

5445

5445

U. S. COAST & GEODETIC SURVEY  
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Form 504  
Ed. June, 1928

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

State: California

DESCRIPTIVE REPORT

~~Topographic~~  
Hydrographic } Sheet No. 21 5445

LOCALITY

Santa Barbara Channel

Anacapa Passage

19.33

CHIEF OF PARTY

Charles K. Green.

DESCRIPTIVE REPORT  
TO ACCOMPANY  
HYDROGRAPHIC SHEET FIELD NO. 21  
CALIFORNIA COAST, VENTURA COUNTY  
ANACAPA ISLAND

INSTRUCTIONS

The work on this sheet is covered in instructions dated October 31, 1932.

LIMITS AND SCALE

The sheet embraces the hydrography of Anacapa Island out to the 100-fathom curve, and includes the greater part of Anacapa Passage, overlapping sheets 1324 (b) and 1325 (b) of the old survey. The sheet also includes the development of the 61 fathom sounding charted 3-3/4 miles southwest of the west end of Anacapa Island. The scale is 1:20,000.

GENERAL DESCRIPTION

Anacapa Island is a 4-1/2 mile chain of three islands separated by narrow, shallow, passages which are bare at low tide. The maximum width of the islands is 1/2 mile, near the western end. Summit Peak, on the western island is fairly sharp, 930 feet high, and appears as a cone. This peak is charted as being 980 feet high, but its present elevation is 930 feet.

The middle and eastern islands appear flat topped and are from 100 to 250 feet high. The coast of the islands is everywhere precipitous with but a scattering of spots of sand. There are no sand beaches more than 100 feet or so in extent. Arch Rock, at the east end, and Cat Rock on the south side of the western island are conspicuous. In general the coast is steep-to and fringed with kelp. The 100-fathom curve is about 1-1/4 mile offshore on the south side and from 2-1/2 to 3-1/2 mile off the north side. The island is uninhabited except for the lighthouse keepers and two or three fishermen.

Anacapa Light, (fog horn and radio direction station) is on the eastern end of the island, and marks the south side of the <sup>east</sup> entrance to Santa Barbara Channel. Steamer traffic in this channel is heavy.

Crawfish, abalone, and sardines, in season, are abundant.

With the exception of infrequent visits of the Lighthouse tender, steamers do not call at the island.

### SURVEY METHODS

The hydrography is hand lead (12 pound) soundings out to approximately 14 fathoms and the remainder is wire soundings (30 pound lead) with gas engine hoist.

The control was sextant fixes on ample topographic signals. The control off the eastern end was very weak due to the narrowness of the island, but by the use of a range and one angle the area was adequately covered. It was necessary to omit the plotting of some soundings in congested areas.

### DISCREPANCIES

No discrepancies were experienced and the cross lines check very well.

### DANGERS

There are no off-lying dangers. The coast is steep-to and vessels should use caution when approaching in thick weather. The chart and the lead are the guides.

### SHOALS

(a) The shoal 350 meters south of signal "An", near the west end of the island, has a least depth of 5 fathom 1 foot.

(b) A slight shoaling to 32 fathoms from surrounding depths of 36 fathoms was found 2-1/4 miles northwest of the west end of the island.

(c) A slight shoaling to 23 fathoms from soundings of 27 fathoms was found 2-1/4 miles west southwest of the west end of the island.

(d) A least depth of 8-1/2 fathoms was found on the slight shoaling near Latitude 34° 00' Longitude 119° 24'.

(e) The 61 fathom sounding charted 3-3/4 miles southwest of the west end of Anacapa Island was developed and a least depth of 52 fathoms was found.

(f) A slight shoaling to 31 fathoms from surrounding depths of 34 fathoms was found 1.4 miles east northeast of Anacapa Light.

(g) 375 meters due east of the intersection of 34-00 and 119-25 between position 6 B and 7 B a sounding of 8-3/4 fathom, in kelp, rocky bottom, was obtained. The 9-1/4 fathom sounding (pos 30-31 D) is 55 meters northward of the 8-3/4 fathom. The shoaler area is about 75 meters in diameter and surrounded by soundings of from 11 to 14 fathoms.

### CHANNELS

Anacapa Passage, lying between Anacapa and Santa Cruz Islands, is free of dangers, is steep-to on the Anacapa side, and has a gradual slope up to the shore of Santa Cruz Island. A 9 fathom sounding is shown on the Chart 5202 about 1.1 mile southeast of the southeast shore of Santa Cruz. The area of the 9 fathom sounding will be developed (1934) by this party under later instructions. Anacapa Passage is but seldom used by steamers. Tide rips are strong under certain conditions of wind and current.

Santa Barbara Channel is eleven miles wide from Point Hueneme Light to Anacapa Light, and is a much used steamer lane for coast-wise shipping. The prevailing winds in the channel is westerly, and at times the sea is too rough to permit the passage of launches.

### ANCHORAGES

Anchorage from southeast storms may be had in 10 fathoms 500 meters offshore, 0.6 miles west of the passage between the middle and eastern islands, keeping that passage just open. Small boats can anchor, in 5 to 7 fathoms with some protection from the prevailing northwest winds, in the kelp and 200 yards off shore in the bight known as East Fish Camp. This bight lies on the south shore 1-1/2 miles west of the extreme east end of the island. In westerly gales, heavy offshore gusts are felt in this bight, and good ground tackle is necessary to hold on. The bottom is sand and rocky.

In the fall and winter months, stiff "Northeasters" are occasionally experienced. They come up without warning, usually at night in clear weather and when the glass is either high or rising rapidly. Small boats must be prepared to leave anchorage at a moments notice during these months and can find protection from this wind in the bight west of Cat Rock, five fathoms sandy bottom, or run to China Harbor on the north coast of Santa Cruz.

There is a Lighthouse boat landing and hoist near the northeast end of the island, and a mooring buoy. Landings are difficult except in smoothwater. Landings can be made in several bights of the island when on the lee side.

### COMPARISON WITH PREVIOUS SURVEYS

In comparing the sheet with old surveys (sheets 501 and 1403), the 50 and 100-fathom curves check well. The 20-fathom curve shows minor changes due to lack of soundings on old survey. Inside the 20-fathom curve there are changes because of insufficient development on old survey.

The shoal areas; a, b, c, f, and g, under paragraph "Shoals" - this report, are not shown on the old survey.

Sheet 501 (1855) shows an almost continuous line of kelp around the island. The present kelp is as shown on topo sheet "C".

GEOGRAPHIC NAMES

East Fish Camp, on the south side and 1-1/2 miles west of the extreme east end of the island is a well established local name, as is also, Cat Rock, on the south side 1.2 miles southeastward from the west end of the island. No new names were assigned by the field party.

CURRENTS

Some 40 notes on currents were made during the survey. In Anacapa Passage the current is northerly from about 3 hours before high water to 3 hours after high water, and southerly from 3 hours before low to 3 hours after low water. Currents of 2 knots are experienced in this passage.

The east and west current past Anacapa Island could not be definitely established, although they are quite pronounced at times. They are probably greatly influenced by westerly winds.

SPECIAL NOTES

Thick patches of kelp are found on both sides of the island. The kelp patches were located by sextant angles and are shown on the topo sheet. Kelp is not shown on the hydrographic sheet because of congested soundings.

*Kelp has been added to the sheet in the office.*

Approved by

*Chas. K. Green*

Chas. K. Green,  
Chief of Party #10.

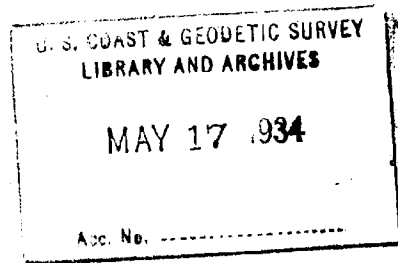
Submitted by

*Chas. K. Green*

Chas. K. Green

STATISTICS SHEET No. 21.

DATE, 1933	LETTER	VOLUME	POSITIONS	SOUNDINGS	MILES STATUTE	VESSEL
Feb. 16	A	1	55	177	13.0	VIRGINIA I
17	B	1	103	284	19.8	"
20	C	1	70	234	13.8	"
21	D	1	148	502	19.5	"
22	E	2	111	309	15.3	"
23	F	2	110	305	13.6	"
24	G	2	84	159	10.0	"
Mar. 1	H	2	39	95	15.6	"
2	J	2 & 3	126	211	33.3	"
3	K	3	130	230	32.5	"
4	L	3	28	42	11.7	"
7	M	3	43	55	10.3	"
8	N	3	57	96	8.0	"
9	P	3 & 4	123	211	15.5	"
10	Q	4	137	235	32.5	"
11	R	4	33	42	9.2	"
14	S	4	96	116	16.4	"
15	T	4 & 5	161	244	33.4	"
16	U	5	56	91	6.9	"
17	V	5	47	68	4.8	"
1934						
Apr. 16	W	5	10	16	1.2	"
17	X	5	<u>23</u>	<u>48</u>	<u>4.4</u>	"
T O T A L			1,790	3,770	340.7	



PARTY #10

Santa Barbara, Calif.,  
May 3, 1934.

Hydrographic sheet No. 21, submitted herewith, has been inspected and approved by me, together with the data listed below.

List of data forwarded with Hydrographic Sheet No. 21.

Title sheet  
Descriptive Report  
Statistic sheet  
Tidal data

The work was done on a 1:20,000 scale because of the necessity of control signals on Santa Cruz Island. A 1:10,000 scale of inshore work would have resulted in three different scales covering a small water area.

The shore line of Santa Cruz Island is not inked as this shore line will appear on sheet No. 22

*This has been  
inked in the  
Office  
A.L.S.*

*Chas. K. Green*

Chas. K. Green,  
Chief of Party.

Division of Hydrography and Topography:

✓ Division of Charts:

Tide Reducers are approved in  
5 volumes of sounding records for

HYDROGRAPHIC SHEET 5445

Locality **Anacapa Passage, Santa Barbara Channel, Coast of Calif.**

Chief of Party: **Chas. K. Green in 1933-34**

Plane of reference is

**2.7 ft. on tide staff at Anacapa Id.**

**17.8 ft. below B. M. 1**

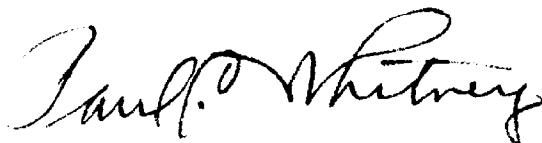
**3.6 ft. on tide staff at Santa Barbara**

**16.6 ft. below B.M. 1**

**Height of mean higher high water above plane of reference is 5.3 feet**

**at Anacapa Id., and 5.4 feet at Santa Barbara**

Condition of records satisfactory except as noted below:



Chief, Division of Tides and Currents



Partial Report  
on H 5445

June 26-1934.

- 1./ The protracting was checked by visual comparison with the boat sheet and a number of positions were checked. The protracting was found to have been very well done.
- 2./ The soundings appear to have been well plotted and were very neatly penciled.
- 3./ The rocks & reefs were only partially transferred to the smooth sheet by the field party - and this was completed by the verifier. Topographic survey T-4841 covers this area. The portion of the shoreline of Santa Cruz Island appearing on the sheet T-4841 - was transferred to the smooth sheet.
4. The mooring buoy mentioned

Page 2

in the field party's descriptive report under "Anchorage" - is located by pos. 25 F. pg 22 vol II of the sounding records for this sheet.

Respectfully Submitted  
Warren W Bamford

Field Records Section (Charts)

HYDROGRAPHIC SHEET No. 5445

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

Number of positions on sheet	<u>1790</u>
Number of positions checked	<u>32</u>
Number of positions revised	<u>NONE</u>
Number of soundings recorded	<u>3770</u>
Number of soundings revised	<u>(NONE) 28 A.M.U.</u>
Number of signals erroneously plotted or transferred	<u>NONE</u>

Date: JUNE 26 - 1934, ..... JULY 25, 1934.....

Cartographer: W.H. Bamford + A.M. Uzefovich

Verification of protracting  
Verification & inking of rocks & shoals) by W.H. Bamford Time: 1 DAY - 3 1/4 hrs

Verification <sup>and</sup> of inking by A.M. Uzefovich Time: 126 hours = 18 days

Review by \_\_\_\_\_ Time: \_\_\_\_\_

July 25, 1934

Section of Field Records  
Report on H-5445

Chief of Party Chas. K. Green      Surveyed in Feb.-Apr. 1933  
Protracted by F.W. Gavin      Surveyed by Chas. K. Green  
Verified, and inked by A.M. Uzefovich      Soundings plotted by F.W. Gavin

1. The records conform to the requirements of the General Instructions.
2. The field plotting was completed to the extent prescribed in the General Instructions.
3. The hydrography is complete, and the usual depth curves can be drawn.
4. The office cartographer did not have to do over any part of the drafting done by the field party.
5. The junction with adjacent sheet H-5446 was <sup>made</sup> verified, and ~~it~~ is satisfactory.  
The junctions with adjacent sheet H-5030 (scale 1:80,000, 1930), and H-4559 (scale 1:120,000, 1925-26) were not <sup>made</sup> verified.
6. Remarks: Soundings between positions 10x-14x (Lat.  $34^{\circ} 0'.5$ , Long.  $119^{\circ} 20'$ ) were inked, as they were penciled on smooth sheet. There is some difference in comparison with Boat Sheet (see also Vol. 5, p.p. 44-46). 8 fms.  
For position 10B sounding "~~7 fms.~~" was used (Lat.  $34^{\circ}$ , Long.  $119^{\circ} 25'.3$ ), as in Vol. I, p. 13 there is a doubtful figure.
7. The quality of the work is good.

Respectfully submitted  
Alexis M. Uzefovich

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

U. S. COAST & GEODETIC SURVEY  
LIBRARY AND ARCHIVES  
MAY 17 1934  
REG. NO.  
Acc. 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. 21

REGISTER NO.

State California

General locality Santa Barbara Channel

Locality Anacapa Passage

Scale 1:20,000 Date of survey February - April, 1933

Vessel Chartered Launch VIRGINIA I

Chief of Party Chas. K. Green

Surveyed by Chas. K. Green

Protracted by F. W. Gavin

Soundings penciled by F. W. Gavin

Soundings in fathoms fms

Plane of reference M. L. L. W.

Subdivision of wire dragged areas by

Inked by W. H. Bamford & A. M. Uzefovich

Verified by W. H. Bamford & A. M. Uzefovich

Instructions dated October 31, 1932

Remarks:

Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 5445 (1933)

Anacapa Passage - Santa Barbara Channel - California.  
Instructions dated Oct. 31, 1932 (Chas K. Green)  
Date of Survey, Feb. - Apr. 1933.

Hand Lead and Machine Soundings - - - - -3-Point Control on Shore Signals

Chief of Party - C.K.Green  
Surveyed by - C.K.G.  
Protracted and soundings penciled by - F. W. Gavin  
Verified and inked by - W.H.Bamford - A.M.Uzefovich

1. Condition of Records

The records are neat, legible and conform to the requirements of the Hydrographic Manual except as follows:

(a) In accordance with standard practice it would have been desirable if dates of triangulation stations had been written in full instead of abbreviated. All dates so shown were revised in the office.

(b) Rocks and reefs of topographic origin were only partially transferred and necessitated completion in the office.

2. Compliance with Instructions for the Project.

The plan, character and extent of the survey including development of the charted 61 fathom shoal in lat.  $33^{\circ}58'$ , long.  $119^{\circ}29'.3$  satisfy the instructions for the project, except that the work was not extended sufficiently to the southward of Anacapa I. to effect an overlap with H-4559 (1926) as required by Par. 16.

3. Sounding Line Crossings.

Agreement of cross lines is excellent.

4. Depth Curves.

The usual depth curves may be satisfactorily drawn including most of the 5 fathom and portions of the 1, 2, and 3 fathom curves.

5. Junctions with Contemporary Surveys.

(a) The junction on the east with H-5446 (1933) is satisfactory.

(b) The junction on the south with H-4559 (1925-26) is inadequate since no overlap was effected and the 200 fathom curve can only be approximated. The 108 fathom sounding in lat.  $33^{\circ}59'.1$ , long.  $119^{\circ}21'.5$  is a sonic sounding obtained just after a turn. Falling well outside the 100 fathom curve on the present survey it is considered of doubtful accuracy. The sounding is shown on our present charts and should be disregarded in future chartings. A note to that effect has been added to H-4559 (1925-26). (See additional work, Par. 9).

5. Junctions with Contemporary Surveys (con'td.)

(c) The junction on the extreme north with H-5030 (1930) is satisfactory.

(d) The junction on the northwest and southwest with H-1324 a (1875) and H-1323 b (1875) respectively, as prescribed in the instructions for the project is satisfactory as well as the junction on the southeast and northeast with H-1403 (1878).

(e) The instructions for this project have since been supplemented by additional instructions which call for an extension of the work to the westward in the vicinity of H-1324 a (1875) and H-1323 b (1875) mentioned in paragraph (d) above. Junctions with this survey, H-5445 (1933) will be effected when that work has been received in the office.

H-5660  
← rec'd

6. Comparison with Prior Surveys

(a) H-289 (1851) and H-1045 (1869)

These surveys are on a very small scale and contain no information which will conflict with the new survey, H-5445 (1933).

(b) H-501 (1885)

1. The major portion of this survey falls within the limits of the new survey. Soundings in general agree favorably with those of the new survey, H-5445 (1933) with the exception of the following:

Lat.	33°59'.4,	long.	119°27'.7	27 fms	falling in depths of	33-38 fms.
"	33°59'.4,	"	119°27'.2	28 "	" " " "	37-38 "
"	34°02'.1,	"	119°27'.9	35 "	" " " "	43-45 "
"	34°00'.4,	"	119°31'.0	27 "	" " " "	20-22 "

The sounding records of H-501 (1855) cannot be found. In view of the general unreliability of the surveys made about the year 1855 in the vicinity of Santa Barbara Channel (for details, consult review of H-5425 (1933), Par. 6 b) it is recommended that the above soundings be disregarded in future chartings.

2. No information was found on the new survey regarding the charted wreck in lat. 34°0'.5, long. 119°23'.3 shown on H-501 (1855) and the contemporary topographic sheet, T-555 (1855). The wreck has probably disintegrated by now, and should be disregarded in future chartings (see Chart Letter No. 615 (1934)).

7. Comparison with Chart 5126 (scale 1-30,000) and 5202

Within the area of the present survey the chart is based on surveys discussed in the foregoing paragraphs and contain no additional information that needs consideration in this review.

8. Field Plotting

The field protracting and plotting of soundings were accurate and conform to the requirements of the Hydrographic Manual.

9. Additional Field Work Recommended

For Future Consideration

When field work is resumed in this locality the 108 fathom sounding originating with H-4559 (1925-26) in lat. 33°59'. plus 135 m., long. 119°21' plus 750 m. discussed in paragraph 5 b of this review should be investigated.

10. Superseding Old Surveys.

Within the area covered, the present survey supersedes the following surveys for charting purposes:

- H-289 (1851) In part
- H-501 (1855) " "
- H-1045 (1869) " "

11. Reviewed by Harold W. Murray Aug. 16, 1934.

Inspected by- A.L. Shalowitz

Examined and approved:

*K.T. Adams*  
 K.T. Adams,  
 Assistant Chief, Division of Charts

*H. Borden*  
 Chief, Section of Field Work

*R. O. Colburn*  
 Chief, Division of Charts.

*E. H. Rouse*  
 Chief, Division of H and T

*Applied to Chart 5114 - Dec 1935 - J. M. Jester*  
*Applied to Chart 5202 - Mar 1936 - L. M. Jester*  
*" " " 5101 - May 1936 - R. M. J.*



25 Jan 24, 1936  
land,