Original

C & G
JUL 19 1930
Acc. No.

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

DEPARTMENT OF COMMERCE
U.S. Coast and Geodetic Survey
R.S. Patton, Director

STATE: Terr. of Hawaii

DESCRIPTIVE REPORT

Hydrographic Sheet No. 7502

LOCALITY

Territory of Hawaii
Westward
Gardner Pinnacles

1929

Chief of Party
K. T. Adams

DESCRIPTIVE REPORT
to accompany
Hydrographic Sheet No. 7
Gardner Pinnacles,T.H.

DATE OF 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.

SURVEY METHODS: All soundings were taken by the Fathometer, the ship running at standard speed. The Fathometer was always read by an officer.

The control consisted of floating buoys located by azimuths and double dead reckoning runs. These buoys were plotted on Hydrographic Sheets Nos. 3 and 8, and all location data for them will be submitted with Sheet No. 8. They were then scaled from Sheets Nos. 3 and 8 and plotted on this sheet by DMs and DPs.

The control consisted of dead reckoning loops from a fixed position out to the depth desired, then across the end and in to a fix. Single angles were taken when they could be seen and bearings were taken to supplement the dead reckoning.

Two logs were streamed and the dead reckoning was controlled as closely as possible. Dead reckoning "Data Sheets" were made from the sounding records and the sheet was plotted from them. All data was recorded in the sounding records, no other record being used.

The area north and northwest of ⊙ BOY was the most poorly controlled, inasmuch as the dead reckoning lines had to be longer to cover the desired area.

FATHOMETER SOUNDINGS: All Fathometer soundings were examined for slope and corrected where found necessary. All red light Fathometer soundings were corrected for velocity of sound but the white light soundings were not corrected for sound velocity, in accordance with authority from The Director, dated December 13, 1929, and based on my letter of December 5, 1929, from which the following is quoted:

"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 th 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 to2635 fathoms the reductions are again positive and gradually increase from zero to eleven fathoms.

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 white light sounding."

DESCREPENCIES: In several places where the crossings were faulty this fault was corrected on the smooth sheet by shifting the adjusted lines a second time to obtain reasonable good crossings.

A few soundings, which were obviously incorrect have been changed. For instance the two 350 fathom soundings on and just after position 104B were obviously 450 and were so changed. The 220 fathom sounding on position 46B is quite questionable but has been retained. It was probably a stray. The 237* fathom sounding between Positions 45 and 46A is also probably a stray but has been retained. * Omitted 237

I would recommend that a few grid lines be run in the vicinity of this 220 fathom sounding. There is another sounding of 270 fathoms on Position 43 B which does not look correct either. It is quite possible that there may be a lump in this vicinity which was not found although the general bottom shows very level characteristics.

SCALE AND AREA: The scale of this sheet is 1:100,000 and it was laid off to supplement the work done on Sheets Nos. 3 and 8, when it was discovered that they did not extend to the desired depths.

SLOPES: The slopes were determined by the use of a celluloid scale which gives the slope in percentage. This was originated by J. A. Bond.

K. T. Adams

K. T. Adams,
H & G E, C & G S.,
Chief of Party.

5021

[redacted]

Diag. Cht. No. 4000

Form 504
Ed. June, 1928

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

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

U. S. C. & G. SURVEY
L. & A.
JUL 23 1930
Acc. No.

State: Hawaiian Is.

DESCRIPTIVE REPORT

~~*Topographic*~~
Hydrographic } *Sheet No.* 7 5021

LOCALITY

West Hawaiian Is.

Gardner Pinnacles

1930

CHIEF OF PARTY

K. T. Adams

U. S. GOVERNMENT PRINTING OFFICE: 1930

5021

[redacted]

Form 537

Department of Commerce
U.S. Coast and Geodetic Survey

REG. NO. 5021

HYDROGRAPHIC TITLE SHEET

[redacted]

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(b), EXECUTIVE ORDER 12356.

Field No.

REGISTER NO. 5021

State ~~Territory of~~ Hawaiian Islands

General locality ~~Westward~~ West Hawaiian Is.

Locality Gardner Pinnacles

Scale 1-~~80,000~~ 100,000 Date of survey August 20--September 23,1929

Vessel GUIDE

Chief of Party K. T. Adams

Surveyed by K. T. Adams

Protracted by F. G. Johnson

Soundings penciled by J. S. Morton

Soundings in fathoms ~~feet~~

Plane of reference MLLW

Subdivision of wire dragged areas by

Inked by

Verified by

Instructions dated March 26, 1928 and April 12, 1929

Remarks:

IN REPLY ADDRESS THE DIRECTOR
U. S. COAST AND GEODETIC SURVEY
AND NOT THE SIGNER OF THIS LETTER

AND REFER TO No.

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

WASHINGTON

March 9, 1931.

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet No. 5021

Gardner Pinnacles.

Instructions dated March 26, 1928, April 12, 1929.
(Projects 22, 23)

Chief of Party K. T. Adams

Surveyed by K. T. Adams

Protracted by F. G. Johnson

Soundings plotted by J. S. Morton

Inked and verified by G. C. Mc Glasson

1. The records conform to the requirements of the General Instructions.
2. The plan and extent of development satisfy the Specific Instructions.
3. A comparison of adjacent sounding lines, as well as the sounding line crossings show good agreement, with the exception lat. 25°12' and long. 167°59' where sounding 184 fms. (63 B) is between 157, 163, 164 fms. It is considered this sounding (184) is incorrect and is recommended to be rejected. 184 has been approved S.P.S.
4. The junctions with the adjacent contemporary sheets H.5012, H.5037, H.5010a and H.5010b are adequate.

5. Character and scope of surveying - good. The depth curves up to 1000 fms. can be completely drawn.

6. a/ The areas from the 200 fm. curve Northward to depth of 500 fms., in long. 168° and Eastward between lat. 25°15' and 25°25' are not sufficiently developed. Spacing of lines according to Specific Instructions of March 26, 1928, should be in this area (of 250-500 fms. depth) - 2½ miles apart, but is from 4 to 5 miles in this survey. The same could be said about area Southwest of Gardner Pinnacles, where spacing between two northern lines is toogreat and is as much as 7 miles.

b/ Near pos. 46 B and 43 B are two shoal soundings 220 fms. and 270 fms. respectively (Lat. 25°25'). The sounding lines are too far apart here to allow having any conclusion regarding these shoal soundings. Soundings retained EOT

c/ There is indication in the area North of lat. 25°20' of a steep slope. The character of the slope is not sufficiently well defined as called for in the Specific Instructions of March 26, 1928, par.20. Therefore, it is recommended that further surveying of the area North of 25°15' and Southwest of Gardner Pinnacles, within the limits of this sheet be carried out if the importance of this area warrantsit.

7. No comparison with previous survey was made. H.4650b yr. 1928 could not be examined, having been sent to the field. Comparison with the chart No 4000 could not be considered valuable, owing to small scale of the chart (3,167,000).

8. Slope correction factors as developed by the field party for this survey have been accepted without question, although some of the field findings were studied.

Referring to data in Records and these corrections, the maximum slope could be determined in this area between lat. 24°50' and 25°15' and long. 167°50' with Eastward direction. In the above area the 600, 700, 800 fms. depth curves are approaching each other in some places as near as 300 - 400 meters, making a slope angle of approximately 25° - 30° (pos. 107A, 63 C, 3 F).

Southeast of Gardner Pinnacles there is an indication of slope of 30° (pos. 50 G - 400 fms.), but this area is not sufficiently developed for the purpose of determination the character of the slope.

9. Reviewed by V. V. Kovalevsky.

Approved

Inspection - E.C.E.

T. O. Colbert

Chief, Section of Field Records (Charts)

T. S. Borden

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

March 9, 1931.

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet No. 5021

Gardner Pinnacles.

Instructions dated March 26, 1928, April 12, 1929.
(Projects 22, 25)

Chief of Party K. T. Adams

Surveyed by K. T. Adams

Protracted by F. G. Johnson

Soundings plotted by J. S. Morton

Inked and verified by G. C. Mc Glassen

1. The records conform to the requirements of the General Instructions.
2. The plan and extent of development satisfy the Specific Instructions.
3. A comparison of adjacent sounding lines, as well as the sounding line crossings show good agreement, with the exception lat. 26°12' and long. 167°59' where sounding 184 fms. (63 B) is between 157, 163, 164 fms. It is considered this sounding (184) is incorrect and is recommended to be rejected. 184 has been expunged SOL
4. The junctions with the adjacent contemporary sheets H.5012, H.5037, H.5010 and H.5010b are adequate.

5. Character and scope of surveying - good. The depth curves up to 1000 fms. can be completely drawn.

6. a/ The areas from the 200 fm. curve Northward to depth of 500 fms., in long. 160° and Eastward between lat. 25°15' and 25°25' are not sufficiently developed. Spacing of lines according to Specific Instructions of March 26, 1928, should be in this area (of 250-500 fms. depth) - 3½ miles apart, but is from 4 to 5 miles in this survey. The same could be said about area Southwest of Gardner Pinnacles, where spacing between two northern lines is too great and is as much as 7 miles.

b/ Near pos. 46 B and 43 B are two shoal soundings 220 fms. and 270 fms. respectively (Lat. 25°25'). The sounding lines are too far apart here to allow having any conclusion regarding these shoal soundings. Soundings retained. CR

c/ There is indication in the area North of lat. 25°20' of a steep slope. The character of the slope is not sufficiently well defined as called for in the Specific Instructions of March 26, 1928, par.20. Therefore, it is recommended that further surveying of the area North of 25°15' and Southwest of Gardner Pinnacles, within the limits of this sheet be carried out if the importance of this area warrants it.

7. No comparison with previous survey was made. H.4650b yr. 1926 could not be examined, having been sent to the field. Comparison with the chart No 4000 could not be considered valuable, owing to small scale of the chart (3,167,000).

8. Slope correction factors as developed by the field party for this survey have been accepted without question, although some of the field findings were studied.

Referring to data in Records and these corrections, the maximum slope could be determined in this area between lat. 24°50' and 25°15' and long. 167°50' with Eastward direction. In the above area the 600, 700, 800 fms. depth curves are approaching each other in some places as near as 300 - 400 meters, making a slope angle of approximately 25° - 30° (pos. 107A, 63 C, 3 F).

Southeast of Gardner Pinnacles there is an indication of slope of 30° (pos. 50 G - 400 fms.), but this area is not sufficiently developed for the purpose of determination the character of the slope.

9. Reviewed by V. V. Kovalovsky.

Approved

Inspected - E.K.

L. O. Colbert

Chief, Section of Field Records (Charts)

T. S. Borden

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

TIDAL NOTE

HYDROGRAPHIC SHEET NO. 8

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.

LIST OF SIGNALS

GARD -ASTRONOMIC LOCATION- BUOY POSITIONS

Log run locations and azimuths.
Azimuths measured from North.

	Distance in meters	Azimuth	
UNO			
Gard - Uno	10476.0	295° 31' 51.9"	*
DOS			
Uno - Dos	8111.2		*
GARD - Dos	- - -	295 26 11.9	
TRES			
Dos - Tres	9269.0		
Gard - Tres		295 48 54.4	*
ABLE			
Able - Gard	9540.8	185 15.48	
BOY			
Able - Boy	8109.5	338 11.22	
CAT			
Gard - Cat	9709.9		
Cat - Gard		1 36.23	
DOG			
Cat - Dog	10228.0		
Dog - Gard		1 48.11	
EGG			
(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	(after Sept.19)
FIN			
(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.

LOG DATA

		Factors to be used		
Period	Log.No.	Factor	Log.No.	Factor
5:30 AM May 31-July 27	194	0.9645	193	1.035
AM 5:30 July 27-Sep.29	194	1.0074	193	1.054

COMPARATIVE SOUNDINGS (Continued)

DATE	FATHOMETER READINGS	VELOCITY REDUCTIONS	CORRECTED FATHOMETER	HANDLEAD SOUNDINGS	HANDLEAD minus FATHOMETER +	HANDLEAD minus FATHOMETER -
Aug.						
24	18.2	+0.5	18.7	18.0		0.7
	18.0	0.5	18.5	18.2		0.3
	18.5	0.5	19.0	18.5		0.5
25	19.3	0.5	19.8	19.0		0.8
	19.0	0.5	19.5	19.8	0.3	
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	1060.			1022.		
	21.0	0.6	21.6	21.0		0.6
	16.0	0.4	16.4	16.7	0.3	
					+1.6	- 5.1
						+1.6
				Sum (17)		- 3.5
				Mean		- 0.204
Aug.						
28	17.0	+0.5	17.5	16.2		1.3
	11.6	0.3	11.9	10.8		1.1
	17.0	0.5	17.5	16.8		0.7
				Sum (3)	+0.0	- 3.1
				Mean		- 1.03
Sept.						
14	19.0	+0.5	19.5	19.0		0.5
	21.5	0.6	22.1	22.5	0.4	
15	21.3	0.6	21.9	21.8		0.1
	19.0	0.5	19.5	19.8	0.3	
16	19.3	0.5	19.8	19.8		0.0
	21.0	0.6	21.6	21.5		0.1
17	21.3	0.6	21.9	22.0	0.1	
	19.8	0.5	20.3	19.3		1.0
18	19.0	0.5	19.5	19.5		0.0
	21.0	0.6	21.6	22.0	0.4	
19	22.5	0.6	23.1	22.7		0.4
	21.3	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	22.3		0.2
	21.0	0.6	21.6	21.3		0.3
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	23.6	0.6	24.2	23.7		0.5
	17.5	0.5	18.0	17.7		0.3
					+2.0	- 3.8
						+2.0
				Sum (19)		- 1.8
				Mean		- 0.1

COMPARATIVE SOUNDINGS. (Continued)

DATE	FATHOMETER READING	VELOCITY REDUCTIONS	CORRECTED FATHOMETER	HANDLEAD SOUNDINGS	HANDLEAD minus FATHOMETER +	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

FROM	TO	USE CONSTANT REDUCER
July 17	July 22	- 0.3
July 23	Aug. 20	- 0.7
Aug. 21	Aug. 27	- 0.8
Aug. 28	- - - -	- 1.0
Aug. 29	Sept. 23	- 0.1
Sept. 24	Sept. 28	- 1.3

Tabulated by KTA
✓ JBQ

COMPARATIVE SOUNDINGS

Used to determine

CONSTANT REDUCTION TO RED LIGHT SOUNDINGS.

Garaner Pinnacles, T.H.
July - Sept., 1929.

DATE	FATHOMETER READING	VELOCITY REDUCTIONS	CORRECTED FATHOMETER	HANDLEAD SOUNDINGS	HANDLEAD minus FATHOMETER +	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
	19.5	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	
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	0.6	21.3	21.0		0.3
	18.0	0.5	18.5	18.5		0.0

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.n.	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 Observations 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

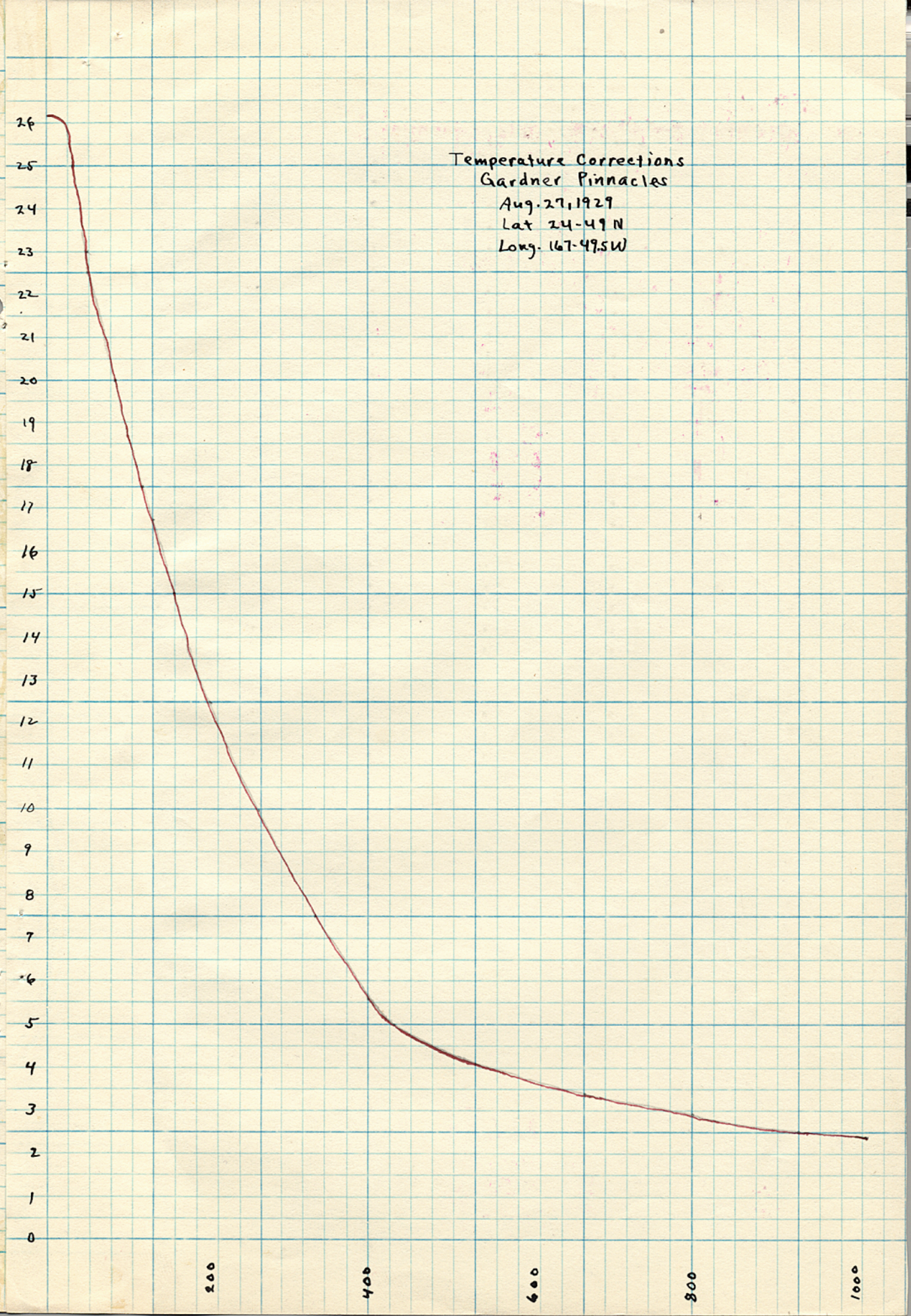
Fms.	Temp.	Sum	Mean °C	Factor	Corr.
13-1/3	26.2			0.0286	+0.38
26-2/3	25.7	51.9	25.95	0.0279	+0.75
40	23.9	75.8	25.27	.0269	+1.08
53-1/3	22.3	98.1	24.52	.0258	+1.38
66-2/3	21.3	119.4	23.88	.0248	+1.65
80	20.4	139.8	23.30	.0236	+1.89
93-1/3	19.5	159.3	22.76	.0225	+2.10
106-2/3	18.4	177.7	22.21	.0214	+2.29
120	17.5	195.2	21.69	.0204	+2.45
133-1/3	16.7	211.9	21.19	.0194	+2.58
146-2/3	15.7	227.6	20.69	.0184	+2.70
160	15.0	242.6	20.22	.0174	+2.78
173-1/3	14.3	256.9	19.76		
186-2/3	13.4	270.3	19.31		
200	12.7	283.0	18.87	.0150	+3.00
213-1/3	12.2	295.2	18.45		
226-2/3	11.6	306.8	18.05	.0136	+3.09
240	11.0	317.8	17.66	.0128	+3.07
253-1/3	10.5	328.3	17.12	.0117	+2.96
266-2/3	10.0	338.3	16.92		
280	9.3	347.6	16.55	.0106	+2.97
293-1/3	8.8	356.4	16.20	.0099	+2.90
306-2/3	8.3	364.7	15.84	.0091	+2.79
320	7.9	372.6	15.52	.0083	+2.65
333-1/3	7.5	380.1	15.20	.0075	+2.50
346-2/3	7.1	387.2			
360	6.7	393.9			
373-1/3	6.2	400.1	14.29	.0052	+1.94
386-2/3	5.8	405.9	14.00	.0045	+1.74
400	5.5	411.4	13.71	.0039	+1.56
413-1/3					
426-2/3					
440					
453-1/3					
466-2/3					
480					
493-1/3					
506-2/3	No corrections applied in				
520-	depths greater than 400 fathoms.				
533-1/3					
546-2/3					
560					
573-1/3					
586-2/3					
600					

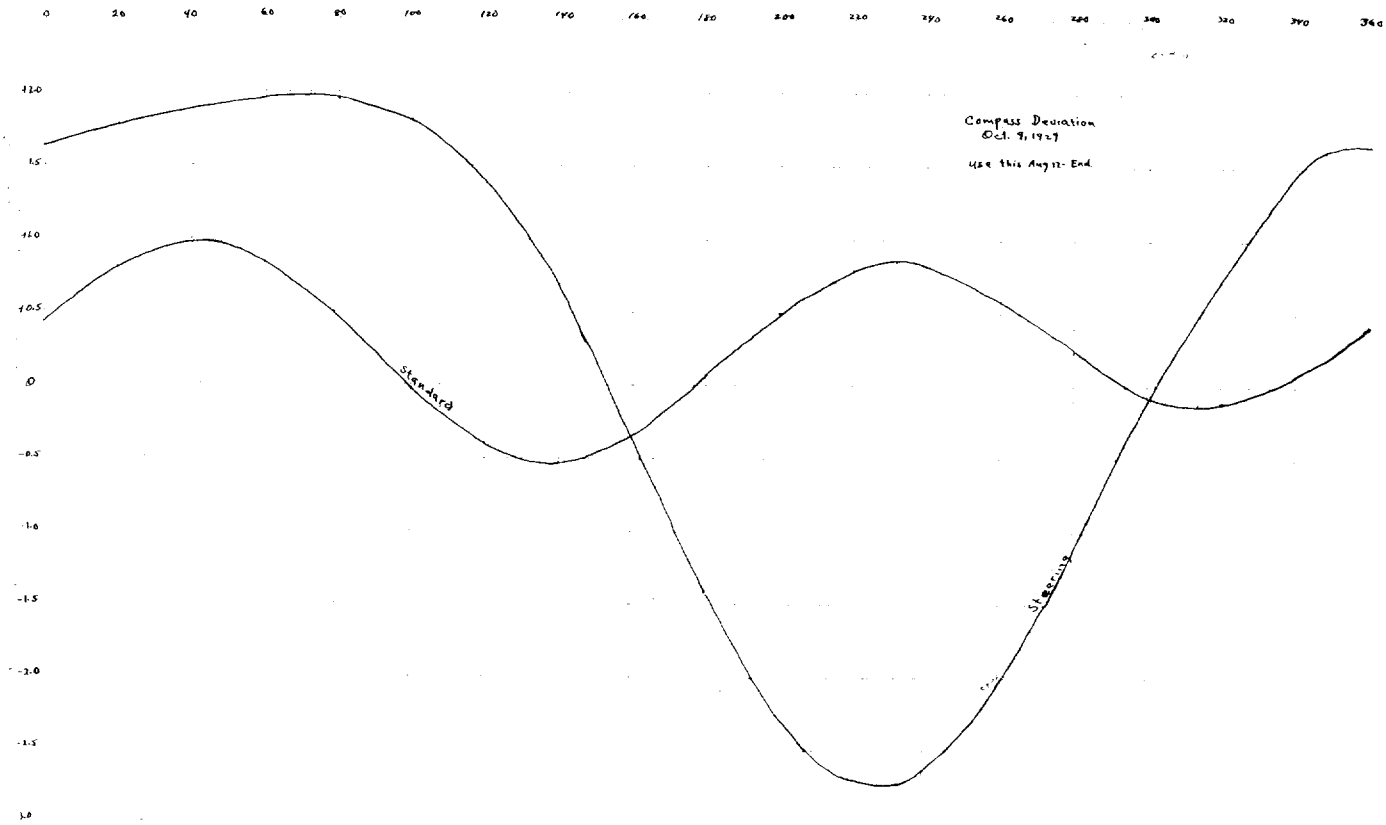
Depth	Corr.
13	
	+0.4
16.8	
	+0.5
20.4	
	+0.6
24.0	
	+0.7
27.9	
	+0.8
31.9	
	+0.9
35.9	
	+1.0
40.0	
	+1.1
44.4	
	+1.2
48.8	
	+1.3
53.3	
	+1.4
58.2	
	+1.5
63.0	
	+1.6
68.1	
	+1.7
73.6	
	+1.8
79.2	
	+1.9
85.4	
	+2.0
155	
	+3.0
311	
	+2.0
386	
	+1.0
End	

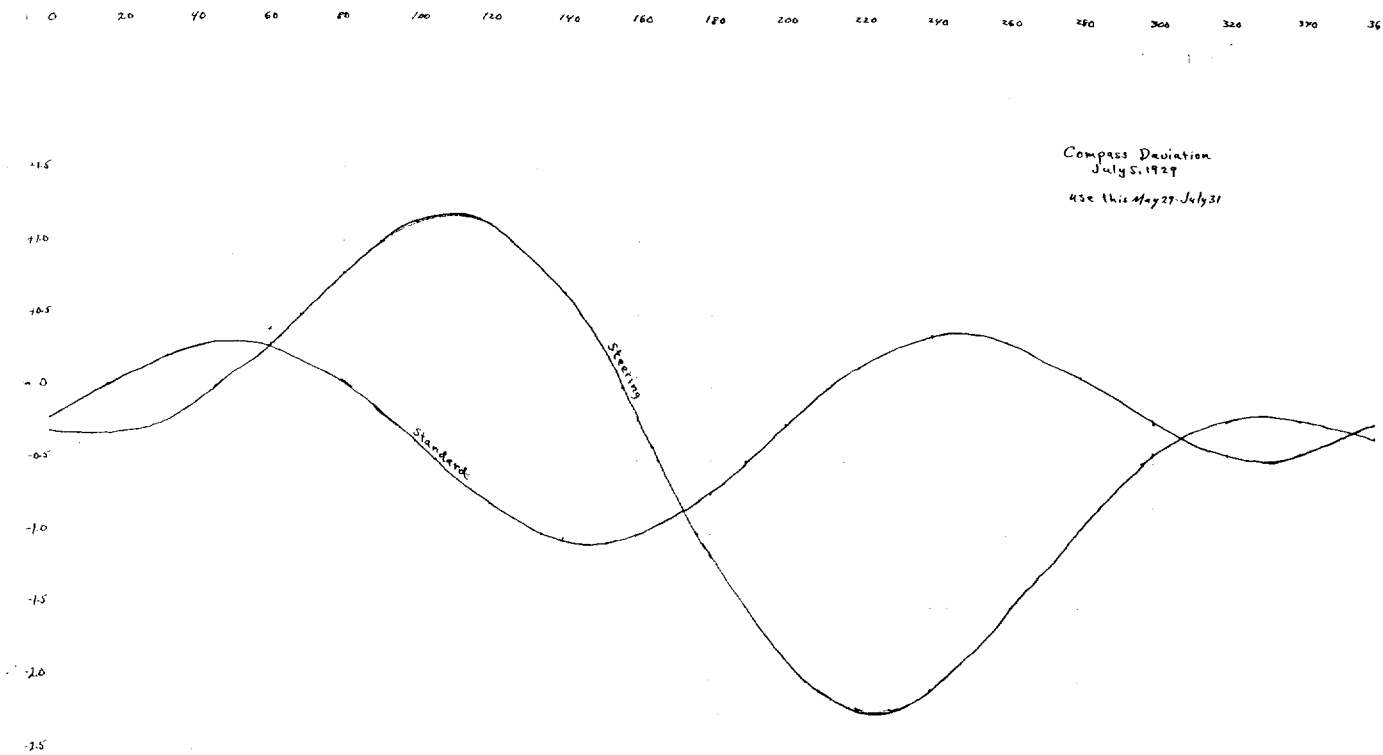
STATISTICS
Sheet 7, Gardner Pinnacles, T.H.

1929

	Day	W. L. Soundings No.	Stat. M.	R. L. Soundings No.	Stat. M.	Total Sta.M.	Number of Positions
8-20	A	89	63	223	39	102.0	119
8-21	B	111	51.5	227	63	114.5	136
8-22	C	66	23.4	256	86.7	110.1	134
8-23	D	13	3.4	55	17.2	20.6	23
8-25	E	28	12.6	83	22.3	34.9	45
8-27	F	8	3.8	38	6.9	10.7	17
9-17	G	97	44.3	50	7.1	51.4	56
9-23	H	88	37.6	11	1.7	39.3	40
Totals		500	239.6	1046	243.9	483.5	570


Temperature Corrections
Gardner Pinnacles
Aug. 27, 1929
Lat 24-49 N
Long. 167-49.5 W
26
25
24
23
22
21
20
19
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
200
400
600
800
1000


0
20
40
60
80
100
120
140
160
180
200
220
250
260
280
300
320
340
360
+2.0
1.5
+1.0
+0.5
0
-0.5
-1.0
-1.5
-2.0
-2.5
-3.0
Standard
Sperry
Compass Deviation
Oct. 9, 1929
Use this August End



Compass Deviation
July 5, 1929

Use this May 27-July 31

Department of Commerce and Labor
COAST AND GEODETIC SURVEY
Form 377

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 _____

Serial Water Temperatures
14½ mi. S. E. Gardner Pinnacles
Latitude 24° - 49' - Longitude 167° - 49.5'
August 27, 1929

Signature of the Officer of the Deck: _____

Signature of the Recorder: _____

11—802

COAST AND GEODETIC SURVEY STEAMER "GUIDE"

Locality, 14¾ mi. SE Gardner Pinnacles Date, August 27, 1929

Sounding No. Line

Lat. 24° - 49' Longitude 167° - 49.5'

Depths in Fathoms.	Temperatures: Reading. Min.	Reading. Max.	Correction. Min.	Correction. Max.	Corrected. Min.	Corrected. Max.	No. of the Thermometer.	Kind of Thermometer used.	Remarks.
	#4102	#14996						Deep Sea	Temperature of Air
Surface.									Temperature of Thermometer, Locker
AM									
10:25 1022	2	40	-	-					Bottom water Sample
9:54 950	3	00	3	20					
10:12 552½	4	00	3	20					
10:31 401	5	20	5	60					
10:45 328	7	65	7	80					Between the bottom and the first 100 fm.
10:57 281	8	85	9	65					depth, at 12:30, the thermometers were
11:09 256	10	50	11	20					in the wooden blocks which at times was
11:17 209½	12	10	15	00					suspected, would not float. One ther-
11:26 190½	12	90	15	50					mometer, #4102 was placed in a metal
11:34½ 176	14	30	-	-	-				reversing case and the remainder of the
11:43 160½	13	90	16	20					temperatures were taken.
11:52 151½	14	50	17	00					
12:01 136	17	60	17	75					
12:09 124¾	17	30	17	30					
12:20 110½	18	15	19	70					
12:30 100½	16	85	18	45					
1:02 100½	18	25							
1:08 86	19	70							
1:13 65½	21	25							

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

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

11—802

Department of Commerce and Labor
COAST AND GEODETIC SURVEY
Form 377

COAST AND GEODETIC SURVEY STEAMER "GUIDE"

Locality, 14¾ mi. SE Gardner Pinnacle Date, August 27, 1929

Sounding No. Line

Latitude 24° - 49' Longitude 167° - 49.5'

Depths in Fathoms.	Temperatures: Reading. Min.	Reading. Max.	Correction. Min.	Correction. Max.	Corrected. Min.	Corrected. Max.	No. of the Thermometer.	Kind of Thermometer used.	Remarks.
	#4102	#14996						Deep Sea	Temperature of Air
Surface.									Temperature of Thermometer, Locker
1:17 55 1/2	21	65							
1:23 45¼	22	90							
1:34 35¾	24	30							
1:38 25¼	25	90							
1:43 17½	26	10							
1:47 7½	26	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

Signature of the Recorder: W. H. Bainbridge

11—802

Ecm
2.a.e.

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 5021

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.

RWH

Chief, Division of Tides and Currents.

Field Records Section (Charts)

HYDROGRAPHIC SHEET No. 5021.

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

Number of positions on sheet	570.
Number of positions checked	82.
Number of positions revised	1.
Number of soundings recorded	1546.
Number of soundings revised	11.
Number of signals erroneously plotted or transferred	None.

Date: 11 Dec., 1930

Cartographer: L.G. McLean

VERIFICATION REPORT
to accompany
Hydrographic Sheet No.7
Gardner Pinnacles, T.H.

This is to certify that I have examined the completed smooth sheet and records and hereby approve same. Your attention is called to the recommendation of a further examination of the area north of Gardner Pinnacles where the discrepancies in soundings occur. I firmly believe that these are strays on the Fathometer, but inasmuch as the spacing is a little wide here it would be well to have it examined by running a few uncontrolled grid lines. If anything is discovered then of course some controlled work could be done later.

The hydrography was done under my immediate supervision. All work was laid out by me and adjusted and examined each evening as the work progressed.

K. T. Adams

K. T. Adams,
H & G E, C & G S.,
Chief of Party.

Section of Field Records

Sheet No H 5021
Surveyed in 1929
Chief of Party - K.T. Adams
Surveyed by - K.T. Adams
Protracted by - F.S. Johnson
Soundings Plotted by - J.S. Norton
Verified & Inked by - E.C. McGlasson

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. An examination of the contemporary adjacent sheets will be made when they have been verified and inked.

Respectfully submitted,
E.C. McGlasson

Applied to Chart 4182 6/7/40 [signature]

4173 10/16/46 [signature].