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PURSUANT TO DOC SYSTEMATIC REVIEW  
GUIDELINES AS DESCRIBED IN SECTION  
3.3(a), EXECUTIVE ORDER 12356.

4537  $\frac{1}{1}$  a



4537  $\frac{1}{1}$  a



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

State: Hawaiian Is.

DESCRIPTIVE REPORT.  
#3  
Sheet No. 1537

LOCALITY:

Oahu I. - S. Coast

Ahua Pt. to Honolulu

Harbor Entrance

1926

CHIEF OF PARTY:  
E. R. Hand

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3.3(a), EXECUTIVE ORDER 12356.



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Form 537 11-6113  
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**GUIDELINES AS DESCRIBED IN SECTION**  
**3.3(a), EXECUTIVE ORDER 12356.**

DEPARTMENT OF COMMERCE  
 U. S. COAST AND GEODETIC SURVEY

**HYDROGRAPHIC TITLE SHEET**

4537

The finished Hydrographic Sheet is to be accompanied by the following title sheet, filled in as completely as possible, when the sheet is forwarded to the Office.

U. S. Coast and Geodetic Survey.

field No. 9  
 Register No. 4537

State ~~Terr. of Hawaii~~ Hawaiian Is.  
 General locality ~~Island of Oahu~~ Oahu I. S. Coast  
 Locality Ahua Point to Honolulu Harbor Entrance  
 Chief of party Eoline R. Hand,  
 Surveyed by " " "  
 Date of survey August - October 1925  
 Scale 1:5000  
 Soundings in feet  
 Plane of reference MLLW  
 Protracted by Chas. E. Merek # Soundings in pencil by Chas E. Merek #  
 Inked by ..... Verified by .....  
 Records accompanying sheet (check those forwarded):  
 Des. report, ..... Tide books, ..... Marigrams, ..... Boat sheets,  
5 Sounding books, ..... Wire-drag books, ..... Photographs.  
 Data from other sources affecting sheet .....  
 # Chief Draftsman, Department Engineer's Office, Fort Shafter.

Remarks:



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**3.3(a), EXECUTIVE ORDER 12356.**

U.S. GOVERNMENT PRINTING OFFICE: 1917

DESCRIPTIVE REPORT

To accompany Hydrographic Sheet No. 9, Ahua Pt. to Honolulu Harbor entrance.  
1925 Eoline R. Hand, Chief of Party.

A barrier reef extends from one <sup>end</sup> to the other of this sheet: but there are several openings. Starting at the east end it is obvious that Honolulu Harbor Entrance offers excellent landing possibilities. Next, directly W. of "Wat" is a narrow entrance opening into considerable of a lagoon, between the baring reef on the W. and the "and. Island fill on the E. A treacherous place to attempt if any sea running, since breakers likely to form suddenly, to the S. of entrance, and over a considerable area. When so breaking smallboats could come in the main channel, however, go west in lee of this breaking, close to seawall, and enter around the corner at "Wat". A half mile W., and NW. of the swash rock, is a possible to fair entrance: it is double, the opening on the W. of the baring reef point being preferable: but neither side opens into anything like a lagoon" but merely offers some slight protection against the breakers. At the end of a prolongation of line from Qn. Id. wharf is another double entrance. Both are to be labeled "good" but the more W. is preferable: though it has a shoal spot in centre, which nearly always breaks. The entrance of this side is narrow but there is reasonably deep water. Behind is quite an extensive lagoon, connecting both entrances, and furthermore, at high tide, lighters could be taken across the flats to the long dock that juts out from Qn. Id. There is a track, and cars, on this dock.

East of Kalihi Channel Entrance is a "possible" entrance: it is very narrow, and not much water through - negligible.

Kalihi Channel is "excellent" as to landing possibilities: once through the reef opening a little south of "Bek" (an Arty. datum pt.) smallboats can continue up the channel away to the north, or discharge anywhere along the baring edge. It is well to say here that the entire area behind the barrier reef bares a flat hard floor easy for the passage of troops: it is only in the immediate vicinity of the fishpond walls that mud is encountered, and also close to the end (particularly the eastward part) of Ahua Point.

But in bad weather Kalihi Entrance should be used with caution: it breaks badly a mile true S. of the island (sta "Hole") and over a considerable area: on the west side closer in (less than half mile from "Bek") it also breaks. Boats should be well off shore before turning in, and then keep "Bok" (the Arty. orientation, or datum, point) on a range with a point midway between the cliff scar that is to the right of, and lower than, a similar one on Salt Lake, and a bright colored field that will be seen an equal height up from the shore, and west of a very tall flagstaff: in lieu if this, midway between flagstaff itself and abovementioned scar.

There are no more openings till near west end of sheet. Here are several possibilities that are to be designated "fair" to "good" Their virtue lies in behind a rather dangerously breaking shoal, or double reef, of considerable extent. The procedure would be to go around one side or the other, the dictates of good seamanship, and the state of the swell and its direction, determining which side for any particular time. Once in lee of the breakers a number of landing entrances are at hand. They lead into pockets in the reef, which bares, as I have said, from the reef edge to the shore. My indication of these entrances upon the topographic sheet may lead to a better understanding of them.

Depth curves not drawn, as confusing to Army who draw them every five instead of six feet ERH

*Eoline R. Hand*  
Eoline R. Hand,  
Lt. USC&GS.

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3.3(a), EXECUTIVE ORDER 12356.

STATISTICS SHEET NO. 9

To accompany Hydrographic Sheet No. 9. (Ahua Point To Honolulu Harbor Entrance.)

Date 1925	Letter	Volume	Positions	Soundings	Miles Statute	Vessel
August 3.....	a	1	24	123	2.0	Whaleboat
" 4.....	b	1	43	314	4.1	"
" 5.....	c	1	77	482	5.4	"
" 6.....	d	1	51	257	2.5	"
August 7.....	a	1	26	81	2.8	Launch
" 10.....	e	1	30	146	3.1	Whaleboat
" 11.....	f	1	62	355	5.0	"
" 12.....	g	1	18	276	1.2	"
" 12.....	g	2	24	167	2.1	"
" 14.....	h	2	53	630	5.5	"
" 15.....	j	2	42	316	2.0	"
" 17.....	k	2	48	245	3.7	"
" 18.....	l	2	54	254	3.2	"
" 19.....	m	2	7	76	0.1	"
" 22.....	b	1	39	107	4.5	Launch
" 24.....	c	1	65	225	7.0	"
" 25.....	n	2	6	26	0.1	Whaleboat
" 26.....	d	1	99	425	12.7	Launch
" 27.....	o	2	37	215	2.1	Whaleboat
" 28.....	e	1	18	60	2.5	Launch
" 28.....	p	2	25	135	1.5	Whaleboat
Sept. 5.....	q	3	36	235	2.2	"
" 7.....	r	3	35	219	1.1	"
" 9.....	s	3	77	414	8.4	"
" 12.....	f	1	60	222	5.8	Launch
" 15.....	u	3	11	64	0.6	Whaleboat
Oct. 3.....	v	3	8	33	0.6	"
" 7.....	w	3	21	120	2.1	"
" 9.....	x	3	36	187	2.5	"
" 10.....	y	3	41	269	2.7	"
" 12.....	z	3	56	299	4.5	"
" 12.....	z	4	5	32	0.6	Whaleboat
Total.....			1234	7009	104.2	

11

WWB

June 10, 1924.

Division of Hydrography and Topography:

Division of Charts:

Tide reducers are approved in  
5 volumes of sounding records for

HYDROGRAPHIC SHEET NO. ~~4537~~

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GUIDELINES AS DESCRIBED IN SECTION  
3.3(a), EXECUTIVE ORDER 12356.**

Locality: South Shore OAHU ISLAND, T.H.

Chief of Party: E. R. Hand in 1925.

Plane of reference is ~~MILW~~  
1.3 ft. on tide staff at Honolulu, T.H.

For reduction of soundings, 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.

*E. R. Hand*

Chief, Division of Tides and Currents.

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3.3(a), EXECUTIVE ORDER 12356.**

ADDRESS THE DIRECTOR  
U. S. COAST AND GEODETIC SURVEY

AND REFER TO NO. 11-DRM

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

WASHINGTON August 16, 1926.

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet No. 4537

South Coast, Oahu Island, H. I.

Surveyed in 1925

Instructions furnished by U. S. Army

Chief of Party, E. R. Hand.

Surveyed by E. R. H.

Protracted and soundings plotted by C. E. Merek.

Verified and inked by H. R. Edmonston.

1. The records conform to the requirements of the General Instructions except that the customary stamps at beginning and ending of days were not used.
2. The plan and character of development fulfill the requirements of the General Instructions, except that in Kalihi Channel there should have been an additional position taken on the line crossing the channel in order that the soundings might be better located.
3. With the exception of Kalihi Channel, wherever cross lines were run the crossings are adequate. The bottom is too irregular to permit of a comparison of adjacent sounding lines.
4. The information is sufficient for drawing the usual depth curves except in some places close inshore.
5. The usual field plotting was done by the field party. Except for the spacing of the soundings in Kalihi Channel the plotting was well executed.
6. The junctions with H. 4484 on the west and H. 4538 on the east are adequate. The junction with H. 4541 on the south will be taken up in the review for that sheet.  
A comparison with the older survey, H. 3294, shows a fairly good agreement considering the irregularity of the bottom.

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3.3(a), EXECUTIVE ORDER 12356.

7. The survey discloses numerous holes and shoal spots, doubtless coral heads and potholes, although the character of the bottom is not always given. Considering the difficulty of surveying such an area it is possible that some of these apparent discrepancies are due to faulty leading.
8. No further leadline work is necessary on the main part of the sheet except possibly, if important enough, to cover some of the blank areas inside the 6 foot curve. Wire drag work should be done over all the shoal spots but particularly over the 8 ft. spot east of Honolulu Entrance and 900 meters south of ☉ Flag.

Kalihi Channel should be resurveyed by a system of lines running with the channel. The soundings on the cross lines cannot be reconciled with the soundings on the lines running with the channel. Excessive differences amounting to as much as 900%, exist at some of the crossings which discredit the entire work in this channel. It is believed that the error is due to the varying speed of the boat as it proceeded across the channel from one side to the other; no notations having been made in the record as to the time of slowing of the boat and no positions having been taken in mid-channel, there was no option but to plot them in accordance with the recorded time. As already stated, this introduced excessive discrepancies in the crossings so as to make it uncertain just where the deepest part of the channel lies. This work on this sheet will therefore be rejected. (See note on sheet.)

9. The character and scope of the surveying and the field drafting are good.
10. Reviewed by A. L. Shalowitz, August, 1926.

4537a and Add'l Wk. 1927



and Add'l. Work 1927

4537a



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GUIDELINES AS DESCRIBED IN SECTION  
3.3(a), EXECUTIVE ORDER 12356.

Form 304  
DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

State: Hawaiian Is.

DESCRIPTIVE REPORT.

Sheet No. 4537a  
- and Add'l Work 1927

LOCALITY:

Oahu I. - S. Coast

Kalihi Channel

1926 and Add'l. 1927

CHIEF OF PARTY:

E. R. Hand, F. G. Engle 1927

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GUIDELINES AS DESCRIBED IN SECTION  
3.3(a), EXECUTIVE ORDER 12356.

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3.3(a), EXECUTIVE ORDER 12356.



DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET



The finished Hydrographic Sheet is to be accompanied by the following title sheet, filled in as completely as possible, when the sheet is forwarded to the Office.

U. S. Coast and Geodetic Survey.

Register No. 9 **45372**

45372

State ~~Terr. of Hawaii~~, Hawaiian Is. . . . .

General locality ~~South shore of Oahu~~, U. S. Coast . . . . .

Locality Kalihi Channel . . . . .

Chief of party Eoline R. Hand, . . . . .

Surveyed by " " " . . . . .

Date of survey Oct - Nov 1926 . . . . .

Scale 1:5000 . . . . .

Soundings in feet . . . . .

Plane of reference MLLW . . . . .

Protracted by B.E. Grimes. Soundings in pencil by B.E. Grimes

Inked by . . . . . Verified by . . . . .

Records accompanying sheet (check those forwarded):

Des. report,  Tide books,  Marigrams,  Boat sheets,  
 Sounding books,  Wire-drag books,  Photographs.

Data from other sources affecting sheet . . . . .

See original sheet No. <sup>4537</sup> 9 of Oahu Inshore Hydrographic Survey series.

Remarks:

Instructions of September 2, 1926. (10-McC)

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PURSUANT TO DOC SYSTEMATIC REVIEW  
GUIDELINES AS DESCRIBED IN SECTION  
3.3(a), EXECUTIVE ORDER 12356.

A.Y. Hotel, Honolulu, T.H.

POST-OFFICE ADDRESS:

TELEGRAPH ADDRESS:

EXPRESS OFFICE:

OCT 14 12 06 PM '26

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

Honolulu, September 30, 1926.

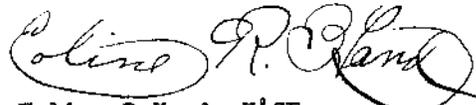
To: The Director, U.S. Coast & Geodetic Survey,  
From: Eoline R. Hand, H&GE.,  
Subject: Instructions.

I have to acknowledge receipt of Office instructions of  
Sept. 2, 1926 (10-McC)

The poor crossings in Kalihi Channel are caused by the unusual currents therein, not fully appreciated or understood at time of survey: more frequent fixes are of course indicated, in a re-survey. I think on the whole that the across-channel lines are good - they were controlled by ranges, and a constant speed was maintained throughout: it is the parallel to channel lines that are at fault: among several reasons for their more probable weakness was the difficulty of finding ranges in that direction. This channel is of no commercial importance (being used only by casual fishing smallboats) and so the care and detail was not put into its survey, as would have been the case had it been a valuable waterway. The fact is - the work inside here served as a school to break in an entirely new party before venturing on the dangerous waters outside.

Circumstances considered it is not surprising that there were some poor crossings: what is inexcusable, however, is the fact of the sheet getting away from here before these errors were discovered by the chief of party.

The eight foot sounding outside, and east of, Honolulu Harbor entrance is a mistake in recording, pure and simple.

  
Eoline R. Hand. H&GE.

DESCRIPTIVE REPORT

To accompany Hydrographic Sheet No. 9', Kalihi Channel to Honolulu Harbor Entrance  
Eoline R. Hand, Chief of Party, 11/22/26

This is a re-survey of Kalihi Channel, and an investigation of doubtful sounding off Honolulu Harbor Entrance, in accordance with Supplemental Instructions of September 2, 1926 (10-McC)

The sounding of 8 ft. off the harbor entrance does not exist: a great number of closely spaced lines were run over the spot where this figure is plotted. If such a shoal spot existed in that comparatively deep water there would be breaking there at nearly all times, but of course no breakers are seen there. Presumably it came about by the recorder reversing the figures sung out by the leadman. The old boat sheet was utilized in the field for this investigation.

Kalihi Channel was re-surveyed, in accordance with Instructions. A new boat sheet was constructed, and used in the revision. The smooth sheet, No. 9', is a duplication of the projection and shoreline of the No. 9 (Ahua Pt. to Honolulu Harbor Entrance) of the Oahu Inshore Hydrographic Survey series, with the exception that it does not take in so much territory as the original.

Tides are from the Honolulu Automatic gauge. These tides are in the Tide Book that will accompany Hydrographic Sheet No. 11, of the regular series: but for purposes of checking they are (for the days required) copied into the back of the sounding book accompanying this sheet No. 9'.

*Eoline R. Hand*

Statistics sheet No. 9 (supplementary)

Date, 1926	Letter	Vol- ume	Pos- itions	Sound- ings	Miles status	Vessel	
October 26.....	a'	1	85	200	3.0	Whaleboat	
November 1.....	b'	1	100	447	6.2	"	
" 4.....	c'	1	112	525	6.5	"	
" 5.....	d'	1	89	304	4.0	"	
Total sheet 9 (supplementary).....				395	1476	19.7	

statistics sheet No. 9 (supplementary)

Date, 1926	Letter	Volume	Positions	Sounds	Miles	Vessel
				ings	status	
October 26	a	1	05	200	5.0	Whaleboat
November 1	b	1	100	449	6.2	"
" 4	c	1	115	525	6.5	"
" 5	d	1	07	204	4.0	"
Total sheet 9 (supplementary)			275	1478	17.7	

ADDRESS THE DIRECTOR  
U. S. COAST AND GEODETIC SURVEY

AND REFER TO No.

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY  
WASHINGTON

January 10, 1927.

REPORT ON VERIFICATION OF HYDROGRAPHIC SHEET No. 4537<sub>a</sub>

This sheet was well protracted and the soundings spaced according to the time intervals.

The sounding record is complete.

The drafting conforms to the general instructions.



H. R. Edmonston.

(11)

December 21, 1926.

Division of Hydrography and Topography:

Division of Charts:

Tide reducers are approved in

1 values of sounding records for

HYDROGRAPHIC SHEET NO. 4537a

Locality: HAWAIIAN ISLANDS

Chief of Party: E. R. Hand

Plane of reference is M L L W  
3.5 ft. on tide staff at HonoluluFor reduction of soundings, 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.



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-DEM

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

WASHINGTON

June 23, 1927.

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet No. 4537<sup>a</sup>  
Channel  
Kalihi/ and Entrance to Honolulu Harbor, Oahu

Surveyed in 1926

Instructions dated September 2, 1926 (Hand)

Chief of Party, E. R. Hand.

Surveyed by E. R. Hand.

Protracted and soundings plotted by B. E. Grimes.

Verified and inked by H. R. Edmonston.

1. The records, as well as the plan and character of the development, conform to the requirements of the General Instructions.
2. The plan and extent of development satisfy the specific instructions, except for the omission of cross lines throughout the major portion of Kalihi Channel, and the development on the 8 foot spot south of Honolulu Harbor entrance is considered insufficient.
3. The sounding line crossings are adequate and the information is sufficient for drawing the usual depth curves.
4. The purpose of the re-survey of Kalihi Channel was to clear up the defective crossings in the survey of 1925. The re-survey clears up all the doubtful places and no further surveying is required in this channel. Numerous soundings on fixed positions along the edges of the channel were transferred from the 1925 survey to define them more completely. Bottom characteristics were also transferred from the 1925 survey.
5. If Kalihi Channel should ever become important for small boat navigation it will be necessary to survey the northern end of the channel.
6. The instructions include a development on the 8 foot sounding south of Honolulu Harbor entrance. Although the re-survey located a 25

foot sounding (fixed position) on the 8 foot spot, the intensive development is to the eastward and there is still some doubt as to the non-existence of the 8 foot sounding, and it has been decided to retain it on the charts.

7. Additional work has been called for on several shoal spots.
8. The character and scope of the surveying are good and the field drafting is excellent.
9. Reviewed by E. P. Ellis. June, 1927.

Approved:

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Chief, Section of Field Records (Charts)

---

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

10-1106

June 30, 1927.

To: Commanding Officer,  
U. S. G. & G. S. S. DISCOVERER,  
Honolulu, T. H.

From: The Director,  
U. S. Coast and Geodetic Survey.

Subject: INSTRUCTIONS.

There is forwarded herewith photostat copy of a section of hydrographic sheet 4537 with certain soundings encircled in red. At such times as will least interfere with the prosecution of your other field work, you will examine the areas in the vicinities of these soundings to check them or disprove their existence.

Under separate cover there was forwarded to you smooth hydrographic sheet H4537a for use in smooth plotting your results.

You will note that partial examination has been made of the area in the vicinity of the eight foot spot, probably due to an error in transferring the eight foot spot. The entire area was not developed. The ten foot spot has been transferred to the photostat from an earlier survey. This spot appears on the previous edition of the chart.

R. L. Paris

Acting Director.

POST-OFFICE ADDRESS:

TELEGRAPH ADDRESS:

EXPRESS OFFICE:

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT OF EXAMINATION FOR FOUR SHOAL AREAS  
AT THE ENTRANCE TO HONOLULU HARBOR.

(To accompany Hydrographic Sheet No. 4537a)

Additional Work 1927

Instructions:

This work was done under instructions dated June 30, 1927, requesting an examination for the four shoal soundings encircled in red on the photostat of hydrographic sheet 4537 enclosed herewith.

Description:

The examination consisted of a series of detached soundings taken in the vicinity of the questionable soundings. The launch was maneuvered around over the area in question and the leadsmen sounded as rapidly as possible. Only the soundings located by a fixed position were recorded in the record.

The areas were completely covered and no indication of any of the four questionable soundings was found. The water was clear and the bottom clearly visible and any shoals which could possibly have been missed by the lead line could have easily been seen from the sounding launch.

Only such positions and soundings as it was possible to plot without confusion were plotted on the smooth sheet. All soundings which were plotted on the smooth sheet were checked in the sounding record with a green pencil. All positions taken in the areas in question can be seen on the boat sheet.

The 13 ft. sounding obtained at Position 129 a is approximately at the position of the 11 ft. spot and therefore checks the latter within 2 feet. A discrepancy of this amount can easily be due to height of waves. It would seem that the depth at this position should be plotted as 13 feet on the chart instead of 11.

Respectfully submitted,



Lieut.(j.g.)

Approved and forwarded,



Comdg. Str. DISCOVERER

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

August 13, 1928.

SECTION OF FIELD RECORDS

Report on Additional Work on Hydrographic Sheet No. 4537<sup>a</sup> 

Entrance to Honolulu Harbor, Oahu, Hawaiian Islands

Surveyed in 1927

Instructions dated June 30, 1927

Chief of Party, F. G. Engle.

Surveyed by T. B. Reed.

Protracted and soundings plotted by T. B. Reed.

Verified and inked by J. D. Torrey.

1. Four questionable shoal soundings were investigated, and the development on each was so thorough that there can be no doubt as to the non-existence of three of the four shoals. Many more soundings were taken than it was possible to plot on a scale of 1:5,000. The descriptive report states that the bottom was clearly visible and any of the shoals or coral heads could have been seen if present.

On the position of the 11 foot sounding 13 feet was found with 12 feet about 20 meters north of it. It is recommended that the 11 foot sounding be retained on the chart.

No trace was found of the 16 foot spot. One 20 foot sounding about 30 meters east of it was found.

The development gives no indication whatever of the 8 foot spot from the survey of 1925 or the 10 foot spot from the old chart. The former was developed in 1926 by E. R. Hand. The 1927 work agrees closely with the development of 1926.

2. Reviewed by M. O. Witherbee, March 5, 1928.

Approved:

\_\_\_\_\_  
Chief, Section of Field Records (Charts)

\_\_\_\_\_  
Chief, Section of Field Work

(H. & T.) **DECLASSIFIED BY NOAA  
PURSUANT TO DOC SYSTEMATIC REVIEW  
GUIDELINES AS DESCRIBED IN SECTION  
3.3(a), EXECUTIVE ORDER 12356.**

Copy for Record Section files.

February 28, 1928.

(11)

Division of Hydrography and Topography:

Division of Charts:

Tide reducers are approved in

1 volumes/ of sounding records for

HYDROGRAPHIC SHEET 4537a add'l.

Locality: HONOLULU HARBOR, T. H.

Chief of Party: F. S. Eagle, 1927.

Plane of reference is M L L W

3.5 ft. on tide staff at Honolulu

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.

Chief, Division of Tides and Currents.

Applied to ch# 4132 Feb 1947 H.F. Stegman  
(Inshore areas only)

H-4537 §37a - Applied to Ch# 4109 During Revision  
of Limits 11-17-61 G.B. Johnson