

9740

Diag. Cht. No. 5202-2

NOAA FORM 76-35A

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SURVEY

DESCRIPTIVE REPORT (HYDROGRAPHIC)

Type of Survey Hydrographic
Field No. FA-5-2-78
Office No..... H-9740

LOCALITY

State California
General Locality .. Pierpont Bay
Locality Ventura Harbor

1978

CHIEF OF PARTY
B.I. Williams

LIBRARY & ARCHIVES

DATE June 7, 1979

9740
5202-2

*Area 5
chts*

*18020 no corr 5/1/80 GK
18022 no corr 5/1/80 GK
18720 Vopp lited
18725 / applied*

HYDROGRAPHIC TITLE SHEET

H-9740

INSTRUCTIONS - 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.

FA-5-2-78

State California

General locality Pierpont Bay

Locality Ventura Harbor

Scale 1:5000 Date of survey Feb 23 - Mar 8, 1978

Instructions dated 11 November 1977 Project No. OPR L100(411)

Vessel Fairweather launches FA-4 (2024) and FA-5 (2025)

Chief of party CDR B.I, Williams

Surveyed by LT. J.A. Withrow

Soundings taken by echo sounder, hand lead, pole _____

Graphic record scaled by Fairweather Personnel

Graphic record checked by Fairweather Personnel

Position verification by _____

Produced by Thelma O. Jones Automated plot by PMC Xynetics Plotter

Sounding Verification by Thelma O. Jones

Soundings in ~~fathoms~~ feet at ~~MLW~~ MLLW _____

REMARKS: The survey was run on GMT. The mean Longitude of the survey is

119°16'00". The field sheet is complete and ready for office verification.

Applied to stds 10/4/79
CAB

10 000 10 100 10 200

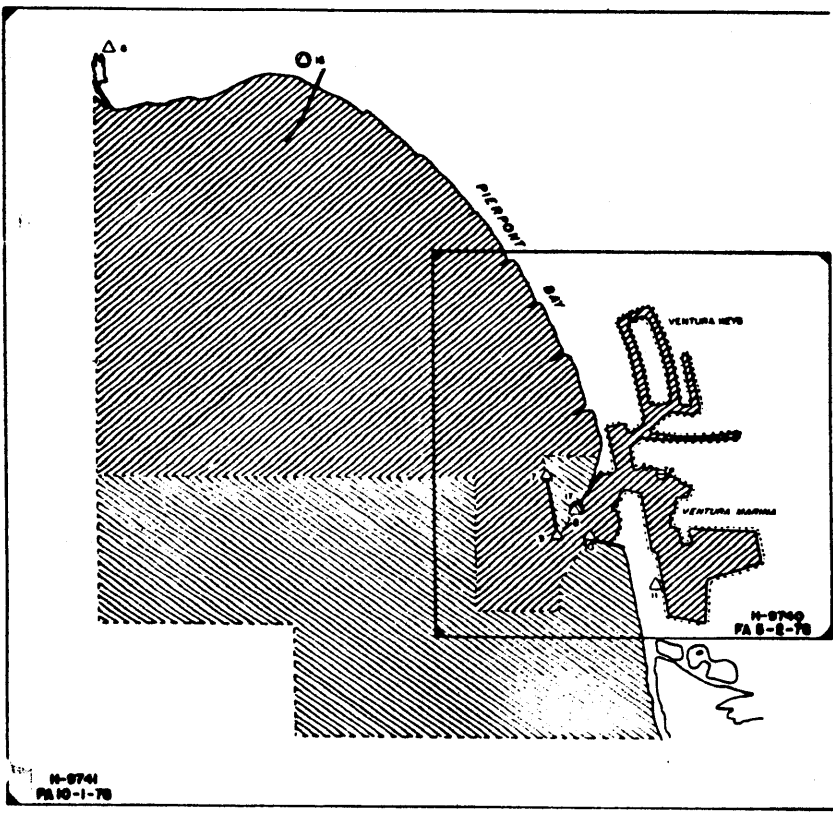
Δ:
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STATIONS RECOVERED

- 1 MART 4, 1970
- 2 PT&T MICROWAVE TOWER, 1976
- 3 VENTURA COUNTY COURTHOUSE CUPOLA, 1953
- 4 CROSS, 1951
- 5 VENTURA PADRE JUNIPERO SERRA MEMORIAL CROSS, 1953
- 6 BRIDGE, 1951
- 7 VENTURA MARINA BREAKWATER NORTH LIGHT, 1977
- 8 VENTURA MARINA NORTH JETTY LIGHT 7, 1976
- 9 VENTURA MARINA BREAKWATER SOUTH LIGHT 1, 1977
- 10 VENTURA MARINA SOUTH JETTY LIGHT 6, 1976
- 11 SANDY 3, 1959 $\frac{1}{4}$
- 12 SAN MIGUEL 4, 1951
- 13 RANCH, 1934
- 14 ANACAPA LIGHT, 1933
- 15 SCOOP, 1951



OPR-L100 (411)-FA-78
 PROGRESS SKETCH
 VENTURA CALIFORNIA
 NOAA SHIP FAIRWEATHER S-220
 CDR BRUCE I. WILLIAMS, CMDG
 SCALE OF NOS CHART 18725
 1978

	FEB	MARCH
LNM SOUNDING LINE	105.0	51.2
30 NM SOUNDING LINE	3.08	1.58
STD CAST (MARTEK)	0	1
BOTTOM SAMPLE	0	25

34'-14"-0"
 100'-10"-0"

- STA ESTABLISHED
- Δ STA RECOVERED
- ⊖ TIDE GAGE
- ⊙ MARTEK CAST
- FIELD EDIT

STATIONS ESTABLISHED

- 16 GEORGE, 1978 $\frac{1}{4}$
- 17 QUAY, 1978 $\frac{1}{4}$
- 18 SAN MIGUEL 4, RM 5, 1978 RAYONET

DESCRIPTIVE REPORT
NOAA SHIP FAIRWEATHER s220
OPR L100(411)-FA-78
SURVEY H-9740 (FA 5-2-78)

A. PROJECT

This survey was accomplished in accordance with Project Instructions OPR L100(411)-FA-78, Southern California Coast dated 11 November 1977, ~~change 1 dated 22 November 1977,~~ change 2 dated 16 December 1977, change 3 dated 19 December 1977, ~~change 4 dated 23 January 1978, change 5 dated 2 March 1978~~ and the PMC Oorder. ✓

B. AREA SURVEYED

The survey area consisted of all of Ventura Harbor and the offshore area out to a radius of 800 meters from the Ventura Harbor North Jetty Light. The survey was conducted between 23 February and 8 March 1978. ✓

C. SOUNDING VESSELS

Hydrography on this survey was accomplished by launches FA-4 (EDP #2024, S/N 1010) and FA-5 (EDP #2025, S/N 1001). Both launches were used to collect bottom samples. Range-azimuth control was used throughout the survey. ✓

D. SOUNDING EQUIPMENT

Both launches were equipped with Ross Fineline fathometers. A TRA corrector of 1.5 ft. was applied to all soundings. The TRA corrector was determined by direct measurement and verified by bar checks. See Report on Corrections to Echo Soundings, ✓

OPR-L100-FA-78. Bar checks were taken twice daily weather and equipment permitting.

SOUNDING INSTRUMENTS

<u>Vessel</u>	<u>Instrument</u>	<u>Model</u>	<u>S/N</u>	✓
FA-4	Ross Fineline	5000	1047	
FA-5	Ross Fineline	5000	1036	

The depths of soundings on this survey ranged from 1 to 43 feet. On Julián day 66 the fathometer in FA-4 did not digitize depths less than 6 feet because of a threshold problem.

Since the fathometer trace remained good the depths were scaled off of it. Because of stormy conditions during the time of the survey the fathograms show various sorts of interference, caused by debris in the water and turbulence. Turbulence was especially prevalent in the vicinity of the outer breakwater. The fathogram in FA-5 showed about a 3 ft. initial but the digitizer tracked well within this range. The initial did not vary much on either fathometer and if it did it was corrected immediately with annotations made to the TTY printout. ✓

No settlement or squat corrections were applied to the field sheet. MARTEC (S/N 357, calibrated Jan. 78) was used to determine sound velocity corrections. ✓

E. HYDROGRAPHIC SHEETS

One sheet was used with an origin at Lat. 34-14-22.0N, Long. 119-16-53.0W. The scale is 1:5000. The boat sheet was hand plotted using an Actor Protractor. A modified transverse mercator projection was used. ✓

F. CONTROL STATIONS

All control stations were located to third order class one specifications using the 1927 North American Datum. Refer to the Ventura/Santa Barbara Horizontal Control Report OPR L100-FA-78. No photogrammetrically located signals were used. The following stations were used: SANDY 3, QUAY RM1, QUAY 1978, and QUAY T-2 OFFSET. ✓

G. HYDROGRAPHIC POSITION CONTROL

Range-azimuth position control was used for all hydrography and bottom samples. Electronic ranging was accomplished with Motorola Miniranger III console number 703 and remote transponder 703. ✓

Calibration was accomplished using fixed calibration points located at the end of the harbormasters pier and dolphin F-4 in the Ventura Marina. Field calibration data was used to verify baseline calibration data and then baseline calibration values were used for plotting. Calibrations were conducted at the beginning and end of each day with the exception of Julian days 65 where no ending calibration was possible because of Onan failure, and Julian day 67 where there was no beginning calibration for the afternoon DP work because of Onan heating. In the latter instance DP's were taken at nearly the same time as the calibration data and the ending calibration was considered sufficient. ✓

On Julian day 67 there was a line run using dead reckoning control. The line (Positions #'s 6326-6327) was run on range with Pier F in Ventura Marina and timed using the event mark on the fathometer. Miniranger control could not be used ✓

because of ONAN failure. The line was well anotated for reconstruction.

H. SHORELINE

Shoreline details were obtained from 1:5000 enlargement of class three manuscripts TP 00925 and TP 00926, which include field edit conducted during the period of the survey. The shoreline area within the harbor consists entirely of riprap, making it impossible to sound the 0 fathom curve. The 0 fathom curve outside the harbor south of the jettys and a small beach area between the jettys was not adequately developed due to unfavorable surf conditions during the time of the survey. The 0 fathom curve should be taken from the manuscripts in these areas. To the north of the jettys is a sand trap for the harbor. Sounding was not completed in this area because of extensive shoaling and very hazardous surf conditions. It is recommended that this area be labeled as a sand trap. *area was not sounded* ✓

I. CROSSLINES

Of the 25.2 miles of hydrography run, 3.0 miles or 12% were crosslines. Crossings were within one foot except just inside the harbor entrance where the maximum discrepancy was 2 ft. This discrepancy was due to sharp bottom relief in the area. ✓

J. JUNCTIONS

This survey junctions with survey H-9741 (FA 10-1-78) to the west and is surrounded by shore on all other sides. It junctions with H-9741 to within ~~one foot~~ ^{two feet}. Also, H-9725, (1:20,000, 1977) ✓

K. COMPARISON WITH PRIOR SURVEYS

↙ Junctional survey, not a prior survey

Survey H-9725 (1:20,000;1977) has only two lines that correspond with this survey. These lines compare within 2 feet except near the harbor entrance. In this area there are discrepancies of up to ^{30'}~~15~~ feet. Discussions with the Ventura Harbor Department indicate that extensive shoaling occurred around the harbor entrance during the January 1978 storms. There was considerable sediment outflow from the Santa Clara River during the storms that occurred during the present survey which lends credibility to this assumption. The following are significant discrepancies noted:

See Sec. VI,
Paragraph
2 of V.R.

<u>LAT</u>	<u>LONG</u>	<u>H-9740</u>	<u>H-9725</u>	<u>DIFFERENCE</u>
34-14-48	119-16-15	17ft	32ft	15ft
34-14-43	119-16-18	26	21	4

Comparison with H-5419 (1:5000;1933) was possible only in the vicinity of LAT 34-15-15 N LONG 119-16-30 W. In this area the survey compares within ⁵~~7~~ feet. Survey H-5419 was completed prior to the construction of Ventura Harbor. ✓

Comparison with H-5420 (1:10,000;1933) was not useful east of Longitude 119-16-25 W because the harbor had not yet been constructed. West of this longitude the survey compares within one foot. ✓

PSR ITEMS 12 & 13. Both items were wire dragged to 27 feet on Julian day 76 with negative results. Wire drag data was submitted with FA 10-1-78 (H-9741). Additionally both National Park and Harbor Department personnel state that extensive investigations of the area using standard search techniques, divers and underwater television have failed to turn up any evidence of the wrecks. It is recommended that the wrecks be deleted from the chart. ~~Cancel~~ RWD 11/79

why not to 32 ft?

Refer to H-9741 for disposition of these items

JPS

PSR ITEM 14. The entire area was sounded at 10 meter line spacing with no suspicious soundings. Based on this and the report that the ruins had been removed, it is recommended that the item be deleted from the chart.

Chart letter C-047 (1973)

L. COMPARISON WITH THE CHART

This survey does not compare well with NOAA Chart 18725 (Ventura insert, 1:20,000, 16th ed. Dec. 10/77). There are discrepancies from 1 to 11 feet over the entire area of the survey. There is insufficient data available concerning the charted information to allow resolution of the discrepancy.

Chart depths as shown on the present survey

M. ADEQUACY OF THE SURVEY

The survey is complete and adequate to supercede all prior surveys. The shoreline work outside the harbor was not completed due to unfavorable surf conditions.

✓

N. AIDS TO NAVIGATION

All aids to navigation were located as listed in the 1978 Coast Guard Light List with the ~~with the~~ exception of buoys 4, 5 and 12. Buoys 4 and 5 had been carried away in the January storms and not replaced. Red nun buoy #12 was not listed and is located at position LAT 34-14-56.9 N, LONG 119-15-55.1 W.

See addendum on page 10 of D.R.

O. STATISTICS

<u>Vessel</u>	<u>Positions</u>	<u>Hydrography (nm)</u>	<u>Area (sq mi)</u>
FA-4	21	0.5	.06
FA-5	405	24.7	.50

✓

Total Area	.56 sq mi
Total Bottom Samples	6
Total Martec Casts	1
Tide Stations	1

P. MISCELLANEOUS

Greenwich Mean Time (+8) was used throughout the survey. Velocity correctors were not applied to the final plot of the field sheet. Bar checks were made except when impractical.

Ventura Harbor was constructed by first digging the harbor and then flooding it. All shoreline within the harbor is made up of steeply sloping riprap. The area east of the outer breakwater and north of the north jetty is designated as a sand trap. As such it fills and deepens in an irregular manner. The surf in this area is very hazardous because of reflected wave action.

There is a small beach area immediately east of the South Jetty Light. The area between the South Jetty Light and the southern end of this beach area is silting in. The lack of previous data outside of the chart makes the estimate of the amount of silting impossible.

Discussions with the Ventura Harbor Department indicated that the sand shoal between the North and South Jetty Lights was recently formed during the January 1978 storms. This shoal appeared to be stable and likely to remain until they dredge it out

The right side of the channel returning from sea into buoy #12 was showing signs of silting in. This shoaling was particularly extensive around buoys 10 and 12

The storm drain (Arundell Barranca) on the right side of the channel into Ventura Keys is not navigable as indicated on the chart. The area at the mouth of this storm drain is heavily silted in along with the area immediately northeast of the drain. During the time of hydrography a dragline was noticed in this area clearing stormdrain debris from the bottom of the channel. ✓

The north end of the harbor (vicinity of LAT 34-15-10, LONG 119-16-02) shows a tendency to collect debris from the storm drain in the channel to Ventura Keys and from the harbor entrance. This could be the reason why the present survey shows shoaler soundings in this area than indicated on the chart. ✓

Q. Recommendations

This survey is complete and ready for office verification.

The Ventura Harbor Department is trying to make arrangements to have the sand shoal across the harbor entrance dredged as soon as possible. They are also considering installation of an automatic dredging system in the sand trap. Considerable expansion of berthing and pier facilities is planned and scheduled to start this year. The proposed plan is enclosed with the data for Julian day 65. Not all of the plan is approved or funded yet so some aspects of the plan may not be accomplished. ✓

R. AUTOMATED DATA PROCESSING

Range-azimuth data was collected on FA-5 by an ASI Logger and on FA-4 by PDP 8e computer using program FA 181. Program RK 330 ✓

Reformat and Data Check, dated 5 May 1976 was used to reformat all raw data. The data was plotted using programs RK 212 Visual Station Table Load and Plot dated 1 April 1974 and program RK 216 Visual Stations and Sounding Plot dated 5 February 1976. The field sheet was constructed on the ships hydroplot system using RK 201, Grid Signal and Lattice Plot dated 18 April 1975.

S. REFERENCES TO REPORTS

FIELD EDIT REPORT OPR L100-FA-78 (VENTURA)
HORIZONTAL CONTROL REPORT OPR L100-FA-78
ELECTRONIC SYSTEMS CALIBRATION REPORT OPR L100-FA-78
REPORT ON CORRECTIONS TO ECHO SOUNDINGS OPR L100-FA-78

Submitted by,

John A. Withrow

John A. Withrow, LT, NOAA

ADDENDUM
TO FA 5-2-78

During clean up field edit work on Julian date 107, the following items were noted:

1. Buoys #4 and #5 had been replaced. They were positioned as follows by sextants:

<u>Buoy</u>	<u>Latitude</u>	<u>Longitude</u>	
<i>Red N</i> #4	34°-14'-42.2"	119°-16'-15.4"	✓
<i>BK C</i> #5	34°-14'-48.4"	119°-16'-15.6"	

2. Discussions with Ventura Marina personnel indicated that two new piers would be installed prior to the end of April 1978 *where?* ✓

3. Discussions with Ventura Harbormaster indicated that the harbor entrance is to be dredged by the end of April 1978. ✓

Prior to the printing of this survey it is recommended that the harbormaster be contacted for any recent changes. His name and address are: ✓

*Pre-bridge Oct '80
112103*

Michael D. Kelley
Ventura Port District
P.O. Box 1107
Ventura, California 93001
Phone # (805) 642-8618

John A. Withrow
John A. Withrow, LT, NOAA

APPROVAL SHEET

FIELD NUMBER FA-5-2-78

REGISTER NUMBER H-9740

This fieldsheet and all accompanying records are hereby approved.
This survey was conducted under my supervision and the survey
is complete and adequate for charting purposes.

Bruce I. Williams

CDR Bruce I. Williams

Commanding Officer

NOAA Ship FAIRWEATHER s220

Velocity Table
Ventura, Calif.
Sound Velocity Corrector Abstract

The following sound velocity correctors are to be applied to all soundings in feet from a fathometer on survey FA-5-2-78 (H-9740)

Depth in Feet	Corrector (Feet)
0.0 - 4.5	+ 0.0
4.6 - 11.3	0.2
11.4 - 18.0	0.4
18.1 - 24.9	0.6
25.0 - 31.8	0.8
31.9 - 35.0	1.0
35.1 - 44.9	1.2
45.0 - 51.5	1.4

DESCRIPTION OF STATIONS

H-9740

QUAY 1978 - This station is located at the end of the North Jetty at the base of the North Jetty Light. It provided good electronic control over the entire offshore area and the harbor entrance. The only obstruction over the area described was the North Jetty Light whose effect was reduced to a small pipe diameter by proper setup.

QUAY T-2 OFFSET - This station is located 5.4 meters NE of QUAY 1978 on the North Jetty. It was used strictly as a visual station. It provided good visibility over the offshore area and the entrance of the harbor. The only obstruction was the North Jetty Light which was minimal.

QUAY RM 1 - This station was used as both a visual and electronic station. It is located on a sandy mound in the middle of a picnic area across the harbor from the harbormasters office. It had good visibility of the harbor entrance, inner harbor including the main channel into Ventura Keys. It did not see into Ventura Keys or Ventura Marina.

SANDY 3 1959 - This station was used for both electronic and visual control. It was located 15 meters back from the western edge of the marina and halfway between the Ventura Yacht Club and the southern end of the marina. It had good visibility into the Ventura Marina.

SUMMARY OF MINIRANGER SERIAL NUMBERS AND TRANSPONDER LOCATIONS

FIELD: FA-5-2-78

JULIAN DAY	LAUNCH	M/R CONSOLE	TRANSPONDER	TRANSPONDER LOCATION
54-61	2025	703	703	QUAY
62	2025	703	703	SANDY 1959
65-66	2025-2024	703	703	QUAY RMI
67	2025	703	703	SANDY 1959

FIELD: FA-5-3-78

JULIAN DAY	LAUNCH	M/R CONSOLE	TRANSPONDER	TRANSPONDER LOCATION
73-88	2025	703	703	DIBBLEE III
090	2023	702	702	MARY
093	2025	703	703	BEND
095-096	2025	703	702	PIER E, 1978
103-104	2024	701	702	MARY
107	2025	703	702	RANGER
108	2025	703	701,704	QUEEN

FIELD: FA-10-1-78

JULIAN DAY	LAUNCH	M/R CONSOLE	TRANSPONDER	TRANSPONDER LOCATION
053	2024	703	701/702	GEORGE/QUAY
054-058	2023	702	701/702	GEORGE/QUAY

VENTURA AREA - OPR - L100 - FA -78 SIGNAL TAPE

~~VENTURA~~

~~P.T. & T. MICROWAVE TOWER 1976~~

~~001 1 34 17 46932 119 16 21333 139 0000 000000~~

Not used

~~VENTURA PADRE JUNIPERO SERRA MEMORIAL CROSS 1959~~

~~002 1 34 17 04531 119 17 42071 139 0115 000000~~

Not used

~~VENTURA COUNTY COURTHOUSE COUPLA 1953~~

~~003 1 34 16 56630 119 17 31757 139 0000 000000~~

Not used

~~VENTURA MARINA BREAKWATER NORTH LIGHT 1977~~

~~005 1 34 15 00608 119 16 01567 139 0000 000000~~

Not used

~~VENTURA MARINA NORTH JETTY LIGHT #7 1977~~

~~006 1 34 14 50018 119 16 10095 139 0000 000000~~

Not used

~~VENTURA MARINA BREAKWATER SOUTH LIGHT #1 1977~~

~~007 2 34 14 46890 119 16 18264 139 0000 000000~~

Not used

~~VENTURA MARINA SOUTH JETTY LIGHT #6 1977~~

~~008 7 34 14 46369 119 16 09509 139 0000 000000~~

~~GEORGE (ESTB. 1978)~~

~~010 1 34 16 34180 119 17 07946 250 0015 000000~~

Not used

QUAY (ESTB. 1978)

020 2 34 14 52037 119 16 13405 250 0003 000000

QUAY T-2 OFFSET

021 4 34 14 52176 119 16 13264 250 0003 000000

SANDY 3 1959

030 7 34 14 36003 119 15 51145 250 0004 000000

QUAY RM 1 (ESTB. 1978)

040 3 34 15 02501 119 16 03960 250 0004 000000

~~ANACAPA ISLAND GREEN RAYDIST (ESTB. 1978)~~

~~101 7 34 00 57581 119 01 45954 250 0049 330040~~

~~SAN MIGUEL 4 RM 5 (ESTB. 1978)~~

~~102 7 04 01 50011 120 01 45000 250 0250 330040~~

CALIBRATION DISTANCES

PR-WRQJ 1-- 700-002

STQTY-: Q: HARBORMASTER DOCK Calib. Point T- STQTYØN B: QUAY

LATITUDE	LØNGITUDE	AZIMUTH	DISTANCE
34 15 4.82142	119 15 58.12622 F	44 47 8.37732	554.9824
34 14 52.03733	119 16 13.40514 B	224 46 59.77836	

WU-TETIC INVERSE CØMPUTATIØN

PRØGRAM NØ. 700-002

STATIØN A: HARBORMASTER DOCK Calib. Point Ø STATIØN B: QUAY RM 1

LATITUDE	LØNGITUDE	AZIMUTH	DISTANCE
34 15 4.82142	119 15 58.12622 F	64 38 28.26730	165.8748
34 15 2.51574	119 16 3.98425 B	244 38 24.97029	

WU-DETIC INVERSE CØMPUTATIØN

PRØGRAM NØ. 700-002

STATIØN A: DOLPHIN F-4 Calib. Point TØ STATIØN B: SANDY 3

LATITUDE	LØNGITUDE	AZIMUTH	DISTANCE
34 14 39.45390	119 15 42.98550 F	63 43.59900	234.3234
34 14 36.00270	119 15 51.14530 B	243 39.00735	

FIELD TIDE NOTE
OPR-L100-FA-78
FA 5-2-78 (H-9740)
FA 10-1-78 (H-9741)

Field tide reductions were based on Los Angeles, outer harbor tides, corrected to Ventura, and were interpolated by PDP 8/e computer utilizing program AM500. Times of both predicted and recorded tides are on GMT.

In accordance with change No. 2, to the project instructions, the tide gage specified outside Ventura harbor at Lat. $34^{\circ}16.0'N$ Long. $119^{\circ}17.0'W$ was deleted. The requirement for a staff or gage in the upper Ventura Keys was also deleted following a telephone conversation with C331 on 15 February 1978.

Gage location and operation period is as follows:

<u>SITE</u>	<u>LOCATION</u>	<u>PERIOD</u>
VENTURA HARBOR 941-1165	$34^{\circ}15'00.0''N$ $119^{\circ}15'48.6''W$	15 February-9 March 1978 (22 days)

VENTURA HARBOR

Gage s/n 67A10266, a 0-20 foot Bristol-Bubbler, was installed on 15 February 1978. The gage operated well, with only minor time difference, until removal on 9 March 1978. A staff-gage comparison was done, at 12 min. intervals, on 24 February for a period of 7 hours 12 mins.

During the entire period of operation a surge of up to 1 foot in amplitude is apparent on the marigram. There is also evidence of a seiche, with a 30 min. period, throughout the entire period of operation.

The gage reads 0.96 feet greater than the tide staff.

LEVELS

The tide staff was leveled to three recoverable points on installation and upon removal. There was no datum shift in evidence.

ZONING

It is recommended that the Ventura Harbor gage be used, for tidal reduction on FA-5-2-78 (H-9740), excluding the area seaward of a line connecting the north jetty at Lat. $34^{\circ}14'52.018''N$ Long. $119^{\circ}16'13.395''W$ and the south jetty at Lat. $34^{\circ}14'46.369''N$ Long. $119^{\circ}16'09.509''W$.

The standard tide gage at RINCON ISLAND Lat. $34^{\circ}20'54''N$ Long. $119^{\circ}26'49''W$ should be used for tidal reductions on the remaining section of FA 5-2-78 (H-9740) and on the entire survey area of FA 10-1-78 (H-9741).

U.S. DEPARTMENT OF COMMERCE
November 9, 1978 NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SURVEY

TIDE NOTE FOR HYDROGRAPHIC SHEET

Processing Division: Pacific Marine Center:

Hourly heights are approved for Form 362

Tide Station Used (NOAA Form 77-12): 941-1165 Ventura Harbor, CA
941-1340 Santa Barbara, CA

Period: February 23-March 8, 1978

HYDROGRAPHIC SHEET: H-9740

OPR: L100

Locality: Ventura Harbor, California

Plane of reference (mean lower low water): 0.7 ft. - Ventura Harbor
3.10 ft. - Santa Barba

Height of Mean High Water above Plane of Reference is
4.8 ft. - Ventura Harbor, California 4.6 ft. - Santa Barbara

Remarks: Recommended zoning:

1. In Ventura Harbor, inside a line extending between the ends of the north jetty and south jetty zone direct on Ventura Harbor.
2. Outside of this area zone on Santa Barbara applying -10 minute time correction.

NOTE: This supersedes the tide note dated July 13, 1978.

Don M. Spillman 11/13/78
85 Chief, Tides Branch

GEOGRAPHIC NAMES

H-9740

Name on Survey	<div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">A ON CHART NO.</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">B ON PREVIOUS SURVEY NO.</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">C ON U.S. QUADRANGLE MAPS</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">D FROM LOCAL INFORMATION</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">E ON LOCAL MAPS</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">F P.O. GUIDE OR MAP</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">G RAND McNALLY ATLAS</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">H U.S. LIGHT LIST</div> </div>										
	Arundell Barranca	X	✓								
Pierpont Bay	X										2
Ventura										X	3
Ventura Keys	X	✓									4
Ventura Marina	X	✓									5
PIERPONT BAY (Ppl)	✓										6
											7
											8
											9
											10
											11
											12
											13
											14
											15
											16
											17
											18
										Approved:	19
										<i>Chas. E. Harrington</i>	20
										Chief Geographer - C 3x5	21
										31 JULY 1979	22
											23
											24
											25

APPROVAL SHEET

FOR

SURVEY H- 9740

- A. All revisions and additions made on the smooth sheet during verification have been entered in the magnetic tape records for this survey. A new final position print-out has been made. A new final sounding print-out has been made.
- B. The verified smooth sheet has been inspected, is complete, and meets the requirements of the Hydrographic Manual. Exceptions are listed in the verifier's report.

Date: 3 May 1979

Signed: _____

Title: Chief, Verification Branch

HYDROGRAPHIC SURVEY STATISTICS

H-9740

RECORDS ACCOMPANYING SURVEY: To be completed when survey is registered.

RECORD DESCRIPTION		AMOUNT	RECORD DESCRIPTION		AMOUNT	
SMOOTH SHEET		1	BOAT SHEETS & PRELIMINARY OVERLAYS		2 & 4	
DESCRIPTIVE REPORT		1	SMOOTH OVERLAYS: POS. ARC, EXCESS		4	
DESCRIP- TION	DEPTH RECORDS	HORIZ. CONT. RECORDS	PRINTOUTS	TAPE ROLLS	PUNCHED CARDS	ABSTRACTS/ SOURCE DOCUMENTS
ENVELOPES			1-Smooth			
CAHIERS	1 - with printouts & misc. data.					
VOLUMES	1					
BOXES						

T-SHEET PRINTS (List) TP-00925 & TP-00926

SPECIAL REPORTS (List)

OFFICE PROCESSING ACTIVITIES

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

PROCESSING ACTIVITY	AMOUNTS		
	PRE- VERIFICATION	VERIFICATION	TOTALS
POSITIONS ON SHEET			434
POSITIONS CHECKED		434	
POSITIONS REVISED		1532	
SOUNDINGS REVISED		83	
SOUNDINGS ERRONEOUSLY SPACED			
SIGNALS (CONTROL) ERRONEOUSLY PLOTTED			
	TIME - HOURS		
CRITIQUE OF FIELD DATA PACKAGE (PRE-VERIFICATION)	3		
VERIFICATION OF CONTROL		12	
VERIFICATION OF POSITIONS		76	
VERIFICATION OF SOUNDINGS		88	
COMPILATION OF SMOOTH SHEET		22	
APPLICATION OF TOPOGRAPHY		34	
APPLICATION OF PHOTOBATHYMETRY			
JUNCTIONS		8	
COMPARISON WITH PRIOR SURVEYS & CHARTS		16	
VERIFIER'S REPORT		42	
OTHER		10	
TOTALS	3	308	
Pre-Verification by James S. Green	Beginning Date 26 May 1978	Ending Date 26 May 1978	
Verification by Thelma O. Jones/Felipe L. Rosario	Beginning Date 25 Sept 1978	Ending Date 26 Apr 1979	
Verification Check by A.E. Eichelberger/James S. Green	Time (Hours) 28	Date 3 May 1979	
Marine Center Inspection by HIT	Time (Hours) 12	Date 15 May 1979	
Quality Control Inspection by F.P. SAULSBURY	Time (Hours) 33	Date 7-27-79	
Requirements Evaluation by J. Baumgardner	Time (Hours) 4	Date 9/6/79	

J. Myers 4 hrs 8/21/79

The Computer and Excess Sounding cards for this survey have not been corrected to reflect the changes made to the Computer Card and Excess Card Printouts at this time of the review.

When the cards have been updated to reflect the final results of the survey the following shall be completed:

CARDS CORRECTED

DATE _____ TIME REQ'D _____ INITIALS _____

REMARKS:

Reg. No. _____

The magnetic tape containing the data for this survey has not been corrected to reflect the changes made during evaluation and review.

When the magnetic tape has been updated to reflect the final results of the survey, the following shall be completed:

MAGNETIC TAPE CORRECTED

DATE _____ TIME REQ'D. _____ INITIALS _____

REMARKS:

PACIFIC MARINE CENTER
VERIFIER'S REPORT

REGISTRY NO: H-9740

FIELD NO: FA-5-2-78

California, Pierpont Bay, Ventura Harbor

SURVEYED: 23 February - 8 March 1978

SCALE: 1:5000

PROJECT NO: OPR L100(411)

SOUNDINGS: Ross 5000
Fineline Fathometer

CONTROL: Range-Azimuth
Mini Ranger

Chief of Party.....Cdr. B.I. Williams
Surveyed by.....Lt. J.A. Withrow

Automated plot by.....PMC Xynetics Plotter
Verified by.....Thelma O. Jones
26 April 1979

I. INTRODUCTION

H-9740 is a basic survey conducted by NOAA Ship FAIRWEATHER from 23 February to 8 March 1978. The area surveyed consisted of Ventura Harbor and the offshore area out to a radius of approximately 800 meters from the Ventura Marina North Jetty Light 7.

Field tide reductions were based on Los Angeles outer harbor tides, corrected to Ventura. In Ventura Harbor inside a line connecting the North and South jetty light, approved tides from Ventura Harbor tide gage were used for reduction of smooth sheet soundings. The area outside of the jettys were reduced using approved tidal data from the Santa Barbara tide gage.

Projection parameters used to plot the field sheets have been revised to center the hydrography on the smooth sheet. Parameters used by PMC are listed in the Sounding Printout. All correctors used to plot and reduce soundings are listed in the Sounding Printout.

The electronic corrector tape submitted from the field did not correctly portray the baseline calibrations, and were corrected during verification.

Two buoys, N "4" and C "5" (pos. #6543 and 6544) were not logged on the raw data tapes, and were transferred from the field sheet. ✓

also G.P.'S on pg. 10 of D.R.

II. CONTROL AND SHORELINE

Horizontal control is adequately described in Section F of the Descriptive Report.

All shoreline features were taken from the following Class I unreviewed photogrammetric manuscripts; with their respective dates of photography and field edit:

TP-00925	1975-76, 1977-78
TP-00926	1975-76, 1977-78

The following items do not appear on the manuscripts and were transferred from the field sheet.

1. Ramp at latitude $34^{\circ}15'15''$ N, longitude $119^{\circ}15'38''$ W. ✓
2. Subm. storm drain at latitude $34^{\circ}14'43.5''$ N, longitude $119^{\circ}15'26.5''$ W. ✓
3. Breakers and surf zones were also transferred from the field sheet. ✓

III. HYDROGRAPHY

The maximum difference in crossline sounding agreement was within 2 feet throughout the survey.

Standard depth curves could be adequately drawn, with the exception of the zero foot curve. This was due to the riprap shoreline and surf conditions during the time of the survey.

A supplementary 36 foot curve was added to the smooth sheet to conform with Chart 18725. ✓

The main scheme hydrography is adequate to delineate bottom configuration and to determine least depths.

There are 6 bottom samples in this survey.

IV. CONDITION OF SURVEY

With the exception of the following items, the hydrographic records, overlays, smooth sheet and reports are adequate and conform to the requirements of the Hydrographic Manual:

- a. Duplicate position numbers were used. (6077, 6241-6242).
- b. Soundings were not run far enough inshore to junction with the adjoining surveys. Although the field sheet delineates a breaker and surf zone, a line of soundings was run on H-9741, 1978. Considering the fact that this is a junction area, the verifier feels that a greater effort should have been made to effect a junction. ✓
- c. The Descriptive Report was not assembled according to requirements of the Hydrographic Manual. ✓

V. JUNCTIONS

H-9740 junctions with the following contemporary surveys:

H-9741 (1978) to the North, West and South
H-9725 (1977) North and South shoreline area

The offshore junction with H-9741 was within 2 feet in depths of 30-40 feet. Due to surf and breaker zone in the inshore junction area, there is not enough soundings to effect a junction with H-9741.

There are only two lines on H-9725 that fall within this survey area. The south line of soundings was transferred to the smooth sheet. Sounding difference was 6 and 7 feet, in the junction area. The depth curve on H-9725 will have to be adjusted to junction with this survey. The north line of soundings was not transferred because there are soundings of 18, 24, and 30 feet that would now be in a shoal area.

VI. COMPARISON WITH PRIOR SURVEYS

H-5419 (1933) 1:5000
H-5420 (1933) 1:20000

Comparison of soundings on H-9740 and H-5419 show a difference of 1 to 5 feet. The shoreline has moved westerly approximately 100 meters, probably due to natural accretion of sand. Soundings on H-5420 compared within a foot. Both surveys were completed before the construction of Ventura Harbor.

H-9725 (1977) 1:20,000, as listed in the Descriptive Report is not a prior, but a contemporary junction survey. The verifier recommends the entire paragraph dealing with H-9725 as a prior, be disregarded.

H-9740 is adequate to supersede all priors in areas of common hydrography.

VII. COMPARISON WITH CHART 18725 (16th Edition, Dec. 10, 1977)

a. Hydrography

The source for charted soundings could not be identified. Sounding discrepancies ranged from 1 to 15 feet. This discrepancy is probably due to dredging operations and the heavy rains during January 1978.

There is no mention in the Descriptive Report of the pipeline originating at the mooring buoys in the vicinity of latitude $34^{\circ}14'45''N$, longitude $119^{\circ}16'45''W$. Recommend the pipeline continue to be charted as shown. *Also no mention of the overhead cable in the vicinity of lat $34^{\circ}15.00'$, lon $119^{\circ}15.96'$*

There is no evidence on the Class I manuscripts or in the hydro-graphic data, of the charted ruins along the shoreline between latitude $34^{\circ}15'30''-34^{\circ}15'45''N$, longitude $119^{\circ}16'15''-119^{\circ}16'30''W$. Recommend the ruins continue to be charted as shown. *OFF SURVEY LIMITS*

The storm drain (Arundell Barranca) near Ventura Keys is reported as being non-navigable, and not as shown on the chart. *concur*
Recommend the drain be charted as shown on the smooth sheet and TP-00926.

PSR Item 12 and 13 *PSR-Item 12 - sunken wrk, most visible, charted from N.M. No 17 of 1969 in lat. 34°14.62', long. 119°16.57'*
PSR Item 13 - subm obstrs, rep. P.A., charted from N.M. 26 of 1969 in vicinity of lat. 34°14.57', long. 119°16.60'

All hydrographic data for disposition of these items was incorporated in the data for H-9741.

PSR Item 14

This item has not been resolved conclusively. 10 meter spaced lines were not run over the entire area in question. The use of divers or wire sweep would have been more effective. Recommend the ruins continue to be charted as shown, unless more recent information is available to the chart compiler. *do not concur, See R.C. Report*

The following uncharted features are depicted on the Class I manuscripts:

- 2 piles @ latitude 34°15'19"N, longitude 119°15'47"W ✓
- 2 piles @ latitude 34°15'17"N, longitude 119°15'51"W ✓
- 5 piles @ latitude 34°15'01.5"N, longitude 119°15'53"W ✓
- pier @ latitude 34°14'59"N, longitude 119°15'46.5"W ✓
- revetment @ latitude 34°14'54"N, longitude 119°16'03"W ✓
(seawall)

b. Aids to Navigation

Charted aids to navigation adequately mark ^{the} features for which they are intended.

The following are uncharted buoys located by the present survey:

- Red nun buoy #4 @ latitude 34°14'42"N, longitude 119°16'15"W ✓
- Black can buoy #5 @ latitude 34°14'48"N, longitude 119°16'16"W ✓
- Black can buoy #9 @ latitude 34°15'00"N, longitude 119°16'03"W ✓
- Red nun buoy #8 @ latitude 34°14'51"N, longitude 119°16'07"W ✓
- Red nun buoy #10 @ latitude 34°14'59"N, longitude 119°16'00"W ✓
- Red nun buoy #12 @ latitude 34°14'57"N, longitude 119°15'55"W ✓

Recommend buoys be charted as shown on smooth sheet. *concur*

This survey is adequate to supersede charted hydrography of common areas.

VIII. COMPLIANCE WITH PROJECT INSTRUCTIONS

This survey adequately complies with the Project Instructions dated 11 November 1977 and Change No. 2 dated 16 December 1977.

IX. ADDITIONAL FIELD WORK

This is a good basic survey. No additional field work is recommended.

Respectfully submitted,

Thelma O. Jones

Thelma O. Jones
Cartographic Technician
26 April 1979

Examined and approved,

James S. Green
Chief, Verification Branch



U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
 NATIONAL OCEAN SURVEY
 Pacific Marine Center
 1801 Fairview Avenue East
 Seattle, Washington 98102

DATE : May 21, 1979
 TO : OA/CPM - Eugene A. Taylor *E.A.T.*
 FROM : *Larry M. McDuck for,*
 OA/CPM3 - Glen R. Schaefer
 SUBJECT: PMC Hydrographic Inspection Team
 Report for Survey H-9740

This survey is a basic hydrographic survey of Ventura Harbor, California. This survey was conducted by NOAA Ship FAIRWEATHER in 1978 in accordance with Project Instructions OPR-L100-FA-78 dated 11 November 1977, and Change Nos. 2 and 3 dated 16 December 1977 and December 1977, respectively.

Several deficiencies were noted:

1. A series of closely spaced sounding lines run parallel to the axis of the channel should have been run to develop the channel as described in paragraph 4.3.5.4 of the Hydrographic Manual. *concur*
2. PSR Item 14 was not disposed of adequately. A series of sounding lines at 10 meter spacing with a narrow beam fathometer is not adequate to disprove the existence of submerged piles. A wire drag or well documented diver investigation would have been sufficient. *do not concur, See R.C. Report*
3. The Project Instructions specified that a tide gage be installed in the upper Ventura Keys but was subsequently deleted by telephone conversation with C331. This should have been documented in a change to Project Instructions by C351. ✓

The inspection team finds H-9740 to be a good basic survey adequate to supersede common areas of prior surveys and charted hydrography. Administrative approval is recommended. ✓

David MacFarland
 David MacFarland

William A. Wert
 William A. Wert

James W. Steensland
 James W. Steensland

Stanley H. Otsubo
 Stanley H. Otsubo



ADMINISTRATIVE APPROVAL
H-9740

The smooth sheet and reports of this survey have been examined and the survey is adequate for charting and to supersede common areas of prior surveys.



Eugene A. Taylor
Director
Pacific Marine Center

23 May 1979
Date



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SURVEY
Rockville, Md. 20852

OA/C352:FPS

July 27, 1979

TO: *R. H. Carstens*
R. H. Carstens
Acting Chief, Hydrographic Surveys Division

THRU: Chief, Quality Control Branch

FROM: *F. P. Saulsbury*
F. P. Saulsbury
Quality Evaluator

SUBJECT: Quality Control Report for H-9740 (1978), California, Pierpont Bay, Ventura Harbor

A quality control inspection of H-9740 was accomplished to monitor the survey for obvious deficiencies with respect to data acquisition, delineation of the bottom, determination of least depths, navigational hazards, junctions, sounding line crossings, shoreline transfer, smooth plotting, decisions and actions taken by the verifier, and the cartographic presentation of data. In general, it was found to conform to the National Ocean Survey's standards and requirements except as stated in the Verifier's Report, the HIT Report, and as follows:

1. Minor revisions to survey items are shown on the one-half scale copy of the survey furnished to the verifier.
2. The contemporary topographic surveys should be used for the chart compilation of piers, since the single line piers on the smooth sheet are sometimes fractionalized by plotted soundings and can be mistakenly interpreted as piers in ruins.
3. The junction on the west with H-9741 (1978) will be addressed in the inspection of that survey.

Junctional soundings from H-9725 (1977) in the inshore area north of the harbor entrance are superseded by present information because of changes in the area.

4. Charted controlling depth notes are generally obsolete and are superseded by depths shown on the present survey.
5. Presurvey Review Item 14--The ruins charted in the vicinity of latitude 34°14.7', longitude 119°15.5' in Ventura Marina originate

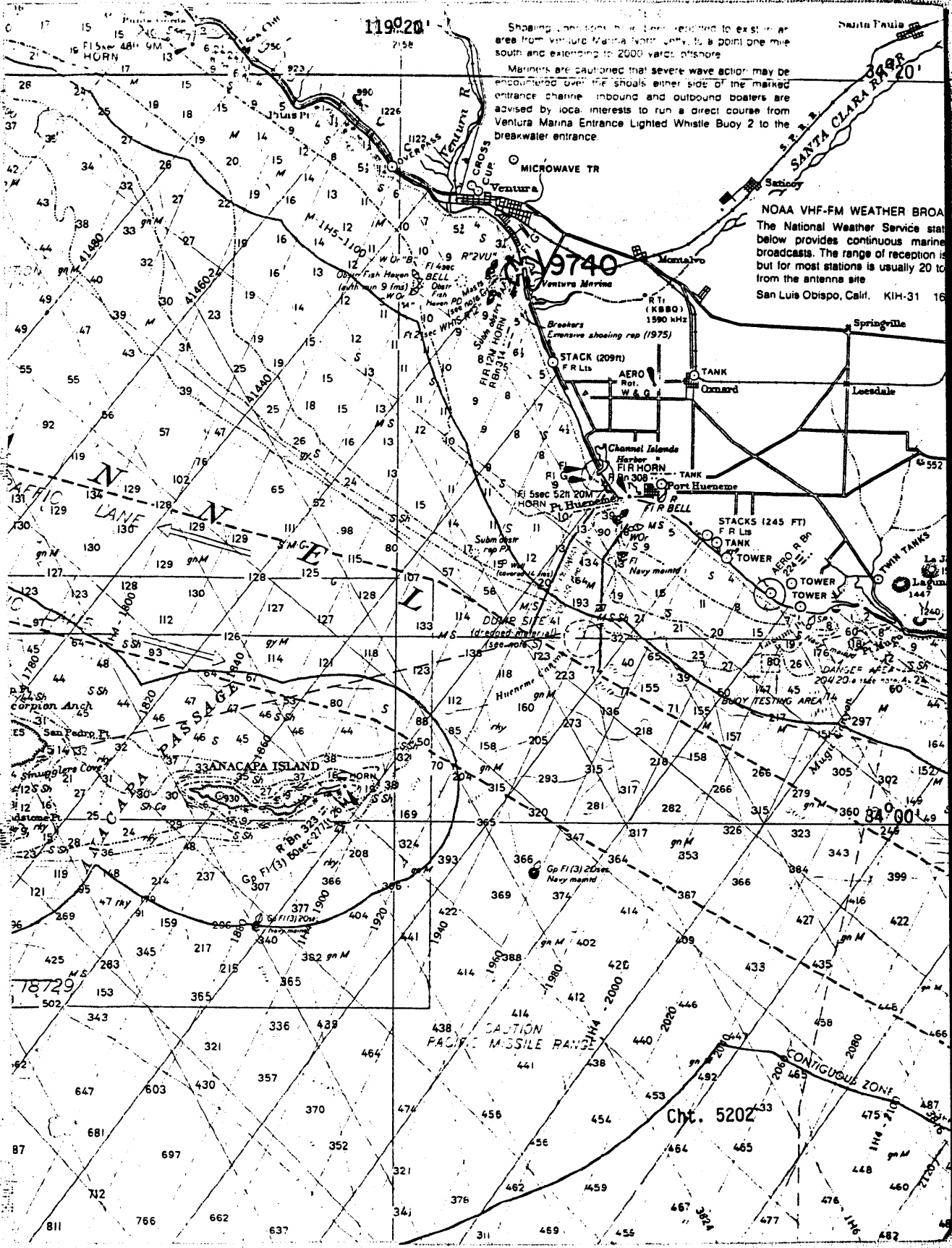


with Chart Letter 1597 of 1970. Chart Letter 1317 of 1973, a Coast Pilot field inspection, reports the ruins to have been removed. The 10-meter development of this area on the present survey, with negative results, is considered adequate to substantiate the reported removal of these ruins. The deletion of the charted ruins is recommended.

cc:

OA/C35

OA/C351



Shipping lanes shown have been reported to exist in an area from Ventura Marina north jetty to a point one mile south and extending to 2000 yards offshore.

Mariners are cautioned that severe wave action may be encountered over the shoals either side of the marked entrance channel. Inbound and outbound boaters are advised by local interests to run a direct course from Ventura Marina Entrance Lighted Whistle Buoy 2 to the breakwater entrance.

NOAA VHF-FM WEATHER BROADCAST

The National Weather Service station below provides continuous marine broadcasts. The range of reception is but for most stations is usually 20 miles from the antenna site.

San Luis Obispo, Calif. KIH-31 16

CAUTION PACIFIC MISSILE RANGE

Cht. 5202

CONTIGUOUS ZONE

