3953

Diag. Cht. No. 8502-1

DESC

Form 504
DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

State: Alaska

11—5613

DESCRIPTIVE REPORT.

Hydro. Sheet No. 3953

LOCALITY:

Copper R Delta
Korsakovic
Slough
Sh. Token

1917

CHIEF OF PARTY:

E. E. Smith

3953

DESCRIPTIVE REPORT TO ACCOMPANY HYDROGRAPHIC SHEET NO. 3953

KOKENHENIC SLOUGH

The investigation of Kokenhenic Slough was undertaken at the instance of local cannery men in search of a channel from Kokenhenic Island to the railroad bridge through which their catch of fish might be brought out. The search was fruitless.

The work was located from the approximate recovery of Station North Base on Kokenhenic Island, the remains on the signal and the center mark, under cut by the action of wind in the sand, being found. Distant peaks located by triangulation were used for orienting. Wind and water have removed half of Kokenhenic Island. The water tank alone remains of the structures previously used by the cannery. No triangulation stations were recovered as the sand dunes are of a very unstable character offering poor foundations for marks. Sufficient signals were located by planetable triangulation to carry on the work. The shore line as sketched is shown on this sheet.

This sheet includes the same territory as Hydrographic Sheet No. 2378 submitted in 1898. The country covered is very sandy and flat, with scattered clumps of trees and scrubby trees. The maximum height of the sand dunes is 75 feet. From a distance of three or four miles off the only details that can be made out are a few such items as the trees at Station Castle, the island on which Station Far is located and Kokenhenic Island. The mountains in the back ground seen over the low country make the extent of the flats seem much less than it is.

All over this sheet the bottom is sand except in a few spots near Signals Def and Cab where there is stiff mud.

The whole area developed at low tide consists of countless bare spaces intersected by tortuous shoal channels. The river falls over these shoals as far off shore as the hydrography was carried making navigation imposible at ~~that stage of the~~ low tide. Although the current would carry the whale boat from which sounding was done over the shoals going down stream, it was constantly necessary to get out and haul it over the shallow spots going up.

Just off the west side of Kokenhenic Island abreast of the water tank the TAKU lay at anchor with swinging room except at low tide. As there was no protection from the wind from any direction this would be an uncomfortable place in bad weather. If the channel was staked a vessel could anchor in the neighborhood of Signal White and find shelter except from the strong winds which blow down the river.

The tide curve obtained at the station on Kokenhenic Island showed that the shoals below this point are high and dam the water in so that it does not fall much below half tide.

From the short term observation it seemed that high tide reaches about to Signal Whis. The channel from the lower end of Kokenhenic

Island to Signal Gin, although narrow in spots and uncertain, could be followed in a light draft boat at any stage of the tide by one thoroly familiar with it. Below Kokenhenic Island the channel is navigable only at high water.

Above Signal Gin an effort was made to find a channel navigable by any draft boat to the railroad bridge but it was proved beyond question that no such channel exists at present. The water just falls over the many wide shoals. Two parties, each in a small boat, spent two days each exploring every possible stream in the vicinity. They had the greatest possible difficulty in making movements in any direction. Water in sufficient depths for launches was some times carried for a few hundred yards only to find it at the end pouring in a thin sheet over the soft sand flats and the boats would have to hauled ahead.

Positions 41c and 61c were taken at intervals of about four minutes while working a boat in this manner up the most favorable looking stretches to the railroad bridge. Above position 61c the boat was dragged over the sand around the head of the small island where Signal Green is located to the channel running down on the west side of that island.

Positions 63c to 68c were run down the part of the river where the most water seems to flow. The channel is 200 yards wide and one to two fathoms deep and is quite straight. The current velocity was perhaps three miles per hour when visited in June. Below position 68c the river soon spreads out over the sandy shoals. The large part of the water coming through this channel trends to the westward toward Alaganik and Pete Dahl Sloughs. There is no channel to the bridge from Kokenhenic Slough. Fishermen say a bar in Alaganik Slough in the vicinity of Snag Point has entirely closed all possibly of navigating that branch. During the summer a skow drawing about thirty inches was taken to the bridge by using the kedge anchor almost the entire way through Pete Dahl Slough. The men who did the work say they might have been able to carry six inches more draft but it was a matter od doubt.

Below Signal Bush and eastward across the river to Cottonwood Point and beyond there are no navigable channels or sloughs. During the fishing season flat bottom river steamers drawing four feet daily make the trip from Orca across the delta to the fishing camps east of Cottonwood Point. The passage from the Race Track to the eastern end of the trip is made at high tide. They lay in the mud or sand wherever the tide leaves them and continue when the water again floats them. In this way they become very familiar with the flats. Where a channel or a high flat is seen it is marked by a spruce tree stuck in the flat to serve as a navigation aid. The masters of these boats say there is no navigable route across these flats which they term "Dago Flats" from Italian fishermen.

There is a great deal of confusion concerning names on the flats. During one or two months of the year there are many nomadic fishermen living on them. Few point are so definitely marked as to be readily recognizable and a great deal of difference exists as to the identy of various sloughs. Alaganik Slough, Pete Dahl Slough, Kokenhenic Slough, Glacier River, Eyak River and Mountain Slough are well established and are used as the charts indicate. But Castle Slough is some times called King Salmon Slough, Gust Stevens Slough or Storey Slough. There seems to be no settled conviction or usage concerning these names. However Castle Island is well known as the group of large cottonwood trees thereon serves as a landmark. Kokenhenic Island, Grass Island and Cottonwood Point are used as shown on the 1916 sheet scale 1/80,000. The names of the other sloughs mentioed are there given as well as they could be determined.

While making the survey it was noticed that Station Far on Top. Sheet 2350 is plotted to far north by 650 meters and the topography of the island dependent upon it is correspondingly shifted.

Respectfully submitted,

E. E. Smith

Assistant C.& G.S.
Chief of Party.

List of Positions on Kokenhenic Branch sheet.

Signal	Lat.60N	Met	Long.145W	Met	Description	Recoverable
Bush	16'	70	05'	608	Spruce top of fine sand duffaat	No
Stake	18'	968	05'	173	Stake top of sand dune	No
Tank	18'	638	05'	365	Water tank Kokenhenic Island	Yes
Cab	18'	365	05'	447	Signal in tree	No
Def	17'	705	07'	515	Pole signal in flats	No
Pex	18'	810	06'	827	Apex of pointed topped bluff	Probably
Tuff	19'	709	07'	140	Tuft of grass near top of bluff	No
Jak	19'	1041	07'	335	Signal in tree	No
Hi	18'	1777	05'	742	Pole signal	No
White	19'	851	05'	715	Pole signal	No
Gin	21'	973	04'	60	Tree	No
Bluff	21'	502	04'	448	Outer tree of bluff	Possibly
Tree	21'	1128	06'	655	High tree in woods	No
Key	23'	1310	05'	374	Pole signal	No
Shag	22'	520	03'	753	Pole signal	No
Whis	23'	96	04'	670	Pole signal	No
Mound	24'	1102	03'	710	Top tree small island	Yes
Green	25'	1099	05'	194	Highest tree northend island	Possibly
North	25'	1564	03'	723	Tree	No
Bridge	26'	1120	05'	465	West pier railroad bridge	Yes

Hyd. 396-3.

List of Positions on Kokenhenic Branch sheet.

Signal	Lat.60N	Met	Long.145W	Met	Description	Recoverable
Bush	16'	70	05'	608	Spruce top of fine sand duff dat	No
Stake	18'	968	05'	175	Stake top of sand dune	No
Tank	18'	658	05'	565	Water tank Kokenhenic Island	Yes
Cab	18'	365	05'	447	Signal in tree	No
Def	17'	705	07'	515	Pole signal in flats	No
Pex	18'	810	06'	827	Apex of pointed topped bluff	Probably
Tuff	19'	709	07'	140	Tuft of grass near top of bluff	No
Jak	19'	1041	07'	535	Signal in tree	No
Hi	18'	1777	05'	742	Pole signal	No
White	19'	851	05'	715	Pole signal	No
Gin	21'	973	04'	60	Tree	No
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STATISTICS SHEET NO. 3.9.5.3.

Date 1916	Letter	Volume	Position	Soundings	Miles-Statute	Vessels
June 16	a	1	65	439	8.7	Whaleboat
June 17	b	1	96	589	7.5	"
June 19	c	1	62	244	4.0	
June 19	c	2	22	121	3.0	
June 20	d	2	83	599	10.0	Taku
	TOTALS		328	1992	33.2	

ADDRESS
U. S. COAST AND GEODETIC SURVEY
WASHINGTON, D. C.

REFER TO No.

HYDROGRAPHY ETC., (HT)

FIELD RECORDS (H)

CHARTS (H)

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
WASHINGTON

December 14, 1917.

Division of Hydro. & Topog.

Division of Charts:

Tidal reductions are approved in 2 volumes of sounding records for

HYDROGRAPHIC SHEET 3953

Copper River Delta, Kokenhenic Slough, Alaska, by E.E.Smith in 1916.

Plane of reference is Lowest tide observed during period of soundings, June 16-20, 1916, and reads

2.3 ft. on tide staff at Kokenhenic Island.

Off shore in this general locality the mean lower low water should correspond to -1.7 on the gauge at Kokenhenic Island.

12/15/17

L. P. Shidy

Acting Chief, Section of Tides and Currents.