

FE 122

FE 122

Diagram No. 5101-3

NOAA FORM 76-35A

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

DESCRIPTIVE REPORT (HYDROGRAPHIC)

Type of Survey ... Field Examination

Field No.

Office No. FE-122

LOCALITY

State California

General Locality ... Outside Coast San Diego Bay

Locality

1954

CHIEF OF PARTY
C.A. George

LIBRARY & ARCHIVES

DATE May 3, 1954

☆ U.S. GOV. PRINTING OFFICE: 1976-669-441

NOTE: A new system for registering Field Examinations (FE's) was established in 1980. All FE's are now consecutively numbered as shown hereon. The date shown in the new format is the actual date of survey. This material was previously registered as;

FE No.1 1954

FE No. 1 1954

FE-122

Diag. Cht. No. 5101-3

Form 504 U. S. COAST AND GEODETIC SURVEY DEPARTMENT OF COMMERCE SPECIAL DESCRIPTIVE REPORT	
Type of Survey	HYDROGRAPHIC
Field No.	Office No. F.E.No. 1 (1954) Rec.
LOCALITY	
State	CALIFORNIA
General locality	OUTSIDE COAST, SAN DIEGO BAY
Locality	
19 54	
CHIEF OF PARTY C. A. GEORGE	
LIBRARY & ARCHIVES	
DATE	MAY 3 1954

B-1870-1 (1)

FE No. 1
1954

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

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.

REGISTER No. _____

Field No. F.E. No. 1 1954

State CALIFORNIA

General locality San Diego

Locality Outside Coast San Diego Bay

Scale 1/20,000 Date of survey 19 - 21 April 1954

Instructions dated 12 April 1954

Vessel West Coast Field Party

Chief of party C. A. George

Surveyed by West Coast Field Party Personnel

Soundings taken by ~~fathometer~~, graphic recorder, ~~hand lead~~, ~~wire~~

Fathograms scaled by D. W. I. & R. M. S.

Fathograms checked by R.M.S. & D.W.I.

Protracted by C.E. Pedersen

Soundings penciled by C.E. Pedersen

Soundings in ~~fathoms~~ feet at ~~MLW~~ MLLW and are true depths

REMARKS: _____

Smooth sheet rec'd 1/25/56

SPECIAL DESCRIPTIVE REPORT TO ACCOMPANY
RECONNAISSANCE HYDROGRAPHIC SURVEY
OUTSIDE COAST OF SOUTH SAN DIEGO BAY

April 1954

Chief of Party C. A. George
Scale of Survey 1:20,000

A. PROJECT:

1. Acting Director's letter 22/MEK, FP-West Coast, dated 12 April 1954; Subject "Surveys on Outside Coast - Project CS-366," to OinC, USC&GS West Coast Field Party.

B. SURVEY LIMITS AND DATES:

1. The limits of the survey are between the 10-fathom curve and the shoreline of the outside coast of South San Diego Bay. Field work completed April 19 - 21, 1954.

C. VESSELS AND EQUIPMENT:

1. A 36-foot, U. S. Navy Launch, LCPL No. 7 was used for all work.
2. The fathometer used was a model 808 J, No. 154 SPX. The project depth was from 3-feet to 60-feet.

D. TIDE STATION:

1. Predicted tides for Point Loma were computed from the 1954 Tide Tables and used for the reduction of soundings. The "Approximate Method" of constructing a tide curve was used after applying a - On 10m time correction and 0.9 ratio of range to the "San Diego" predicted tides. *Disregard above. Tide reducers were computed from hourly tide heights furnished by Washington. (See attached letter from OinC W. Coast field party.)*

E. SMOOTH SHEET:

1. The hydrography has ~~not~~ been smooth plotted.
2. The field work was plotted on a copy of Chart 5107 (San Diego Bay) Scale 1:20,000, a Mercator Projection.

982

F. CONTROL STATIONS:

1. Except for five (5) hydrographic stations, the positions of control stations were taken from the published list of Geographic Positions or from the 1954 field computations of Geographic Positions (West Coast Field Party). The data for locating the hydrographic stations are recorded in volume I ("a" day) of the Sounding Records.

2. Hydrographic stations MAG, LEO, IRK, and HOG have been identified on the aerial photographs, and positions can be obtained from the photogrammetric plot. Hydrographic station USE is not identified on the photographs.

G. SHORELINE AND TOPOGRAPHY:

all photographic surveys RS 499 (1950), RS-500 (1953) and RS 501 (1953)
1. The shoreline as it appears on ~~Chart 5107~~ was used. ~~No~~ changes were made.

2. The inshore hydrography was done at high water on 21 April 1954. Breakers prevented any closer approach to the beach other than that shown on the Boat Sheet.

3. Distances to the water line at the time of the hydrography was estimated at each position determination on the inshore lines. These estimations ranged between 35 and 60 meters.

H. SOUNDINGS:

1. All soundings were taken with a model 808 J portable fathometer No. 154 SPX calibrated at 800 fathoms per second.

2. Velocity corrections were determined from bar check comparisons with the fathometer. These corrections are entered in the record book.

I. CONTROL OF HYDROGRAPHY:

1. The hydrography was controlled by visual sextant fixes.

J. ADEQUACY OF SURVEY:

1. The survey is considered adequate in ~~lieu~~^{view} of the special instructions set forth in the Acting Director's letter listed under paragraph A of this report.

2. This is a reconnaissance survey and is not to be considered a complete survey.

K. CROSSLINES:

1. Crosslines compare favorably throughout the survey.

L. COMPARISON WITH PRIOR SURVEYS:

1. This survey has not been compared with prior surveys.

M. COMPARISON WITH CHART:

1. The chart was used as the boat sheet and comparisons are made directly on the sheet. Little change was noted in the location of the depth curves in the offshore area, however, in the inshore area, the 1954 soundings are considerably shoaler than the charted depths.

N. DANGERS AND SHOALS:

1. The only danger encountered in this survey was the wreck in the charted obstruction area at Lat. $32^{\circ} 38'.8$ Long. $117^{\circ} 09'.4$. The wreck was not found in its charted position, but an indication of it was believed to have been found 200 meters to the eastward. Time did not permit further developement of this area.

SEE
REVIEW

U. REMARKS:

The boat sheet of
This survey was plotted on a copy of 1:20,000 scale Chart 5107 as suggested in the Director's letter of 12 April 1954. The inshore area can be plotted on the 1:10,000 scale smooth sheet of South San Diego Bay if so desired. The signals used for control of this portion of the survey are common to both sheets.

FE 1, 1954

Roy M. Sylar
Roy M. Sylar
Supervisor, Cartographer

Approved & Forwarded

27 April 1954

C. A. George
C. A. George
CDR., USC&GS
OinC, West Coast Field Party

APR - 7 1954

22/MEK
FP-West Coast

7 April 1954

AIR MAIL

To: Comdr. Clarence A. George
OinC, USC&GS West Coast Field Party
P. O. Box 1429
San Diego 12, California

Subject: Hydrographic Surveys—Project CS-366

Your letter of 1 April 1954 states that the hydrographic survey of South San Diego Bay will be completed by 16 April, and it is inferred by this office that no surveys will have been made on the outside coast at the time the inside surveys are completed.

Prior to departure of the party from San Diego it is desired that sufficient hydrography be accomplished on the outside coast to delineate the 1-, 2-, and 3-fathom curves where they are near the high-water line and where practicable. Information is also desired that will permit correct charting of the low-water line.

Please furnish this office, via air mail, with an estimate of the date by which the hydrography mentioned in the paragraph above can be completed. In addition to this hydrography, a few sounding lines should be run through the remainder of the outside area in order that a comparison can be made between present depths and charted depths.

Arrangements will be made to have the launch shipped from San Francisco to Willapa Bay for arrival about 1 May. It is not desirable to delay the arrival of your party at Willapa Bay much later than 1 May.

(Signed) Robert W. Knox

Acting Director

cc. Supervisor, Western District
Supervisor, Southwestern District
Supervisor, Northwestern District
Chart Division ✓

MEMORANDUM TO SEATTLE PROCESSING OFFICE

RELATIVE TO RECONNAISSANCE SURVEY, OUTSIDE COAST, SAN DIEGO, CALIF.

(FIELD EXAMINATION No. 1 - 1954)

A. REFERENCES

1. INSTRUCTIONS, Project CS-366, dated 12 October 1953
2. Acting Director's Letter of Special Instructions, 22/MEK, F.P. West Coast, dated 12 April 1954.
3. Acting Director's Letter, 22/MEK, dated 30 April 1954.
4. Special Report on Reconnaissance Survey, dated 27 April 1954.
5. Photo Field Inspection Report for Project CS-366.

Copies of References 2 to 5 are either attached or have been furnished with the data for Survey H-8135(1954).

B. CONTROL

See Paragraph F of Special Report(Reference A-4) and Paragraph 11 of the Photo Field Inspection Report(Reference A-5).

C. SMOOTH SHEET AND PROCESSING

In accordance with the Acting Director's letter, Reference A-3, the inshore portion of this reconnaissance survey is to be plotted on the smooth sheet for Survey H-8135(1954). *Plotted as FE-1, 1954*

A projection furnished by the Washington Office as Boat Sheet No. WCFFP-1453 was not used by the field party and is being forwarded to the Processing Office. There is a probability that this sheet may be of some value in plotting the offshore lines of the reconnaissance survey, if so desired.

D. TIDES

The tide reducers for the reconnaissance survey were furnished by the Washington Office in the form of hourly heights. Paragraph D of the Special Report should be disregarded. *Disregard above. Tide reducers computed from hourly tide heights furnished by Washington.*

E. RECORDS

The records have been kept separate from the records for Survey H-8135(1954). All corrections to the soundings have been entered and checked, but the soundings have ~~not~~ been reduced.

C. A. George
C.A. George
CDR., USC&GS
OinC, West Coast Field Party

STATISTICS FOR RECONNAISSANCE SURVEY
OUTSIDE COAST, SAN DIEGO, CALIFORNIA

Vol. No.	Day Letter	Date	No. Pos.	Statu. Miles Sdg.
I	a	19 April 1954	86	27.5
II	b	21 April 1954	125	31.7
TOTALS			<u>211</u>	<u>59.2</u>

ABSTRACT OF VELOCITY CORRECTIONS

FOR HYDROGRAPHIC SURVEY

Reconnaissance Survey - Outside Coast

San Diego, California

1954

West Coast Field Party GS-366

Date & Day Letter	Depth ft.	Corr.	Fathometer
19 & 21 April	A Scale 0.0 to 2.5	+0.4	154
	3.0 to 31.0	+0.2	
	31.5 to 45.0	+0.4	
"a" & "b" days	45.5 to 50.0	+0.6	
	50.5 to 53.0	+0.8	
	53.5 to 55.0	+1.0	
	B Scale		
	36.0 to 48.0	+1.0	
	48.5 to 54.5	+1.2	
	55.0 to 58.5	+1.4	
	59.0 to 62.0	+1.6	

Use entire
day

LIST OF SIGNALS USED FOR
SPECIAL RECONNAISSANCE SURVEY
OUTSIDE COAST, SAN DIEGO, CALIFORNIA

Signal Name	Origin
ADD	ADMINISTRATION, 1933
BEACH *	BEACH, 1954
COVE *	COVE, 1954
DUNE	DUNE 3, 1954
HOG	Sextant fix and cuts page 48, Vol I, H-8135 (1954) Also identified on photo 3M-201
IRK	Sextant fix and cuts page 48, Vol I, H-8135 (1954) Also identified on photo 3M-201
LEO	Sextant fix and cuts page 48, Vol I, H-8135 (1954) Also identified on photo 3M-200
LOOK	Coronado, USN Amphibious Base Lookout Tower, 1954
MAG	Sextant fix and cuts page 49, Vol I, H-8135 (1954) Also identified on photo 3M-200
NEW	POINT LOMA LIGHTHOUSE (NEW), 1892
NOR	Tank, elevated north. Chart Letter 744 SW Dist.(1944)
OLD	POINT LOMA LIGHTHOUSE (OLD), 1898
PARK	PARK, 1954
POLE	Center of Three Poles Near SOUTH PYLON 2, 1954
RADIO	RADIO, 1933
SOUTH PYLON *	SOUTH PYLON 2, 1954
STACK	San Diego Municipal Sewage Works STACK, 1954
STRAND	SILVER STRAND, 1933-42
TOW	CORONADO TOWER, 1887
USE	Sextant fix and cuts page 48, Vol I, H-8135 (1954)

* These signals were used only to locate signal "USE"

TIDE NOTE

To Accompany Special Descriptive Report of
Reconnaissance Survey, Outside Coast, San Diego Bay

The observed tides at the San Diego control tide station, located at Lat. $32^{\circ} 42' .50$ Long. $117^{\circ} 10' .23$, and corrected for time and height differences to the outside coast area of the survey were used for reduction of soundings.

The hourly heights, as furnished by the Washington Office and needing no further modification, are forwarded with this report.

(Re: Acting Director's letter 36-rjb dated 30 September 1954)

E. SMOOTH SHEET

A projection, machine-ruled by the Washington D. C. office was used. Shoreline was transferred square-by-square, due to distortion in the air photo compilation films.

F. CONTROL

Triangulation was plotted from published geographic positions, 1954 field computations and Graphic Control Sheet WCFP-A-54.

Stations Mag, Leo, Irk and Hog were pricked through from the films (Photogrammetric plot). The plotting data, fixes and cuts from the sounding volumes were used also, due to the film distortion.

Station "Use" was plotted from the sounding volumes and is shown in blue as a hydro station.

G. SHORELINE AND TOPOGRAPHY

Shoreline is from Air Photo Compilation RS 499 (T-5371) corrected to 1950, RS 500 (T-5372) corrected to 1953. The seaward side of Pt. Loma is from T-5373 of 1935.

(RS 501)

M. COMPARISON WITH CHART

The Descriptive report states that: "The 1954 soundings are considerably shoaler than the charted depth." The comparison between the smooth sheet and the published chart shows practically no change, and the comparison is very good.

See
FR-1-54
Review

A tracing was made of the curves on the published chart and used on the smooth sheet. Except for slight changes the check is good.

See
Review

N. DANGER AND SHOALS

Several references or notes were made of "breakers" between position 17b and 30b. Breakers were not noted on the smooth sheet as a surf is general in this area, and breakers are not shown from previous surveys on the published chart.

References to Kelp were plotted. However, several large areas of kelp are shown on the published chart, and no mention of them in the record.

P. AIDS TO NAVIGATION

Three buoys were located by the field party through estimated distances from time on the line. They are: White Spar Buoy No. 3, White Buoy No. 2, and Red Channel Buoy No. 6. They agree reasonably well with the published chart.

Respectfully submitted,



Clarence E. Pedersen
Carto. Comp. Aid

Examined and Approved:



William M. Martin
Cartographer-in-Charge, SPO

Approved and forwarded:



L. S. Hubbard, Captain, C&GS
Seattle District Officer

GEOGRAPHIC NAMES

Pacific Ocean

South San Diego Bay

North Island

Coronado

Zuniga Shoal

Zuniga Point

Point Loma

Ballast Pt.

Due to the fact that smooth sheet H-8135 (WCFP-1553) was completed and the insert of Glorietta Bay Yacht Club finger piers was placed in the offshore area on the outside coast before the report for the reconnaissance sheet was read, the instructions to plot the inshore work on H-8135 were not followed. To have done so would have necessitated erasing the insert and perhaps ruin the sheet. It is hoped that this omission will not cause too much inconvenience.



William M. Martin
Cartographer-in-Charge, SPO

RHC

TIDE NOTE FOR HYDROGRAPHIC SHEET

~~Division of Coastal Surveys:~~

14 February 1956

Division of Charts: R. H. Carstens

Plane of reference approved in
2 volumes of sounding records for F E No. 1 1954

HYDROGRAPHIC SHEET

Locality San Diego Bay Entrance, California

Chief of Party: C. A. George in 1954
Plane of reference is mean lower low water, reading
3.3 ft. on tide staff at San Diego
12.9 ft. below B. M. 13 M (1926)

Height of mean high water above plane of reference at the
working grounds is 3.7 feet.

↑ *may be faulty as mean range is 3.7*

Condition of records satisfactory except as noted below:

NOTE: The tide reducers entered were computed and verified
by using San Diego observations with a range correction
of 0.9.

William Hufus

Chief, ~~Division of~~ Tides ~~and Currents~~ Branch

GEOGRAPHIC NAMES

Survey No. **F.E.No.1(1954)**

Rec.

Name on Survey	Source										
	A	B	C	D	E	F	G	H	K		
											1
											2
											3
											4
											5
											6
											7
											8
											9
											10
											11
											12
											13
											14
											15
											16
											17
											18
											19
											20
											21
											22
											23
											24
											25
											26
											27

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. F.E.No.1(1954) Rec.

Records accompanying survey:

Boat sheets 1...; sounding vols. 2...; wire drag vols.;
 bomb vols.; graphic recorder rolls ~~(4)~~ Envelopes
 special reports, etc. 1-Descriptive report, & 1-Smooth sheet.....

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

Number of positions on sheet	.....	211	.....
Number of positions checked	.....	24	.....
Number of positions revised	.....	0	.....
Number of soundings revised (refers to depth only)	.....	0	.....
Number of soundings erroneously spaced	.....	0	.....
Number of signals erroneously plotted or transferred	.....	0	.....
Topographic details	Time	0	.....
Junctions	Time	0	.....
Verification of soundings from graphic record	Time	1 hr.	.....

Verification by Paul S. Hanson..... Total time 16 hr. Date 4/18/56

Reviewed by [Signature]..... Time 14 Date 6-28-56

Review of F. E. No. 1, 1954

This field examination was accomplished in accordance with instructions contained in the Director's letter of April 12, 1954.

The purpose of the field examination was to survey the inshore area of chart 5107 between lat. $32^{\circ}38'$ to $32^{\circ}40'$ which was incompletely charted due to lack of hydrographic information, and to run a few widely spaced sounding lines over the outside area in order to determine if present depths are different from charted depths.

The shoreline originates with air-photographic surveys RS-499 (1950), RS-500 (1953) and RS-501 (1953). The source of the control is given in the Descriptive Report.

Comparison with Prior Surveys

H-5666 (1934)
H-5679 (1934)

A comparison between the prior and present surveys shows only minor differences of 1 - 2 ft. in depths greater than 30 ft. and differences of as much as 19 ft. in inshore depths. The shoreline has accreted as much as 200 meters with the resultant changes in depths and depth curves. The 18-ft. depth curve has moved offshore about 200 meters beyond its prior location.

The wreck charted in lat. $32^{\circ}38.83'$, long. $117^{\circ}09.40'$ from chart letter 168 (1953), falls in an area on the present survey which is not considered adequately developed to disprove the existence of the feature. However, a 20-ft. sounding in depths of 26 ft. is found on the present survey about 200 meters to the eastward of the charted position of the wreck. This sounding probably falls on a disintegrated portion of the wreck. More complete information regarding the least depth over the wreck could probably be most economically obtained by a wire drag investigation of the area.

The present survey supersedes the prior surveys in the inshore area.

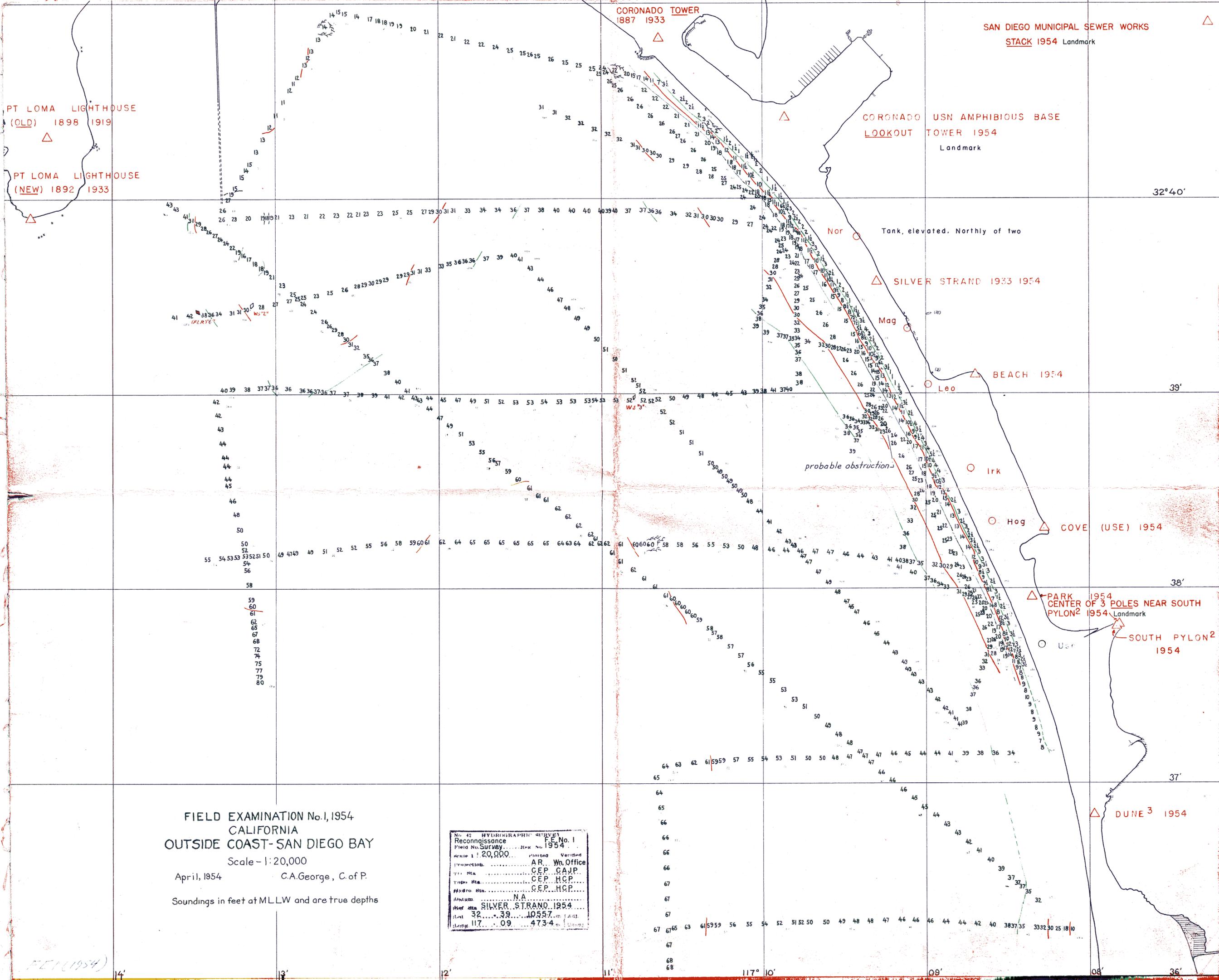
Comparison with Chart 5105 (latest print date 11-1-54)
Chart 5107 (latest print date 5-2-55)

The charted hydrography in depths less than 30 ft. originates principally with the present survey prior to verification and review and with the prior surveys previously discussed which need

no further consideration. In depths greater than 30 ft. the charted hydrography originates with the prior surveys. Only minor differences of 1 - 2 ft. between the charted and present depths are noted.

The Descriptive Report and attached correspondence adequately cover all other matters pertaining to this examination. No further discussion is considered necessary.

Reviewed by - I. M. Zeskind 6-22-56
Inspected by - R. H. Carstens



PT LOMA LIGHTHOUSE
(OLD) 1898 1919
PT LOMA LIGHTHOUSE
(NEW) 1892 1933

CORONADO TOWER
1887 1933

SAN DIEGO MUNICIPAL SEWER WORKS
STACK 1954 Landmark

CORONADO USN AMPHIBIOUS BASE
LOOKOUT TOWER 1954
Landmark

FIELD EXAMINATION No. 1, 1954
CALIFORNIA
OUTSIDE COAST-SAN DIEGO BAY
Scale - 1:20,000
April, 1954 C.A. George, C. of P.
Soundings in feet at MLLW and are true depths

No. 42	HYDROGRAPHIC SURVEY
Reconnaissance	F.E. No. 1
Field No. Survey	Rev. No. 1954
Scale 1:20,000	Plotted
Projection	AR. Wn. Office
Tr. Sta.	CEP. CAJP.
Tr. Sta.	CEP. HCP.
Hydro. Sta.	CEP. HCP.
Datum	N.A.
Ref. Sta.	SILVER STRAND 1954
Lat	32.39 10557
Long	117.09 4734

FIELD (1954)

