

6336

6336

U. S. COAST AND GEODETIC SURVEY
LIBRARY AND ARCHIVES

Cl. 8304

17 1939

Form 504
Rev. April 1935
DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

Topographic }
Hydrographic } Sheet No. H. 6336

State Alaska

LOCALITY
CROSS SOUND
Icy Strait

Port Althorp - Eirin Cove

1938

CHIEF OF PARTY

H. Arnold Karo

U. S. GOVERNMENT PRINTING OFFICE

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO.

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. 538

H6336

REGISTER NO. H 6336

State Alaska

General locality CROSS SOUND
~~loy Strait~~

Locality Port Althorp - Elfin Cove

Scale 1 - 5,000 Date of survey May - June, 19 38

Vessel Tender No. 1

Chief of Party H. Arnold Karo

Surveyed by George E. Morris Jr.

Protracted by George E. Morris Jr.

Soundings penciled by George E. Morris Jr.

Soundings in fathoms feet

Plane of reference MLLW

Subdivision of wire dragged areas by _____

Inked by H.F. STEGMAN

Verified by H.F. STEGMAN

Instructions dated March 10, 19 38

Remarks: _____

Descriptive Report to Accompany Sheet No. H 6336

Field No. 538

Elfin Cove, Alaska.

(a) Date of Instructions:

Work was done under instructions dated March 10, 1938, Project HT - 221

(b) Survey Methods:

Standard methods of obtaining depths and positions were followed. Signals used in taking three point sextant positions were located by triangulation or plane table topography. Depths within the range of the hand lead were measured with the wire centered hand lead line with a twelve pound lead. Greater depths were measured with a power driven sounding machine using standard wire and a twentyfive pound lead.

(c) Discrepancies:

The sounding of three feet on position 41e ✓ does not agree with surrounding depths. This sounding line was carried toward the beach which rises abruptly to the low water line and it is believed the position was marked slightly before the time of the sounding so that the sounding was actually taken inshore from the position. It is recommended that the sounding be rejected. *Sounding retained.*

In running lines directly toward the beach, ✓ the speed of the sounding launch was never intentionally decreased before the end of the line. In running lines away from the beach, the launch always reached sounding speed before the sounding was started.

(d) Dangers: ✓

A rock, position 131 g latitude $58^{\circ} - 11'.9$ ✓
longitude $136^{\circ} - 21'.2$, has a least depth of $1 \frac{5}{6}$
fathoms. It is marked by kelp. In addition to the sound-
ing lines run over the area, twenty minutes were spent
in drift sounding to insure that the least depth be
obtained.

A rock, position 63 f latitude $58^{\circ} - 11'.7$ ✓
longitude $136^{\circ} - 20'.8$, has a least depth of $1 \frac{2}{6}$
fathoms. The bottom in this area was visible so the
point of least depth was easily found.

See (e) Channels below.

(e) Channels:

The channel between \odot KIP and Δ FINN is the one
mainly used and has a minimum depth of 10 feet, position
3 h, and leads through a very narrow cut between topographic
signals PER and OAK with a minimum depth of 3 feet, position
61 f, to a small inner basin with depths of 3 to 4 fathoms.
A second basin with depths of $2\frac{1}{2}$ to 5 fathoms lies
beyond triangulation station CHICH and Topographic signal
AMP with a least depth in the channel of 9 feet.

The channel is somewhat obstructed by a rock ledge
off topographic signal NIB on the southwest side of the
channel and a rock reef half way between topographic
signals NIB and LOW on the northeast side of the channel.

- (e) Channels: continued- These obstructions are marked with day beacons.

The channel between Topographic signals HOT and CAL is used to some extent.

- (f) Anchorages:

The area east of a north and south line through Topographic station MEX and south of an east and west line through topographic station JEW is used as an anchorage by power trollers during the summer fishing season. The bottom is sandy and rock and is fair holding bottom.

The inner basin, southeast of topographic station PER is used as an anchorage throughout the year by power trollers. The bottom is hard with a thin covering of soft mud and silt and is poor holding during the winter willy-wahs.

An oil barge, from which fishing boats obtain gasoline and fuel oil, is kept on the grid near triangulation station KOFF during the winter and secured to the pilings between topographic station MEX and LOW from about June to October. ✓

- (g) Comparison with Previous Surveys:

This survey is in much greater detail than the previous one (Sheet No. 2559⁽¹⁹⁰¹⁾) and in general should supplant the earlier work.

A close check was made with the former survey as the

(g) continued- work progressed and all discrepancies checked in the field.

The 29 fathom spot in latitude $58^{\circ} - 12'.1$ longitude $136^{\circ} - 21'.6$ was not found. A least depth of 30 fathoms, position 51c, was obtained after considerable development of the area. However, if the 29 fathom depth is from reliable sources, it should be retained until disproven by the wire drag; because in that depth it is difficult to be certain that the shoalest spot was found. *Par. 7+11 of Review.*

(i) Geographic Names:

All geographic names in the area are charted ~~or well~~ ^{are} well established names.

The cove now known as Elfin Cove is referred to in the Coast Pilot as "Dunk Hole". The original settlers claim that this is an error and that the name should have been "Gunk Hole". The "old timers" still refer to the cove as "Gunk Hole"; more recent visitors as "Dunk Hole"; but everyone knows that the official name (because of the post office) is "Elfin Cove". *25*

(j) Statistics:

Statistics for sheet H 6336, field no. 538.

873 Positions

2285 Soundings

1296 Hand Lead

989 Wire

48.2 Statute miles sounding lines.

0.7 Square statute miles area.

Respectfully submitted,

George E. Morris, Jr.
George E. Morris Jr.
Jr. H. & G. E.

Forwarded:

H. Arnold Karo
H. Arnold Karo
H. & G. E.
Chief of Party

Records examined and approved
H. Arnold Karo

Field Records Section (Charts)

HYDROGRAPHIC SHEET NO. **H6336**

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

Number of positions on sheet	..873.
Number of positions checked17.
Number of positions revised2 ✓
Number of soundings recorded	..2285
Number of soundings revised47 ✓
<i>Number of soundings erroneously spaced</i>	4 ✓
Number of signals erroneously plotted or transferred

Date: Feb. 20, 1939

Verification by H.F. STEGMAN

Review by *Leathraw*

Time: 33 1/4 hours.

Time: 13 hours.

3/8/39.

HYDROGRAPHIC SURVEY NO. H6336

Smooth Sheet Yes

Boat Sheet Yes

Records; Sounding 3 Vols., Wire Drag Vols., Bomb Vols.

Descriptive Report Yes

Title Sheet Yes

List of Signals Vol. #1

Landmarks for Charts (Form 567) Yes

Statistics None

Approved by Chief of Party Yes

Recoverable Station Cards (Form 524)

Special Chart for Lighthouse Service
(Circular Nov.30, 1933)

Hydrography: Total Days 8; Last Date June 8, 1938

Remarks

Remarks

Decisions

1		575 355
2		580 360 (D.G.N.)
3		580 360
4		580 365
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		
26		
27		
M 234		

GEOGRAPHIC NAMES
 Survey No. **H6336**

Name on Survey	A, On Chart No.	B, On previous survey No.	C, On U. S. quadrangle Maps	D, From local information	E, On local Maps	F, P. O. Guide or Map	G, Rand McNally Atlas	H, U. S. Light List	K	
✓ <u>Chichagof Island</u> ✓										1
✓ <u>Elfin Cove</u> * ✓										2
✓ <u>Port Althorp</u>										3
✓ <u>Cross Sound</u>										4
										5
										6
										7
		- Heck		5/16/39						8
										9
										10
										11
										12
										13
										14
										15
										16
										17
										18
										19
										20
										21
										22
										23
										24
										25
										26
										27

22c

TIDE NOTE FOR HYDROGRAPHIC SHEET

January 31, 1939.

Division of Hydrography and Topography:

✓ Division of Charts: Attention: Mr. E. P. Ellis.

Plane of reference
~~Tide-Reducers-are~~ approved in
3 volumes of sounding records for

HYDROGRAPHIC SHEET 6336

Locality Port Althorp to Elfin Cove, ^{Cross Sound} ~~Icy~~ Strait, Alaska.

Chief of Party: H. Arnold Karo in 1938
Plane of reference is mean lower low water reading
2.6 ft. on tide staff at Elfin Cove
18.8 ft. below B.M. 1

Height of mean high water above plane of reference is 9.6 feet.

Condition of records satisfactory except as noted below:



Chief, Division of Tides and Currents.

MEMORANDUM

IMMEDIATE ATTENTION

SURVEY
 DESCRIPTIVE REPORT
~~PHOTOSTAT OF~~

No. H -6336
~~No. 15~~

received Jan. 17, 1939
 registered Jan. 27, 1939
 verified
 reviewed
 approved

This is forwarded in order that your attention may be directed to the matters as indicated below. Please initial in column 3 as an acknowledgement that your attention has been thus directed. The complete original records are available if desired. If you cannot give this your immediate attention, please initial, note, and forward to the next section marked, calling for the records at your convenience.

ROUTE		Initial	Attention called to
20			
22			
24			
25	✓		Pages 2, 3 and 4 refer again to 25
26			
30			
40			
62			
63			
82			
83			
88			
90			

RETURN TO

82	T. B. Reed
----	------------

REPORT ON VERIFICATION OF H-6336 (1938)

1. CONDITION OF RECORDS.

The records are neat and legible, and conform to the requirements of the hydrographic manual except that:

a. On the inshore work, when the launch was running on range, (apparently), that fact was not noted in the records.

b. There were no notes in the record concerning rocks awash. These rocks had been located by topography, but information as to their heights, as determined by the hydrographic party, would be of value. Since there are discrepancies between the hydro and topo ^{often hard to identify} location of the low water line it is evident that any heights determined only by the topo party may be in error.

No outstanding rocks were overlooked in this respect.

2. Shoreline and Signals.

Shoreline and signals originate with Topo sheet Field Letter "A" 1938 (T-6625 (1938)). This topo sheet was not yet in the office when H-6336 was verified. When T-6625 is received in the office a comparison should be made with H-6336.

3. Sounding line crossings.

Agreement of sounding line crossings is satisfactory. Attention is called to the 3 foot depth in $\phi-58^{\circ}11.6$, $\lambda-136^{\circ}20.5'$ (pos. 41e). ~~This is shown as a sunken mark.~~ ^{party} The field recommends that it be rejected - see paragraph (c) of the Descriptive Report.

4. Depth Curves.

The usual depth curves may be satisfactorily drawn. ✓

5. Junctions.

There are no contemporary surveys in this area. No junctions ✓
were made.

6. Field plotting.

Field plotting was very neat, and protracting and penciling were ✓
carefully done. However there were two types of error in penciling
soundings, as follows:

1. In depths of 7 to 11 fathoms the 1 foot and 4 foot fractions ✓
were called 0 and $\frac{1}{2}$ fathoms respectively, instead of $\frac{1}{4}$ and $\frac{3}{4}$ fathoms.

2. Some depths in excess of 11 fathoms were plotted to $\frac{1}{2}$ fathom ✓
in order to smooth the depth curves.

Approximately 35 soundings were revised to correct the error ✓
noted in Type 1, above.

Feb. 20, 1939.

Respectfully submitted. ✓

Harold F. Stegman

Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 6336 (1938) FIELD NO. 538

Elfin Cove, Port Althorp, Cross Sound, Alaska
Surveyed in May - June 1938, Scale 1:5,000
Instructions dated March 10, 1938 (WESTDAHL)

Hand Lead and Machine Soundings.

3 Point fixes on shore signals.

Chief of Party - H. A. Karo.
Surveyed by - G. E. Morris, Jr.
Protracted by - G. E. Morris, Jr.
Soundings plotted by - G. E. Morris, Jr.
Verified and inked by - H. F. Stegman.

1. Condition of Records.

The records are neat and legible and conform to the requirements of the Hydrographic Manual.

The Descriptive Report is comprehensive and satisfactorily covers all items of importance.

2. Compliance with Instructions for the Project.

The survey satisfies the instructions for the project.

3. Shoreline and Signals.

The shoreline and signals originate with T-6625 (1938). The low water line and shoreline detail will be compared with the topographic survey when received from the field. *compared*

4. Sounding Line Crossings.

No system of cross lines was run. However, the crossings which result from the development of the area are satisfactory.

5. Depth Curves.

The usual depth curves can be satisfactorily drawn including portions of the one and two fathom and low water curves.

6. Junctions with Surveys.

This survey makes a satisfactory junction with H-2559 (1901) on the north, west and southwest.

7. Comparison with Prior Surveys.

H-2559 (1901) scale 1:20,000.

The salient features of the shoreline as shown on the old survey are borne out in greater detail on the present survey.

6/22/37
L.S.S.

The depths on the 1901 survey are in good agreement with the new work. Due to closer development some shoaler soundings were obtained, the most important is the 1-5/6 fathom in lat. $58^{\circ} 11.94'$, long. $36^{\circ} 21.2'$.

The 5 fathom sounding on H-2559 (1901) in lat. $58^{\circ} 11.72'$, long. $136^{\circ} 21.0'$ (N.A. 1927 Datum), between the main land and the island to the northeast, falls in a depth of 1-1/2 fathoms on the present survey. An examination of the old records shows that this sounding is erroneously plotted and when plotted correctly is in agreement with the depths on the present survey.

According to the old sounding records the 29 fathom sounding (referred to in paragraph "g" of the Descriptive Report), is plotted 30 meters too far east on the old survey, and when plotted correctly falls in depths of 30 and 31 fathoms in Lat. $58^{\circ} 12.07'$, long. $136^{\circ} 21.6'$, on the present survey. The 29 fathom sounding still falls in the area covered by closer development, but is carried forward, to the present survey as recommended by the field party.

Because of the much larger scale and closer development, the present survey, within the common area, should supersede H-2559 (1901) for charting purposes.

8. Comparison with Wire Drag Surveys.

H-4318 (1923) Wire Drag, scale 1:40,000.

This wire drag survey overlaps H-6336 (1938) to approximate longitude $163^{\circ} 21.45'$. No conflict exists between the effective drag depths and the depths found on the present survey.

9. Comparison with Chart 8202 (New Print dated May 11, 1938).
Chart 8304 (New Print dated Dec. 1, 1938).

a. Hydrography.

The charts are based on surveys discussed in the preceding paragraphs and contains no additional information that needs consideration in this review.

b. Aids to Navigation.

Elfin Cove lighted beacon as shown on the present survey agrees with the charted position and properly marks the feature intended.

Notice to Mariners No. 41 (1938) describes day beacons No. 1 and No. 2 off signal NIB in the approach to Elfin Cove. These beacons are noted in paragraph 6 of the

descriptive report, but are not shown on the sheet, due possibly to the fact that the beacons may have been established after the completion of the survey. When plotted on the survey in accordance with the published locations they properly mark the features intended.

See par "c"
of Descriptive
Report T-6625
6/22/39 L.S.S.

c. Controlling Depths.

The controlling depth between signals KIP and FINN, lat. 58° 11.73', long. 136° 21.0' is 9 feet.

The controlling depth between signals OAK and PER, lat. 58° 11.6', long. 136° 20.7', is 3 feet.

The controlling depth between triangulation station CHICH 1938 and signal AMP Lat. 58° 11.53', long. 136° 20.47', is 10 feet.

d. Topography.

For information concerning rock awash, in Lat. 58° 11.84' long. 136° 20.8', see par. 3. charted [of review T-6625 (1938)]

10. Field Plotting.

6/22/39
L.S.S.

The protracting was excellent. The plotting of the soundings was not in accordance with the Hydrographic Manual (par. 152) in that from 7 to 11 fathoms the 1 foot and 4 foot fractions were called 0 and 1/2 fathoms respectively, instead of 1/4 and 3/4 fathoms.

11. Additional Field Work Recommended.

Since the area surrounding the 29 fathom sounding, mentioned in paragraph "g" of the Descriptive Report, and paragraph 7 of this review, was covered with the wire drag at an effective depth of 50 feet in 1923 (H-4318 W.D.) no additional work is considered necessary in this area. Additional sounding or dragging would be desirable inside the 10 fathom curve to the southward and westward of the 1-5/6 fathom spot in lat. 58° 11.94' long. 136° 21.2'.

12. Superseded Prior Surveys.

With the exception of the 29 fathom sounding referred to in paragraphs 7 and 11 of this review, the present survey supersedes the following old survey for charting purposes:

H-2559 (1901) in part.

13. Reviewed by - Leo S. Straw, March 8, 1939.

Inspected by - E. P. Ellis.

Examined and approved:

T. B. Reed

T. B. Reed,
Chief, Section of Field Records.

Wm. L. Pascoe
Chief, Section of Field Work.

K. T. Adams

Chief, Division of Charts.

G. H. Gude
Chief, Division of H. & T.

Applied to Chart 8304 6/14/39 *Chas P. Bunker*
" " Insert (Elfin Cove) Chart 8304 Dec. 11/39 SR.