

# 4329

DIRECTOR \_\_\_\_\_  
HYDROGRAPHY \_\_\_\_\_  
SALES \_\_\_\_\_  
GEOLOGY \_\_\_\_\_

MAY 23 12 11 PM '24

OFFICE \_\_\_\_\_  
LIBRARY \_\_\_\_\_  
GEOLOGY \_\_\_\_\_

Diag. Chy. No. 8152-1 & 8201-3

# 4329

Form 504 <b>DEPARTMENT OF COMMERCE</b> U. S. COAST AND GEODETIC SURVEY
State: <u>S.E. Alaska</u>
11-5013
<b>DESCRIPTIVE REPORT.</b>
Hydrog. Sheet No. <u>4329</u>
LOCALITY:
<u>W. Coast Prince of Wales I.</u>
<u>El Capitan Pass - South Part</u>
1923
CHIEF OF PARTY:
<u>T. J. Maher</u>

DESCRIPTIVE REPORT

to accompany

HYDROGRAPHIC SHEET B, EL CAPITAN PASSAGE, (South  
Part), WEST COAST of PRINCE OF WALES ISLAND.

SOUTHEASTERN ALASKA.

U. S. S. SURVEYOR.

Thos. J. Maher, Chief of Party.

This sheet extends from Hub Rock on the North to Cap Island and Sea Otter Sound on the South and is the most Southerly of the El Capitan Sheets. In this area the Pass width tapers from four miles in the Northern part to three in the Southern, and as in the section immediately North, this width is broken up by many islands. The country is solidly wooded with scrub evergreen trees and the shore line is almost invariably rock ledge and is steep to; it is typically Southeastern Alaska. There is no sign in this area of human habitation past or present.

#### SURVEY METHODS.

Soundings were taken with lead and wire from a gasoline launch with hand rig for reeling in. The launch was stopped for each sounding except in a few isolated cases in shoal areas where a greater number of soundings were desired, the hand lead was used with the launch underway, very slow ahead. Shell bottom was obtained and recorded in many cases when pieces of broken shell were brought up on the lead; the bottom in these cases was always hard; instances of this sort inshore where rocky bottom was visible indicates that these pieces of shell were picked up off rock bottom. The junior officer recording took the liberty to abbreviate "growing kelp" to "g.k." in his records.

#### LANDMARKS and DANGERS.

This section of the Pass is the route for boats between Karheen to the South, and Deweyville, Tokeen or Shakan. There are really three passes here - that is, the Pass offers three channels. The one most used is the Westerly one, leaving Cap Island on the starboard hand in going North. From Cap Island the rock on which  $\odot$ Fir is located is to be picked up and left also on the starboard hand. This rock is more of a landmark than a danger, although it is very small and shows only as a black dot on the surface. There is good water around it East and West. It just covers on an extreme high tide - say 19.5 feet at Juneau. From this rock the usual track leaves the island of  $\odot$ Was on the port hand; it is well to keep 100 meters off the Northeast point of this island. From here the course lies between  $\odot$ Din and  $\triangle$ Egg. A small kelp patch projects perhaps 50 meters out from the beach just North of  $\odot$ Din but a midchannel course clears this satisfactorily. A considerable number of soundings were taken in this pass between these islands to insure its reliability and nothing was found indicative of danger. From here the course bends slightly right to leave  $\odot$ Joe and  $\odot$ Lot on the starboard hand, but  $\odot$ Joe must be given a wide berth to miss 2 offlying rocks, one of which has two feet of water and the other four at lower low water. These

rocks are marked by a heavy kelp patch.

The middle channel thru this section of the Pass after leaving Cap Island on the starboard hand leaves  $\Delta$ Twin on the port hand and goes between  $\circ$ Flat and  $\circ$ Mis, favoring the latter to miss the rocks North of  $\circ$ Flat, which, however, show to about half tide. Thence passing  $\Delta$ Under close on the port hand so as to have missed the rock almost in midchannel West of  $\circ$ Si. This rock is marked by kelp. From here the course is clear, leaving  $\Delta$ Bath on the port hand and  $\Delta$ White on the starboard hand. The rock at  $\circ$ Bo is covered at very high tides.

The East channel passes Dot Island on either side and runs up the narrow pass between  $\circ$ Eat and  $\circ$ So known as "Skookumchuck" to leave Hub Rock well on the port hand. The rocks just off  $\circ$ Fore constitute the only danger to be passed. They are marked by kelp and show up to nearly half tide; with the exception of the rock just North of  $\circ$ Kay all the shore line along this channel is steep to and will bear crowding.

The channel East of Cap Island represents a cut-off for Karheen-Deweyville traffic and is used by small boats. The dangers are the  $1/6$  fathom spot West of  $\circ$ Tic and the reef making out North of  $\circ$ Isle.

#### CURRENTS.

The general direction of the flood tide is North; that is the tide floods up from Sea Otter Sound, and ebbs South and out again into the sea.

The flood runs Easterly across the North end of Cap Island and joins with the flood which has come along the East side of the same Island to give a very strong current in the "Skookumchuck" between  $\circ$ Eat and  $\circ$ So, the strongest of any place in this section of the Passage. No measurements of current were made; the maximum ebb or flood in "Skookumchuck" is probably 4 knots. Time of slack water is very nearly coincident with high and low tides at Deweyville. Except for the above mentioned Easterly flood across the North end of Cap Island and the consequent Westerly ebb the currents set fair with the channel.

#### ANCHORAGES.

It is to be understood that this entire area is protected, practically landlocked, and never gets any ocean swell. Altho the bottom is mostly rocky, an anchor could be let go in suitable depth successfully since the only disturbing force would be the tidal current or a very gentle breeze.

Respectfully  
Arthur W. Skelling Jr H+GE

Statistics sheet No. 71

Date, 1923	Letter	Volume	Positions	Soundings	Miles, #t.	Vessel
August 28	a	1	38	61	2.9	# 3
29	b	1	97	154	6.5	
31	c	1	171	285	12.3	
Sept 4	d	1	359	101	4.5	
5	e	1 & 2	175	301	11.0	
7	f	2	88	99	5.0	
8	g	2	50	77	2.0	
10	h	2	152	253	11.8	
11	j	2 & 3	163	269	13.4	
12	k	3	141	249	11.2	
13	l	3	128	214	8.0	
14	m	3	132	211	8.0	
15	n	3 & 4	50	111	2.9	
17	p	4	188	358	13.5	
18	q	4	174	323	12.6	
19	r	4 & 5	156	266	9.1	
20	s	5	210	350	9.7	
21	t	5	174	277	6.4	
22	u	6	43	71	2.3	
25	v	6	144	274	9.3	
26	w	6	192	358	11.5	
Oct 1	x	6 & 7	187	333	11.2	
2	y	7	67	118	3.8	
3	z	7	235	446	13.9	
4	aa	7 & 8	131	225	8.9	
5	bb	8	160	285	8.2	
8	cc	8	9	15	0.4	
Total			3514	6084	220.3	

The unit for soundings on this sheet is fathoms.  
 The automatic tide gauge was located at Deweyville,  
 El Capitan Pass. South East Alaska.  
 The plane of reference, reading on gauge is 13.1 feet

Report on inking of 4329

The sounding records were complete.  
The protracting was poorly done.  
There were 83 positions that were  
out from 50 to 700 meters. Almost  
all of these positions when  
replotted agreed with the  
boat sheet.

The channels and shoals were  
well developed.

The drafting conforms to the  
general instructions

H. C. Munston

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

WASHINGTON May 31, 1924.

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet No. 4329

El Capitan Pass, Southern Part, Alaska

Surveyed in 1923

Instructions dated February 15, 1923.

Chief of Party, T. J. Maher.

Surveyed by A. G. Katz and A. W. Skilling.

Protracted by R. W. Knox

Soundings plotted by A. W. Skilling

Verified and inked by H. R. Edmonston.

1. The records conform to the requirements of the General Instructions.
2. The plan and character of development conform to the requirements of the General Instructions.
3. The plan and extent of development satisfy the specific instructions.
4. The sounding line crossings are as good as could be expected on broken bottom like the area covered by this survey.
5. The information is sufficient for drawing the usual depth curves.
6. The field plotting was completed to the extent prescribed in the General Instructions. The protracting was poorly done and a considerable portion of it was checked in the office. 83 positions were found to be 50 to 200 meters in error, and almost all of them when replotted agreed with the boat sheet.
7. The junctions with adjoining sheets are satisfactory.

8. No further leadline surveying is required within the area covered by this sheet.
9. In the descriptive report are detailed descriptions of sailing routes, the descriptions referring almost exclusively to triangulation points. As these points will not appear on the charts it will be difficult to describe the routes in the Coast Pilot, and it is suggested that the field party should apply names to the various geographic features, as is customary with explorers in uncharted regions.
10. The character and scope of the surveying and plotting of soundings are excellent. The protracting was poor.
11. Reviewed by E. P. Ellis, May, 1924.

April 9, 1924

Division of Hydrography and Topography:

Division of Charts:

Tide reducers are approved in  
8 volumes of sounding records for

HYDROGRAPHIC SHEET 4329

Locality: El Capitan Passage - S. E. Alaska

Chief of Party: T. J. Maher in 1923  
Plane of reference is mean lower low water reading  
13.1 ft. on tide staff at Deweyville.

For reduction of soundings, condition of records satisfactory  
except as checked below:

1. Locality and sublocality of survey omitted.
2. Month and day of month omitted.
3. Time meridian not given at beginning of day's work.
4. Time (whether A.M. or P.M.) not given at beginning of day's work.
5. Soundings (whether in feet or fathoms) not clearly shown in record.
6. Leadline correction entered wrong column.
7. Field reductions entered in "Office" column.
8. Location of tide gauge not given at beginning of each day's work.
9. Leadline corrections not clearly stated.
10. Kind of sounding tube used not stated.
11. Sounding tube No. entered in column of "Soundings" instead of "Remarks".
12. Legibility of record could be improved.
13. Remarks



Chief, Division of Tides and Currents.

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

The finished Hydrographic Sheet is to be accompanied by the following title sheet, filled in as completely as possible, when the sheet is forwarded to the Office.

U. S. Coast and Geodetic Survey.

Register No. 4329

State Southeastern Alaska

General locality West coast of Prince of Wales Island

Locality El Capitan Passage-South part.

Chief of party T. J. Maher

Surveyed by A. G. Katz; A. W. Skilling.

Date of survey August 28th - October 8th, 1923.

Scale 1:10 000

Soundings in Fathoms

Plane of reference M. L. L. W

Protracted by R. W. K. Soundings in pencil by A. W. S.

Inked by . . . . . Verified by . . . . .

Records accompanying sheet (check those forwarded):

Des. report, . . . . . Tide books, . . . . . Marigrams, 1 Boat sheets,

8 Sounding books, . . . . . Wire-drag books, . . . . . Photographs.

Data from other sources affecting sheet . . . . .

Remarks: