

# 4952

Diag. Cht. No 8502-2 (8556-1)

Form 504 U. S. COAST AND GEODETIC SURVEY DEPARTMENT OF COMMERCE  <b>DESCRIPTIVE REPORT</b>	
Type of Survey	<i>Hydrographic</i>
Field No.	Office No. <i>4952</i>
LOCALITY	
State	<i>Alaska</i>
General locality	<i>Larsen Bay</i>
Locality	<i>Kodiak Id.</i>
	<i>Alaska</i>
<u>1949</u>	
CHIEF OF PARTY	
<i>R. R. Jenkins</i>	
LIBRARY & ARCHIVES	
DATE .....	

B-1870-1 (1)++

# 4952

DESCRIPTIVE REPORT.

Hydrographic Sheet

No. 18

AUTHORITY. This survey was made in accordance with instructions dated March 14, 1929.

LIMITS The survey includes all of Larsen Bay, its entrance and its immediate approach. Larsen Bay is an arm of Uyak Bay, a large bay on the west side of Kodiak Island Alaska.

METHODS The hydrography was done by the motor sailer with Lieut. C.A. Egner in charge. In deep water, the power driven sounding machine was used, and in depths of about 15 fathoms and less the hand lead was used. The registering sheave was tested and found correct, and a bronze centered hand lead was used.

CONTROL. Triangulation was extended into the bay, and a new plane table survey was made of the entire area. All the principal aids to navigation were located by triangulation and the geographic positions computed. The original survey of Larsen Bay was made without triangulation control except for one station in the entrance.

TIDES. A portable automatic gauge was installed in the bay at the end of the cannery wharf. The datum plane was determined by simultaneous observations with Uyak. For the work inside the bay, the Larsen Bay tides were used and for work in the approach, the Uyak tides were used.

DANGERS The principal danger in the entrance to Larsen Bay is a reef which bares only at low tide. It is located in the middle of the entrance, and has a deep channel on either side of it. The reef is flat and at low water its bare surface extends for 20 yards or more in an east and west direction. It is marked by a structural steel beacon about 15 feet high and painted red. The hydrographic party made no notes as to this reef and I am unable to state the exact stage of tide when it is awash.

CHANNELS. The channel in general use is the one lying south of the reef and about midway between it and the 20-foot black rock 200 yards southeastward from it. This channel is preferred because it involves an easier turn than the one north of the reef.

see  
D.R.  
T-447

The southern channel is marked by a range which has been constructed by the Alaska Packers Association. The front mark is a yellow wheel-like design on a yellow dolphin while the back mark is a circular yellow disk painted under the gable of a cannery building.

The channel northward of the reef is marked by same yellow dolphin on the slender twin black stacks of the cannery.

CANNERY. The cannery of the Alaska Packers Association is located on the west side of the southern entrance point. It is an unusually large cannery and has extensive buildings painted red. The wharf has about 8 feet of water at its outer end at MLLW. The company plans to extend this wharf 300 feet during the spring of 1930. There is a store and a radio station which is kept in operation during the fishing season. Most of the salmon canned at Larsen Bay comes from Karluk in scows.

ANCHORAGE. Anchorage can be had in 20 to 25 fathoms about  $\frac{1}{2}$  miles west true from the cannery wharf. In westerly weather, severe winds blow down the bay and a ship must have good tackle to hold on. Anchorage can also be selected at the head of the bay in 8 to 20 fathoms. A trail leads from the head of the bay to the Karluk River.

BANKS There are several banks in the approach to Larsen Bay, and some of them were not properly developed by the hydrographic party. This was not noticed by the chief of party until after leaving the working grounds.

The bank lying  $\frac{7}{8}$  mile east true from signal Ite was fairly well developed on sheet H-2981. A least depth of 8 fathoms was found by that survey.

PROMINENT OBJECTS. The most prominent objects to be seen in approaching Larsen Bay are:

- Box, a white square like structure near the fish trap about  $\frac{1}{2}$  mile north of the entrance.
- △ Cage, the red skeleton steel beacon on the reef in the middle of the entrance.
- △ Dol, a black pile dolphin marking the end of the spit making off the northern entrance point.
- △ Yel, a yellow dolphin bearing a yellow wheel-like device.

△ Disk, a yellow bircular disk painted under the gable of a cannery building.

△ Tope, a triangulation station at the summit of a symetrical grassy hill forming the inner south entrance point.

○ Stax, the northerly one of two slim black stacks at the cannery.

○ Rad, is the higher of two radio masts

○ Mex is a prominent black 20-foot rock off the outer south entrance point.

DESCREPECIES In developing the channel south of the reef, three channel lines were run, one on the range and one on each side of the range. A series of cross lines were run and in doing this, the hydrographer ran too long between fixes. If the soundings between 151 and 152a are plotted according to time, it throws a shoal sounding in the channel. In the plotting, the channel lines were held as correct and the cross lines were adjusted slightly to make them fit. Large vessels both sail and steam have been taken through this channel for a number of years, and no obstruction has ever been encountered.

A 28-foot sounding was had about 200 meters west true from Dol. This should have had additional investigation, but it was not done through oversight.

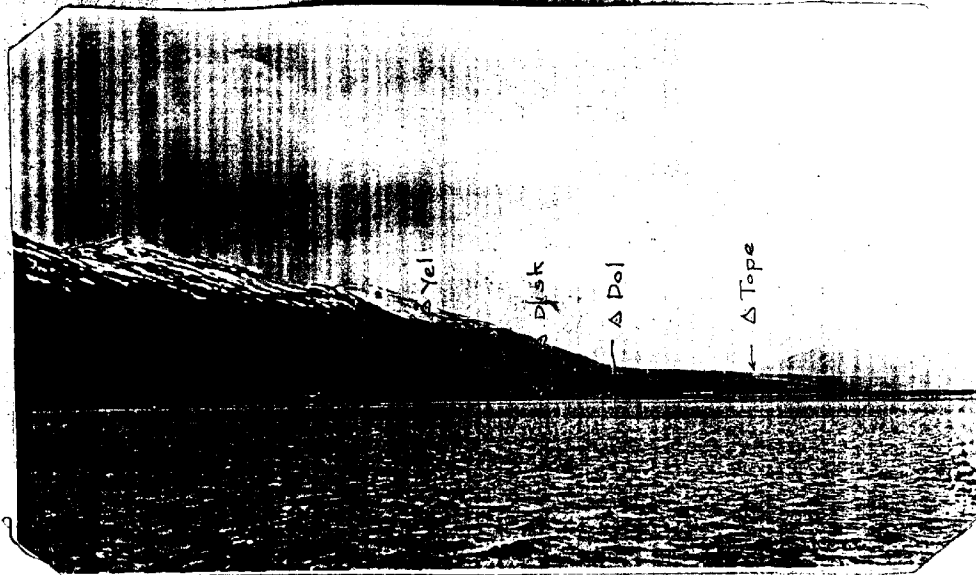
The sounding records show mostly rock bottom in the entrance channel. It is believed that this is a gravel hard pan and not bed rock. When the bottom feels hard and the lead comes up clean with some dents in it, the leadsman call out "Rocky bottom". Strong currents here keep the bottom scoured.

LAGOON From △ Dol to ○ Ite, there is a lagoon which is navigable by small boats and launches at high tide. The northern end of the lagoon is used as a storage place for small boats, pile drivers and rafts of piling.

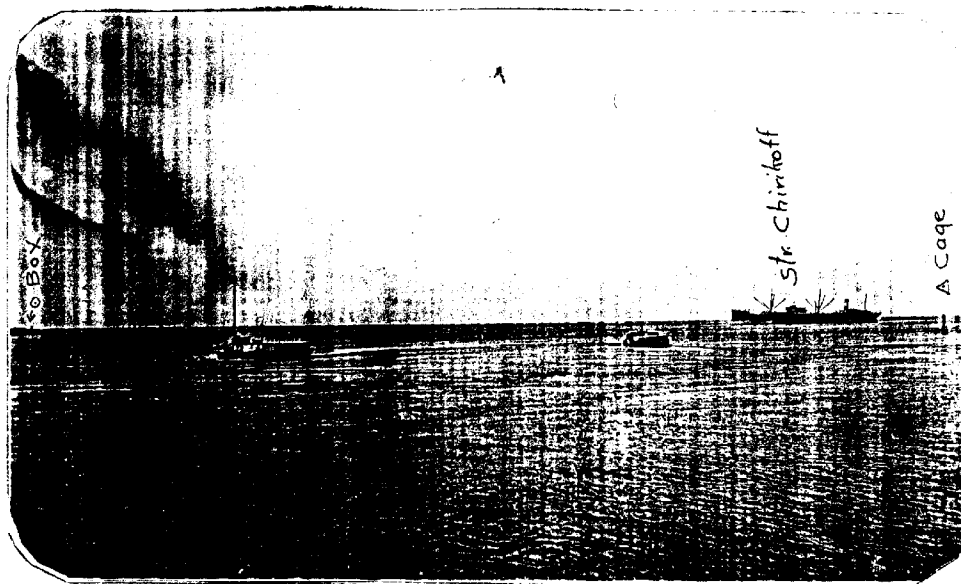
Plotting of this sheet was done by R.J.Sipe. Lieut. C.A. Egner was in charge of the launch during the field work.

Respectfully submitted,

*R. R. Lukens*  
R. R. Lukens  
Chief of Party.



View of entrance to Larsen Bay, Alaska.



Showing Str. CHIRIKOF loading salmon off the entrance to Larsen Bay. Due to heavy westerly winds and the light condition of the ship, she was not taken inside the bay.

Larson Bay,

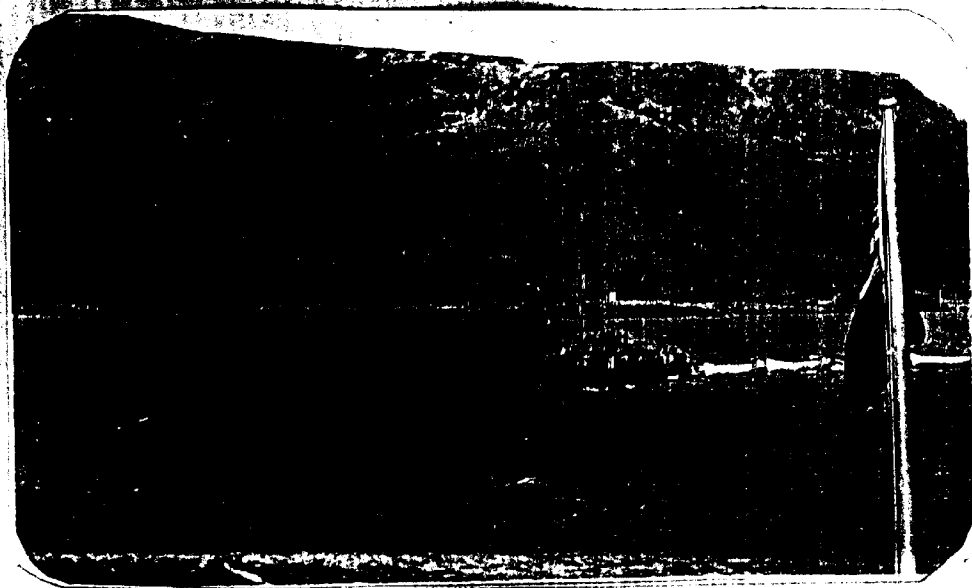
Larson Bay.

BELOW

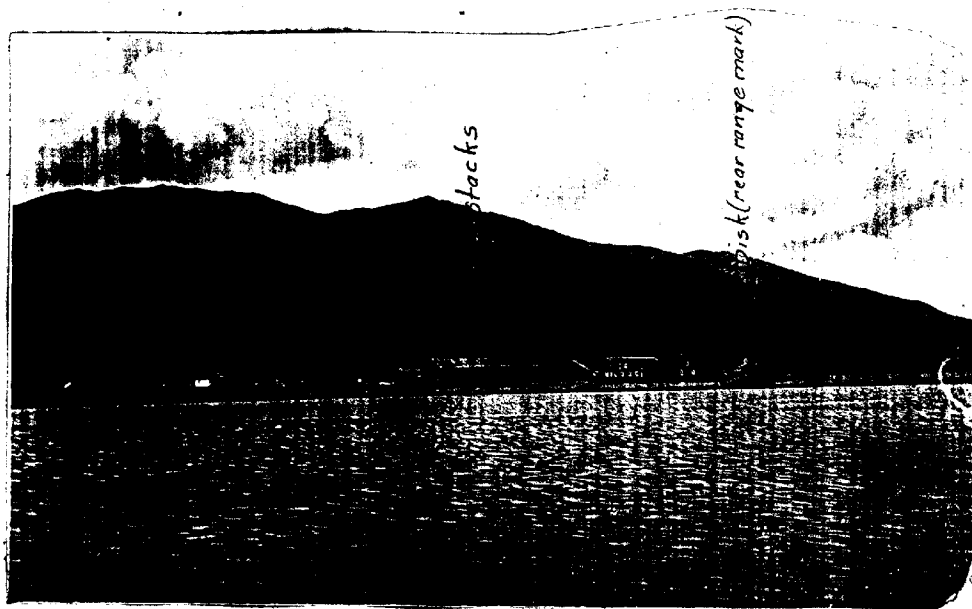
HU-35

20091 19

behind receiving cargo of  
canned salmon from lighters at  
Larson Bay.



Showing tender RAVEN with lifeboats in tow  
bringing the passengers and crew of the  
S.S. ALEUTIAN aboard the SURVEYOR off  
entrance to Larsen Bay, Alaska.



View of Larsen Bay Cannery from the inner  
entrance.

Prayer with Aleutian Survivors.

H-14

Lason Bay Cannery.



## LIST OF SIGNALS

## HYDROGRAPHIC SHEET #18

Name	Location	Name	Location
Alder 1929	Triangulation	Hat	Topo. Sheet "M"
Entrance 1929	"	Der	" " "
Cotton	"	Gas	" " "
Jag	"	Po	" " "
Tail	"	Boy	" " "
Spit	"	Cut	" " "
Tut	"	Ace	" " "
Tope	"	Mit	" " "
Disk	"	Let	" " "
Yel	"	An	" " "
Dol	"	Is	" " "
Cage	"	Was	" " "
Brown	"	Be	" " "
Larsens	"	Gal	" " "
Fly	Topo. Sheet "M"	Stax	" " "
El	" " "	Rad	" " "
Pin	" " "	Pole	" " "
Fin	" " "	Flag	" " "
Gab	" " "	Chim	" " "
Ite	" " "	Grey	" " "
On	" " "	Nex	" " "
Red	" " "	Tu	" " "
Box	" " "	Ex	" " "
Blok	" " "	Hi	" " "
Hut	" " "	Or	" " "
Mag	" " "	Las	" " "

STATISTICS FOR HYDROGRAPHIC SHEET #18

Day	Volume	Sta.Miles of Sounding line	Number of Soundings	Number of Positions	Date
a	1	25.8	568	165	8/19/29
b	1 & 2	20.8	739	167	8/20/29
c	2	12.2	589	111	8/21/29
d	2 & 3	9.6	568	92	8/22/29
	TOTALS	<hr/> 68.4	<hr/> 2464	<hr/> 535	

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

LANDMARKS FOR CHARTS

Seattle, Washington.

January 17, 1930., 19

SUPERINTENDENT, U. S. COAST AND GEODETIC SURVEY:

The following determined objects are prominent, can be readily distinguished from seaward from the description given below, and should be charted:

Chief of Party.

DESCRIPTION.	POSITION.				Datum.	Method of determination.	Charts affected.
	Latitude.		Longitude.				
	'	D. M. meters.	'	D. P. meters.			
(⊙Red) Radio Tower (taller)	57.32	80	153.59	607	Valdez	Topo.	8822
(⊙Star) Twin Stacks (N. stack)	57.32	236	153.59	761	"	"	"
(△Disk) Rear Range	57.32	406	153.59	784	"	Triangulation	"
(△Yel) Front Range	57.32	547	153.59	442	"	"	"
(△Cage) Steel cage on rock at entrance	57.32	875	153.58	900 599	"	"	"
(△Dol) Dolphin on North side of entrance	57.32	790	153.59	368	"	"	"
(⊙Box) White box-like, square sheet iron structure	57.32	1691	153.58	874	"	Topo.	"
( Above aids to navigation constructed and maintained by Alaska Packers Association).							

A list of objects which are of sufficient prominence for use on the charts, together with a description of the same, must be furnished in a special report on this form, and a copy of such report must be attached by the Chief of Party to his descriptive report. The selection, determination, and description of these points are of primary importance.

The description of each object should be short, but such as will identify it; for example, standpipe, water tower, church spire, tank, tall stack, red chimney, radio mast, etc. Generally, flagstaves and like objects are not sufficiently permanent to chart.

ecm

**FOR FILES OF FIELD RECORDS SECTION**

**February 1, 1930**

Division of Hydrography and Topography:

Division of Charts:

Tide Reducers are approved in  
**3** volumes of sounding records for

**HYDROGRAPHIC SHEET 4962**

Locality: **Larsens Bay, Kodiak I., Alaska**

Chief of Party: **R. R. Lukens, in 1929**  
Plane of reference <sup>is</sup> **mean lower low water, reading**  
**2.4** ft. on tide staff at **Uyak**  
~~ft. below B. M.~~

**8.4 ft. on tide staff at Larsens Bay**

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 in wrong column.
7. Field reductions entered in "Office" column.
8. Location of tide gauge not given at beginning of 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.

**Paul C. Whitney**

Chief, Division of Tides and Currents.

IN REPLY ADDRESS THE DIRECTOR  
U. S. COAST AND GEODETIC SURVEY  
AND NOT THE SIGNER OF THIS LETTER

AND REFER TO No. 11-DFM

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

WASHINGTON

March 21, 1930.

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet No. 4952

Larsen Bay, Uyak Bay, Alaska

Surveyed in 1929

Instructions dated March 14, 1929 (SURVEYOR)

Chief of Party, R. R. Lukens

Surveyed by C. A. Egnor

Protracted and soundings plotted by R. J. Sipe

Verified and inked by J. Fleming.

1. The records conform to the requirements of the Hydrographic Manual.
2. The work conforms to the specific instructions with the exception that menacing shoals such as the 8 1/4 fathom spot (from H. 2981) in Lat. 57° 33 1/4', Long. 153° 57 1/4' should have been further investigated.
3. This survey affords complete information without the need of using the 1908 work except in the few instances where the soundings have been transferred to the 1929 survey in blue.
4. The junction with H. 4949 on the north is satisfactory. In Uyak Bay the work joins well with the work on H. 2981 (surveyed in 1908).
5. A comparison was made of the shore line in Larsen Bay on the new survey and the shore line as surveyed in 1908 to see whether it would be possible to adjust the interior topography of the 1908 survey with the 1929 shore line since no triangulation was carried into the bay in 1908. The discrepancy between the two surveys was not found to be of such extent as to make an adjustment impossible. Therefore, no new topography will be necessary for this area.
6. No additional hydrographic work is recommended at the present time but attention is called to the desirability of dragging the shoals

The shore line of Larsen Bay on Top. 4478 was reduced to 1-20000, the scale of T. 2898, (surveyed in 1908) and was found to be in close agreement, except as to minor details of shoreline. The scale of T. 2898 was also found to be very close to 1-20000, although the projection indicates a larger scale. It was therefore impossible to satisfactorily adjust the old topography to the new shoreline of T. 4478. For adjusted shoreline and topography see drawing of Larsen Bay for Chart 8822. H. Bacon June 5, 1930.

at the entrance to the bay, and of making a further examination of the  $4 \frac{4}{6}$  fathom spot about 220 m. west of  $\triangle$  Dol and the shoal area about 300 m. northwest of  $\odot$  Gal.

7. Reviewed by A. L. Shalowitz, March 1930.

Approved:

*A. M. Sobczanski*  
\_\_\_\_\_  
Chief, Section of Field Records (Charts)

*T. Borden*  
\_\_\_\_\_  
Chief, Section of Field Work (H. & T.)

# Field Records Section

Report on H. 4952 - Surveyed in 1929

Chief of Party - R. R. Siskens - Surveyed by - C. A. Egner

Projected by R. J. Sipe - Soundings by - R. J. S.

(1) The records conform to the requirements of G.D. ✓

(2) The plan and character of the development fulfill the requirements of G.D. ✓

(3) Sounding line crossings are adequate ✓

(4) The usual depth curves can be completely drawn ✓

5 The field plotting was completed to the extent prescribed in G.D. ✓

6 With the exception of some incorrect position plotting and timing of soundings which had to be revised none of the work had to be done over. ✓

(7) A replot of 100-b 40m - N.E. (at head of bay) causes a slight alteration in the low water line ✓

(8) 165-a was 110-m. out of position. field plotter used  $\odot$  Stax instead of  $\odot$  Rad ✓

(9) 10-c was 50-m out of position. field plotter used  $\odot$  HUT instead of  $\Delta$  ENT ✓

9<sup>a</sup> 48-C Plots on land the fix is no doubt  $\begin{matrix} \text{TUT} \\ \text{TOPE} \\ \text{ENT} \end{matrix}$  ✓  
SEE Page 5 Vol 3 and the  
fix at top of Page 6.

## Report on H-4952

(10) The sounding line between 32-3K-d south of ΔDOL was bent due to the plotting of 33-d. The boat sheet shows the line to be quite straight. If the fix <sup>TOPE</sup><sub>YEL</sub><sub>NEW</sub> is used the position will plot on the line and better agreement will be obtained. The change was made see page 62 Vol-2 ✓

(11) Whenever the sounding value  $\frac{1}{2}$  appears near the shore without a whole number the  $\frac{1}{2}$  was plotted as  $\frac{3}{6}$ . Frequently such values as  $8\frac{2}{6}$   $7\frac{4}{6}$  etc were used. ✓

(12) The timing of soundings on id day was particularly faulty. ✓

(13) Sig "Top" is used as a center sig. No doubt ΔTOPE is the signal. ✓

(14) The low water line between O'boy and O'po was changed to conform to the hydrography. ✓

The low water line N. of O'Ani was also changed to conform to the hydrography.

A considerable change in the low water line was made

N. of O'Las. altho the change really is the creation of a small islet which is bare 4 ft at M.L.L.W. (These changes were made in the office) ✓



# Report on H-4952

15

The approach to Jansen Bay is over what appears to be a very uncertain bottom and the transfer of the critical soundings from H-2981 to the doubtful areas on this sheet shows a condition which unfortunately was overlooked by the Chief of Party.

16

While the controlling depth in the channel south of  $\Delta$  cage appears to be 4 fathoms or 24 feet it should be noted that this depth does not provide sufficient leeway in bad weather and an adverse current, owing to the proximity of shallower depths not more than 25 or 30 meters from the range (See the 3 1/2 fathoms 120-m S.E. of  $\Delta$  cage) between the N. and S. channels. The 2 fathoms 190-m S.W. of  $\Delta$  cage is not considered a danger to vessels using either channel and the range, but it does mark the westerly limit of the reef.

The controlling depth in the Northern channel is 3 1/2 fathoms which is in mid-channel.

Were it not for the sharp turn which would result from using this channel, it would appear superior to the one on the south.

The 4 1/2 fathoms ridge making out into the channel 220 - West of  $\Delta$  DOL presents a menacing aspect. However, the controlling depth is much less than this - Moreover large sail and steam vessels have been using this channel for years without encountering difficulties.

Note the 3 1/2 fath (in blue) 380-m. N.W. of  $\Delta$  Tope.

Report on H-4952

17

While there is some change noted in the detailed outline of the important features noted on the survey of 1908, no indication of other dangers was brought out by this survey, — except the 10 fathoms indication in Lat 33.3

18

owing to the steep sides of the bay and the close development at the entrance it became necessary to check practically all positions, in the first case, so that the contours should be as nearly accurate as possible and in the second case, to check accurately the positions and sounding intervals which were numerous between positions and very close together — often 5-seconds apart.

19

The work is considered 'good'

Respectfully Submitted

John Fleming

Feb - 21 - 1938

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

C & G. SURVEY  
JAN 25 1930  
Acc. No.

REG. NO. 4952

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.

Field No. 18

REGISTER NO. 4952

State ALASKA

General locality SHELIKOF STRAIT - UYAK BAY

Locality ~~UYAK BAY~~ \* LARSEN BAY.

Scale 1:10,000 Date of survey August 19 - 22, 1929

Vessel Str. SURVEYOR

Chief of Party R. E. Lukens

Surveyed by C. A. Egner

Protracted by R. J. Sipe

Soundings penciled by R. J. Sipe

Soundings in fathoms

Plane of reference M L L W

Subdivision of wire dragged areas by

Inked by J. Fleming

Verified by J. J. Feb. 20 - 1930

Instructions dated March 14, 1929

Remarks:

AND REFER TO NO. 11-DEM

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

WASHINGTON

March 21, 1930.

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet No. 4952

Larsen Bay, Uyak Bay, Alaska

Surveyed in 1929

Instructions dated March 14, 1929 (SURVEYOR)

Chief of Party, R. R. Lukens

Surveyed by C. A. Egnar

Protracted and soundings plotted by R. J. Sipe

Verified and inked by J. Fleming.

1. The records conform to the requirements of the Hydrographic Manual.
2. The work conforms to the specific instructions with the exception that menacing shoals such as the 8 1/4 fathom spot (from H. 2981) in Lat. 57° 33 1/4', Long. 153° 57 1/4' should have been further investigated.
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at the entrance to the bay, and of making a further examination of the  $4 \frac{4}{5}$  fathom spot about 220 m. west of  $\triangle$  Del and the shoal area about 300 m. northwest of  $\odot$  Gal.

7. Reviewed by A. L. Shalowitz, March 1930.

Approved:

  
Chief, Section of Field Records (Charts)

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Chief, Section of Field Work (H. & T.)

Field Records Section (Charts)

HYDROGRAPHIC SHEET No. 4952

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

Number of positions on sheet . . 535  
Number of positions checked . 397  
Number of positions revised . . 19  
Number of soundings recorded . 2464  
Number of soundings revised . 123  
Number of signals erroneously  
plotted or transferred . . . NONE

Date: Feb - 21<sup>ST</sup> 1930

Cartographer: John Fleming