

8296

Diag. Cht. Nos. 8502-2 and 8554-2.

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey Hydrographic

Field No. PF-215 Office No. H-3296

LOCALITY

State Alaska - South Coast

General locality Cook Inlet

Locality Chinitna Bay

19 56

CHIEF OF PARTY

John Bowie

LIBRARY & ARCHIVES

DATE December 18, 1956

8296

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

REGISTER No. H-8296

Field No. PF-2156

State Alaska - South Coast

General locality Cook Inlet

Locality Chinitna Bay

Scale 1:20,000 Date of survey May 1956

Instructions dated 30 November 1955

Vessel SHIP PATHFINDER

Chief of party John Bowie

Surveyed by W. E. Randall, J. O. Boyer

Soundings taken by ~~fathometer~~, graphic recorder, ~~hand lead, wire~~

Fathograms scaled by Ship personnel

Fathograms checked by Ship personnel

Protracted by J. O. Boyer

Soundings penciled by J. O. Boyer

Soundings in ~~fathoms~~ feet at ~~MLLW~~ and are true depths

REMARKS:

765

DESCRIPTIVE REPORT

To Accompany

HYDROGRAPHIC SURVEY H-8296 (Field No. PF 2156)

Cook Inlet

Scale 1:20,000

1 9 5 6

USC&GS SHIP PATHFINDER

John Bowie, Commanding

A. PROJECT:

This survey is a part of Project CS-1384. Original instructions were dated 30 November 1955. Paragraph 9 of these instructions authorize this hydrographic survey.

B. SURVEY LIMITS AND DATES:

This sheet covers the entrance to Chinitna Bay (latitude  $59^{\circ}49'$  to  $59^{\circ}52'$  and longitude  $152^{\circ}58'$  to  $153^{\circ}05'$ ).

Hydrography was started 12 May and completed 17 May 1956.

Hydrography was done to facilitate wire drag operations. Only that area that was to be wire dragged was sounded.

C. VESSEL AND EQUIPMENT:

All hydrography was done by PATHFINDER Launches Nos. 1 and 4. The launches based from the ship which was anchored on the working grounds.

Launch No. 1 used 808 type portable depth recorder No. 68, calibrated for 800 fathoms per second.

Launch No. 4 used 808 type portable depth recorder No. 46, calibrated for 800 fathoms per second.

D. TIDE AND CURRENT STATIONS:

Tide corrections were determined from tides recorded by a portable gage installed off the west side of Gull Island at the entrance to Chinitna Bay. See "Tide Note" attached to this report.

Tidal bench marks established in Chinitna Bay in 1911 were searched for and believed lost.

No current stations were observed.

E. SMOOTH SHEET:

The smooth sheet projection and plotting was done by Ship's Officers.

The shoreline was determined by a topographic survey in 1911. This shoreline was not transferred to the smooth sheet.

F. CONTROL STATIONS:

Unmarked 1911 topographic stations were recovered. Most of these, used to control hydrography, were checked on tin sheet PF-A-56. Other hydrographic signals were located on PF-A-56. See Topographic Descriptive Report for Sheet PF-A-56.

*Indicated for destruction*

G. SHORELINE AND TOPOGRAPHY:

The shoreline and topography were determined in 1911. No effort was made to check that survey. No changes were noted except near station SNOW. This area is used for landing and storing oil drilling gear and supplies. The sandy point is subject to changes by storms and also has been modified some by earth moving equipment. This area was beyond the survey limits and no attempt was made to relocate the shoreline since it will continue to change due to storms and man.

The low water line was not determined since it was outside the survey area required for wire drag operations.

H. SOUNDINGS:

Soundings were taken with 808 type portable depth recorders with units mounted in the keel. Bar checks were taken and then the initials were set so that the instruments would read correct when recording in feet on "A" scale. Therefore the only corrections applied were for phase and for tide.

All soundings were recorded in feet.

I. CONTROL OF HYDROGRAPHY:

Horizontal control was by 3-point sextant fixes. Objects were located by planetable. No "jumps" were noted.

J. ADEQUACY OF SURVEY:

This survey was intended primarily to expedite wire drag operations. The thoroughness and quality of equipment and control makes it adequate to supersede all prior surveys of the area covered.

K. CROSSLINES:

About eight per cent of the lines run are crosslines. All crossings are excellent. ✓

L. COMPARISON WITH PRIOR SURVEYS:

This area was covered by Hydrographic Survey No. 3354 in 1911. Soundings 1 and 2 feet shoaler were obtained in some places. Generally the two surveys agree very closely indicating very little change in this area. ✓

PS  
Review

M. COMPARISON WITH CHART:

Chart 8554 was compiled using Survey No. 3354, therefore comments for "L" above apply here also. ✓

PG  
Review

N. DANGERS AND SHOALS:

No new dangers or shoals were found. Hand lead soundings were obtained at low tide on the 8 foot shoal at latitude  $59^{\circ} 50.5'$  longitude  $153^{\circ} 00.9'$ . About an hour was spent investigating the shoal by drift sounding with hand lead and fathometer. ✓

O. COAST PILOT INFORMATION:

Coast Pilot information will be submitted in a separate report. ✓

P. AIDS TO NAVIGATION:

There are no aids to navigation within the area of this survey. ✓

Q. LANDMARKS FOR CHARTS:

No landmarks are recommended for charting. ✓

R. GEOGRAPHIC NAMES:

No new geographic names are recommended. ✓

S. SILTED AREAS:

The north and western parts of this area are slightly shoaler than in 1911. It appears that this flat area is silting very slowly. No bottom specimens were taken in this area. ✓

PS  
Review  
|

U. MISCELLANEOUS:

The Ship PATHFINDER arrived Chinitna Bay 24 April 1956. Heavy snow extended down to the beach. The bay was filled with large chunks of drifting ice.

The site of the 1911 tide gage bench marks was covered by 8 to 10 feet of snow-ice which did not melt until the latter part of May.

Frequent storms, much wind, low clouds and poor visibility predominated throughout the month of May.

Iliamna Volcano was visible several times. Smoke was seen coming from a vent near the southeast side of the top of the cone. No smoke was observed coming from the volcano on Augustine Island.


The ship anchored in 10 fathoms about 2-1/2 miles S.S.E. of Gull Island and 1-1/2 miles offshore. Good holding bottom - mud.

Descriptions of the 1911 topographic stations are listed in Geodesy's description of triangulation stations - Alaska No. 23 - Cook Inlet.


Z. TABULATION OF APPLICABLE DATA:

1. Topographic Descriptive Report PF-A-56
2. Wire Drag Descriptive Report PF-2156WD
3. Coast Pilot Notes

Respectfully submitted,

  
John O. Boyer  
LCDR, USC&GS

APPROVED AND FORWARDED:

  
John Bowie  
CAPTAIN, USC&GS

SIGNAL LIST

HYDROGRAPHIC SURVEY H-8296 (PF2156)

Veal, 1911	(Topo 1911)
Mare, 1911	(PF-A-56)
Bluff, 1911	(Topo 1911)
Pork, 1911	(Topo 1911)
Sot, 1911	(Topo 1911)
Snow	(PF-A-56)
Yell	(PF-A-56)
Tune	(PF-A-56)
Tig	(PF- <del>2156</del> <sup>2156</sup> )
Nob, 1911	(Topo 1911)
Nan	(PF 2156)
Bix, 1911	(Topo 1911)

STATISTICS

for

HYDROGRAPHIC SURVEY H-8296 (PF-2156)

VOL.	DAY LETTER	DATE 1956	NUMBER OF POSITIONS	STATUTE MI. SOUNDING
<u>Launch No. 1</u>				
1	a	5/12	92	26.7
1	b	5/15	<u>66</u>	<u>17.6</u>
Total Launch No. 1			158	44.3
<u>Launch No. 4</u>				
2	a	5/12	93	30.9
2	b	5/15	15	4.6
2	c	5/16	57	12.9
2	d	5/17	<u>31</u>	<u>8.5</u>
Total Launch No. 4			196	56.9
Total all launches			354	101.2
Total area = 8.0 square statute miles.				



TIDE NOTE

During this survey a portable automatic tide gage was in operation off the west shore of Gull Island, at the entrance to Chinitna Bay (latitude  $59^{\circ} 50.5'$ , longitude  $152^{\circ} 59.5'$ )

Hourly heights for less than a months observations from this gage were sent to the Washington Office. The Office supplied the datum for this gage. Corrections were applied to all soundings to reduce them to this MLLW datum.

No location for easy installation of a tide gage was found in this area. A wooden tripod structure was jettied down to hold the gage. Because of the big range in tide, the structure had to be quite large.

Tidal bench marks established in Chinitna Bay in 1911 were searched for and believed lost.

COAST PILOT NOTES

Project CS 1384 - April - May 1956

USC&GS SHIP PATHFINDER

CHINITNA BAY is shoal, and an anchorage in 4 to 5 fathoms in the entrance is exposed to easterly winds. The bottom is muddy and good holding ground, and anchorage can be selected anywhere in the bay where there is sufficient depth to remain afloat at low water. There are strong williwaws with westerly winds. The bay is full of ice during the winter. Tidal currents in the bay are weak. Current predictions can be obtained from the Pacific Coast Current Tables.

GULL ISLAND is a rocky, grass covered island, 100 feet high, on the south side of the entrance to Chinitna Bay. Reefs extend 0.6 mile north-eastward and southeastward from the island. A deep channel 1/3 mile wide leads into the bay southwestward of the island.

Note: The above is submitted to supersede the text in the United States Coast Pilot - Alaska - Part II - 1947 Edition from Line 45, Page 169 through Line 12, Page 170.

John Bowie  
Captain, USC&GS  
Comdg. Ship PATHFINDER

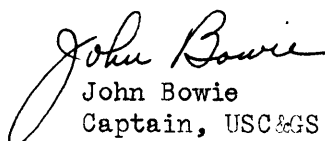
APPROVAL SHEET

HYDROGRAPHIC SURVEY H-8296 (PF-2156)

CHINITNA BAY, COOK INLET, ALASKA

This survey was done under my supervision, the boat sheet being inspected daily during the period of hydrography.

This survey was made to expedite wire drag operations; however I consider it adequate for the charting of this area. No additional work is recommended within the area covered.

  
John Bowie  
Captain, USC&GS  
Comdg. Ship PATHFINDER

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

REG. NO.

TOPOGRAPHIC TITLE SHEET

The Topographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

Field No. PF-A-56

REGISTER NO.

State Alaska

General Locality Cook Inlet

Locality Chinitna Bay

Scale 1:20,000 Date of survey May, 19 56

Vessel PATHFINDER

Chief of party John Bowie

Surveyed by J. O. Boyer

Inked by J. O. Boyer

Heights in feet above \_\_\_\_\_ to ground to tops of trees

Contour, Approximate contour, Form line interval \_\_\_\_\_ feet

Instructions dated \_\_\_\_\_ 30 November, 1955

Remarks: Signals transferred to H-8296 (1956)

DESCRIPTIVE REPORT TO ACCOMPANY

SHEET PF-A-56

PROJECT SC-1384

Original instructions for this survey were dated 30 November 1955.

The survey was made on an aluminum mounted sheet on a scale of 1:20,000. Standard methods of intersection and resection were used. Only that work required for the location of signals for hydrography and wire drag operations was done.

The following 1911 topographic stations were recovered and used to control this sheet:

Veal

Bluff

Pork

Knob

The following hydrographic signals were located and are not recoverable:

Mare

Snow

Yell

A thorough search for the buried bottle marking Moon 1911 was not practical because of frozen ground. The highest point on Gull Island was located as it agreed with the old description for Moon. The new position fell about 15 meters SW of the old G. P. This point was marked with a standard disc and called Tune, 1956.

Other 1911 topographic stations that were recovered are:

Bix

Tar

Boot

Rose

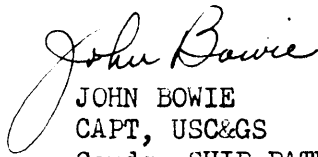
These stations were not checked on the aluminum sheet, but it is believed that their recovery was definite.

Stations Nob, Pork, and Veal were remarked with standard topographic discs.

Respectfully submitted,

JOHN O. BOYER, LCDR  
USC&GS

APPROVED BY:



JOHN BOWIE  
CAPT, USC&GS  
Comdg. SHIP PATHFINDER



GEOGRAPHIC NAMES  
 Survey No. H-8296

Name on Survey	A On Chart No.	B On previous survey No.	C On U. S. Maps	D On U. S. quadrangle Maps	E From local information	F On local Maps	G P. O. Guide or Map	H Rand McNally Atlas	K U. S. Light List	
<u>Alaska</u>										1
<u>Cook Inlet</u>										2
<u>Chinitna Bay</u>										3
<u>Gull Island</u>										4
										5
										6
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										26
										27

} for title  
 (tide station)

Bay

Names approved  
 1-10-57. L. Heck



Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. .8296...

Records accompanying survey:

Boat sheets .1....; sounding vols. ...2...; wire drag vols. ....;  
 bomb vols. ....; graphic recorder rolls .3-Envelopes  
 special reports, etc. ...1-Smooth sheet and 1-Descriptive report  
 .....

The following statistics will be submitted with the cartographer's report on the sheet:

Number of positions on sheet		3.54
Number of positions checked		125
Number of positions revised		.....
Number of soundings revised (refers to depth only)		18
Number of soundings erroneously spaced		26
Number of signals erroneously plotted or transferred		3
Topographic details	Time	.....
Junctions	Time	.....
Verification of soundings from graphic record	Time	3

Verification by *W. E. Roig* ..... Total time *41 hrs.* Date *5/28/58*

Reviewed by *A. J. Giesend* ..... Time *8* Date *6/3/58*

DIVISION OF CHARTS

REVIEW SECTION - NAUTICAL CHART BRANCH

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. H-8296

FIELD NO. PF 2196

Alaska-South Coast, Cook Inlet, Chinitna Bay

Surveyed May 1956

Scale 1:20,000

Project No. 1384

Soundings:

Control:

808 Depth Recorder

Sextant fixes on shore  
signals

Chief of Party - J. Bowie  
Surveyed by - W. E. Randall and J. O. Boyer  
Protracted by - J. O. Boyer  
Soundings plotted by - J. O. Boyer  
Verified and inked by - W. E. Roig  
Reviewed by - I. M. Zeskind  
Inspected by - R. H. Carstens

Date: 6/3/58

1. Shoreline and Control

There is no contemporary topographic survey covering the area of the present survey. The shoreline which is delineated on topographic survey T-3237 (1911), the most recent survey of this area by this Bureau, has not been transferred to H-8296.

The source of the control is given in the Descriptive Report.

2. Sounding Line Crossings

Depths at crossings are in good agreement.

3. Depth Curves and Bottom Configuration

The usual depth curves were adequately delineated within the area sounded.

The bottom is fairly irregular. A natural channel which leads from Cook Inlet into Chinitna Bay has a controlling depth of 45 ft.

southwestward of Gull Island. Shoals and Channel deeps contribute to the bottom irregularity.

4. Junctions with Contemporary Surveys

No contemporary surveys join the present survey. Charted depths at the limits of the present survey are in adequate agreement with present depths.

5. Comparison with Prior Surveys

H-3354 (1911), 1-40,000

A comparison between the prior and present surveys shows the area as a whole has been shoaling, with the greatest changes in depths occurring in the natural channel. Here changes in depths of as much as 29 ft. are noted, as for example, in lat.  $59^{\circ}50.85'$ , long.  $153^{\circ}01.20'$ , where a prior depth of 127 ft. falls in present depths of 98 ft. Elsewhere shoaling of 2-4 ft. is noted. Bottom characteristics from H-3354 have been brought forward to the present survey.

With the addition of these bottom characteristics, the present survey is adequate to supersede the prior survey within the common area.

6. Comparison with Chart 8554 (Latest print date 9-20-54)

A. Hydrography

The charted hydrography originates with the previously discussed prior survey which needs no further consideration.

The present survey is adequate to supersede the charted hydrography within the common area.

B. Aids to Navigation

There are no aids to navigation within the limits of the present survey.

7. Condition of Survey

- a. The sounding records and Descriptive Report are complete and comprehensive.
- b. The smooth plotting was accurately done.
- c. No bottom characteristics were obtained during the present survey.

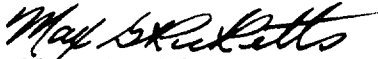
8. Compliance with Project Instructions

The survey adequately complies with the Project Instructions, except as noted in paragraph 7c above.

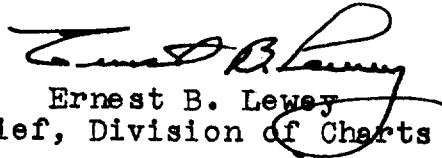
9. Additional Field Work Recommended

The survey is considered basic and no additional field work is recommended. As a matter of record, attention is directed to the fact that no bottom characteristics were obtained in the area of the present survey as noted in paragraph 7c above.

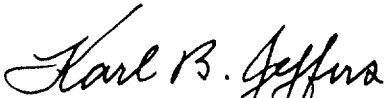
Examined and approved:



Max G. Ricketts  
Chief, Nautical Chart Branch



Ernest B. Lewey  
Chief, Division of Charts



Karl B. Jeffers  
Chief, Hydrography Branch



Samuel B. Grenell  
Chief, Division of Coastal Surveys

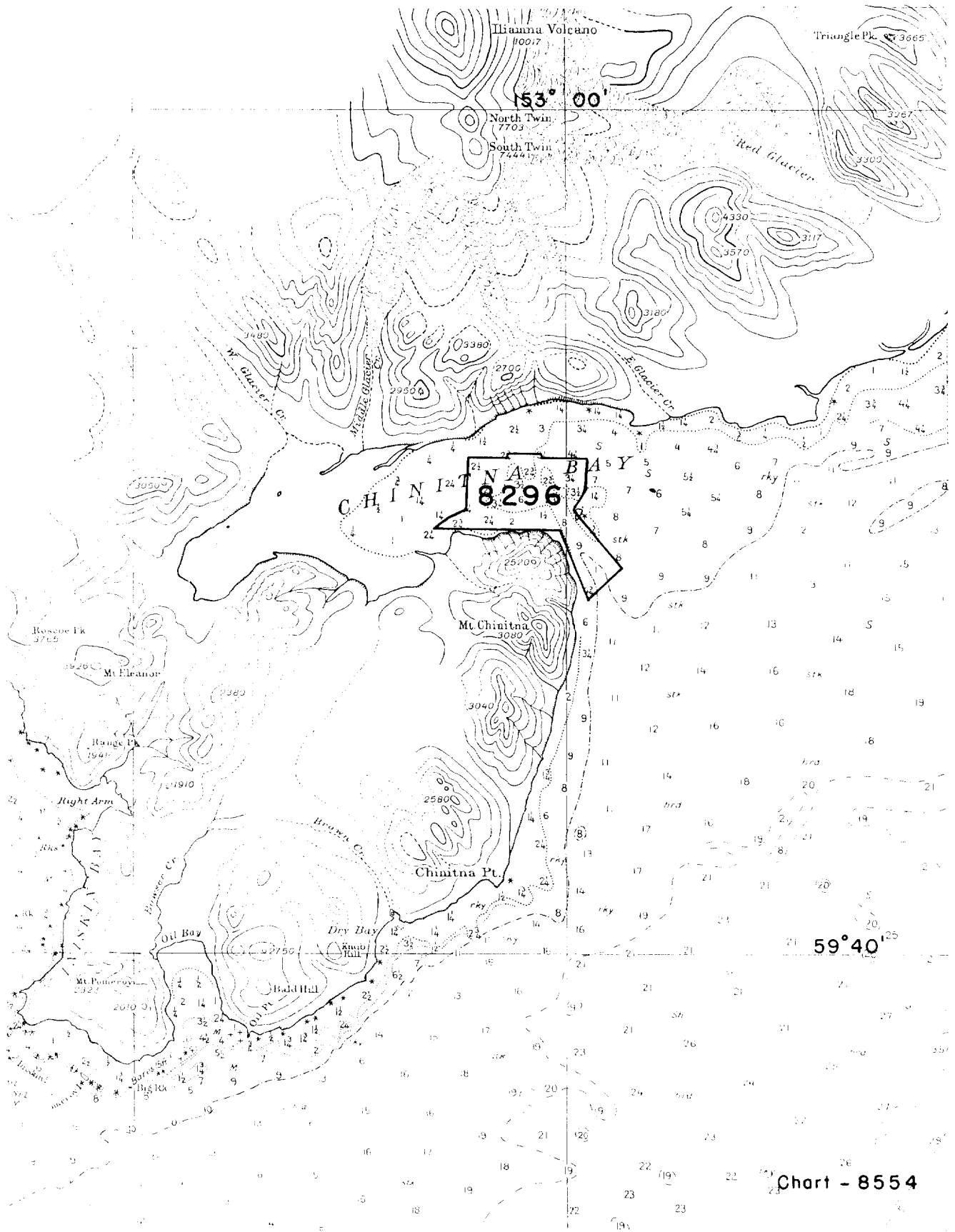


Chart - 8554

