

5037

Original

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Form 504
Ed. June, 1928

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

State: Hawaiian Ids.

DESCRIPTIVE REPORT

~~Topographic~~ } Sheet No. Field #8
Hydrographic } 5037

LOCALITY

Gardner Pinnacles

1929

CHIEF OF PARTY

K. T. Adams

U. S. GOVERNMENT PRINTING OFFICE: 1928

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DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO. 5037

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. 8

REGISTER NO. **5037**

State Hawaiian Islands

General locality Gardner Pinnacles

Locality South of Gardner Pinnacles

Scale 1:60,000 Date of survey September 18-28, 1929

Vessel G U I D E

Chief of Party K. T. Adams

Surveyed by K. T. Adams

Protracted by J. C. Mathisson, J.N. Jones

Soundings penciled by J. C. Mathisson

Soundings in fathoms ~~feet~~

Plane of reference M.L.L.W.

Subdivision of wire dragged areas by

Inked by

Verified by

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

Remarks:

DESCRIPTIVE REPORT
to accompany

HYDROGRAPHIC SHEET NO. 8

HAWAIIAN ISLANDS

DATE OF INSTRUCTIONS.

The hydrographic survey embraced by this sheet was done in compliance with instructions for project 22 dated March 26, 1928 and instructions for project 33 dated April 12, 1929.

SURVEY METHODS.

All soundings taken in this area were by the Fathometer, red light soundings on the average being obtained to 300 fathoms and white light soundings in greater depths. Owing to the fact that the control beyond the shoal proper was by continuous dead reckoning loops, check soundings were, as a rule, only obtained at the beginning and end of the day.

The control over the entire shoal proper was by three point fixes on anchored surveying buoys. A row of these buoys along the axis of the shoal extended from Gardner Pinnacles to the southern end of the shoal area.

Beyond the shoal area angles on buoys were taken as far as possible and then from the last good fix, dead reckoning closed loops were run out to the desired depth, across the end, and back to a visual fix.

One line which extends south by east from the southern end of the shoal was part of a line on Sheet #4 previously submitted. This line has no control on this sheet. It was plotted and adjusted on sheet #4 and was then transferred to Sheet #8.

AREA AND LIMITS.

This Sheet #8 supplements hydrographic Sheet #3 previously submitted, with which it makes a junction at signal "Egg". This Sheet #8 in turn is supplemented by hydrographic Sheet #7, which covered work beyond the limits of #3 and #8.

These three Sheets #8, #3 and #7 combined, complete the survey over and around the shoal of which Gardner Pinnacles is the only landmark.

LOCATION OF BUOYS.

The data used in the location of all surveying buoys used in this area are forwarded with this sheet, whether or not these buoys are within the limits of this sheet.

** The line 1F to 13F (red), extending southward from
O'Key, was plotted from the sounding records of
H. 5012.*

It is therefore to be seen that this reduction is always less than one half of one percent and is generally very much less than that. Also this reduction is always less than half of the probable error of observation of a whitelight sounding".

All soundings have been reduced for slope when this was appreciable. The method used for the reduction was to draw the depth curves on the boat sheet and use a celluloid scale, originally constructed by Lieutenant J. A. Bend, to take off the correction in percentage.

CURRENTS.

Quite satisfactory current observations were obtained on this sheet and sheet #3. These current observations were taken at night only and never for a long continuous period, however, they were obtained on a good many nights and in absolutely calm weather.

The currents around the edge of the shoals were not as noticeable as in the other areas surveyed eastward of here. However, this is probably accounted for by the fact that calm weather was encountered almost entirely during the period these surveys around Gardner Pinnacle were made, the normal trade wind being noticeably lacking.

PROJECTION.

The area was surveyed on a 1:60,000 scale. No projection was used on the boat sheet, merely north and south azimuth lines about five miles apart. No projection was necessary, as the signals were located by distance and azimuth from one another.

DISCREPANCIES.

The only discrepancies of note were the soundings between positions 10-F and 21-F, all of which appear too deep by amounts from two to six fathoms, and the soundings between 109 and 111-J which also appear too deep by two or three fathoms. These soundings have been omitted from the smooth sheet. It is probable that a stray has been read at these times.

Your attention is called to the dead reckoning loop from 48 to 66-G. This loop ended without a fixed position. It was tied in to the arc of one angle and the other soundings on the edge of the shoal.

K. T. Adams

K. T. Adams,
Chief of Party,
Steamer GUIDE.

LIST OF SIGNALS

GARD -ASTRONOMIC LOCATION- BUOY POSITIONS

Log run locations and azimuths.
Azimuths measured from North.

UNO	Distance in meters	Azimuth		
Gard - Uno	10476.0	295°	31' 51.9"	*
<u>DOS</u>				
Uno - Dos	8111.2			*
GARD - Dos	- - -	295	26 11.9	
<u>TRES</u>				
Dos - Tres	9269.0			
Gard - Tres		295	48 54.4	*
<u>ABLE</u>				
Able - Gard	9540.8	185	15.48	
<u>BOY</u>				
Able - ABLE ^{BOY}	8109.5	338	11.22	
<u>CAT</u>				
Gard - Cat	9709.9			
Cat - Gard		1	36.23	
<u>DOG</u>				
Cat - Dog	10228.0			
Dog - Gard		1	48.11	
<u>EGG</u>				
(1) Dog - Egg	9423.	182	24.48	(prior to Sept.16)
(2) Egg - Gard		1	56.54	} (after Sept.19)
(3) Egg - Dog		2	10.35	
<u>FIN</u>				
(a) Fin - Egg	9335.0	7	55.94	(prior to Sept.16)
(b) Fin - Egg		8	11.21	(after Sept.19)

- (a) This azimuth to position of EGG as given by (1)
- (b) This azimuth to Position of EGG as given by (2)
- (1) Location on this azimuth used prior to Sept.16.
- (2) Location on this azimuth used after Sept.19.

* Azimuths by horizontal angles.

Original records to be forwarded with Sheet No.8.

Statistics Sheet #8 Gardner Pinnacles.

Day	Stat. Miles Sdg. Lines			Number of Soundings				No. of Pos.
	R.L.	W.L.	Total	R.L.	V.C.	W.L.	Total	
A	91.7	7.2	98.9	286	2	25	313	134
	111.6	---	111.6	371	2	--	373	143
C	106.0	---	106.0	471	2	--	473	136
D	65.8	9.1	74.9	290	1	30	321	93
E	62.8	---	62.8	288	1	--	289	87
F	61.5	3.1	64.6	283	2	13	298	88
G	62.0	13.7	75.7	289	2	37	328	100
H	34.0	86.6	120.6	164	2	233	399	145
J	51.2	56.0	107.2	240	2	130	372	134
K	58.3	----	58.3	250	2	1	253	84
L	72.0	----	72.0	292	2	-	294	91
X	Counted in F day, Sheet #4 French Frigate Shoals to Gardner Pinnacle							
TOTAL	776.9	175.7	952.6	3224	20	469	3713	1235

COMPARATIVE SOUNDINGS

Used to determine

CONSTANT REDUCTION TO RED LIGHT SOUNDINGS.

Gardner Pinnacles, T.H.

July - Sept., 1929.

DATE	FATHOMETER READING	VELOCITY REDUCTIONS	CORRECTED FATHOMETER	HANDLEAD SOUNDINGS	HANDLEAD minus FATHOMETER	
					+	-
July						
17	19.8	+0.5	20.3	20.8	0.5	-
18	19.4	0.5	19.9	19.7		0.2
	20.0	0.5	20.5	20.4		0.1
19	19.8	0.5	20.3	20.0		0.3
	19.8	0.5	20.0	19.5		0.5
20	19.5	0.5	20.0	19.2		0.8
	11.0	0.3	11.3	10.8		0.5
	17.5	0.5	18.0	18.0		0.0
21	18.2	0.5	18.7	17.8		0.9
	19.4	0.5	19.9	20.0	0.1	0.0
22	19.5	0.5	20.0	20.0		0.0
	19.8	0.5	20.3	19.8		0.5
					+ 0.6	-3.8
						+0.6
					Sum (12)	-3.2
					Mean	-0.267
23	20.0	+ 0.5	20.5	19.7		0.8
	21.5	0.6	22.1	21.5		0.6
24	21.0	0.6	21.6	21.0		0.6
	21.4	0.6	22.0	21.3		0.7
25	21.3	0.6	21.9	21.5		0.4
	21.9	0.6	22.5	21.8		0.7
26	21.5	0.6	22.1	21.5		0.6
	22.0	0.6	22.6	21.8		0.8
	21.5	0.6	22.1	21.0		1.1
Aug.						
18	20.0	0.5	20.5	19.0		1.5
	21.0	0.6	21.6	21.5		0.1
19	20.6	0.6	21.2	21.8	0.6	
	19.0	0.5	19.5	18.0		1.5
20	19.0	0.5	19.5	18.2		1.3
					+ 0.6	-10.7
						+ 0.6
					Sum (14)	-10.1
					Mean	- 0.72
21	19.0	+ 0.5	19.5	18.8		-0.7
	16.5	0.4	16.9	17.4	+ 0.5	
22	17.0	0.5	17.5	18.0	0.5	
	19.5	0.5	20.0	20.0		0.0
23	20.7	0.5	21.2	21.0		0.2
	18.0	0.5	18.5	18.5		0.0

These buoys were established in rows along the axis of the shoals. The distance between buoys was obtained by a careful full speed double run using two logs. These runs were then plotted on a separate sheet on a 1:20,000 scale and the distances scaled in meters.

A temporary azimuth was usually obtained by getting the two adjacent buoys in range and measuring the azimuth with the pelorus and compass. The final azimuth was obtained by getting two buoys in range and measuring the angle between them and the sun and thus computing the azimuth. These sun azimuths were surprisingly correct and established the row of buoys so well that no trouble was encountered, using three point fixes. The azimuths of some of the buoys nearest the island were obtained by a theodolite ashore at Gardner Pinnacle.

The buoys in general were placed about four and one half miles apart.

Buoy "Key" at the southern end of the shoal was located by cuts.

At the end of the work star sights were taken at buoy "Key", the intention being to hold the azimuth of the line of buoys fixed and expand or shrink the distance proportionately. These were very poor but as nearly as could be determined Buoy "Key" was in its correct position and no adjustment was made.

DANGERS.

No dangers were found within the limits of this sheet, the shoal area being of a quite uniform depth, and the bottom sloping off quite steeply in every direction from the shoal proper.

COMPARISON WITH PREVIOUS SURVEYS.

Previous surveys of this area are so limited in scope that a comparison is valueless. However, the previous indications had the approximate correct shape of the shoal although it extended considerably farther south.

REDUCTION OF SOUNDINGS.

All red light soundings have been reduced for temperature and salinity. This reduction was omitted for white light soundings as in accordance with your authority in letters dated December 12, 1929 which was based on the following information, quoted from my letters of December 5, 1929.

"I give herewith a resume' of the reductions necessary on one sheet which has already been reduced.

From zero to 200 fathoms the reductions are plus and gradually increase from zero to three fathoms.

From 200 fathoms to 450 fathoms the reductions gradually decrease from plus three fathoms to zero.

From 450 fathoms to 1500 fathoms the reductions are negative and gradually increase from zero to seven fathoms.

From 1500 fathoms to 2250 fathoms the reductions are negative and gradually decrease from seven fathoms to zero.

From 2250 fathoms to 2635 fathoms the reductions are again positive and gradually increase from zero to eleven fathoms.

COMPARATIVE SOUNDINGS (Continued)

DATE	COMPARATIVE SOUNDINGS		COMPARATIVE SOUNDINGS		HANDLED
	FATHOMETER READINGS	VELOCITY REDUCTIONS	GENERATED FATHOMETER	HANDLED SOUNDINGS	minus FATHOMETER
Aug.					
24	18.2	+ 0.5	18.7	18.0	+ -
	18.0	0.5	18.5	18.2	0.7
	18.5	0.5	19.0	18.5	0.5
25	19.5	0.5	19.8	19.0	0.8
	19.0	0.5	19.5	19.8	0.5
26	19.0	0.5	19.5	19.5	0.0
	17.0	0.5	17.5	17.0	0.5
	17.0	0.5	17.5	17.0	0.5
	20.4	0.5	20.9	20.7	0.2
27	1000,			1022.	
	21.0	0.6	21.6	21.0	0.6
	18.0	0.4	18.4	18.7	0.3
					+1.6
					- 5.1
					+ 1.6
					- 5.5
					Sum (17)
					Mean
					- 0.204
Aug.					
28	17.0	+ 0.5	17.5	16.8	1.5
	11.6	0.5	11.9	10.8	1.1
	17.0	0.5	17.5	16.8	0.7
					Sum (3) +0.0
					Mean
					- 1.05
Sept.					
14	19.0	+ 0.5	19.5	19.0	0.5
	21.5	0.6	22.1	22.5	0.4
15	21.5	0.6	21.9	21.8	0.1
	19.0	0.5	19.5	19.8	0.3
16	19.5	0.5	19.8	19.8	0.0
	21.0	0.6	21.6	21.5	0.1
17	21.5	0.6	21.9	22.0	0.1
	19.8	0.5	20.3	19.5	1.0
18	19.0	0.5	19.5	19.5	0.0
21	21.0	0.6	21.6	22.0	0.4
19	22.5	0.6	23.1	22.7	0.4
	21.5	0.6	21.9	22.0	0.1
20	21.2	0.6	21.8	22.5	0.7
	21.9	0.6	22.5	22.8	0.3
	21.0	0.5	21.5	21.5	0.5
21	19.0	0.5	19.5	18.0	1.5 Reject
	21.5	0.6	22.1	21.7	0.4
22	23.4	0.6	24.0	24.0	0.0
23	25.6	0.6	26.2	25.7	0.5
	17.5	0.5	18.0	17.7	0.3
					+2.6
					- 3.8
					+ 2.0
					Sum (19)
					Mean
					- 0.1

value 21.6-174



COMPARATIVE SOUNDINGS. (Continued)

DATE	FATHOMETER READING	VELOCITY REDUCTIONS	CORRECTED FATHOMETER	HANDLEAD SOUNDINGS	HANDLEAD minus FATHOMETER
Sept.					+
24	16.5 ✓	+0.4	16.9	16.0	0.9
	21.5 ✓	0.6	22.1	20.2	1.9
	19.0 ✓	0.5	19.5	18.5	1.0
25	19.0 ✓	0.5	19.5	18.5 ✓	1.0
	21.0 ✓	0.6	21.6	20.0	1.6
26	21.2 ✓	0.6	21.8	20.3 ✓	1.5
	19.4 ✓	0.5	19.9	19.8	0.1
27	18.5 ✓	0.5	19.0	18.0	1.0
	19.0 ✓	0.5	19.5	18.0 ✓	1.5
28	19.0 ✓	0.5	19.5	18.2 ✓	1.3
	18.5 ✓	0.5	19.0	17.0	2.0
				Sum (11)	+0.0 - 13.8
				Mean	- 1.255

SUMMARY

<u>FROM</u>	<u>TO</u>	<u>USE CONSTANT REDUCER</u>
July 17	July 22	- 0.5
July 23	Aug. 20	- 0.7
Aug. 21	Aug. 27	- 0.2
Aug. 28	- - - -	- 1.0
Aug. 29	Sept. 23	- 0.1
Sept. 24	Sept. 28	- 1.3

Tabulated by KTA
✓ JBL

DATA SHEET FOR OCEAN OBSERVATIONS

Station Hawaiian Islands Observer Various Officers - GUIDE

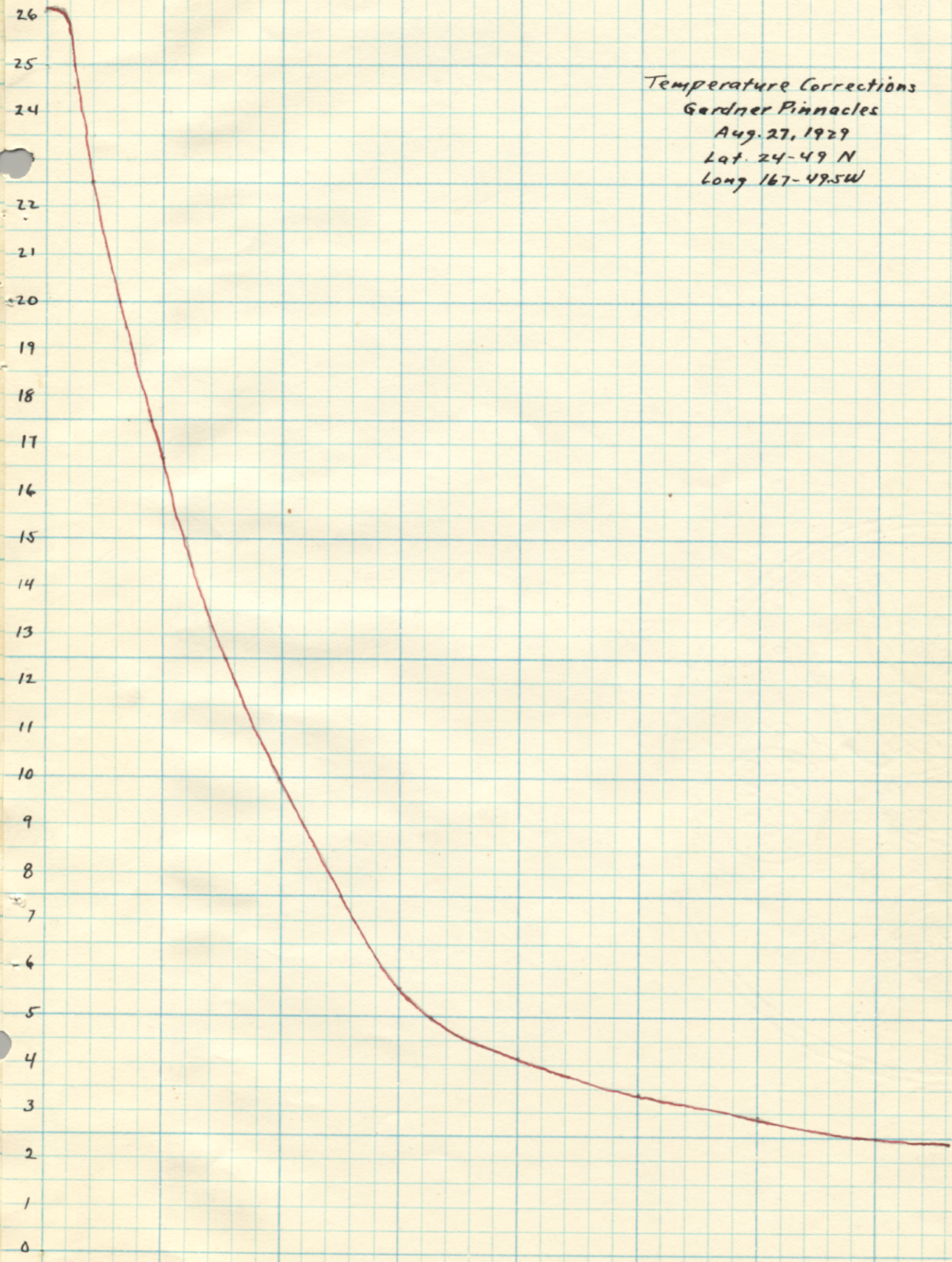
Sample No. Date Time	Latitude Longitude	Thermo. No. Reading Cor. Temp.	Haul No. Apparatus Depth	Salinity	Remarks
183 7/16/29 1-30 p.m.	24 40.8 167 20.8	25.5 C Surface	W. S. 180 Canv. buck	35.49	
184 7/16/29 7:00 p.m.	25 02.2 168 07.5	25.6 C Surface	W.S. 181 Canv. buck.	35.43	
187 8/27/29 9:25 a.m.	24 49 167 49.5	4102 2.4 C	W. S. 183 Cup T-77 1022 fms	34.72	Serial temperature
194 9/13/29 6:50 p.m.	24 50.8 168 04.5	11670 27.4 C	W. S. 184 Canv. buck Surface	25.37	
195 9/25/29 7:30 p.m.	24 27.0 167 55.6	11670 26.9 C	W. S. 185 Canv. buck. Surface	35.37	
197 9/28/29 11:00 p.m.	24 11.6 167 37.	11670 26.3 C	W. S. 186 Canv. buck Surface	35.36	Note: Refer to copy of Salinity Obser- vations made by GUIDE sent to the DIRECTOR by Scripps Institute of Oceanography of the University of California under date of Sept. 18, 1929.

TEMPERATURE CORRECTION FOR RED LIGHT SOUNDINGS
Gardner Pinnacles

Fms.	Temp.	Sum	Mean °C	Factor	Corr.	Depth	Corr.
15-1/3	26.2			0.0256	+0.39		
25-2/3	25.7	51.9	25.95	0.0279	+0.75		
40	25.9	75.8	25.87	.0269	+1.08	15	
55-1/3	22.5	98.1	24.52	.0259	+1.59	15	
65-2/3	21.3	119.4	23.89	.0248	+1.65		+0.4
80	20.4	139.8	23.30	.0236	+1.89	16.8	
95-1/3	19.5	159.3	22.76	.0225	+2.10		+0.5
105-2/3	18.4	177.7	22.21	.0214	+2.29	20.4	
120	17.5	195.2	21.69	.0204	+2.45		+0.6
135-1/3	16.7	211.9	21.19	.0194	+2.59	24.0	
145-2/3	15.7	227.6	20.69	.0184	+2.70		+0.7
160	15.0	242.6	20.22	.0174	+2.79	27.9	
175-1/3	14.3	256.9	19.76	.0174			+0.8
185-2/3	13.4	270.3	19.31			31.9	
200	12.7	283.0	18.97	.0150	+3.00		+0.9
215-1/3	12.2	295.2	18.45			35.9	
225-2/3	11.6	306.8	18.05	.0136	+3.09		+1.0
240	11.0	317.8	17.66	.0128	+3.07	40.0	
255-1/3	10.5	328.3	17.12	.0117	+2.96		+1.1
265-2/3	10.0	338.3	16.92			44.4	
280	9.3	347.6	16.55	.0106	+2.97		+1.2
295-1/3	8.8	356.4	16.20	.0099	+2.90	48.8	
305-2/3	8.3	364.7	15.84	.0091	+2.79		+1.3
320	7.9	372.6	15.52	.0083	+2.65	53.3	
335-1/3	7.5	380.1	15.20	.0075	+2.50		+1.4
345-2/3	7.1	387.2				58.2	
360	6.7	393.9					+1.5
375-1/3	6.2	400.1	14.29	.0052	+1.94	63.0	
385-2/3	5.8	405.9	14.00	.0045	+1.74		+1.6
400	5.5	411.4	13.71	.0039	+1.56	68.1	
415-1/3							+1.7
425-2/3						73.6	
440							+1.8
455-1/3						79.2	
465-2/3							+1.9
480						85.4	
495-1/3							+2.0
505-2/3						155	
520-							+3.0
535-1/3						511	
545-2/3							+2.0
560						386	
575-1/3							+1.0
595-2/3						End	

No corrections applied in depths greater than 400 fathoms.

Temperature Corrections
Gardner Pinnacles
Aug. 27, 1929
Lat. 24-49 N
Long 167-49.5W



200 400 600 800 1000

COAST AND GEODETIC SURVEY STEAMER "....."

Locality, Date,, 19.....

Sounding No. Line

DEPTHS, IN FATHOMS.	TEMPERATURES.						REMARKS.		
	Reading.		Correction.		Corrected.			No. of the Thermometer.	Kind of Thermometer used.
	Min.	Max.	Min.	Max.	Min.	Max.			
Surface.								Temperature of Air Temperature of Thermometer. Locker	
<p>Serial Water Temperatures 14 1/2 mi. S. E. Gardner Pinnacles Latitude 24° - 49' - Longitude 167° - 49.5' August 27, 1929</p>									

Signature of the Officer of the Deck:

Signature of the Recorder:

COAST AND GEODETIC SURVEY STEAMER "GUIDE"

Locality, 14 1/2 mi. SE Gardner Pinnacles Date, August 27, 1929

Sounding No. _____ Line
 Lat. 24° - 49' Longitude 167° - 40.5'

Department of Commerce and Labor
 COAST AND GEODETIC SURVEY
 Form 377

COAST AND GEODETIC SURVEY STEAMER "GUIDE"

Locality, 14 1/2 mi. SE Gardner Pinnacles Date, August 27, 1929

Sounding No. _____ Line
 Latitude 24° - 49' Longitude 167° - 40.5'

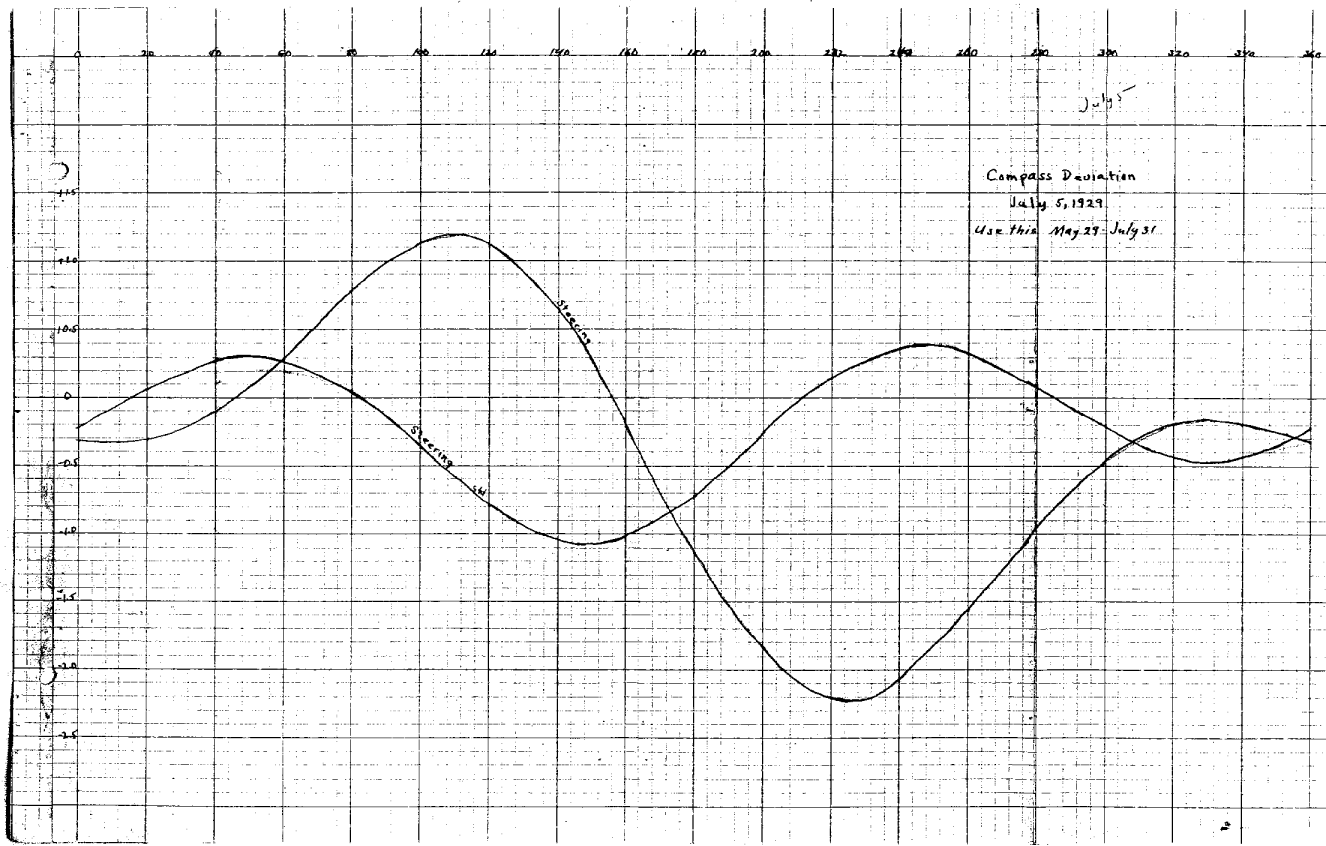
DEPTHS. IN FATHOMS.	TEMPERATURES.						REMARKS.
	Reading		Correction		Corrected		
	Min.	Max.	Min.	Max.	Min.	Max.	
Surface	4102		14906				Deep Sea Temperature of Air
AM							Temperature of Thermometer.
10:55	102 1/2	3	40	-	-		Bottom water in locker
9:54	900	3	30	3	20		
10:12	652 1/2	4	30	3	20		
10:31	401	5	20	5	60		
10:45	324	7	35	7	60		
10:57	261	8	35	9	65		
11:09	256	10	50	11	20		
11:17	209 1/2	12	10	15	00		
11:26	190 1/2	12	00	15	20		
11:54 1/2	176	14	50	-	-		
11:45	160 1/2	15	50	15	20		
11:52	151 1/2	14	50	17	00		
12:01	136	17	60	17	75		
12:09	124 1/2	17	50	17	50		
12:20	110 1/2	18	15	19	70		
12:30	100 1/2	18	35	18	45		
1:02	100 1/2	18	25				
1:08	65	19	70				
1:15	65 1/2	21	25				

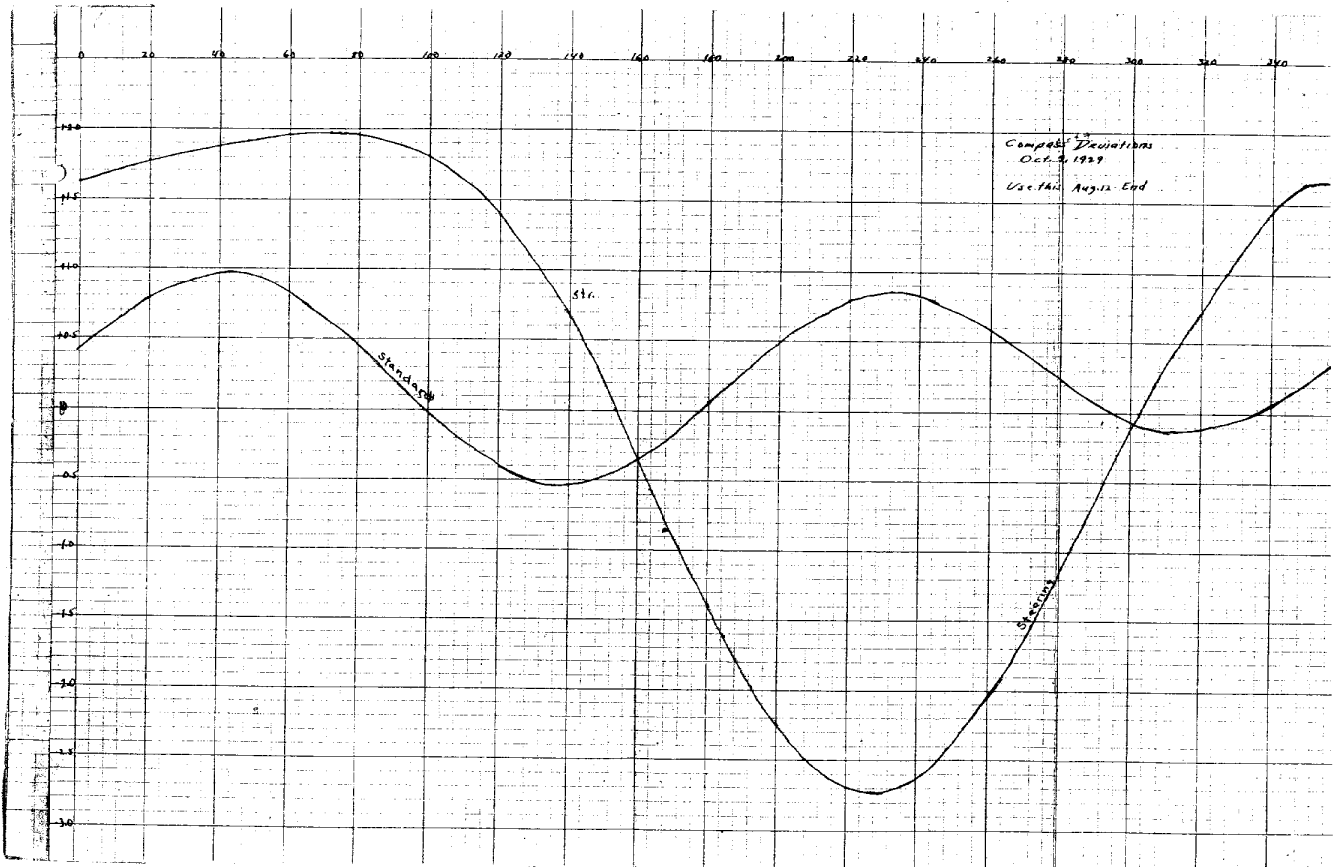
Between the bottom and the first 100 ft. depth, at 12:30, the thermometers were in the wooden blocks which at times was suspected, would not float. One thermometer, 4102 was placed in a metal reversing case and the remainder of the temperatures were taken.

DEPTHS. IN FATHOMS.	TEMPERATURES.						REMARKS.
	Reading		Correction		Corrected		
	Min.	Max.	Min.	Max.	Min.	Max.	
Surface	4102		14906				Deep Sea
117	58 1/2	31	65				Temperature of Air
1:23	43 1/2	22	90				Temperature of Thermometer.
1:34	33 1/2	24	20				Locker
1:39	25	25	20				
1:43	17 1/2	25	10				
1:47	7 1/2	25	20				
1:50	Surface	26	20				
1:57	120	17	00				
2:04	215	11	30				

Signature of the Officer of the Deck: W. H. Bainbridge & F. B. Quinn
 Signature of the Recorder: W. H. Bainbridge & F. B. Quinn

Signature of the Officer of the Deck: W. H. Bainbridge
 Signature of the Recorder: W. H. Bainbridge





LOG DATA

Factors to be used				
Period	Log.No.	Factor	Log.No.	Factor
8:00 AM				
May 31-July 27	194	0.9045	195	1.035
AM 8:00				
July 27-Sep. 29	194	1.0074	195	1.034

Section of Field Records

tc
lee

December 5, 1930

Division of Hydrography and Topography:

Division of Charts:

Tide Reducers are approved in
4 volumes of sounding records for

HYDROGRAPHIC SHEET
5037

Locality
Gardner Pinnacles, T. H.

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~~ 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.

RAW
Chief, Division of Tides and Currents.

December 5, 1930

Division of Hydrography and Topography:

Division of Charts: ✓

Tide Reducers are approved in
4 volumes of sounding records for

HYDROGRAPHIC SHEET 5037

Locality Gardner Pinnacles, T. H.

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

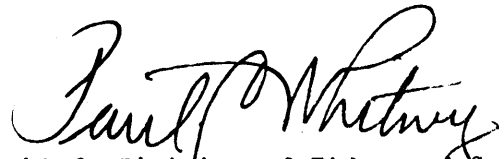
Plane of reference is mean lower low water, reading

3.5 ft. on ~~tide staff~~ 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. 5037..

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

Number of positions on sheet	1235..
Number of positions checked	238..
Number of positions revised	..4...
Number of soundings recorded	3713..
Number of soundings revised	..79..
Number of signals erroneously plotted or transferred	<i>None</i>

Date: ... 12-31-30

Cartographer: *H. M. Brown*

VERIFICATION REPORT
to accompany
HYDROGRAPHIC SHEET - #8.
GARDNER PINNACLES.

This will certify that I have examined the completed smooth sheet and records and hereby approve same. The actual field work was done under my direct supervision.

Your attention is called to the fact that two positions of signal "Egg" were used, as on Sheet #3. It is not known whether this buoy dragged or not, but the use of two positions was the only way in which the work could be coordinated. Both of these positions come within the same circle, and the data regarding them appears as a part of this report.

K. T. Adams

K. T. Adams,
Chief of Party,
Steamer GUIDE.

Section of Field Records

Sheet No 5037

Surveyed in 1929

Chief of Party - H. T. Adams

Surveyed by - H. T. Adams

Protected by - J. C. Mathison, J. N. Jones

Soundings plotted by - J. C. Mathison

Verified & Inked by - A. M. Glorson

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 usual depth curves can be completely drawn within the limits of the sheet.
4. The field plotting was completed to the extent prescribed in general instructions.
5. The office draftsman did not have to do over any part of drafting done by field party, except as noted on statistic sheet.
6. The junctions with the adjacent sheets which were examined, were found to be satisfactory. An examination of the remaining adjacent sheets will be made when they have been inked and verified.

Respectfully submitted,
A. M. Glorson

DEPARTMENT OF COMMERCE

AND REFER TO No. 82-DRM

U. S. COAST AND GEODETIC SURVEY

WASHINGTON

May 27, 1931.

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet No. 5037

South of Gardner Pinnacles, H.I.

Surveyed in 1929

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

Chief of Party, K. T. Adams

Surveyed by party of Steamer GUIDE

Protracted by J. C. Mathisson and J. N. Jones

Soundings plotted by J. C. M.

Verified and inked by G. C. McGlasson

1. The records conform to the requirements, except for the total omission of bottom characteristics. There are 200sq. miles inside of the 25 fathom curve and 23 hand lead soundings were obtained.
2. The character and scope of the survey comply with the specific instructions.
3. The information is sufficient for drawing the usual depth curves.
4. The junctions with the adjoining sheets are satisfactory. Six lines from H. 5012 and one line from the DISCOVERER's 1927 work extend across this sheet. The ends only of these lines are tied in to the signals, the balance of the lines being dead reckoning. They contain no soundings that would add to the information on this sheet and, on account of their weak control, they have been omitted from this sheet.
5. This sheet is a very fine example of two phases of hydrographic surveying: First, the excellent results obtained by the modern buoy control system; second, the consistent results obtained by the fathometer in depths of 15 to 25 fathoms.

6. No additional surveying is required.
7. The character and scope of the surveying and field drafting are excellent.
8. Reviewed by E. P. Ellis, March 1931.

Approved:

A. M. Sobieralski
Chief, Section of Field Records

J. B. Borden
Chief, Section of Field Work

DEPARTMENT OF COMMERCE

AND REFER TO NO. 82-DRM

U. S. COAST AND GEODETIC SURVEY

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5. This sheet is a very fine example of two phases of hydrographic surveying: First, the excellent results obtained by the modern buoy control system; second, the consistent results obtained by the fathometer in depths of 15 to 25 fathoms.

6. No additional surveying is required.
7. The character and scope of the surveying and field drafting are excellent.
8. Reviewed by E. P. Ellis, March 1931.

Approved:

R. O. Platt

Chief, Section of Field Records

W. S. Borden

Chief, Section of Field Work

Applied to Chart 4172 8/7/40 CRB1-

4173 10/16/46 ~~CRB1~~