

5020



Diag. Ckt. No. 4000

DECLASSIFIED BY NOAA
SUBJECT TO DOC SYSTEMATIC REVIEW
GUIDELINES AS DESCRIBED IN SECTION
3(a) EXECUTIVE ORDER 12356.

Form 504
2d. June, 1928

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
R. S. Patton Director

G. & B. SURVEY
L. & A.
JUL 23 1930
Acc. No.

State: Hawaiian Is.

DESCRIPTIVE REPORT

Topographic }
Hydrographic } Sheet No. 5020

LOCALITY

Western Hawaiian Is.

Gardner Pinnacles

1930.

CHIEF OF PARTY

K.T. Adams

5020



DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO. 5020

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.

DECLASSIFIED BY NOAA
PURSUANT TO DOC SYSTEMATIC REVIEW
GUIDELINES AS DESCRIBED IN SECTION
3.3.11 RESOLUTIVE ORDER 12356.
REGISTER NO. 5020

State ~~Territory of Hawaiian Is.~~

General locality ~~Westward West Hawaiian Islands~~

Locality Gardner Pinnacles

Scale 1-20,000 Date of survey August 28, 1929

Vessel GUIDE

Chief of Party K. T. Adams

Surveyed by K. T. Adams and T. B. Quinn

Protracted by H. J. Healy

Soundings penciled by J. S. Morton

Soundings in fathoms -feet-

Plane of reference MLLW

Subdivision of wire dragged areas by

Inked by L. S. Straw

Verified by L. S. S.

Instructions dated March 26, 1928 and April 12, 1929, 19

Remarks:

Original

C. & G. SURVEY

JUL 19 1930

Act

U. S. COAST & GEODETIC SURVEY
R. S. Patton, Director.
1930.

HYDROGRAPHIC SHEET NO. 3-A

Territory of Hawaii,
Westward.
Gardner Pinnacles

Steamer GUIDE
K.T. Adams
Commanding

DESCRIPTIVE REPORT

HYDROGRAPHIC SHEET NO. 3^A
Gardner Pinnacles, T. H.

INSTRUCTIONS:

The hydrography on this sheet was executed in compliance with instructions for project 22, dated March 26, 1928 and instructions for project 33, dated April 12, 1929.

SCALE AND AREA:

The scale was 1:20,000 being the largest scale which would permit the plotting of the necessary buoys on the sheet. The area covered was the immediate inshore area at Gardner Pinnacle and is supplementary to sheet No. 3. This work was in too much detail to plot on Sheet No. 3.

SURVEY METHODS:

Due to the small area of the island and the difficulty of making landings on it, there were no signals built or located. A traverse of the shore line was run. The ship fixed its position by angles to tangents and buoys and the whaleboat fixed its position by angles to tangents supplemented by an angle to the ship. These angles were taken simultaneously on a signal given by the ship.

The ship also observed a vertical angle to the whaleboat for distance and a horizontal angle for direction, to be used when the whaleboat failed to get their own position. In most cases it was necessary to use this as a check only.

DANGERS:

There are no dangers. The water is very deep right up close to the shoreline.

SOUNDINGS:

All whaleboat soundings are with the handlead. Part of the ship soundings are with handlead, the remainder being by the Fathometer, read by an officer. The Fathometer soundings have been corrected for velocity. There is no slope correction.

SIGNALS:

Triangulation Station GARD; the position of which was determined by latitude and longitude observations. The positions of Hydrographic Signal Able and Hydrographic Signal Cat were taken from Sheet No. 3 on which they were plotted by observed azimuth and double ship's run.

BOAT SHEET:

There was no boat sheet used for this work.

K.T. Adams
H. & G.E.

TEMPERATURE CORRECTION FOR RED LIGHT SOUNDINGS
Gardner Pinnacles

Fms.	Temp.	Sum	Mean °C	Factor	Corr.	Depth	Corr.
13-1/3	26.2			0.0266	+ 0.39		
26-2/3	25.7	51.9	25.95	0.0279	+ 0.75		
40	25.9	75.8	25.87	.0269	+ 1.09	13	
53-1/3	22.3	98.1	24.52	.0259	+ 1.39	13	
66-2/3	21.3	119.4	23.89	.0249	+ 1.65		+ 0.4
80	20.4	139.8	23.30	.0236	+ 1.89	18.8	
93-1/3	19.5	159.3	22.76	.0225	+ 2.10		+ 0.5
106-2/3	18.4	177.7	22.21	.0214	+ 2.29	20.4	
120	17.5	195.2	21.69	.0204	+ 2.45		+ 0.6
133-1/3	16.7	211.0	21.19	.0194	+ 2.59	24.0	
146-2/3	15.7	227.6	20.69	.0184	+ 2.70		+ 0.7
160	15.0	242.6	20.22	.0174	+ 2.79	27.9	
173-1/3	14.3	256.9	19.76				+ 0.8
186-2/3	13.4	270.3	19.31			31.9	
200	12.7	283.0	18.87	.0150	+ 3.00		+ 0.9
213-1/3	12.2	295.2	18.45			35.9	
226-2/3	11.6	306.8	18.05	.0136	+ 3.09		+ 1.0
240	11.0	317.8	17.66	.0123	+ 3.07	40.0	
253-1/3	10.5	328.3	17.12	.0117	+ 2.96		+ 1.1
266-2/3	10.0	338.3	16.92			44.4	
280	9.3	347.6	16.55	.0106	+ 2.97		+ 1.2
293-1/3	8.8	356.4	16.20	.0099	+ 2.90	48.8	
306-2/3	8.3	364.7	15.84	.0091	+ 2.79		+ 1.3
320	7.9	372.6	15.52	.0083	+ 2.65	53.3	
333-1/3	7.5	380.1	15.20	.0075	+ 2.50		+ 1.4
346-2/3	7.1	387.2				59.2	
360	6.7	393.9					+ 1.5
373-1/3	6.2	400.1	14.29	.0052	+ 1.94	63.0	
386-2/3	5.8	405.9	14.00	.0045	+ 1.74		+ 1.6
400	5.5	411.4	13.71	.0039	+ 1.56	68.1	
413-1/3							+ 1.7
426-2/3						73.6	
440							+ 1.8
453-1/3						79.2	
466-2/3							+ 1.9
480						85.4	
493-1/3							+ 2.0
506-2/3						155	
520-							+ 3.0
53-1/3						311	
546-2/3							+ 2.0
560						386	
573-1/3							+ 1.0
586-2/3						End	
600							

No corrections applied in depths greater than 400 fathoms.

List of Signals on Hydrographic Sheet No. 3A.

Name	Location
Gard	Gard. 1929--Astronomic Station.
Able)	Hydrographic Signals. Bouys, record of
)-	location sent separately.
Cat)	

Sheet 3A.
Gardner Pinnacles

Statistics

Day	Vessel	No. of Positions	Stature Mi. Sdg. Lines		
			H.L.	R.L.	Total
A	GUIDE	23	2.3	3.6	6.4
A	Whaleboat	<u>17</u>	<u>1.6</u>	<u> </u>	<u>1.6</u>
Totals		40	4.4	3.6	8.0

Tidal Note
Hydrographic Sheet -- # 3A.

Gardner Pinnacles T.H.
1929

No tides were observed at Gardner Pinnacles, there being no place at which either a gauge or staff could be established. Honolulu tides were used, corrected to 75% of range and made 20 minutes later. These corrections were obtained by taking

simultaneous comparisons of French Frigate Shoals tides with Honolulu tides and correcting them to Gardner Pinnacles by proportional distances to Midway Island.

July 28, 1930

Section of Field Records

Division of Hydrography and Topography:

Division of Charts:

Tide Reducers are approved in
2 volumes of sounding records for

HYDROGRAPHIC SHEET 5020

Locality: T. H. (Gardner Pinnacles)

Chief of Party: K. T. Adams, in 1929

Plane of reference is mean lower low water, reading
3.5 ft. on ~~tide staff at~~ tabulations at Honolulu
17.3 ft. below B. M. 2

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.

Chief, Division of Tides and Currents.

Field Records Section (Charts)

HYDROGRAPHIC SHEET No. *H-5020*.....

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

Number of positions on sheet <i>40</i>
Number of positions checked <i>40</i>
Number of positions revised <i>0</i>
Number of soundings recorded <i>110</i>
Number of soundings revised <i>2</i>
Number of signals erroneously plotted or transferred <i>0</i>

Date:.....*September, 17, 1930*.....

Cartographer:.....*W. B. Shaw*.....

Verification Report
Hydrographic Sheet 3--A
Gardner Pinnacles
T. H.

This will certify that the completed smooth sheet and records have been examined by me and are hereby approved.

This sheet is really a sub-plan to sheet #3 and originally was intended to be plotted on that sheet but there was no available space.

The whaleboat was in charge of Lieutenant (J.G.) F. B. Quinn. The ship work was in charge of myself.

K. T. Adams

K. T. Adams
Chief of Party.

Section of Field Records.

Surveyed Aug 28, 1929.

Report on Sheet no. H-5020

Chief of Party - F. W. Adams.

Surveyed by F. W. Adams and F. B. Quinn.

Protracted by H. J. Kealy.

Soundings Plotted by J. S. Morton.

Verified and Inked by L. S. Straw.

1. The records conform to the requirements of the General Instructions.
2. The plan and character of development fulfill the requirements of the General Instructions.
3. The sounding line crossings are adequate.
4. Only the 10 fathom curve can be completely drawn.
5. The field plotting was completed to the extent prescribed in the General Instructions.
6. It was not necessary to do over any part of the drafting done by the field party.
7. Further surveying is not required to fully develop this area. However, attention is called to the indication of shoaling, northwest of the Gardner Pinnacles. (between sounding lines 19A-20A and 21A-22A) Note two 10 fathom soundings on line 19A-20A.
8. The plotting of positions was accurately done. The work is considered very good.

Respectfully submitted

Sept. 17, 1930.

L. S. Straw

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

AND REFER TO No. 11-DRM

WASHINGTON

October 10, 1930.

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet No. 5020

Gardner Pinnacles, Hawaiian Islands

Surveyed in 1929

Instructions dated March 26, 1928 and April 12, 1929
(GUIDE)

Chief of Party, K. T. Adams

Surveyed by K. T. A. and B. F. Quinn

Verified and inked by L. S. Straw

1. The work, as well as the plan and character of the development, conforms to the General and Specific Instructions.
2. The development, in general, is sufficient. It is noted, however, that there are shoalings northwest and east of the pinnacles on which less water may exist. ~~But it is not believed that menacing depths would be found in these areas, and no further surveying is recommended.*~~
3. This sheet overlaps H. 5010a which has not yet been verified. The junction of the two sheets will be reported when H. 5010a is completed.
4. The character of the work is excellent.
5. Reviewed by E. P. Ellis, September, 1930.

Approved:

L. O. Albert

Chief, Section of Field Records (Charts)

F. J. Borden

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

* In view of the fact that ships are known to pass close to Gardiner Pinnacle, (see letter from Master, Steamer Java Pacific Bengal line), a more intensive survey on this sheet for a distance of 2 miles from Gardiner Pinnacle is recommended. (Letter referred to above is filed with Desc. Report, 5010a.)

G. T. Stude, Chief, H & T.

W. B. Vignier, Chief Charts

Applied to Comp of Chart 4182 7/25/40 *BJ*

4173 10/16/46 *DD*