels. Entering vessels, depending upon their draft and condition of the sea, generally cross the entrance bar between half and full tide stages only. Moderately heavy seas will break over this bar with any stage of tide, although it has 4 fathoms over it at high water. It is considered the most dangerous bar in the Bristol Bay area.

(122) In 1982, extensive shoaling was reported in the entrance to Egegik Bay; local knowledge is advised. In 1994, a wreck was reported about 6.7 miles WNW of Coffee Point in about 58°15'19"N., 157°37'48"W.

Pilotage, Egegik Bay

(123) Pilotage, except for certain exempted vessels, is compulsory for all vessels navigating the waters of the State of Alaska.

(124) The Bering Sea is served by the Alaska Marine Pilots. (See **Pilotage, General** (indexed), chapter 3, for the pilot pickup stations and other details.)

Anchorage

(125) At the entrance to Egegik River are two partially protected anchorages with limited swinging room that are used by power scows and tugs. The principal one is the channel inside **Coffee Point**, with depths up to 5 feet. A smaller anchorage is just E of the wharf at Egegik, with depths from 6 to 11 feet. Ebb current at the smaller anchorage is very strong.

(126) Egegik River is navigable to small boats for its entire length into and across Becharof Lake. Although tidal to the foot of the rapids, mean range in its lagoons is only 1 foot; 5- to 6-foot drafts can be carried through the river, but the small lagoon reduces this to 3 or 4 feet, depending upon water stage. The controlling depth of the ¼ - mile rapids of the lake outlet is 4 feet at low water stage. Although its midchannel current averages 5 knots, slow-speed powerboats run it frequently with and without handline aid from the shore. The river is open from May to October. In 1970, the river was obstructed by numerous boulders possibly carried in through ice action.

(127) Freight from oceangoing vessels is generally lightered into Egegik from the ship anchorage off Naknek. **Egegik** has limited facilities; a cannery wharf that is 80 feet long dries at low water. Water and a 5-ton crane are available. Gasoline and diesel fuel are available for local use only. A pier, 70 feet long and 40 feet wide, with dolphins 10 feet off each outer corner, is 0.2 mile ENE of the cannery, just N of the twin tanks. Depths of 6 to 11 feet are off the pier. A cannery wharf, across the river, is 150 feet long with little water at its face. This cannery is inoperative, but its marine railway is active and hauls out barges, piledrivers, and tugs for winter layup. A removable fish conveyor and three pile dolphins extend offshore from Coffee Point. The conveyor and dolphins are removed after the fishing season. Two stores remain open all year in Egegik. Their supplies are principally food staples and clothing.

(128) Radiotelegraph communications are maintained. Transportation is available by floatplane from May to October, and is usually obtained from Naknek village or King Salmon Airport.

(129) **Naknek River** enters Kvichak Bay on the E side, about 10 miles S of Koggiung. **Cape Suworof** is the point on the N side of the entrance. The large 60-mile-long river has its source in **Lake Naknek**, where there are two villages.

Anchorage

(130) Anchorage can be had off the entrance to Naknek River in 35 to 40 feet; this is the head of navigation for deep-draft vessels. The approach channel to this anchorage has depths of 33 to 60 feet.

(131) Shoals and banks, many of which uncover, fill the lower course of the river and extend 3 or 4 miles, then trend around N and join the body of the banks that fill the upper end of Kvichak Bay.

Pilotage, Naknek

(132) Pilotage, except for certain exempted vessels, is compulsory for all vessels navigating the waters of the State of Alaska.

(133) The Bering Sea is served by the Alaska Marine Pilots and Southwest Alaska Pilots Association. (See **Pilotage, General**, (indexed), chapter 3, for the pilot pickup stations and other details.)

(134) Vessels using Southwest Alaska Pilots Association pilots and en route to Naknek can contact the pilot boat by calling "NAKNEK PILOT BOAT" on VHF-FM channel 16 or on a prearranged frequency between pilot and agent/vessel.

(135) The Naknek River has several large salmon canneries; all have wharves that bare alongside at low water. Some of the canneries have not operated for years. Deep-draft vessels anchor about 6 miles off the entrance to the river and lighter their freight ashore in barges which are available at Naknek; the approaches to the anchorages vary little from year to year. Vessels drawing up to 10 feet can go alongside the cannery wharves at half tide, but can remain afloat at low water only by shifting to what is called the hole just E of **Morakas Point**, which is 4 miles above the river mouth. The hole has depths of 9 to 14 feet at low water over a narrow crooked area 200 to 300 feet wide and about 0.5 mile long. Mooring buoys are maintained in this hole by the canneries on seasonal basis for use of power scows, tugs, and barges. Craft of these types, drawing up to about 12 feet, can proceed up the river with local knowledge some 12 miles from the mouth. In order to do this, vessels leave Naknek village 1 hour before high water. Beyond this point, small boats

TIDAL INFORMATION					
Chart	Station	LAT/LONG	Mean Higher High Water*	Mean High Water*	Mean Low Water*
16206	Nome, Norton Sound	64°30'N/165°26'W	1.5	1.4	0.3
16240	Apoon Mouth, Yukon River	63°03'N/163°23'W	4.0	--	--
16240	St. Michael, Norton Sound	63°29'N/162°02'W	3.9	--	--
16300	Goodnews Bay Entrance, Kuskokwim Bay	59°03'N/161°49'W	8.9	6.8	0.6
16300	Apokak Creek Entrance, Kuskokwim River	60°08'N/162°10'W	12.0	9.9	0.5
16322	Protection Point, Nushagak Bay	58°30'N/158°43'W	16.9	15.2	2.5
16322	Snag Point, Nushagak Bay	59°02'N/158°27'W	20.2	18.4	2.4
16322	Clarks Point, Nushagak Bay	58°51'N/158°33'W	19.5	17.8	2.5
16323	Egegik, Egegik River	58°13'N/157°23'W	13.3	11.6	0.8
16323	Naknek River Entrance, Kvichak Bay	58°43'N/157°03'W	22.6	20.7	2.2
16323	King Salmon Airport, Naknek River	58°40'N/156°39'W	3.2	2.3	0.2
16323	Kvichak, Kvichak River	58°58'N/156°57'W	16.5	14.8	0.9
16343	Port Heiden, Bristol Bay	56°56'N/158°44'W	12.3	11.1	2.6
16363	Port Moller, Bristol Bay	55°59'N/160°34'W	10.5	9.6	2.2
16381	Zapadni Bay, St. George Island	56°34'N/169°41'W	3.3	--	--
16382	Village Cove, St. Paul Island	57°08'N/170°17'W	3.3	3.1	1.0

* Heights in feet referred to datum of sounding MLLW.
Real-time water levels, tide predictions, and tidal current predictions are available at:
http://tidesandcurrents.noaa.gov
To determine mean tide range subtract Mean Low Water from Mean High Water.
Data as of June 2011

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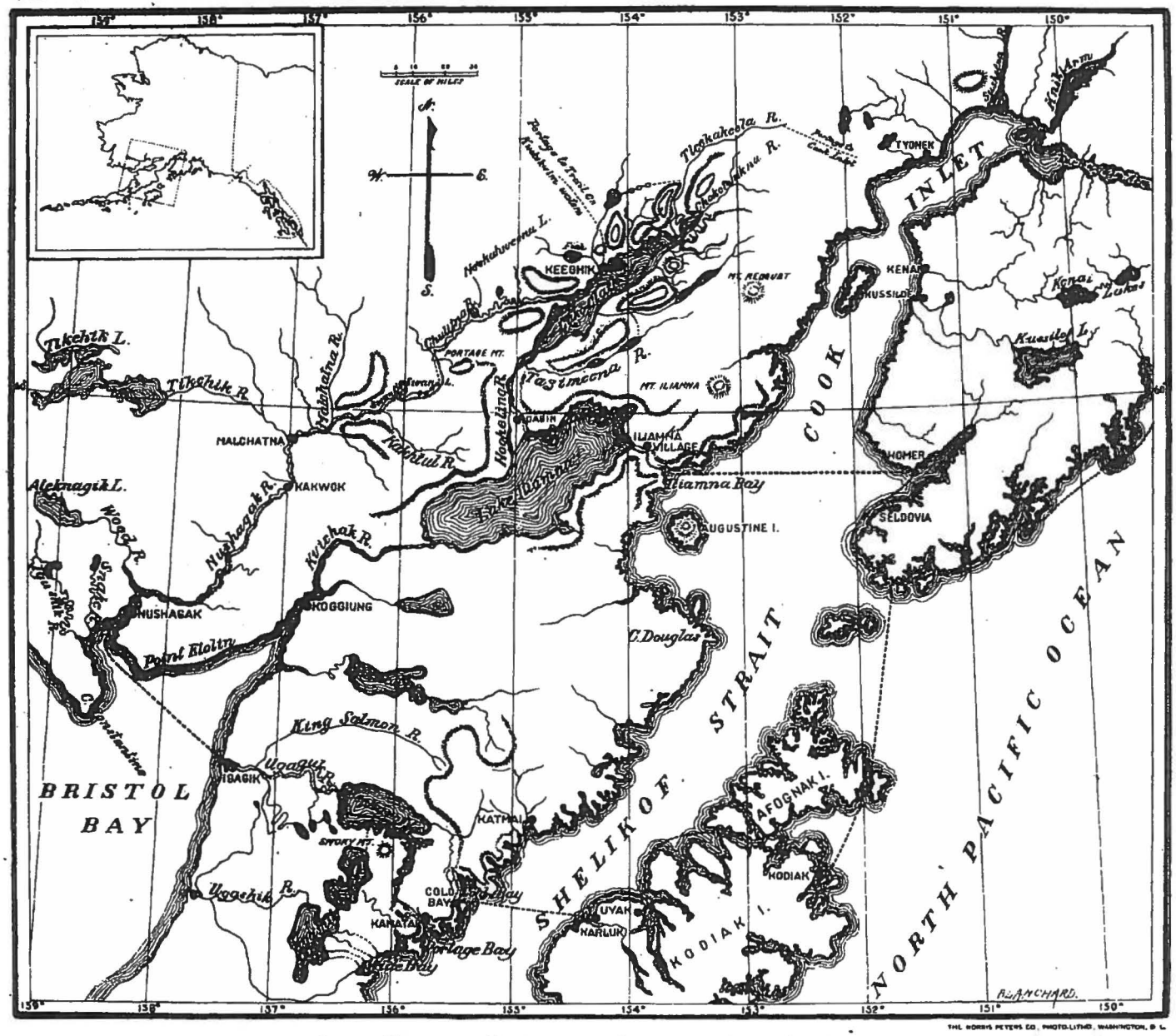

SKETCH MAP OF THE VICINITY OF THE BASE OF THE ALASKA PENINSULA.

Route of expedition ----------

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DIVISION OF BIOLOGICAL SURVEY

NORTH AMERICAN FAUNA

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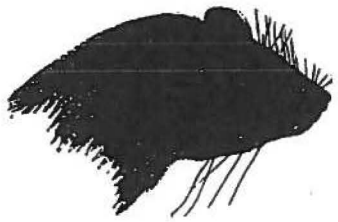

A BIOLOGICAL RECONNAISSANCE OF THE BASE OF THE ALASKA PENINSULA

BY

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men and traders, with the usual parasitic settlement of natives. It was formerly one of the best fur-trading stations in Alaska, and, indeed, still is, as the business can hardly be said to have decreased there more than elsewhere.

NUSHAGAK TO COLD BAY.

When Nushagak was reached, September 12, all the larger fishing boats were found beached and housed in for the winter. No suitable sailboats were to be had for the trip across Bristol Bay, and we finally decided upon the hazardous undertaking of coasting around to Koggiung in our own canoe. By great good fortune, however, a small schooner, which had been reported lost, suddenly appeared, and passage was engaged to Igagik. Start was made on September 26, and the next evening Igagik was reached. Here a salmon cannery is situated just inside the mouth of Ugaguk River and surrounded by a half dozen rude dwelling houses for the watchmen and a small collection of igloos or native huts. The region is low and treeless.

The Ugaguk River offered no great difficulties, as it is only a little more than 40 miles in length, and all but the upper 5 miles is affected by the tide. Starting at 6.30 a. m. on September 29, and stopping a half-hour for luncheon, we were still able to make camp only one mile below Becharof Lake at 2 p. m. of the same day. The lower part of the Ugaguk at flood tide has the appearance of any ordinary tidal slew. It begins to look more like a stream about 10 miles above its mouth, where there are a few low bluffs, which, however, are not continuous. The river is wide and contains many shallow stretches, where long sand-bars are doubtless exposed at ebb tide. The banks are lined with low, scrubby willows, with now and then a clump of small alders on an occasional higher and more protected bank. Often the banks are mere swamps only 6 inches or a foot above high-water mark. The stream cuts through a ledge of granite just as it issues from Becharof Lake. For about three-quarters of a mile the current is very swift, and many granite bowlders project above the water. This stretch of swift water is called the Ugaguk Rapids. Several days were spent at the foot of the rapids, as high winds caused a strong surf to break along the beaches at the lower end of Becharof Lake, making it impossible to put off in a canoe. The country around the lower end of the lake is very desolate. A stretch nearly a mile in width immediately bordering the shore consists of sandy, wind-swept dunes almost devoid of vegetation except for thin irregular mats here and there on protected slopes. Farther back plant growth is more continuous, but very depauperate. The chief woody plants are *Empetrum* and several small species of *Salix*.

On October 4, during a temporary lull of the wind, the canoe was lined up the rapids and the journey continued around the end of the

lake to the south shore. After a long day of rowing, camp was made in a little bay near the northeast base of the volcano called by the natives Smoky Mountain. The lake is bordered by an almost continuous gravel beach, back of which are bluff-like hills clothed with tundra vegetation. Small willows are excessively abundant, and reindeer moss, Labrador tea, and crowberry are in great profusion. The alders at this time had shed their leaves, and at a short distance the scattered patches had the appearance of burnt ground. The willow leaves were turning yellowish, and some of the smaller plants reddish, and the whole effect was attractive. Continuing on the second day around the base of the mountain, we passed several stretches of high bluffs and rounded two or three rocky points and made camp on a narrow peninsula on the west side of the mouth of the long southern arm of the lake. On the following day, having threaded the small islands of the south arm, we continued on to the head of the arm and up a stream about one mile to a small subcircular lake at the base of the coast mountains. The course up Becharof Lake was along the south shore, and at no time was it more than a half mile from the beach. Along this route the water is seldom more than 15 feet in depth. It is very clear and cold, and the bowlder-strewn bottom is easily visible all the way. The region about the head of the arm is rather swampy and is characterized by a luxuriant growth of grass (*Agrostis*), which in many cases reaches to a man's shoulders. A small collection of native igloos or barabaras is located near the mouth of the stream. There is another on the little lake where we camped and made ready for the portage across the mountains. These mountains form an irregular semicircle about the small lake. They are from 2,000 to 3,000 feet in height, and are rough and rocky except for the first 500 feet, where the rolling slopes are more or less covered with grass and dwarf shrubs.

The portage trail runs from the east side of the small lake across a half mile of swamp, and thence up about 1,000 feet, traversing a rocky pass and continuing on down over more rocks to the native village of Kanatak, situated just above high-water mark on the bay of the same name. This bay is frequently called Portage Bay, which seems ill-advised on account of the existence of a better known Portage Bay farther west on the same coast. Two days of hard work in stormy weather sufficed to transport impedimenta to Kanatak. A small rowboat was immediately loaded, and we coasted around the rocky shore of Shelikof Strait to Cold Bay, as this was the only hope of securing passage on the southbound mail steamer. Cold Bay was reached on October 13 after a hard passage and a very narrow escape in a sudden storm off Cape Kanatak. Here we waited until October 26, when the steamer arrived, being hospitably entertained meanwhile by

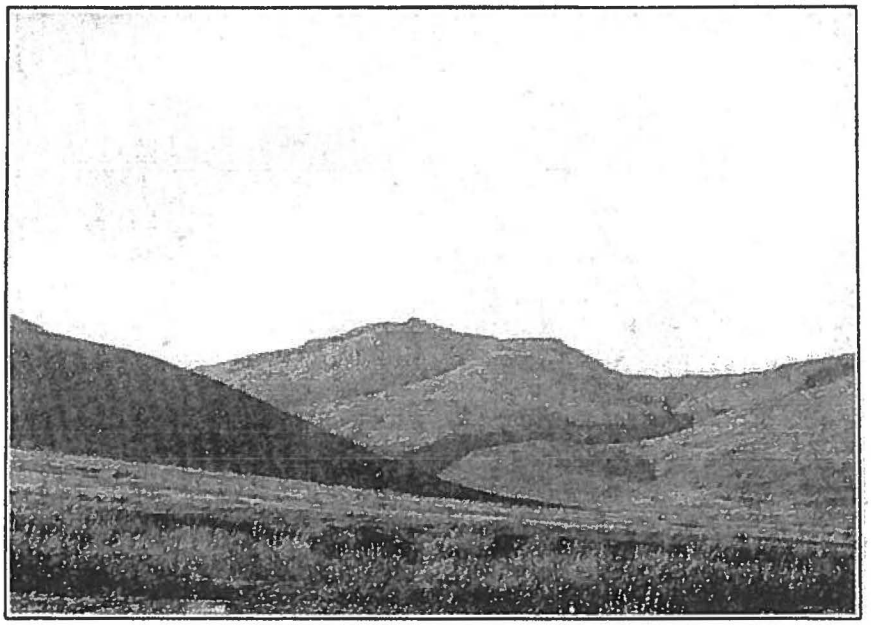


FIG. 1.—MOUNTAINS NEAR COLD BAY.

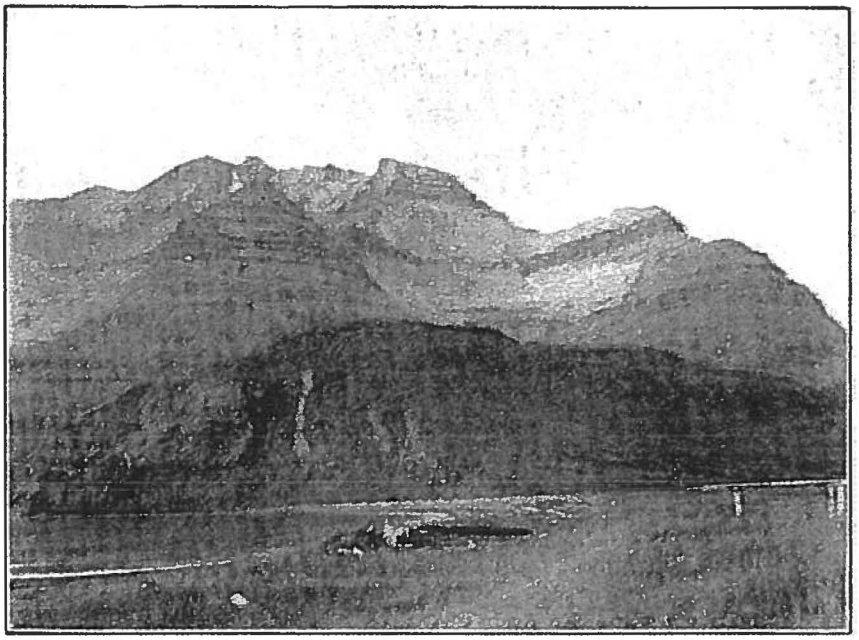


FIG. 2.—MOUNTAINS NEAR KANATAK.

Mr. J. H. Lee, who had charge of a small camp engaged in locating petroleum lands. Cold Bay is surrounded by bleak-looking mountains, in many places steep and bare, exposing sandstones and conglomerates (Pl. VI, fig. 1). A scanty growth of alder and willow is found along some of the streams, which are short, swift, and shallow. At the head of the bay there is a small area of level ground of a swampy nature. The hillside blanket of tundra vegetation is very thin, and the gravel or shingle beneath shows through in many places. Several low passes exist near Cold Bay, from which one looks down over a gently undulating descent to Becharof Lake, beyond which looms the snowy cap of the Smoky Mountain.

LIFE ZONES.

Practically all the region under consideration in the present paper lies along the border of the Hudsonian and Arctic zones. By using the actual limits of coniferous trees as a guide, the Arctic and Hudsonian may be sharply defined. The Arctic occupies the main part of the Alaska Peninsula southwest of the vicinity of Naknek Lake, together with a narrow strip northward along the coast of Bristol Bay and Bering Sea;[a] the Hudsonian, stretches over the region to the northward on the mainland. Throughout most of the part which may be assigned to the Hudsonian there are frequent occurrences of apparent Arctic intrusions in so-called faunal islands. Tundra conditions, in more or less insular form, occur throughout the Hudsonian zone, and in this border country are merely more numerous and extensive than farther south. By tundra is meant absolutely treeless country, where vegetation forms a thick mat consisting largely of mosses, lichens, saxifrages, dwarf willows, and such small plants as *Empetrum*, *Ledum*, *Andromeda*, *Chamæcistus*, *Vaccinium*, *Arctos*, and *Dryas*. Throughout the Hudsonian of this region such tundra is found in patches varying in size from a few acres to several square miles. About the upper end of Lake Iliamna, which may be regarded as a timbered region, there is considerable tundra, and the lower end of Lake Clark presents similar conditions. The valley of the Chulitna River, though containing much timber, some of it of fair size, is largely a tundra region, except along the immediate border of the stream and its more important affluents. Along the Nushagak drainage the subordination of the forest is still more pronounced, and the coniferous trees are strung out in thin lines confined to the very banks of the water courses. The accompanying map (Pl. VII), intended to indicate the limits of the coniferous forest, obviously fails, in the nature of the case, to show this mixture of forest and tundra, and pre-

[a] The extension of the Arctic zone to Bristol Bay was recognized by Nelson in 1887, when an 'Alaskan-Arctic' was defined to include the 'treeless coast belt.' (See Natural History Collections in Alaska, U. S. War Dept., pp. 27–32, 1887.)

Freight Canoes

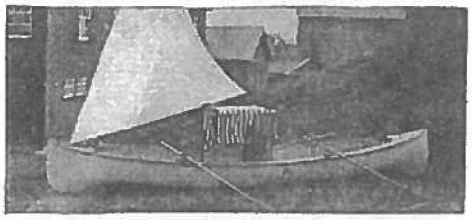
We build a lot of large Canoes specially for heavy work, for Government survey, exploring expeditions, etc. They are larger and more strongly built than ordinary Canoes, with heavier bottom boards and heavier ribs. We have built them for use in Alaska, different parts of the Hudson Bay country, Labrador and Newfoundland.

They have been used by the Department of the Interior; in Government work and the U. S. Government on the Boundary survey. By Mr. Wm. Ogilvie, D.L.S., for his trip down the Yukon and across to and up the Mackenzie River, in 1887, and in his reports he says of these Canoes: "They did considerable work on Chilkoot and Taiya Inlets, and they were then packed over to the head of Lewes River (Lake Lyndeman), from where they were used in making the survey of the Lewis and Yukon Rivers. In this work they made about 650 landings. They were then transported on sleighs from the boundary on Yukon River to navigable water on the Porcupine. In the spring of 1888 they descended the latter, heavily loaded, and through much rough water, to the mouth of Bell's River and up to McDougal's Pass. They were then carried over the pass to Poplar River, used in going down the latter to Peel's River, and thence up the Mackenzie River 1400 miles; or exclusive of railway and ship carriage, they were carried about 170 miles and did about 2500 miles of work for the expedition, making in all about 1700 landings in no easy matter and going through some very bad water. I left them at Fort Chipewyn, in fairly good condition, and with a little painting, they would *go through the same ordeal again.*"

We built the Canoes used by Mr. J. B. Tyrell, of the Government survey, for his trips through the Barren Lands west of Hudson Bay, 1893-94, and other trips, and for A. P. Low for his many explorations through Labrador and up east of Hudson Bay—and also for Messrs. A. E. Barlow, R. J. McConnell, Dr. Bell, W. McInnis, R. H. Ellis, and other members of G. S. Depart. of Interior, and for the Quebec Crown Lands Dept., the Newfoundland Government and United States Government surveys, and for hundreds of explorers and travellers in Alaska, on the Yukon, in the N. W. Territories, in the Rainy River and many other places, who wanted good and large canoes. For travelling or exploring they are much better than a skiff or any other kind of boat as their carrying capacity is large, and they are light and easily handled, for two men will paddle them and portage them more easily, and you do not have to leave a large space in the centre of your boat for a man to row, as a man can sit on the top of his load and paddle.

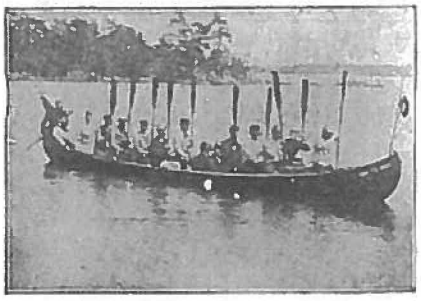
The Basswood and Cedar Canoes listed below are built of either wide style or of narrow strips with ship lap joint and the ribs closer together. Our stock canoes in the larger or XX sizes are built mostly of the narrow strips as we consider this the strongest and best method for heavy carrying canoes which are exposed to all kinds of weather and rough usage.

Our large Canvas Covered Canoes are the best that are put on the market. They are light and tough and the material throughout is the



25 ft. Canoe, with Portable Cabin, Oars and Sail,
for Inspector of Indians, N.W.T.

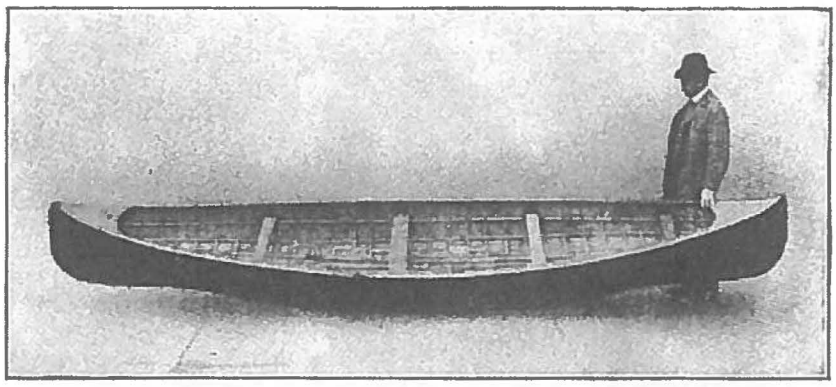
25 ft. Freight Canoe—Model "D"



30 ft. Canoe

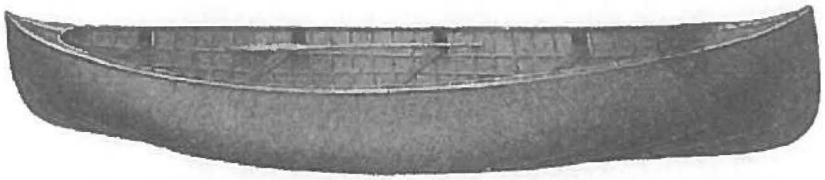
Mr. Ogilvie's 19 ft. Canoe, with Canvas Cover
For Prices of Covers, see List of Fittings

17½ ft. Special Canoe for Rough Water
Used on Labrador Coast



Copied from Rod and Gun, May, 1908:

"Mr. J. B. Tyrrell standing by one of the canoes in which in 1894, he travelled 1900 miles through the Barren Lands of Canada. After being used for this trip, the canoe was brought down to Nepigon and used for several years. It was brought to Toronto, and was included in the Canadian Northern Railway's Exhibit at the Sportsmen's Show."



Heavy Canoe with Strips on Bottom

Large Rib and Batten Canoe

Carrying Capacity of 69xx Canoe

very best. They are well ribbed and built to stand the test. Having supplied canoes to this trade for many years we know what is required in the way of strength and durability. A recent purchaser writes as follows: "I have just returned from a five weeks' canoe trip from Missinabi to Moose Factory, returning via Abitibi, Frederick House and Montreal Rivers. The total distance travelled we figure about 950 miles and included a great deal of swift water. The entire trip was made in the special 19¼ ft. Canvas Covered Canoe which you built especially for the trip. The Canoe was carried across some portages by one man, and took us through without serious accident from start to finish. The worst accident of the entire trip happened in Dog Lake, within three minutes from the time when the canoe was first placed in the water. We ran squarely on a rock there which cracked three or four ribs and would have put an ordinary canoe absolutely out of business. The little boat is now in winter quarters on Temagami Lake as good as ever, barring a multitude of scars along her good old ribs. I want to thank you for your courtesy in meeting our wishes last winter and building us the elegant little craft, which so competely answered our purposes. The Indians on Temagami think she is the greatest boat that ever was constructed."

No.	Length	Beam	Depth	Weight About	Capacity		About	Bass-wood	Cedar	Cedar
					10 in. Draft	12 in. Draft	15 in. Draft	Painted	Painted	Canvas Covered
66X	17	36	15	95	950	1250	....	$40 00	$54 00	.....
67X	17½	38	16	100	1000	1400	....	42 00	55 00	$63 00
68X	18	38	16½	100	1100	1500	....	44 00	56 00	66 00
68½X	18½	40	17	110	1200	1600	....	46 00	58 00	69 00
69X	19	42	17½	120	1250	1700	....	48 00	60 00	72 00
69½X	19½	43	18	130	1300	1800	....	51 00	62 00	76 00
68XX	18	42	17	130	1250	1700	....	47 00	58 00	71 00
68½XX	18½	43	18	140	1300	1800	2500	50 00	60 00	75 00
69XX	19	44	19	150	1400	1900	2700	54 00	62 00	81 00
69½XX	19½	45	20	160	1500	2000	2800	56 00	64 00	84 00
566	17	42	17	....	....	....	....	45 00	56 00	. ....
567	17½	44	17½	....	....	....	....	49 00	60 00	. . . .
568	18	46	18	....	...	....	....	53 00	65 00	. ....
569	18½	48	18½	...	....	....	....	50 00	69 00	.....
570	19	50	19	....	....	....	....	60 00	73 00	.... .
571	19½	52	19½	....	...	....	....	64 00	78 00	.....
572	20	54	20	....	....	....	....	68 00	85 00	....

INCLUDING TWO PADDLES.

We can make these Canoes deeper at a cost of about $2.00 per inch extra, and for copper fastened from $3.00 to $5.00 each extra.

We cannot get three of above Canoes into a car when crated over one another—and only two of some of the smaller ones—and the freight on them is 4 times first class rate.

We can get three in one crate by nesting two of them and then the rate is less.

EXTRAS—We can put in heavier keelsons and make Canoes heavier when required, to order.

Bilge and outside keels and rubbing strips also put to order.

PETERBOROUGH CANOE CO. Limited

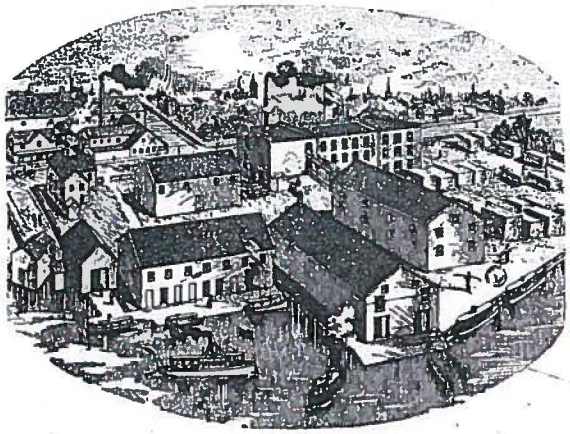
Successors to the Ontario Canoe Co., Ltd.

PETERBOROUGH,

ONTARIO, CANADA.

W. H. HILL, PRESIDENT

J. Z. ROGERS, SEC. AND MAN-DIRECTOR.



THE LEADING MANUFACTURERS OF ALL KINDS OF

HUNTING... FISHING and SAILING..... CANOES

IN BASSWOOD, CEDAR, BUTTERNUT, ETC.

Skiffs—Single Handers, Sail Boats, Sailing Yachts, Steam Yachts, Sails, Canoe Fittings, Camp Furniture, Tents and all kinds of Camp Goods, &c.

Send 3c. Stamp for Catalogue, and get our prices before buying, as we can give you better value for your money than you can get elsewhere.

A CHAPTER

...ON...

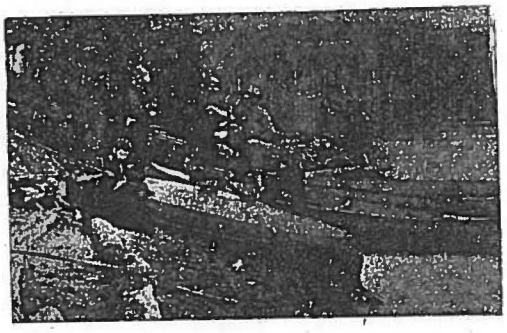
CANOES.

THE PETERBOROUGH CANOE COMPANY, LIMITED, OF PETERBOROUGH, ONT., CAN.

EXAMINER PRINT

A Chapter ON Canoes.

THE excitement of the Rossland, Rat Portage, Klondike and other Gold Fields has called attention to the use of LARGE CANOES such as we have been building for years for the use of explorers, surveyors and others who need to carry in them a larger load than the ordinary canoe will accommodate.



We are getting so many enquiries that we place in print some facts to give all possible information about the canoes, for many write us who have not an adequate idea of the capabilities of a canoe, what they are, or what they will carry.

We are nearly out of Catalogues and these Pamphlets. We have been very busy this season and besides other orders have sold a company six hundred

Canoes, which they have sold at Dyea, Vancouver, Edmonton, Prince Albert, and other points in the North West. It is too late to get out another Catalogue this year, so we are reprinting this Catalogue and shall be glad to give you any further information and to answer any enquiries.

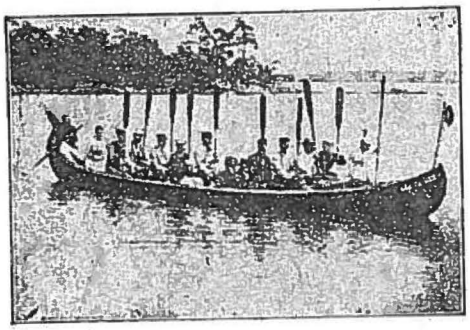
For exploring and travelling where there are large loads to be carried we think there is no craft as good as our large 18 ft. and 19 ft. canoes. Their carrying capacity is large, they are light and easily handled, and two men will paddle them or portage them easily. Men take up much less space in a boat paddling than they do rowing as there must be a large clear space near the centre of the craft, for a man to row, but he can sit on the top of the load and paddle.

We have the largest and best canoe or boat factory in the country, and have all the necessary machinery, and have always a large quantity of dry lumber on hand, so that we are always in a position to build anything that may be required from a canoe or a skiff to a steam launch, and have had many years experience.

The Peterborough Canoe is the Canoe for prospectors and surveyors use, or for hunting, sailing or pleasure, and affords the best and easiest conveyance over water stretches. The model is the principal thing in canoe building; and while we construct and furnish our Canoes on correct principles, our models are what have given the world-wide reputation they enjoy. For speed, carrying capacity, ease of paddling and steadiness, our Canoes have taken foremost rank against all comers the world over.

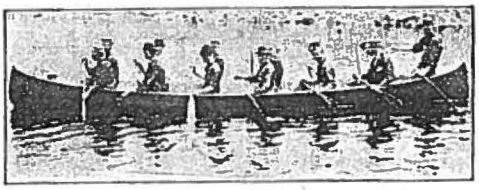
PETERBOROUGH CANOE CO., Limited.

LARGE OR WAR CANOES.



OUR 80 FT. WAR CANOE.

THE largest canoes we have constructed are sometimes known as "War Canoes" and are used as Club canoes. We built the first of these some years ago and it is still in use. Such canoes are 30 ft. long, 50 in. beam, and will carry 16 paddlers or about 3800 lbs , and will weigh about 350 pounds.



OUR 25 FT. X 50 IN. CANOE.

The next size is 25 ft. x 50 in. beam, will carry about 3200 lbs. and will weigh about 300 pounds.

Again, we build these canoes in all sizes below this as will be seen by list at the end of this chapter.

PETERBOROUGH CANOE CO., Limited.

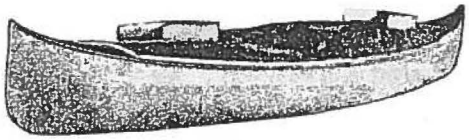
OUR CANOES were selected and used for years by the Government for use in exploration work. We built the canoes used by Mr. William Ogilvie, D.L.S., of the Department of the Interior, and who was Government Commissioner at Dawson City, on the Yukon, for his trip down the Yukon and across to and up the Mackenzie River in 1887.

THIS CUT IS ONE OF OUR 19 FT. NO. 69 XX CANOES AND SHOWS CARRYING CAPACITY.

OUR CANOES ON THE YUKON.

MR. OGLIVIE, in his report, refers to these canoes as follows :—"A word or two about "these canoes may not be out of place. They were "made by the Ontario, (now Peterborough) Canoe "Company, of Peterborough. Both were of special "make and somewhat outside the Company's usual "style of build. One was 18 ft. long, the other 19 "ft., both 40 in. beam and 18 in. deep. They were "built of basswood, painted ; the bottom planks "being ⅜ in. thick and the sides ¼ in. They were "extra strong, and higher at the bow and stern than "the usual make. When dry they weighed about "140 lbs. each, so that two men could without diffi-

"culty carry them. They would each hold two "men and 1400 lbs. without being at all overloaded "and could with ease then be driven 4 to 4½ miles "per hour. I had them furnished with moveable "canvas decks, which could be fitted on and made "the canoes almost water-tight. These two canoes "travelled about 3000 miles by rail and 1000 miles "by steamship before being brought into service. "They did considerable work on Chilkoot and Taiya "Inlets, and were then packed over to the head of "Lewes River, (Lake Lyndeman), from where they "were used in making the survey of the Lewis "and Yukon Rivers. In this work they made about "650 landings. They were then transported on "sleighs from the boundary on Yukon River to "navigable water on the Porcupine. In the spring "of 1888 they descended the latter, heavily loaded, "and through much rough water, to the mouth of "Bell's River and up it to McDougall's Pass. They "were then carried over the pass to Poplar River, "used in going down the latter to Peel's River, and "thence up the MacKenzie River 1400 miles; or "exclusive of railway and ship carriage, they were "carried about 170 miles and did about 2500 miles "of work for the expedition, making in all about "1700 landings in no easy manner and going through "some very bad water. I left them at Fort Chipewyan "in fairly good condition, and, with a little painting, "they would *go through the same ordeal "again.*"



MR. OGILVIE'S CANOE WITH CANVAS COVER.

The canvas covers referred to were fastened to the gunwales with thumb screws and false gunwales, and each man sat with his feet in a pocket sewn into the cover, with a wood rim laced around it, and if the water got into it he picked up bottom of the pocket and the water was tossed overboard.

OGILVIE'S "NELSON" CANOES.

OGILVIE'S NELSON CANOE.

THIS cut is of another canoe we built for Mr. Ogilvie in 1891, which he named the "Nelson' for his exploring trip on the River Nelson. It was 19 ft. long, 44 in. beam, 24 in. deep with inside gunwales and combing; the same as our Solid Comfort Canoes described in our catalogue. It is easy to attach a canvas cover to these canoes, as it can be hooked over the combing and is easily put on and taken off, and does not interfere with paddling.

OUR CANOES IN THE BARREN LANDS.

THE Canoes we built for Mr. J. B. Tyrrell, of the Geological Survey Department, for his explorations through the Barren Lands west of Hudson Bay, in 1893-94, were No 68, 18 ft. and No. 69, 19 ft. canoes, and were made of the best cedar and varnished, and were built to combine great strength with lightness.

BY CANOE THROUGH LABRADOR.

WE built for Mr. A. P. Low, of the Geological Survey Department, for one of his exploring trips through Labrador, a varnished cedar canoe, 18 ft. long, 40 in. beam, 19 in. deep, that weighed less than 90 lbs. and which he said one man carried over a three-mile portage without stopping. This canoe was frequently loaded with a burthen of 1500 lbs. It did its work well but it was rather light for the heavy work. All other canoes we built for him were heavier and stronger. Several of them were painted basswood canoes, but many were of varnished cedar.

USED FREELY IN GOVERNMENTAL WORK.

WE have also built these large canoes for M. Deville, of the Department of the Interior, Surveyor-General, who first used our canoes in government work, and for Messrs. A. E. Barlow, R. G. McConell, W. McInnis, Dr. Bell, R. W. Ells and other members of the Geological Survey Department and Department of the Interior, and also for the Crown Lands Department of Quebec, for the Newfoundland Government, for Mr. King of the Department of the Interior for the International Boundary Survey between Canada and Alaska, and for the United States Geological Survey, for their work both in the United States and Alaska, and they have been nearly all canoes ranging from No. 67 to No. 69, XX several of varnished but most of them were of painted basswood, according to what they were required for and the work they had to do. This shows that the canoe most desirable for this work is a good large canoe from 18 to 19 ft. long. Such canoes are safe, carry a large load, are easily handled and portaged.

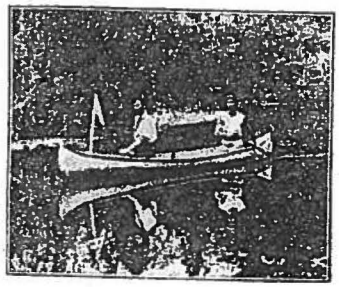
We have also built many canoes of special design and for use in very special circumstances. We are familiar with this class of work, and our resources are equal to any call.

We covered the bottoms of some canoes for Prof. Pike, of Toronto,—for special hard work in shallow rivers—with longitudinal strips of oak, so as to save them when dragged over stones in shallow rivers, and they answered very well.

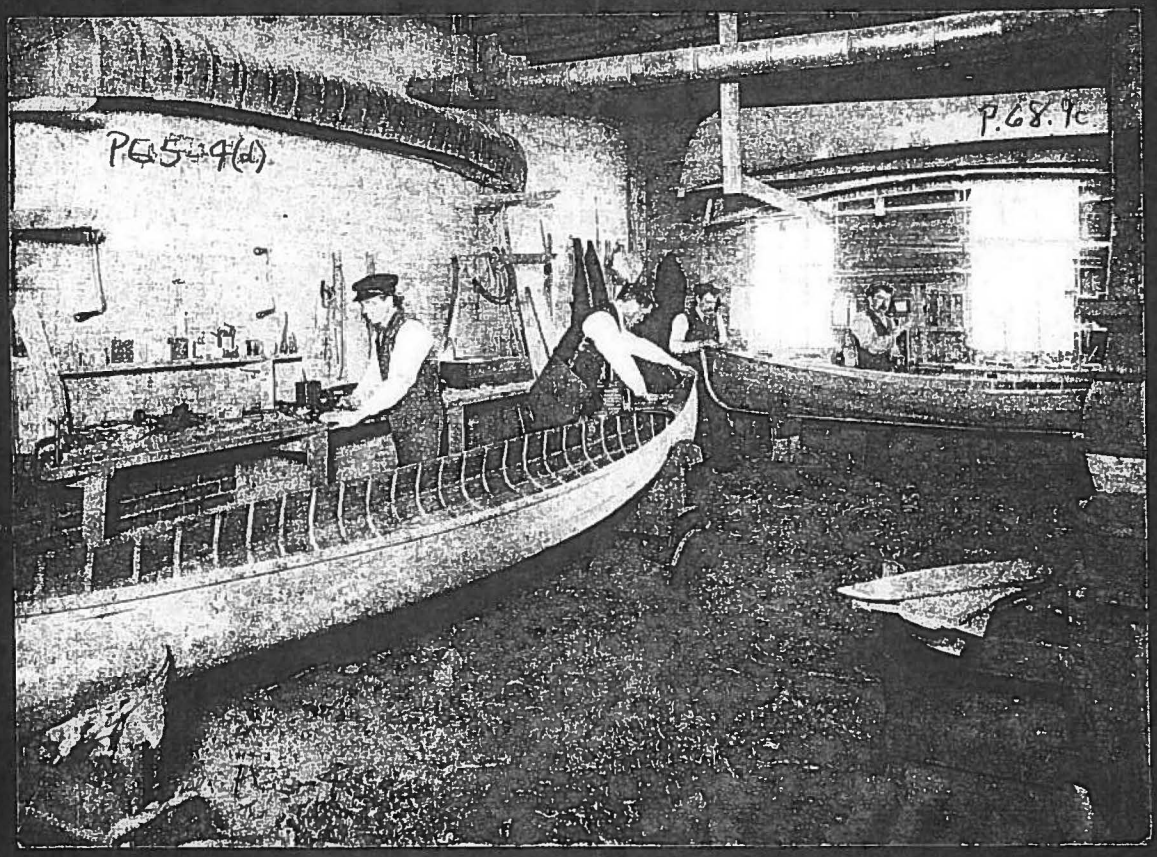
A folding canoe to strap on the side of a waggon box, so that it could be used for exploring ponds and lakes, etc., for the Geological Survey Department.

We built canoes for Mr. McColl, Inspector of Indians in the North West, and also for other Inspectors. Several of them were 19 ft. and some 23 ft. long, with portable cabins, and which could be arranged to paddle, row or sail, and so arranged that everything could be taken out for portaging.

We built several cedar rib canoes for Mr Malterner who has made several trips down the MacKenzie River, and this year we built him a 17 ft. cedar rib canoe, with inside gunwales and combing, and he started from Edmonton and wintered at Great Slave Lake, and continued his journey this spring.



ONE OF OUR LIGHT CANOES. SEE NEXT PAGE.



1891