

# 4759

## & Additional Work.

Diag. Cht. 8552 & 8502-2

# 4759

Form 504	
DEPARTMENT OF COMMERCE	
U. S. COAST AND GEODETIC SURVEY	
....., Director	
<div style="border: 1px solid black; width: 100px; height: 50px; margin-left: auto;"></div>	
State: Alaska.....	
<b>DESCRIPTIVE REPORT</b>	
<i>Topographic</i> <i>Hydrographic</i>	} Sheet No. <b>4759</b>
LOCALITY	
Kenai Peninsula	
North and West Arms of	
Nuka Bay	
1927-28	
CHIEF OF PARTY	
R.R.Luce	

DESCRIPTIVE REPORT  
To Accompany Hydrographic Sheet No. D

Chief of Party - - - - - R. R. Lukens, H & G Engr.

Work executed under instructions issued to the Commanding Officer of the Str. SURVEYOR, dated February 3, 1927.

General Description:- This sheet covers the West and North Arms of Nuka Bay and joins sheet (field letter) "F" on its southern side. All shoreline and signals on this sheet are found on topographic sheet (field letter) "D".

Survey Methods:- All the soundings on this sheet were taken from the SURVEYOR'S launch #3, which was equipped with a sounding machine driven by a shaft connected to the launch engine. The sounding wire, stranded, was lead over a sheave suspended from a pipe extending outboard on the starboard quarter. An 18 lb. lead was generally used, but it was found that a heavier lead would reach the bottom quicker and thereby save considerable time when in deep water. Consequently, 24 and 36 lb. leads were sometimes used.

Hand lead soundings were taken in Shelter Cove, Ariadne Cove, and when obtaining the least water over certain shoals. Due to the inconvenience of this launch for hand lead sounding, such soundings were only taken in important places and where the water was comparatively shoal.

The 29 fathom bank in the entrance to Cabin Bay was not developed on account of a break in the sounding machine which occurred at the end of the season and which could not be repaired in the field.

General Depth and Shoals:- West Arm and North Arm of Nuka Bay are both deep and the shore in most places can be approached quite closely. The main part of these Arms is free from dangers and the only shoals of importance are found in the adjoining bays and coves. A bank with a least depth of 11 fathoms lies 1/2 mile Westward of  $\Delta$  Cove, and there is a shoal with a least depth of 5 fathoms lying 225 yards off shore about 1/4 mile Northwestward of  $\Delta$  Cove.

In Cabin Bay there is an important shoal in the center of the bay having a least depth of 3-1/2 fathoms. Bottom cannot be seen here and the shoal is not marked by kelp. Two rocks, bare at low tide, lie about 150 yards offshore, between signals "It" and "Was".

A shoal with a least depth of 2-4/6 fathoms lies in the western entrance of Ariadne Cove and a reef, bare at low water and marked by kelp, lies off the southern point of this entrance. A rock, which

bare at low water and marked by kelp, lies in the center of the northern entrance.

The rock described in the Coast Pilot as being seen at the head of Palisade Bay could not be found.

Rock Bay has several shoals and banks in its entrance, the principal ones being the shoal with a least depth of 5-1/6 fathoms lying 1/2 mile northwestward of  $\Delta$  Isle, and the two shoals with least depths of 4-1/6 and 4 fathoms lying off the northern side of the entrance. These shoals are not marked by kelp.

Anchorage:- Pilot Harbor affords the best anchorage on this sheet. It is well protected in any weather and has good holding bottom with ample swinging room.

Shelter Cove affords good anchorage as described in the Coast Pilot, but with northerly weather becomes rough for small craft.

Good anchorage can also be found near the heads of Rock Bay, Palisade Bay and Cabin Bay. Ariadne Cove affords excellent anchorage for small craft, but with strong northerly breezes, becomes quite rough. The WILDCAT anchored here during the greater part of the season.

Ice:- Palisade Lagoon is the only part of this area known to freeze over in the winter. Small quantities of ice from Mc Carty Glacier often enter West Arm but is seldom found above Rock Bay.

Sailing Directions:- General description of the coast are given in the Coast Pilot, <sup>Notes</sup> which have been forwarded to the office.

New Place Names and description of the coast are given in the Descriptive Report Accompanying Topographic Sheet (field letter) "D"

Respectfully Submitted

Wm. D. Patterson  
Wm. D. Patterson

Hyd. & Geod. Engr.

approved  
R. P. Lukens

Note The 29 fm. bank in Cabin bay will be developed next year. Also the discrepancy in the shore line near the north entrance of Cabin bay will be corrected next year. This trouble was not apparent until after the field was left. Fixing of this shore lines been held aboard.  
R.P.L.

STATISTICS

FOR HYDROGRAPHIC SHEET NO. D

NUKA BAY- WEST ARM

Date	Day	Vol.	Positions	Soundings	Miles	Launch
:May 31	a	1	96	193	12.6	Launch #3
:Jun 27	b	1	88	236	16.7	"
:Jun 30	c	1&2	65	180	14.0	"
:Jul 22	d	2	81	229	10.0	"
:Jul 23	e	2	93	290	18.0	"
:Jul 25	f	2&3	110	394	22.0	"
:Jul 27	g	3	117	304	19.5	"
:Jul 28	h	3	52	159	9.0	"
:Aug 2	i	4	47	125	7.6	"
:Aug 6	k	4	113	262	25.5	"
:Aug 9	l	4	76	221	10.8	"
:Aug 11	m	5	83	238	14.9	"
:Aug 20	n	5	62	176	12.5	"
:Sept 3	p	5	19	62	3.4	"
<hr/>						
TOTALS:			1102	3069	177.2	
<hr/>						
: AREA: -29.0 Sq. Miles :						

T.J.A.

(11)

Section

Copy for Records ~~Sales file.~~

April 14, 1926.

Division of Hydrography and Topography:

Division of Charts:

Tide reducers are approved in  
5 volumes of sounding records for

HYDROGRAPHIC SHEET 4759

Locality: NUKA BAY, S.W. ALASKA.

Chief of Party: H. R. Lukens, 1927.

Plane of reference is M L L W

6.9 ft. on tide staff at Nuka Bay

2.4 " do Seward

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 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.

*G. Wade*

Chief, Division of Tides and Currents.

*add to orig. Report*

SUPPLEMENTARY DESCRIPTIVE REPORT

to accompany

HYDROGRAPHIC SHEET D.

4759 Add'l Work 1928

SUPPLEMENTARY DESCRIPTIVE REPORT  
to accompany  
HYDROGRAPHIC SHEET "D".

Original work executed in 1927.  
Supplementary work executed May 9, 1928.

Chief of Party - - - - - R. R. Lukens, H. & G. Engr.

Work executed under instructions issued to the Commanding Officer,  
Str. SURVEYOR, dated February 3, 1927.

Locality: Cabin Bay in Western part of Muka Bay.

Extent: Three separate jobs are covered by this supplementary report. (1) Development of the 29 fathom shoal in the entrance to Cabin Bay noted in paragraph 4 of the original report. (2) 3 north and south lines run normal to shoreline at north side of entrance to Cabin Bay contiguous to a discrepancy in the topography of the shore line, noted in the topographic report of Sheet D. (3) Location of and sounding on a reef 400 meters E x S of the north side of the entrance to Cabin Bay where a breaker had been noted by the topographer in rerunning this shore line.

Details of (1) above: Close lines were run over this area, sounding at slow speed with launch #3 with the power machine and 18# lead. The shoal is small in area and 26 fathoms was least water obtained on it. Lines were run by steering ranges.

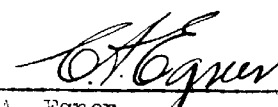
(2) The three regular lines were run in N & S direction, sounding with machine and 18# lead. Usual methods were employed.

(3) This reef was easily spotted as it is marked by kelp. It is 5 meters in extent being a pinnacle surrounded by deep water. After approximate reduction for tide referred to Seward this rock has 2' of water on it at M. L.L.W. It is located 350 meters E x S of © Nude.

Tidal reductions are to be referred to Seward for each of these three jobs. No soundings have been reduced in the field.

Note; Due to the fact that there are no critical depths on this sheet it was not considered necessary to erect a tide staff. The work was done while the Surveyor and Wildcat were enroute to Port Hobron.

Respectfully

  
C. A. Egner,  
H. & G. Engr.



STATISTICS

Hydrography, Cabin Bay, S. W. Alaska.

Date	Day	Vol.	Soundings	Miles	Positions	Boat Used
4/9/28	a	4	62	2.4	42	Launch #3.



*J.P.H.*  
July 6, 1928

(11)

Division of Hydrography and Topography:

Division of Charts:

Tide reducers are approved in  
1 volume of sounding records for

HYDROGRAPHIC SHEET 4759, Additional Work

Locality: **Nuka Bay, S. W. Alaska**

Chief of Party: **R. L. Lukens, 1928**

Plane of reference is **M. L. L. W.**  
**2.4ft. on tide staff at Seward**

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 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.

*G. Wade*

Chief, Division of Tides and Currents.

PLEASE ADDRESS THE DIRECTOR  
U. S. COAST AND GEODETIC SURVEY  
AND NOT THE SIGNER OF THIS LETTER  
AND REFER TO No. 11-DEM

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

WASHINGTON August 8, 1928.

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet No. 4759 (Additional Work)

Cabin Bay, West Arm of Nuka Bay, Alaska

Surveyed in 1928

Instructions dated February 3, 1927  
(SURVEYOR)

Surveyed by C. A. Egner.

Chief of Party, R. R. Lukens.

Protracted and soundings plotted by J. T. Jarman.

Verified and inked by F. B. Kelly.

1. This work comprised an examination of a 29 fathom sounding in the entrance to Cabin Bay, and the running of the necessary sounding lines in the bight on the north side of Cabin Bay after correcting the topography in this bight.
2. The work seems adequate for the purpose and no further surveying is required here.
3. Reviewed by A. L. Shalowitz, July, 1928.

Approved:

---

Chief, Section of Field Records (Charts)

---

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

Sections of Field Records.

Report on Hyd. Sheet H-4759

Kenai Peninsula

Surveyed in 1927

Inst. dated. Feb. 3, 1927

Chief of Party - R. Q. Lukens.

Surveyed by - W. D. Patterson

Protected & Sdy. Plotted by - F. R. Gossett

Verified & Indexed by - J. Kelly

1. The records conform to the req. of the U.S.
2. The plans & character of development fulfill the req. of the U.S.
3. Crossing lines show, generally, good agreement.
4. All channels with the exception of #29 farther one in the entrance to Cabin Bay are sufficiently developed.
5. Most of the depth curves were drawn in the field
6. ~~Three~~ <sup>Four</sup> rocks awash were added to the smooth sheet. Two of these <sup>off 30K N.W. of Δ same</sup> were taken from the Boat Sheet. A rock awash in the small bight south of O Kelp was taken from the Topo Sheet. A rock awash between O Ter & O Lugs <sup>in Cabin Bay</sup> was taken from the Boat Sheet & verified by the notes.
7. Though there were considerable rocks awash on the sheet few notes in the sdy. records were given to verify their location by the topo party.
8. Two missing broogs were added to the smooth sheet; one between pos. 5d & 6d in Ariadne Cove & one between 49a & 50a in Shelter Cove.
9. The junction with sheet H-4721 on the south is good.

10. Sigsbee Auger Dad in Cabin Bay are evidently in error (See Base Reports # <sup>4759</sup> 45976 T4334) ~~and~~ ~~the~~ Hydrograph in that case ~~is~~ is questioned. ~~An~~ An attempt was made to use the Hydrograph but was abandoned as being useless. This Hydrograph is left in pencil ~~for additional work next~~ & additional work will be necessary in this locality. There is also an apparent shoaling 350 meters SW of O Slide which should also be developed.

11. 219 files were checked & 19 found to be in error.

12. Field draft - good.

13. Report, Sigsbee Bay 1928.

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

AND REFER TO No. 11-DRM

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

WASHINGTON August 13, 1928.

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet No. 4759

Kenai Peninsula - North and West Arms of Nuka Bay

Surveyed, May-Sept., 1927

Instructions to SURVEYOR dated February 3, 1927

Chief of Party, R. R. Lukens.

Surveyed by W. D. Patterson.

Protracted and soundings plotted by F. R. Gossett.

Verified and inked by F. B. Kelly.

1. The General and specific instructions were complied with except in regard to additional development wherever danger indications were found.

- a. The 29 fathom bank in Cabin Bay was not sufficiently developed because of trouble with the sounding apparatus at the end of the season. A tracing of this sheet was retained by the Chief of Party with the intention of completing the development in the next (1928) season.

Topographic signals "Any" and "Bad" just north of this bank are also to be correctly located and additional hydrographic development made in that light if necessary. This discrepancy was not discovered until after the party had left the field and soundings between positions 14g and 21g can not be plotted until the above mentioned corrections are made. For an explanation of the error in the position of signals "Any" and "Bad" see Descriptive Report of T. 4334.

It would have been well to split the three wide spaces between sounding lines to the west of the 29 fathom bank on account of the irregular bottom there.

- b. In the middle of the channel that would be used by a vessel entering Rock Bay is an 8 3/4 fathom indication. Although the sounding lines are spaced about 100 meters here it is my opinion that a search for the least depth should have been made. Also a few more soundings on the east and west wing of the bank extending off signal "Point" would have been desirable.

- c. About 300 meters west southwest of signal "Slide" is a shoal which should have been investigated.
- d. More development would have been desirable in the following places:

Between positions 52 and 53 n are two soundings of 11 fathoms and 16 fathoms. These soundings indicate that a bank makes off from the point on which is located signal "Sand". It is not well defined.

A similar bank with deeper water on it makes off from the point on which is located signal "Bear" at the east end of Bear Cove.

East of the point near signal "Knob" is an uninvestigated 18 fathom spot.

North by east of signal "Pat" on the east shore of North Arm is a slight bar which might have considerably less water than shown.

It is possible that a bar extends clear across the mouth of Pilot Harbor instead of broken as shown.

- 2. Although the lines were spaced about as directed in the specific instructions it is thought that the spacing should have been reduced off the rocky points and especially those at the entrances of the coves and harbors.
- 3. Field drafting was excellent, although four rocks and two mooring buoys had to be plotted on the smooth sheet by the office draftsman. The sounding records contained little mention of the numerous rocks shown by the topographic party.
- 4. At the southern end of the sheet a poor crossing was obtained by transferring the limit of H. 4721. Near signal "Cove" an 8 fathom sounding was obtained on H. 4721. This should have been developed either on this sheet or on H. 4721 as it is at a critical point. The Coast Pilot mentions a rock lying half way between a 17 fathom anchorage at the head of Palisade Bay and the northeast shore. Soundings are not very numerous over this anchorage but there is no indication of a rock.
- 5. Reviewed by W. M. Gibson, May 21, 1928.

Approved:

---

Chief, Section of Field Records (Charts)

---

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

Copy for Section of Field Records files.

F. J. H.

August 8, 1928.

(11)

Division of Hydrography and Topography:

Division of Charts:

Tide reducers are approved in  
2 volumes of sounding records for

HYDROGRAPHIC SHEET 4589 Add'l. wk.

Locality: SANTA BARBARA CHANNEL, CALIFORNIA.

Chief of Party: F. G. Engle, 1928.

Plane of reference is M L L W

3.5 ft. on tide staff at Los Angeles Harbor.

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 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.

*G. H. de*

Chief, Division of Tides and Currents.

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

C. & G. SURVEY  
L. & A.  
MAR 19 1928  
Acc. No.

REG. NO.  
4759

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. ..... D.....

REGISTER NO. 4759

State ~~S. W.~~ Alaska

General locality ~~Nuka Bay~~ Kenai Peninsula

Locality ~~West Arm~~ North and West Arms of Nuka Bay

Scale 1:20,000 Date of survey May to September, 1927

Vessel Str. SURVEYOR

Chief of Party R. R. Lukens

Surveyed by W. D. Patterson

Protracted by F. R. Gossett

Soundings penciled by F. R. Gossett

Soundings in fathoms ~~fms~~

Plane of reference MLLW

Subdivision of wire dragged areas by

Inked by

Verified by

Instructions dated February 3rd, 1927

Remarks:



DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

REG. NO.

HYDROGRAPHIC TITLE SHEET  
*Submitted on Boat Sheet - To be shown on orig. 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. "D" (1427)

REGISTER NO. 4759 Add'l. Work 1928

State ~~S. W.~~ Alaska

General locality ~~Nuka Bay~~ Kenai Peninsula

Locality Cabin Bay

Scale 1:20000 Date of survey May 9, 1928

Vessel Launch #3.

Chief of Party R. R. Lukens

Surveyed by C. A. Egner

Protracted by

Soundings penciled by

Soundings in fathoms ~~feet~~

Plane of reference Soundings not reduced

Subdivision of wire dragged areas by

Inked by

Verified by

Instructions dated February 18, 1928

Remarks: This work submitted on Boat Sheet - To be added to orig. Sheet 4759