

4997

Diag. Ch. No. 5602-2 & 5702-2

Form 504
Ed. June, 1928

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

R. S. Patton, Director

C. & G. SURVEY

L. & A.

APR 8 1930

Acc. No.

State: CALIFORNIA

DESCRIPTIVE REPORT

~~Topographic~~ } Sheet No. 4 4997
~~Hydrographic~~ }

LOCALITY

~~NORTHERN COAST OF CALIFORNIA~~

~~ROCKY POINT TO TRINIDAD HEAD~~

Trinidad Head to Rocky Pt.

19-29

CHIEF OF PARTY

A. P. Ratti

H. & G. E.

4997

DESCRIPTIVE REPORT

To accompany Hydrographic Sheet Field No. 4, Rocky Point
to Trinidad Head, Northern Coast of California.

** ** * ** **

DATE OF INSTRUCTIONS.-

The Director's instructions of April 27, 1929 cover work on
this sheet.

SURVEY METHODS.-

All soundings on this sheet were obtained by the hand-lead
with the exception of soundings of 17 fathoms and upward
which were obtained with a hand sounding machine. All positions
of soundings were determined by visual fixes using signals
located by triangulation in 1927 and 1928 and topography
executed in 1929.

DANGERS.-

Rock with least depth of 1 foot over it lies 500 meters,
91° true (ENE $\frac{1}{2}$ E mag.) from Inner Turtle Rock. Position of this
rock is recorded in Vol.3, page 6, pos.118g. ✓

A breaker lies 590 meters, 80° true (NE x E $\frac{1}{2}$ E mag.) from
Inner Turtle Rock. This rock is recorded in Vol.3, page 10,
pos.144g. ✓ *has 34 ft. on it*

Rock awash at Low water is located 980 meters, 81° true
(NE. x E $\frac{1}{2}$ E. mag.) from Inner Turtle Rock. ✓

A sunken rock with depth of 31 feet over it lies 1260 meters,
153° true (SE $\frac{1}{2}$ E mag.) from Inner Turtle Rock. Position of
this sounding is recorded in Vol.3, page 8, pos.130 g. ✓

A sunken rock with 57 feet over it lies 1010 meters, 169° true
(SSE $\frac{3}{4}$ E mag.) from Inner Turtle Rock. Position of same is
recorded Vol.2, page 54, pos.39g. ✓

A sunken rock with 26 feet over it lies 1130 meters, 115° true
(E $\frac{1}{2}$ S mag.) from Cone Rock. Position is recorded in Vol.2, page 4,
pos.84e. ✓

A rock bearing 2 feet at low water lies 1593 meters, 124° true
(ESE $\frac{3}{4}$ E mag.) from Cone Rock. This rock is shown on topographic
sheet field no.D. ✓

A sunken rock with 16 feet over is located in

Lat. 41° 05' 120 meters. ✓

Long. 124° 10' 472 "

This rock breaks in a moderate swell. Position is recorded in
Vol.2, page 39, pos.121 f. ✓

A sunken rock with a least depth of 3 $\frac{1}{2}$ feet over it is located
in

Lat. 41° 05' 280 meters.

Long. 124° 10' 67 "

position is recorded in Vol.2, page 29, pos. 56f. ✓

A sunken rock with 21 feet over it lies in

Lat. 41° 04' 920 meters.

Long. 124 10' 740 "

This rock breaks with a moderate swell. Position is recorded

in Vol.1, page 55, pos. 59d. ✓

A sunken rock with 68 feet over it is located,

Lat. 41° 04' 1143 meters.

Long. 124° 10' 945 "

Position is recorded in Vol.1, page 29, pos. 70b. ✓

A sunken rock with 44 feet over lies in

Lat. 41° 04' 540 meters. ✓

Long. 124° 10' 540 "

42 ft.

Lat. 41-04-550

Long-124-10-590

This rock covers an area of about 75 meters. Position is recorded in Vol.1, page 51, pos. 35 d. ✓

A sunken rock with 65 feet over it lies,

Lat. 41° 03' 790 meters.

Long. 124° 10' 785 "

Position is recorded in Vol.5, page 15, pos. 5n. ✓

A sunken rock with 50 feet over it is located in

Lat. 41° 03' 500 meters. ✓

Long. 124° 10' 00 "

Position of this sounding is recorded in Vol.4, page 48, pos. 94m. ✓

A sunken rock with 9 feet over it is located in

Lat. 41° 03' 15 meters. ✓

Long. 124° 08' 650 "

Position is recorded in Vol.5, page 12, pos. 1q. ✓

A sunken rock with 8 feet over it lies in

Lat. 41° 03' 1120 meters. ✓

Long. 124° 09' 1350 "

This rock breaks in a moderate swell. Position is recorded in Vol.4, page 63, pos. 16r. ✓

Should be 303½ ✓

COMPARISON WITH PREVIOUS SURVEYS.-

Chart 5846 shows a "Break" 2150 yards, 333½° true from Trinidad Head L.H. It is recommended that this symbol be retained although no break was ever seen. A sounding of 12 fathoms, rocky bottom, without any development was obtained at this spot. ✓

No evidence was seen of the "rock awash at H.W." shown on chart 5846, 1720 yds. 325° true from Trinidad Head L.H. The least sounding obtained was 25 feet. ✓

A sunken rock symbol is shown 2-1/8 miles naut. 315° true from Trinidad Head L.H. It is recommended that this symbol is retained due to lack of development in this vicinity. ✓

Chart 5846 shows a rock with 22 feet over it 3/8 mile 108° true from Trinidad Head L.H.; this rock was examined and found to have a least depth of 9 feet over it. ✓

The sunken rock symbol about 140 yds. Northeastward of Flat Rock in Trinidad Cove (Chart 5846) should be changed to "Rock awash at L.W." Bare 1 ft at M.L.L.W. ✓

49 ft least water
Barred 1929.

REMARKS.-

All soundings on smooth sheet are plotted in feet; sounding shown on boat sheet are in fathoms approximately reduced for tide.

Only critical soundings in Trinidad Cove were verified.

This sheet makes a junction with sheet no. 1296 and 1157.

G E O G R A P H I C N A M E S . -

The following names were assigned by field officers because they describe the rock named and are very good landmarks for inshore navigation. Names are shown in pencil on topographic sheet field no. D. ✓

Pinnacle Rock.
Saddle Rock.
Double Rock.
Lime Rock.

Respectfully submitted,

Augustus P. Ratti

H. & G. E.

Chief of Party.

T I D A L D A T A S H E E T N O. 4.

Location of tide gauge:	Trinidad Harbor.
Plane of Reference:	MLLW 3.66 Feet.
Highest Tide:	11.5 "
Lowest "	1.5 "
Type of gauge:	Portable automatic.

FOR FILMS FIELD RECORDS SECTION

Edm
& Co.

May 8, 1930

Division of Hydrography and Topography:

Division of Charts:

Tide Reducers are approved in
5 volumes of sounding records for

HYDROGRAPHIC SHEET 4997

Locality: California (Rocky Point to Trinidad)

Chief of Party: A. P. Ratti, in 1929
Plane of reference is mean lower low water, reading
4.5 ft. on tide staff at North Jetty, Humboldt Bay
12.5 ft. below B. M. 2

Tide 3/4 hour earlier than at North Jetty

Condition of records satisfactory except as checked below:

1. Locality and sublocality of survey omitted.
2. Month and day of month omitted.
3. Time meridian not given at beginning of day's work.
4. Time (whether A.M. or P.M.) not given at beginning of day's work.
5. Soundings (whether in feet or fathoms) not clearly shown in record.
6. Leadline correction entered in wrong column.
7. Field reductions entered in "Office" column.
8. Location of tide gauge not given at beginning of day's work.
9. Leadline corrections not clearly stated.
10. Kind of sounding tube used not stated.
11. Sounding tube No. entered in column of "Soundings" instead of "Remarks".
12. Legibility of record could be improved.
13. Remarks.

Chief, Division of Tides and Currents.

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

AND REFER TO No. 11-WSW

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

WASHINGTON

August 29, 1930.

SECTION OF FIELD RECORDS

Report on Hydrographic Sheet No. 4997

Trinidad Head to Rocky Point

Surveyed in 1929

Instructions dated April 27, 1929.

Chief of Party, A. P. Ratti.

Surveyed by A. P. Ratti.

Protracted by A. P. Ratti, G. M. Marchand.

Soundings plotted by G. M. Marchand.

Verified and inked by J. D. Torrey.

1. The records conform to the requirements of the Hydrographic Manual except that there are no records of the sheave test of the sounding machine.

*2. The work conforms to the specific instructions. There are some cases where additional development might have been done and is necessary but due to the very unevenness and character of the bottom, this area could not have been fully developed without spending a considerable amount of time thereon, which is not justified by the importance of the area.

* There are many places where work should have been carried closer to shore

3. Only those topographic features which fell outside the low water curve were considered in this review. Numerous rocks and dangers do not appear on the topographic sheet (4516) but do appear on the hydrographic sheet 4997. A comparison between the two sheets was made and every feature shown on the hydrographic sheet and not shown on the topographic sheet was verified as to character and position from the sounding records.

4. Agreement with old works:

a. The new hydrography should supersede the old generally. Only the more important one will be discussed in this review. The old may be used to fill in.

b. The 11 5/6 fathoms sounding (71) shown on sheet 1296 335 meters 321 1/2 True from Outer Turtle Rock should be retained. The old survey shows a rocky bottom here and the new survey shows indications of this.

c. The old survey 1296 shows a breaker or sunken rock 752 meters east (True) of Inner Turtle Rock. This rock is evidently an estimated location of the rock awash shown both on this sheet 4997 and on the old topographic sheets 1179, 908 meters 94° True from Inner Turtle Rock. As both the old survey and this survey are in agreement and the Hydrographer in 1875 was 800 meters away it is recommended that this rock be rejected and omitted from the compilations.

d. In Lat. 41° 07' 1050 meters, Long. 124° 10' 230 meters the old survey shows a high water rock and a sunken rock. The new survey shows a rock awash. It is recommended that the new survey be accepted in place of the old.

e. In Lat. 41° 06' 160 meters, Long. 124° 10' 140 meters the old hydrographic sheet shows a group of three sunken rocks. The old topographic sheet, 1179, and the new on 4516, both show only one rock, and this sheet H. 4997 sounding around there also shows one rock. It is recommended that only the middle one of these three be retained and shown to agree in position and character with the 1929 locations.

f. Sheet 1296 shows a sunken rock in Lat. 41° 05' 500 Long. 124° 10' 680. Sheet T. 4516 shows this a 2' rock. It is recommended it be retained as a 2' rock.

g. Sheet 1296 shows a sunken rock in Lat. 41° 05' 150 M., Long. 124° 10' 470 M. Sheet 4997 secured a sounding of 16 feet (2 3/4 fathoms) and it should be so retained.

h. In Lat. 41° 04' 930 M., Long. 124° 10' 740 M., this survey 4997, shows a 21 foot sounding. The old sheet, 1296, shows a 19 foot sounding about 40 M. north of this. It is not believed that 2 sunken rocks exist here, therefore it is recommended that the 19 foot sounding be carried forward and shown on the new location (4997).

i. Sheet 1296 shows an 8 fathom sounding (48 ft) 570 M., 230° True from signal Green Rock. This should be retained and charted as there are indications of rocky bottom here, the new sheet 4997 showing 9 1/4 fathoms (56 ft) 120 M. east of this 8 fathom sounding.

j. In Lat. 41° 03' 1325 M., Long. 124° 10' 430 M. sheet 1296 shows a 70 foot (11 3/4 fm) sounding. The present survey shows an 88 ft. (14 3/4 fm) rocky bottom here. It is recommended that the 70 foot sounding of the old survey be retained.

k. In Lat. 41° 03' 950 M., Long. 124° 10' 00 M. the old survey shows a 33 foot (5 1/2 fm) sounding. The new survey shows a 58 foot (9 3/4 fm) sounding here of rocky bottom and reports a breaker 100 M. east of this position. It is believed that

both these conditions exist and therefore it is recommended that the 33 foot sounding be retained and charted in place of the 58 foot sounding and the breaker also should be charted in its proper place.

l. There is a very marked agreement between sheet 1157 and 4997. Where the hydrography of 1157 falls inside the hydrography on 4997, that hydrography should be accepted. Where the 2 sheets cover the same area the shoaler soundings should be selected. The curves should be modified considering both surveys. In the area about 1/2 way between Trinidad Head and Blank Rock sheet 1157 shows several shoaler soundings than sheet 4997. These should be retained.

m. The shoal in Lat. 41° 02' 00 M., Long. 124° 09' 940 M. was well developed on both sheets (1157 & 4997) and both on the same scale (1/10,000). The shoal agrees in position but sheet 1157 shows 6½ fathoms (37 ft) while sheet 4997 shows 8½ fathoms (51 ft). It is recommended that the 37 foot sounding be retained. There are also 3 other soundings shoaler than what was found on 4997. These should also be retained. The area is rocky and the bottom is very uneven and steep, but a combination of both surveys show a very close development of this area. Nevertheless, the sounding party on sheet 4997 dropped a buoy and sounded for 1½ hours and found a least depth of 8½ fathoms (51 ft), which leads one to believe that the 37 foot and 39 foot soundings obtained on sheet 1157 are either erroneous or on pinnacles. Due to the importance of the area (entering Trinidad Harbor from the southwest) it is recommended that the latter theory be accepted and the shoaler soundings from sheet 1157 be retained and charted.

n. In Trinidad Harbor the old survey was accepted and so noted in the instructions. The instructions called for development of critical soundings only and the following notes are submitted for the compiler. Where least depths differ on the 2 sheets, it is not believed that more than one rock exists and it is therefore recommended that the shoaler one of the two should be charted and retained.

1. 830 M., 108° from Trinidad Lighthouse new survey shows 9½ feet. This should be charted in position shown on 4997. (see descriptive report)

2. 600 M. 52° True from ^{Trinidad} Light House, old survey shows a sunken rock symbol. This should be changed to 1½ feet as shown on 4997. There are 2 more shoal soundings on 4997 in this immediate vicinity which should be charted as shown on 4997.

3. About 170 M. SxE of the above sunken rock symbol on 1157, the old sheet shows 7½ feet where the new survey shows 9½. Retain 7½ feet.

4. The sunken rock symbol on 1157 about 140 M. northeastward from Flat Rock should be changed to ~~X~~-baring 1 foot lower low water as 4997 shows $-1\frac{1}{2}$ feet.
5. The group of 3 soundings ($1\frac{1}{2}$, $8\frac{1}{2}$ & $9\frac{1}{2}$ ft) about 90 M. southeastward of Double Rock on 4997 should be retained. The $5\frac{1}{2}$ foot sounding a little south of the above 3 soundings is shown as $1\frac{1}{2}$ on the old survey. This $1\frac{1}{2}$ feet should be retained.
5. The junctions with 1157, 4998 and 1296 on the south are adequate and satisfactory.
 - a. The junction with 1296 on the west is adequate.
 - b. The junction with 4967 on the north is O.K.
6. Additional Work:
 - a. No additional work is required here insofar as spacing of lines and character of soundings require. However, should a sounding party ever be in this vicinity it is recommended that the doubtful conditions be investigated. These are mentioned in the report under 4, a, g, h, and those mentioned in the Descriptive Report of the Chief of Party. The shoals found were developed sufficiently to ascertain the least depth with the exception of the 31 foot sounding in Lat. $41^{\circ} 07'$ 550 M., Long. $124^{\circ} 10'$ 750 M. This should have been further developed, and the 2 shoals (46 and 42) in approximate Lat. $41^{\circ} 04.4'$, Long. $124^{\circ} 10.5'$.
7. Reviewed by I. E. Rittenburg, August, 1930.

Approved:

J. M. Bohieralski
Chief, Section of Field Records (CHARTS)

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

Note: The broken character of this coast indicates the desirability of a wire drag survey skirting the rocks, to insure discovery of all dangers in areas where vessels may pass. In coasting voyages.

ams.

S T A T I S T I C S S H E E T N O . 4 .

* * * * *

Date 1929	Letter	Volume	Positions	Soundings	Miles Stat.	Vessel
July 10	a	1	98	182	13.0	Rogue.
" 18	b	1	80	143	7.0	"
" 19	c	1	72	248	13.3	"
" 22	d	1	89	203	9.0	"
" 23	e	1	77	274	9.5	"
" 23	e	2	102	326	10.4	"
" 24	f	2	169	540	17.5	"
" 25	g	2	99	229	11.2	"
" 25	g	3	56	112	5.1	"
" 26	h	3	102	331	8.9	"
Aug. 5	j	3	125	413	9.5	"
" 13	k	3	113	446	10.6	"
" 14	l	4	165	574	17.3	"
" 15	m	4	174	522	19.7	"
" 16	n	4	66	186	7.1	"
" 19	p	5	39	79	1.0	"
" 20	q	5	4	5	0.0	"
" 26	r	5	<u>13</u>	<u>20</u>	<u>0.4</u>	"
TOTALS			1643	4832	170.5	

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

REG. NO. 4997

The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

Field No⁴ _____

REGISTER NO. 4997

*See 5602-2
and 5702-2*

State CALIFORNIA

General locality ~~NORTHERN COAST~~ Trinidad Head

Locality ~~ROCKY POINT TO TRINIDAD~~ Trinidad Head to Rocky Pt.

Scale 1-10000 Date of survey July 10 to Aug. 26, 1929.

Vessel Chartered Launch Rogue

Chief of Party A.P. Ratti

Surveyed by A.P. Ratti

Protracted by A.P. Ratti & G.M. Marchand

Soundings penciled by G.M. Marchand

Soundings in fathoms feet

Plane of reference MLW Trinidad

Subdivision of wire dragged areas by _____

Inked by J.D. Torrey

Verified by J.D.T.

Instructions dated April 27, 1929

Remarks: This sheet makes a junction with sheet 1296
and sheet 1157

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

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

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k. In Lat. 41° 03' 950 M., Long. 124° 10' 00 M. the old survey shows a 33 foot (5 1/2 fm) sounding. The new survey shows a 58 foot (9 1/2 fm) sounding here of rocky bottom and reports a breaker 100 M. east of this position. It is believed that

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n. In Trinidad Harbor the old survey was accepted and so noted in the instructions. The instructions called for development of critical soundings only and the following notes are submitted for the compiler. Where least depths differ on the 2 sheets, it is not believed that more than one rock exists and it is therefore recommended that the shoaler one of the two should be charted and retained.

1. 830 M., 108° from Trinidad Lighthouse new survey shows $9\frac{1}{2}$ feet. This should be charted in position shown on 4997. (see descriptive report)

2. 600 M. 52° True from Light House, old survey shows a sunken rock symbol. This should be changed to $1\frac{1}{2}$ feet as shown on 4997. There are 2 more shoal soundings on 4997 in this immediate vicinity which should be charted as shown on 4997.

3. About 170 M. SxS of the above sunken rock symbol on 1157, the old sheet shows $7\frac{1}{2}$ feet where the new survey shows $9\frac{1}{2}$. Retain $7\frac{1}{2}$ feet.

4. The sunken rock symbol on 1157 about 140 M. northeastward from Flat Rock should be changed to bearing 1 foot lower ^{er Low} water as 4997 shows $-1\frac{1}{2}$ feet.
5. The group of 3 soundings ($1\frac{1}{2}$, $8\frac{1}{2}$ & $9\frac{1}{2}$ ft) about 90 M. southeastward of Double Rock on 4997 should be retained. The $5\frac{1}{2}$ foot sounding a little south of the above 3 soundings is shown as $1\frac{1}{2}$ on the old survey. This $1\frac{1}{2}$ feet should be retained.
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 - a. The junction with 1296 on the west is adequate.
 - b. The junction with 4967 on the north is O.K.
6. Additional Work:
 - a. No additional work is required here insofar as spacing of lines and character of soundings require. However, should a sounding party ever be in this vicinity it is recommended that the doubtful conditions be investigated. These are mentioned in the report under 4, a, g, h, and those mentioned in the Descriptive Report of the Chief of Party. The shoals found were developed sufficiently to ascertain the least depth with the exception of the 31 foot sounding in Lat. $41^{\circ} 07'$ 550 M., Long. $124^{\circ} 10' 750$ M. This should have been further developed, and the 2 shoals (46 and 42) in approximate Lat. $41^{\circ} 04.4'$, Long. $124^{\circ} 10.5'$.
7. Reviewed by I. E. Rittenburg, August, 1930.

Approved:

Chief, Section of Field Records (CHARTS)

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