

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. 1139

H6481

REGISTER NO. H6481

State SOUTHWEST ALASKA

General locality Kodiak Island

Locality St. Paul Harbor and ^{Womens} ~~English~~ Bay

Scale 1:10,000 Date of survey July 12-Aug. 3, 1939

Vessel DISCOVERER

Chief of Party Lieut. Cdr. G. C. Jones

Surveyed by G. E. Boothe

Protracted by W. Weidlich

Soundings penciled by W. Weidlich

Soundings in ~~fathoms~~ feet feet

Plane of reference M. L. L. W.

Subdivision of wire dragged areas by _____

Inked by R. H. Carstens

Verified by R. H. Carstens

Instructions dated 22-AB, 1995, DI 1 Jan 25, 1939, 19____

Remarks: _____

SOUNDING EQUIPMENT

An open motor whale boat, with sounding chains rigged off the starboard bow, was used by the sounding party. A plotting board was secured over the thwarts, amidships. Sextant angles were taken from aft the plotting board. ✓

All soundings were obtained by hand lead. The hand lead consisted of a ten pound leaded weight fastened to a line consisting of metal-cored sash rope. In addition to the usual markings on the line at every fathom, marks were also wrapped at every foot interval. The length of the lead line remained constant throughout the season. ✓ ✓

DEPTH UNITS

Soundings were plotted in fathoms and fractions of a fathom on the boat sheet; but on the smooth sheet the soundings were plotted in feet. ✓ ✓

SHORELINE

The shoreline on the smooth sheet was traced from topographic sheets T6696⁽¹⁹³⁹⁾ and T6697⁽¹⁹³⁹⁾. The shoreline on the north side of English Bay and west of signal Abbert has been omitted, because proper means of reducing the scale of the shoreline, as surveyed on sheet T6695,⁽¹⁹³⁹⁾ was not available in the field. *Transferred in office.* ✓

CURRENTS

Currents were noticeable while sounding, often making the running of lines difficult. Currents were not strong enough, however, to be dangerous to navigation. ✓ ✓

TIDES

A standard automatic tide gage was maintained at Kodiak throughout the period of the survey, as a basic tide station. ✓ ✓

A portable automatic tide gage was operated near the southwest end of High Island. High Island is situated on the working grounds of this sheet. The records from the High Island tide gage were used in obtaining the tide reducers for all soundings on this sheet.

WIRE DRAG

Much of this area was wire dragged in conjunction with sounding operations. The wire dragged area is shown on sheet #6480. All groundings are completely described in the descriptive report accompanying sheet H6480. Sheet H6480 should be consulted for supplementary shoal soundings.

GEOGRAPHIC NAMES

Names have been recommended by the topographer. The report accompanying sheets T6693, 6694, 6695, 6696, and 6697, should be consulted for geographic names.

AIDS TO NAVIGATION

The buoys marking the entrance to St. Paul Harbor were removed in July by the Lighthouse Service and then replanted, some in new positions. The new locations were determined by this party. The buoy data will be found listed in the sounding volumes.

ANCHORAGES

The ship DISCOVERER anchored in St. Paul Harbor $\frac{1}{2}$ mile WSW of Puffin Island, in Lat. $57^{\circ}-44.9$, Long. $152^{\circ}-27.5'$. A hard, sand bottom in $6\frac{1}{2}$ fathoms of water was found. This was indifferent holding ground.

(4)

SAILING DIRECTIONS ^{Womens}
~~ENGLISH BAY~~

Until a channel has been dredged and marked, the following courses should be used in entering English Bay. Proceed on courses across Chiniak Bay as directed in the Coast Pilot, Alaska, Part II, page 186, until buoy N4 is reached. To enter English Bay, from a point 200 yards, 215° True from buoy N4; (1) steer 275° True, for $\frac{1}{2}$ mile, to a point having buoy #7, 450 yards on the starboard beam; (2) Continue on course 275° True for $\frac{1}{4}$ mile, when the east tangent of High Island will be on the port beam; (3) Steer 213° true, passing 200 yards west of High Island, to the south tangent of High Island abeam; (4) Steer 246° true for $\frac{3}{4}$ mile, to the southwest end of a small islet near the southeastern shore 0.2 mile on the port beam; (5) Steer 217° true for $\frac{7}{8}$ mile, to $\frac{1}{8}$ mile past the beam bearing of the southwest tangent of Nyman Peninsula, on the northwest side of the bay; (6) Then pass midway between the end of Nyman Peninsula and Mary Island, and anchor in 10 fathoms, mud bottom, off the entrance to Womens Bay.

SHOALS; DANGERS TO NAVIGATION

The greatest danger to navigation in this area is the rock located in Latitude 57°-44.31', Long. 152°-27.62'. In a shoal area about 50 meters in diameter, a pinnacle rock having a least depth of 8 feet, was found. A preliminary investigation of this shoal was made by two launches in May, 1939, and a notice to mariners broadcast. The shoal was again investigated in August. With the launch drifting across the rock a number of times, the leadsman felt along the bottom very thoroughly. A kelp patch about

50 feet in diameter surrounded the rock at this time of year. The kelp was so thick that a wire drag, set to an effective depth of 7 feet could not pass over the rock.

A buoy was established by the US. Lighthouse Service to mark the location of this rock. The buoy (black can #7) is located 100 meters, 35° true, from the rock.

A second shoal is located in Latitude $57^{\circ}-44.38'$, Long $152^{\circ}-27.75'$. This shoal has a least depth of 22 feet. Small points of rock, one to two feet high, were felt with the hand lead. A wire drag, set at an effective depth of 22 feet, passed over this shoal without catching on the rocks.

The #7 buoy mentioned before, is situated ²¹⁰ 190 meters, 105° true, from this shoal.

A shoal area exists in Latitude $57^{\circ}-44.3'$, Longitude $152^{\circ}-26.45'$. This was investigated by the drift lead method. A sharp pinnacle with a least depth of 3 feet was found.

A spur extends from the 3 foot shoal to a shoal in Lat. $57^{\circ}-44.22'$, Long. $152^{\circ}26.56'$. The least depth found here was 23 feet. Nun buoy #4 is situated 65 meters, 190° true, from the 23 foot spot.

A rocky shoal, about 150 meters long, exists in Latitude $57^{\circ}-44.7'$, Long. $152^{\circ}-28.2'$. A sounding of 11 feet was obtained by the hydrographic party. Soundings of 11 feet and 12 feet were also obtained on this shoal by the wire drag party. The kelp on this shoal was so thick that the wire drag would not pass over it.

A foul area extends northward from Cliff Island for a third of a mile and then spreads eastward for a third of a mile, its eastern limit marked by can buoy #5. Numerous rocks awash, reefs, and islets are scattered through this area. These are shown on topographic sheets T6696⁽¹⁹³⁹⁾ and T6697⁽¹⁹³⁹⁾.

A foul area surrounds Puffin Island. Rocks awash and reefs are shown on topographic sheet T6696⁽¹⁹³⁹⁾. Shoals extend for $\frac{1}{4}$ mile WSW of Puffin Island. ^{FLW} ~~Can~~ buoy #6 marks the western limit of the submerged ridge off Puffin Island.

Reefs and islets extend north of High Island for 300 meters. They are shown in detail on topographic sheet T6696⁽¹⁹³⁹⁾.

CROSSINGS

All crossings checked well.

COMPARISON WITH SHEET H5440

Part of the area included on this sheet was surveyed in 1933, on sheet H5440. A tracing, enlarged from a scale of 1:20,000 to 1:10,000 was made of the H5440 survey⁽¹⁹³⁹⁾ and is submitted herewith. This tracing was placed over sheet H6481⁽¹⁹³⁹⁾ to make comparisons between soundings. The soundings of the two surveys differed by no more than one foot in most of the area. A few discrepancies are noted, however.

In Lat. $57^{\circ}-43.6'$, Long. $152^{\circ}-28.9'$, on sheet H5440⁽¹⁹³⁹⁾, is a sounding of 14 feet. This is close to a sounding of 20 feet on sheet 6481. The 14 foot sounding is not disproved and should be retained on the chart.

In Lat. $57^{\circ}-43.4'$, Long. $152^{\circ}-28.6'$, on sheet 5440, are soundings of 0 and 1 foot off the south end of High Island. These are close to

Par. 5 b (1),
review. ✓

soundings of 20 and 21 feet on sheet 6481. The 0 sounding is close to a sounding of 32 feet on the H2929 sheet, surveyed in 1907. It is believed the 0 and 1 foot soundings are out of position, and should be shifted north to fit on the reef at the south end of High Island.

Par. 5b(2),
review.

In Lat. $57^{\circ}-43.52'$, Long. $152^{\circ}-27.7'$, on sheet 5440, is a ^{rock awash} reef baring 4 feet. On sheet 6481 soundings of 14 feet and 13 feet surround this spot. The lines run on both sides of this spot (76f to 77f, 116f to 117 f) mention a kelp patch in this area. The 1939 soundings near this spot were obtained when there was 5 and 4 feet of tide. The topographer surveyed this area at about a zero stage of the tide. He failed to find this rock. If the rock exists, it must be only awash at zero tide.

Par. 5b(3),
review.

In Lat. $57^{\circ}-43.9'$, Long. $152^{\circ}-28.13'$, on sheet 5440, is a sounding of 6 feet. This is near soundings of 14 feet and 17 feet on sheet #6481.

Disregard 6.
On edge of
reef.

The 6 foot sounding is at the northeast tip of a reef, and should be retained.

In Lat. $57^{\circ}-43.85'$, Long. $152^{\circ}-27.2'$ is a group of four soundings 24, 26, 31, and 33 feet in depth. These fall near the edge of a reef on the 1939 sheet, and on soundings of 11 feet and 5 feet. It is believed the four soundings on the 1933 survey should be shifted slightly south.

Disregard
old soundings.

In Lat. $57^{\circ}-43.83'$, Long. $152^{\circ}-27.53'$, on sheet 5440 is a rock awash. This rock is also shown on sheet H2929, surveyed in 1907. A thorough search was made for this rock in 1939, but it could not be found. This search was made during a zero tide, and with a flat sea when it was possible to see for some depth into the water. A can marker buoy was anchored at the spot. An area covering a radius of 150 meters around the buoy was felt over with a hand lead, for a period of fifteen minutes.

Par. 5a(2),
review.

The least depth found was 18 feet.

The topographer surveying sheet T6697⁽¹⁹²⁹⁾ examined this area for this particular rock awash, during a minus two foot tide. Only a kelp patch could be seen. (See descriptive report T6697). The rock awash shown on the 1933 sheet may have been copied from the 1907 sheet. In view of the 1939 investigations, it is believed the rock should be removed.

Rock is shown on T as original on T-4845 (1922) but may have been copied in field.

COMPARISON WITH SHEET H2929

All of the area included in this survey was previously surveyed in 1907, on sheet H2929. A tracing, enlarged from a scale of 1:20,000 to 1:10,000, was made of sheet 2929, and is submitted herewith. This tracing was placed over sheet 6481 to make comparisons between soundings. The soundings of the two surveys differed by no more than one foot in most of the area. Some discrepancies are noted, however.

In Lat. $57^{\circ}-43.8'$, Long $152^{\circ}-28.9'$, on sheet 2929, are soundings of $14\frac{1}{2}$, 15, and 16 feet over soundings two feet shoaler on sheet 6481. The shoaler soundings should be used.

In Lat. $57^{\circ}-45.8'$, Long. $152^{\circ}-28'$, on sheet 2929, is an area about $\frac{1}{2}$ mile in diameter with soundings of 19 feet to 39 feet. Corresponding soundings on sheet 6481 are from two to four feet shoaler. The shoaler soundings should be used.

In Lat. $57^{\circ}-43.6'$, Long. $152^{\circ}-27.5'$, on sheet 2929, are soundings of 1 and 4 feet. These soundings are near soundings of 8 and 10 feet on sheet 6481. Since the exact positions of the 1 and 4 foot spots were not resounded, they should be accepted as correct.

Par. Sa (1),
review.

In Lat. $57^{\circ}-43.8'$, Long $152^{\circ}-26.3'$, on sheet 2929, is a sounding of 64 feet, near soundings of 50 and 52 feet on sheet 6481. The 52 ft.

and 50 ft. soundings mark the northeast end of a submerged ridge. Broken bottom exists in this vicinity, so all three soundings are probably correct. Unimportant. Old survey simply did not develop end of ridge. ✓

On sheet 2929, in Lat $57^{\circ}-43.47'$, Long $152^{\circ}-27.88'$, and in Lat. $57^{\circ}-43.52'$, Long. $152^{\circ}-27.7'$ are two rocks awash. Soundings of 8 and 9 feet were obtained very close to these spots in the 1933 survey. Soundings of 9 and 10 feet were obtained near these spots in the 1939 survey. There is not sufficient evidence to refute the existence of these rocks. Par. 5a (2), review. ✓

On sheet 2929, in Lat. $57^{\circ}-43.67'$, Long. $152^{\circ}-27.27'$ is a rock awash. A sounding of 11 feet was found here on the 1939 survey. An extensive reef is shown on the 1939 survey, reaching off Cliff Island to within 15 meters north of the rock. It is believed that this rock should be shifted north to be included in the extensive reef area. Unquestionably. Disregard rock. ✓

On sheet 2929, in Lat. $57^{\circ}-43.8'$, Long. $152^{\circ}-27.13'$ are two rocks awash. Soundings of 31 feet and 27 feet were obtained near these spots in 1939. On the 1939 sheet an extensive reef area makes off from Cliff Island to about 25 meters from these rocks, It is believed these rocks should be shifted to be included in the reef area. Ditto above. ✓

On sheet 2929, in Lat. $57^{\circ}-43.83'$, Long. $152^{\circ}-27.53'$, is a rock awash. This rock is also shown on sheet H5440. It was discussed in a paragraph under the heading "Comparison with sheet H5440. Refer to this paragraph for information about this rock." Par. 5a (3), review. ✓

In Lat $57^{\circ}-45.05'$, Long. $152^{\circ}-26.9'$, on sheet 2929, are shown two rocks awash, located on the rocky submerged ridge which extends from

Puffin Island to buoy #6. This area was surveyed by the topographer during a minus stage of the tide. He failed to find these two rocks in the old positions, but did find one rock 60 meters southwest of the 1907 position of the western rock. This rock, which bares 1 foot at MLLW, is located in $57^{\circ}-45.03'$, Long. $152^{\circ}-26.93'$. This area was sounded closely in 1939. If the second rock exists, it is, at least, a rock submerged at all stages of the tide.

Par. 5a (4),
review.

COMPARISON WITH CHART #8545

On chart 8545, in Lat. $57^{\circ}-44.02'$, Long. $152^{\circ}-27.52'$ is a sounding of 2 fathoms. Near this spot the 1939 survey shows a sounding of 17 feet. Since further development was not made in 1939, the 2 fathoms should be retained. It is believed that the 2 fathom sounding was obtained in 1933 on sheet H5441A.

26 on H-5441a.
Carried
forward.

Approved and Forwarded:

J. M. Smook
J. M. Smook, Lieut. USC&GS
Officer in Charge
Seattle Processing Office

Respectfully Submitted:

L. S. Hubbard
L. S. Hubbard, Lieut. USC&GS

STATISTICS

H6481

Sheet H6481

Volume; Date: Day; Number of Positions; Number of Soundings; Miles of Soundings
(statute)

1	July 12	a	131	684	15.9
	July 13	b	181	869	18.8
	July 25	c	89	424	9.8
			<u>401</u>	<u>1977</u>	<u>44.5</u>
<hr/>					
2.	July 25	c	34	180	3.9
	26	d	141	725	15.5
	27	e	126	783	14.7
	28	f	56	391	8.1
			<u>357</u>	<u>2079</u>	<u>42.2</u>
<hr/>					
3.	July 28	f	108	536	9.8
	29	g	169	759	15.5
	30	h	84	419	8.8
			<u>361</u>	<u>1714</u>	<u>34.1</u>
<hr/>					
4.	July 30	h	28	98	2.1
	Aug. 1	j	152	577	13.1
	2	k	129	518	11.1
	3	l	67	317	5.7
			<u>376</u>	<u>1510</u>	<u>32.0</u>
<hr/>					
5.	Aug. 3	l	59	271	6.6

TOTALS-----pos.1554 soundings-7551 miles----- 159.4

Area Surveyed----- $4\frac{1}{2}$ square miles (statute)

TIDE NOTE FOR HYDROGRAPHIC SHEET

February 27, 1940

Division of Hydrography and Topography:

✓ Division of Charts: Attention: Mr. H. R. Edmonston

Plane of reference approved in
5 volumes of sounding records for

HYDROGRAPHIC SHEET 6481

Locality St. Paul Harbor and English Bay, Kodiak Island.

Chief of Party: G. C. Jones in 1939
Plane of reference is mean lower low water reading
4.1 ft. on tide staff at High Island
13.3 ft. below B. M. 1-1933

Height of mean high water above plane of reference is 7.6 feet.

Condition of records satisfactory except as noted below:



Chief, Division of Tides and Currents.

GEOGRAPHIC NAMES

Survey No.

86481

Name on Survey

On Chart No. 8534
 On previous survey No.
 On U. S. Quadrangle Maps
 From local information
 On local Maps
 P. O. Guide or Map
 Rand McNally Atlas
 U. S. Light List

	A	B	C	D	E	F	G	H	K
<u>Kodiak Island</u> *	✓								1
<u>St. Paul Harbor</u>	St Paul Hbr.								2
<u>Womens Bay</u> *	Womens Bay								3
<u>English Bay</u>									4
<u>Cliff Point</u>	✓								5
<u>Cliff Island</u>	✓								6
<u>Gibson Bay</u> cove	✓								7
<u>Zaimkh</u> <u>High Island</u>	✓				Decision	6-11-41			8
<u>Buskin River</u>	✓								9
<u>Puffin Island</u>	✓								10
									11
									12
									13
									14
									15
									16
									17
									18
									19
									20
									21
									22
									23
									24
									25
									26
									27

Names underlined and approved by ATE on 4/16/40

Remarks

Decisions

	Remarks	File No.
1	* - USGB decisions	575 520
2		575 520
3		575 525
4		575 520
5		575 520
6	OMIT NAME ON THIS SURVEY	575 520
7		575 520
8		575 520
9		575 520
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		
26		
27		

Field Records Section (Charts)

HYDROGRAPHIC SHEET NO. **H6481**

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

Number of positions on sheet	1554.
Number of positions checked	143.
Number of positions revised	48.
Number of soundings recorded	7551.
Number of soundings revised	12.
Number of soundings erroneously spaced	27.
Number of signals erroneously plotted or transferred	0.

Date: **March 20, 1940**

Verification by **R. H. Carstens** Time: **101 hr**

Review by **J. A. McCormick** 3/29/40 Time: **35 hr.**

HYDROGRAPHIC SURVEY NO. H6481

Smooth Sheet Yes

Boat Sheet Yes

Records; Sounding 5 Vols., Wire Drag Vols., Bomb Vols.

Descriptive Report Yes

Title Sheet Yes

List of Signals Yes

Landmarks for Charts (Form 567) No

Statistics Yes

Approved by Chief of Party Yes

Recoverable Station Cards (Form 524) No

Special Chart for Lighthouse Service No
(Circular Nov.30, 1933)

Hydrography: Total Days 11 ; Last Date Aug 4, 1939

Remarks _____

MEMORANDUM

IMMEDIATE ATTENTION

SURVEY
 DESCRIPTIVE REPORT
 PHOTOSTAT OF

} No. H **H6481**
~~No. H~~

{ received
 registered
 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 3 - 6
26			
30			
40			
62			
63			
82			
83			
88			
90			

RETURN TO

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

Verification Report for H-6481 (1939)

1. The depth curves could be satisfactorily drawn.
2. Sounding line crossings were satisfactory. No regular system of crosslines was run.
3. Junctions with contemporary surveys were satisfactory. The junction with H-6479 (1939) will be discussed in the verifier's report for that sheet. Butt junctions were made with H-5441 A (1933) and H-2929 (1907) which overlap this sheet. No junction was made with H-5440 (1933) which also overlaps this sheet as H-6481 (1939) joins H-6479 (1939) on the west. The placing of junction notes on overlapping sheets was left to the reviewer. Notes added.
J. G. M.
4. The condition of the sounding records was satisfactory.
5. The field protracting was apparently rather carelessly accomplished as evidenced by the large number of positions revised as shown on the statistic's sheet.

6. The field plotting of soundings
was satisfactory.

Respectfully submitted
R.H. Carstens

3/20/40

DIVISION OF CHARTS

Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 6481 (1939) FIELD NO. 1139

Southwest Alaska, Kodiak Island,
St. Paul Harbor and Womens Bay
Surveyed in July - August 1939, Scale 1:10,000
Instructions dated January 25, 1939 (DISCOVERER)

Soundings:
Hand Lead.

Control:
Three point fixes on shore
signals.

Chief of Party - G. C. Jones.
Surveyed by - G. E. Boothe.
Protracted by - W. Weidlich.
Soundings plotted by - W. Weidlich.
Verified and inked by - R. H. Carstens.
Reviewed by - J. A. McCormick, March 29, 1940.
Inspected by - H. R. Edmonston.

1. Shoreline and Signals.

Shoreline and topographic signals are from T-6695,
T-6696, and T-6697 of 1939.

2. Depth Curves.

Satisfactory.

3. Sounding Line Crossings.

Satisfactory.

4. Junctions with Contemporary Surveys.

The junction with H-6479 (1939) on the southwest is
satisfactory. Extensive overlaps with adjoining surveys
H-2929 (1907) on the north and H-5441a (1933) are dis-
cussed in the following paragraph:

5. Comparison with Prior Surveys.

a. H-2929 (1907) 1:20,000.

This survey includes the entire area covered by
the present survey. The old survey has already
been considered in the reviews of H-5440 and H-5441a
of 1933 and is discussed in considerable detail in
the descriptive report, pages 8 to 10. Depths on
the two surveys are, in general, in fair agreement.
Major discrepancies are in rock detail and shoal
soundings close to shore and as the shoreline of
the 1907 survey differs widely in places from that

of the present survey it is not improbable that some of the differences are due to inaccuracies in the 1907 topography.

- (1) Soundings of 1 and 4 feet (not charted) in lat. $57^{\circ}43.6'$, long. $152^{\circ}27.5'$ on H-2929 fall in depths of 8 to 10 feet on the present survey. Locations of the 1 and 4 are questionable and such depths are not substantiated on H-5440 (1933). It is probable that they were obtained closer to the nearby island and they have not been carried forward.
- (2) Two rocks awash and a 0 sounding (none charted) in lat. $57^{\circ}43.45'$, long. $152^{\circ}27.75'$ on H-2929 fall in depths of 8 to 13 feet on the present survey and on H-5440. Locations are indefinite or poor and the reef inshore on the present survey is considered the most nearly correct representation of actual conditions.
- (3) The rock awash (charted) in lat. $57^{\circ}43.83'$, long. $152^{\circ}27.53'$, on H-2929 and H-5440 (1933) falls in depths of 19 feet on the present survey. The location on H-5440 is from T-4845 (1933). The thorough investigation on the present survey and on T-6697 (1939) is considered sufficient to disprove existence of the rock in the location shown (descriptive report, pages 7 and 8) and it has not been carried forward. It is probable that the 1933 topographer was influenced by the rock on the older surveys and cut in a kelp patch.
- (4) Two rocks awash (charted) are shown in lat. $57^{\circ}45.05'$, long. $152^{\circ}26.9'$ on H-2929 as compared with one rock (corresponding roughly with the westerly of the older two) on the present survey. Investigation at minus tide on T-6697 (1939) plus excellent development on the present survey (descriptive report, pages 9 and 10) is sufficient justification for not carrying forward the unverified rock.

The present survey supersedes the overlapping portion of H-2929.

- b. H-5440 (1933), 1:20,000; H-5441a (1933) 1:10,000.

The descriptive report, pages 6 to 8, includes a detailed comparison of H-5440 with the present survey but omits discussion of H-5441a. The two

older surveys combine to cover most of the area included on the present survey. Depths on the older surveys are in good agreement with those on the present survey. Several soundings and rocks have been carried forward from the 1933 surveys where such action has been deemed necessary. Disposition of principal discrepancies was made as follows:

- (1) The 14 foot depth (not charted) in lat. $57^{\circ}43.6'$, long. $152^{\circ}28.9'$ on H-5440 is the result of an erroneous reduction. The correct sounding of 20 feet is in agreement with the present survey.
- (2) The 0 and 1 foot soundings (curve charted) in lat. $57^{\circ}43.4'$, long. $152^{\circ}28.6'$ on H-5440 fall in depths of 21 to 29 feet on the present survey. The old soundings undoubtedly belong closer to the nearby island and have not been carried forward.
- (3) The rock awash (charted) in lat. $57^{\circ}43.52'$, long. $152^{\circ}27.6'$ on H-5440 falls in depths of 13 to 14 feet on the present survey. Location of the rock depends upon a note, "sliding over rock", in the sounding volumes for H-5440. Draft of the launch was 3 feet and the tide, 7 feet giving 4 feet as the amount the rock bared. It is possible that the boat slid over a submerged log or heavy kelp but in the absence of definite proof, the rock has been carried forward. The note, "bares 4 feet", has been omitted as the rock was not sighted at about low tide by the topographer.
- (4) The three rocks awash (charted) in lat. $57^{\circ}43.5'$, long. $152^{\circ}26.9'$, on H-5440 fall in depths of 11 to 13 feet on the present survey. The rocks are presumed to be less accurate locations of the same features shown as reef about 50 meters inshore on the present survey and have not been carried forward.

The present survey, with indicated additions, supersedes the overlapping portions of the older surveys.

6. Comparison with Wire Drag Surveys.

a. H-5441b (1933) W.D.

Effective drag depth of 42 feet in lat. $57^{\circ}44.4'$, long. $152^{\circ}27.2'$ on H-5441b compares with sounded

depths of 40 and 41 feet on the present survey. The bottom is sandy, however, and the drag is noted at this point on H-5441b as touching bottom.

b. H-6480 (1939) W.D.

Comparison with the above survey will be made in its review.

7. Comparison with Chart 8545 (New Print of June 20, 1938).

a. Hydrography.

Hydrography charted in the area covered by the present survey is from surveys discussed in the foregoing paragraphs.

b. Aids to Navigation.

Survey positions of floating aids are in substantial agreement with positions charted. Can Buoy "7" was changed to a lighted bell subsequent to the survey (C.G. N. to M. 9 of 1940).

8. Condition of Survey.

Satisfactory.

9. Compliance with Instructions for the Project.

Satisfactory.

10. Additional Field Work Recommended.

None.

11. Superseded Surveys.

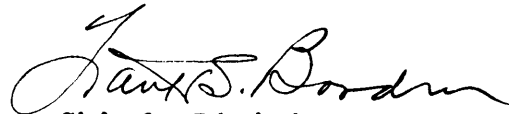
H-2929 in part
H-5440 in part

H-5441a in part

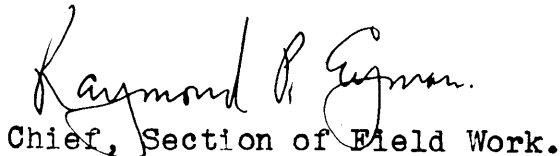
Examined and approved:



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



James S. Borden,
Chief, Division of Charts.



Raymond P. Egan,
Chief, Section of Field Work.



G. W. Wade,
Chief, Division of H. & T.

Applied to chart 8546 [REDACTED] L.A.M. May 21, 1942.
" " " 8535 examined & compared with larger scale charts J.H.B.
4/24/42