

6186

WIRE DRAG

U. S. COAST & GEODETIC SURVEY
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DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

R. S. Patton, Director

State: California

DESCRIPTIVE REPORT

WIRE DRAG
Topographic
Hydrographic

Sheet No. 24

LOCALITY

~~Northern Part of Santa Catalina~~
Santa Catalina Island
~~Island~~

Northern Part

1936

CHIEF OF PARTY

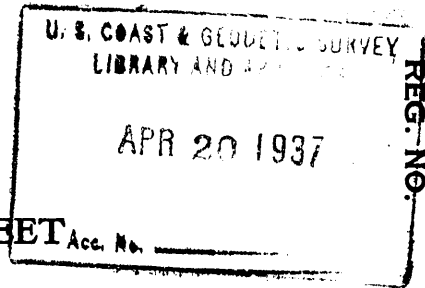
F. H. Hardy

GOVERNMENT PRINTING OFFICE

CP

6186 WIRE DRAG

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY



WIRE DRAG
~~XXXXXXXXXXXXXXXXXXXX~~ 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. 24

REGISTER NO. H 6186 W.D.

State California

General locality Santa Catalina Island

Locality Northern Part ~~of Island~~

Scale 1:20,000 Date of survey November 22 & 23, 1936
December 4, 1936

Vessel GUIDE

Chief of Party F. H. Hardy

Surveyed by I. E. Rittenburg

Protracted by W. J. Chovan

Soundings penciled by R. C. Bolstad

Soundings in fathoms feet & sixths
Effective Depths in Feet.

Plane of reference M.L.L.W.

Subdivision of wire dragged areas by R. C. Bolstad

Inked by R. C. Bolstad

~~May 31, 1934, 3rd para. letter of Chief~~

Verified by J. A. Mc Cormick

Instructions dated May 31, 1934, 3rd para. letter of Chief,
Div. of H. & T. August 31, 1936

Remarks: Dual Control - Visual Fixes using Chartered Launches
VIRGINIA I (guide Launch) and CAPON (end launch).

DESCRIPTIVE REPORT
to accompany
WIRE DRAG SHEET FIELD No. 24
Project No. HT-206
Coast of California
U.S.C. & G.S.S. GUIDE
1936

INSTRUCTIONS: Instructions for this work were dated May 31, 1934, and in the third paragraph of a letter from the Chief, Division of Hydrography and Topography dated August 31, 1936. ✓

CHARACTER AND LIMITS OF WORK: This sheet is a wire drag survey of the northern half of Santa Catalina Island. It is joined on the south by Wire Drag Sheet Field No. 25. The inshore limits of the drag strip extend from about 200 meters to a quarter mile offshore and were governed by the growth of kelp occurring along the coast. In general the guide launch was held from 10 to 100 meters offshore from the kelp line. In connection with this see a memorandum from the Chief, Division of Hydrography and Topography to the Chief, Section of Coast Pilot dated February 12, 1937. This kelp was too heavy to drag through and the area dragged off the kelp line on this sheet represents the closest inshore area obtainable under the conditions existing at this time. From the 1933 topographic survey it appears the kelp line shows no appreciable deviation, except in the area one mile northwest of Isthmus Cove which is now fouled with kelp as shown on this sheet. A buoy marks the outer limits. Strong northerly gusts of wind sweeping down from the hills during the dragging of "A" day prevented the guide launch from approaching closer to the kelp line. Along the east shore where little or no kelp was encountered the guide launch was held so as to skirt the small points from 25 to 100 meters offshore. The outer boundaries of the drag extend about one mile offshore. It was not possible to drag Catalina Harbor on the south side of the island in Latitude $33^{\circ} 25.6'$, Longitude $118^{\circ} 30.5'$ any closer because of the restricted areas involved. Likewise, Isthmus Cove on the north side of the island could not be dragged further inshore because of the rocky area in Latitude $33^{\circ} 26.8'$, Longitude $118^{\circ} 29.3'$. Inshore from this rocky area numerous mooring buoys prevented a further attempt at dragging any appreciable area. *See par. 8d*
this review

The scale of this sheet is 1 : 20,000. ✓

Effective depths range from 38 to 84 feet. ✓

Dual control was used throughout. ✓

CONTROL AND DATUM: This sheet is on the final adjusted North American 1927 datum. Triangulation was that of 1933 and 1934. Shoreline and topographic signals were taken from tracings of topographic sheets ✓

⁴T-3869 and ⁴T-3870, ¹and T-4884 furnished this vessel by the office. Offlying rocks and kelp, (shown in ink on this sheet), were taken from the photostats furnished by the Washington office. In this connection, *see para 3* the photostats and tracings had distorted to such extent that difficulty was encountered in transferring the topographic detail to the smooth sheet. In plotting and checking signals the meridians and parallels were held fixed, and adjustments made. This method disagreed with the tracings furnished, in many instances with relation to the position of triangulation stations shown on these tracings. *the of review*

DATES OF SURVEY: Three day's work are shown on this sheet, being done on November 22 and 23 and December 4, 1936. Stormy weather with occasional "Santa Annas" prevented continuous work. ✓

TIDAL REDUCERS: Tide reducers for this sheet were secured by information derived from the hourly heights furnished by the Washington office for the Standard Tide Gage at Outer Harbor, Los Angeles. The M.L.L.W. on the staff was taken as 3.6 feet. No height or time difference in the tide was applied. ✓

JUNCTIONS AND OVERLAPS: This sheet joins Wire Drag Sheet Field No. 25 on the south. The junctions are good as the drag strip is continuous to, (on east side), and from, (on west side), Sheet No. 25. Overlaps of adjoining lines are sufficient. ✓

SPLITS: There are no splits on this sheet. ✓

GROUNDINGS: There is only one grounding on this sheet. This grounding occurred on Position "84B" just outside of Isthmus Cove in Latitude 33° 27.3', Longitude 118° 29.3'. It appears the drag initially grounded on Position "82B" near Buoy No. 2 but as the dragging progressed the wire slipped along the grounding until on Position "84B" it had pulled past the No. 3 Buoy which finally disappeared below the surface of the water. A search by the tender failed to reveal any shoal capable of fouling the drag. The lead line was lowered from the tender and the ground wire followed along by feeling, to the locality of apparent grounding at which place the depth of the wire tested out to be 53 feet, (reduces to 49 feet).

Inasmuch as the initial grounding was on an inclined section between buoys No. 2, (reduced effective depth of 39 feet), and No. 3, (reduced effective depth of 49 feet), and the fact that the drag cleared this area at 39 feet on the following day, deduces that the grounding was at a depth of from 40 to 49 feet below M.L.L.W. Although a depth test of the wire by the tender at the point of apparent grounding resulted in 49 feet, (reduced), it is possible the test was not obtained at the exact point of grounding. Therefore a sounding of 6 4/6 fathoms, (one foot below cleared depth), has been shown in pencil as the grounding on Position "1b"; this sounding is on the safe side. The grounding is evidently a pinnacle rock as is indicated by the irregular bottom soundings "2b" and "3b". *6 1/2 fathom grounding plotted. Jam*


The additional soundings obtained, positions "2b" and "3b", ^{10 3/4 plotted} which although showing a shoaler depth than the former hydrographic ^{on 3b.} survey of 1933, do not represent the shoalest soundings and are too close to the grounding position to be penciled on this sheet.

The bight of the drag at Position "84B" has been shown in pencil ✓ at the offshore side as no area is claimed where these buoys swung out beyond the path of the end launch during its maneuvering.

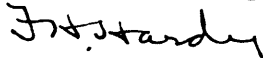
COMPARISON WITH PREVIOUS SURVEYS AND CHART: There are no soundings on charts 5101 and 5128 or Hydrographic Sheet H-5556 which are shoaler ✓ than the dragged depths. The grounding of 6 4/6 fathoms, (Position "1b") falls in a surrounding depth of 11 fathoms. ^{6 1/2 fms. plotted J.A.M.}

PERSONNED AND EQUIPMENT: Lieutenant I. E. Rittenburg was in charge of this work and in charge of the guide launch. Lieutenant (j.g.) Francis B. Quinn was in charge of the end launch during the dragging of "A" and "B" days after which time Lieutenant W. H. Bainbridge assumed charge. ✓ The Chartered Launch VIRGINIA was used as guide launch and the Chartered Launch CAPON as the end launch. Standard wire drag equipment was used.

Respectfully submitted,


I. E. Rittenburg,
H. & G. Engineer,
C. & G. Survey.

Forwarded and approved:


F. H. Hardy, Chief of Party,
Coast and Geodetic Survey,
Commanding Ship GUIDE.

STATEMENT
to accompany
WIRE DRAG SHEET FIELD NO. 24
1936

The plotting and protracting of buoy positions was performed by Lieutenant (j.g.) W. J. Chovan.

The drag areas were subdivided and inked by Lieutenant (j.g.) R. C. Bolstad.

The completed smooth sheet has been inspected and is approved.

F. H. Hardy
F. H. Hardy,
Chief of Party, C. & G. S.,
Commanding Ship GUIDE.

STATISTICS
to accompany
WIRE DRAG SHEET FIELD NO. 24
1936

Date 1936	Day Letter	Volume	Positions	Statute Miles	Drag Length Feet	Tender Positions	Soundings
Nov. 22	A	1	86	6.9	6,000	0	0
23	B	1	132	12.5	6,000	3	2
Dec. 4	C	1	24	2.2	4,000	0	0
4	C	1	94	8.3	6,000	0	0
TOTALS			336	29.9		3	2

AREA 25.0 SQUARE STATUTE MILES.

C O P Y

20-RS
720 Vc 15

February 12, 1937.

MEMORANDUM to Chief, Section of Coast Pilot.

On my recent inspection of the party on the Ship GUIDE, the chief of the wire drag sub-party informed me that it was impractical to drag within the desired distance from shore around the islands off the Southern California Coast because of heavy kelp. It is not certain whether this kelp remains attached all year or is seasonal. I shall recommend, however, to the Division of Charts that the kelp line as indicated on the drag sheets be charted. You will please give consideration to a statement of caution in the Coast Pilot to the effect that, while hydrographic surveys have been made close in to shore, wire dragging for dangers extends only in to the kelp line as indicated on chart No. --.

/signed/ G. T. RUDE

Chief, Division of
Hydrography and Topography.

*Not applicable to this survey.
See par. 2d of review.
10 J. A. M.*

Lac

TIDE NOTE FOR HYDROGRAPHIC SHEET

Division of Hydrography and Topography:

APR 29 1937

✓ Division of Charts: Attention Mr. E. P. Ellis

Tide Reducers are approved in
3 volumes of sounding ~~records~~ ^{and wire drag} for

HYDROGRAPHIC SHEET 6186

Locality Santa Catalina Islands, Northern Part, California

Chief of Party: F. H. Hardy in 1936

Plane of reference is mean lower low water, reading

3.6 ft. on tide staff at Los Angeles Harbor

14.9 ft. below B.M. 8

Height of mean high water above plane of reference is 4.4 feet.

Condition of records satisfactory except as noted below:


Chief, Division of Tides and Currents.

Remarks.

Decisions

	Remarks.	Decisions
1		<i>see T-4870</i>
2		<i>USGB decision</i>
3		<i>see T-4870</i>
4		<i>USGB decision</i>
5		<i>see T- 4869</i>
6		<i>USGB decision</i>
7		<i>" "</i>
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GEOGRAPHIC NAMES

Survey No. H-6186 W.D.

On Chart No. 5112
4202

On previous survey No. _____

On U. S. quadrangle Maps _____

From local information _____

On local Maps _____

P. O. Guide or Map _____

Rand McNally Atlas _____

U. S. Light List _____

Name on Survey

	A	B	C	D	E	F	G	H	K	
<u>Santa Catalina Island</u>	✓ app'd									1
<u>California</u>	✓ app'd									2
<u>Isthmus Cove</u>	✓ app'd									3
<u>Long Point</u>	✓ app'd									4
<u>West End</u>	✓ app'd									5
<u>Bird Rock</u>	✓ app'd									6
<u>ship Rock</u>	✓ app'd									7
										8
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										27

Names underlined in red approved
by SHR on 4/26/37

Field Records Section (Charts)

HYDROGRAPHIC SHEET NO. **H6186** W.D.

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

Number of positions on sheet	...171.
Number of positions checked	...11.
Number of positions revised	...0.
Number of soundings recorded	...3.
Number of soundings revised	...0.
Number of signals erroneously plotted or transferred	<i>See comment in review.</i>

Date: *June 9, 1937*

Verification by *J. A. Mc Cormick*

Time: *14 hrs.*

Review by *J. A. Mc Cormick*

Time: *5 hrs.*

HYDROGRAPHIC SURVEY NO. H-6186 W.D.

Smooth Sheet Yes

Boat Sheet Two

Sounding Records One Vols. _____

Wire Drag Records Two "

Descriptive Report Yes

Title Sheet Yes

List of Signals In Sounding Volume

Landmarks for Charts (Form 567) None

Statistics Yes

Approved by Chief of Party Yes

Recoverable Station Cards (Form 524) None

Special Chart for Lighthouse Service None
(Circular Nov. 30, 1933)

Remarks _____

HYDROGRAPHY

Total Days 3

Last Date Dec. 4, 1936

Verfies's Report on H-6186 (1936) W.D.

No comment other than that contained
in the review is considered necessary.

June 9, 1937.

J. A. Mc Cormick.

Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 6186 (1936) W. D. FIELD NO. 24

Northern Part of Santa Catalina Island, California
Surveyed in Nov.-Dec. 1936, Scale 1:20,000

Instructions dated May 31, 1934 (GUIDE) Letter from Chief of
Division of H. & T. Aug. 31, 1936

Wire drag.

Dual control on shore signals.

Chief of Party - F. H. Hardy.
Surveyed by - I. E. Rittenburg.
Protracted by - W. J. Chovan.
Subdivision of wire dragged areas by - R. C. Bolstad.
Inked by - R. C. Bolstad.
Verified by - J. A. McCormick.

1. Condition of Records.

The records are neat and legible and conform to the requirements of the Hydrographic Manual and Special Publication 118 except as noted in paragraph 3 of this review.

The Descriptive Report satisfactorily covers all items of importance.

2. Compliance with Instructions for the Project.

The plan, character and extent of the survey satisfy the instructions for the project except that drag work should have been extended north of Ship Rock. (See paragraph 8b, this review, for discussion of effective depths.)

3. Shoreline and Signals.

The shoreline and signals originate with T-4869 (1933-34), T-4870a (1933-34) and T-4884 (1934), tracings and photographic reproductions of which were furnished the field party. All topographic signals were checked with the original sheets by the verifier. Discrepancies were found to be as much as 15 meters but the field plotting of the signals was accepted as not introducing greater inaccuracies than those to be expected in the locations of the end buoys of the drag. All shoal soundings were plotted directly on H-5556 (1934) from the angles recorded in the drag records and the positions thus obtained check very well with the positions shown on this survey. (See Descriptive Report, pages 1 and 2 for field party discussion of control.)

4. Junctions with Contemporary Wire Drag Surveys.

- a. The junctions with H-6187 (1936) W. D. on the southeast and on the southwest are satisfactory, the single drag strip on

each side of Santa Catalina Island being continuous from sheet to sheet.

- b. No offshore drag work outside the limits of the present survey is included under the present project.

5. Comparison with Latest Hydrographic Surveys.

H-5555 (1934), H-5556 (1934), H-5658 (1934).

The present survey covers portions of the above 1:10,000 and 1:20,000 scale surveys and the effective drag depths are consistent with the depths shown thereon.

6. Comparison with Charts No. 5101 (New Print dated Jan. 18, 1937),
No. 5112 (New Print dated April 27, 1936)
No. 5128 (New Print dated Feb. 14, 1936).

Within the area covered, the effective drag depths do not conflict with any of the charted depths.

7. Field Plotting.

The protracting, plotting and subdivision of the drag strips were excellent.

8. Results of Survey.

a. Shoals discovered and clearance depths obtained.

A grounding of $6\frac{1}{2}$ fathoms in lat. $33^{\circ}27.3'$, long. $118^{\circ}29.3'$ falls in depths of 11 to 15 fathoms on H-5556 (1934) and was cleared with an effective depth of 39 feet. (See D. R., pages 2 and 3 for detailed discussion.)

b. Effective depths.

In general, the effective depths are sufficient to insure the safety of surface navigation from a distance of $\frac{1}{4}$ mile offshore to a distance of 1 mile offshore.

No drag work was done on the offshore side of Ship Rock and there is a sizable area on the inshore side which was dragged to only 39 feet. (See par. 9, this review.)

c. Splits and insufficient overlaps.

No splits exist on this survey, the overlaps being very generous.

9. Additional Field Work Recommended.

In order to complete the area covered by the present survey the following additional work is required:

- a. The drag work should be extended to the north of Ship Rock to insure against the existence of additional dangers on the chain of rocks and shoals making out from the eastern promontary of Isthmus Cove.
 - b. When the above is accomplished, the sizable area south-east of Ship Rock, dragged to an effective depth of 39 feet on the present survey, should be redragged to a depth of at least 50 feet. The general depth in this area is about 30 fathoms.
10. Kelp.
- Attached to the D. R. is a memorandum dated Feb. 12, 1937 from the Chief, Division of H. & T. which implies that the inshore limit of the drag strip should represent the approximate offshore limit of kelp for charting purposes in this area. Inasmuch as the D. R. (page 1) states that there is no appreciable deviation of the kelp line from that shown on the 1933 topographic surveys, it is evident that the memorandum is not applicable to the present survey. The only additional kelp that originates with the present survey is a small patch in lat. $33^{\circ}27.7'$ long. $118^{\circ}30.5'$ which has been transferred to H-5556 (1934) in color.
11. Note to Compiler.
- Attention is called to the treatment of kelp and the memorandum discussed in paragraph 10 of this review.
12. Reviewed by J. A. McCormick, June 10, 1937.
- Inspected by Harold W. Murray.

Examined and approved:

C. K. Green, *C. K. Green.*
Chief, Section of Field Records.

L. O. Polbat.
Chief, Division of Charts.

Fred. L. Peacock
Chief, Section of Field Work.

G. H. Hilde
Chief, Division of H. & T.

Dragged area compared with chart 5112 F.M.A. Mar. 1939