

6249 WIRE DRAG

U. S. COAST & GEODETIC SURVEY
LIBRARY AND ARCHIVES

FEB 23 1938

Acc. No. _____

5402-2
5502-2

6249 WD

Form 504
Rev. April 1935
DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

~~Topographic~~
~~Hydrographic~~

Sheet No. 23

State California

LOCALITY

Point Reyes

Point Reyes & Vicinity

1937

CHIEF OF PARTY

F. H. Hardy

6249 WIRE DRAG

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

U. S. COAST & GEOD. SURV.
LIBRARY 1555
FEB 23 1938
Acc. No.

REG. NO.

WIRE DRAG _____

~~HYDROGRAPHIC~~ TITLE SHEET

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

Field No. 23

REGISTER NO. H-6249 W.D.

State California

General locality Point Reyes

Locality Point Reyes & Vicinity
~~2 miles east of Chimney Rock to 4 miles North of Pt. Reyes.~~

Scale 1:20,000 Date of survey Nov. 4, 5, 21 & Dec. 3, 6, 7, 8, 1937

Vessel GUIDE

Chief of Party F. H. Hardy

Surveyed by Charles Shaw

Protracted by M. G. Ricketts

Soundings penciled by M. G. Ricketts

Soundings in fathoms ~~feet~~ Drag Depths in Feet.

Plane of reference M.L.L.W.

Subdivision of wire dragged areas by M. G. Ricketts

Inked by M. G. Ricketts

Verified by _____

Instructions dated May 2, 1935 (Project HT-206) and March 6,, 1937

Remarks: Dual Control-Visual Fixes using Chartered Launches FLORENCE (guide launch), VIRGINIA I (end launch) and No. 28 A 889 (tender).

c.5.

POST-OFFICE ADDRESS: P. O. Box 1197, Oakland, Calif.

TELEGRAPH ADDRESS:

EXPRESS ADDRESS:

1938 FEB 25 PM 12 12

JHD
22 ger
50 KVA
87 ma

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY
Steamer GUIDE, Oakland, Calif.,
February 19, 1938.
(Ans 3-4-38)

To: The Director, U. S. Coast and Geodetic Survey,
Washington, D. C.

From: The Commanding Officer, U.S.C. & G.S.S. GUIDE.

Subject: Descriptive Report, Wire Drag Sheet Field No. 23.

In the subject report on Page 1, Paragraph 3 under "Character of Work" it is requested that "3 miles per hour" be changed to "1 1/2 miles per hour". ✓

This error was not caught until after the report was mailed ~~along~~ with the smooth sheet to the Washington office.

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

Attach. D.R. of # 23

80-DRM

March 4, 1938.

To: Commanding Officer,
U. S. Coast and Geodetic Survey,
Ship GUIDE,
P. O. Box 1197,
Oakland, California.

From: The Acting Director,
U. S. Coast and Geodetic Survey.

Subject: Descriptive report, wire drag sheet, Field No. 23.

In accordance with your letter of February 19, 1938, the wording under "Character of Work" on page 1 of the descriptive report for the above sheet has been changed from "3 miles per hour" to "1 1/2 miles per hour".

(Signed) J. R. WELBY
Acting Director.

see
KTA
2

DESCRIPTIVE REPORT
to accompany
WIRE DRAG SHEET FIELD NO. 23
Project No. HT-206
POINT REYES
Coast of California
U.S.C. & G.S.S. GUIDE
1937

INSTRUCTIONS:

Instructions for Project H.T.-206 were dated May 2, 1935. Supplemental Instructions for this work were dated March 6, 1937.

LIMITS OF WORK:

The dragging on this sheet is from about 2 miles east of Chimney Rock, doubling Point Reyes and extending about 4 miles northward to Latitude 38° 03'N. The dragged area covered extends from about the 30 fathom curve 1 1/2 to 2 miles offshore, to within 1/4 to 1/3 mile from the shore. The inshore limit was slightly outside the generalized foul area line but as close as practicable bearing in mind the attendant dangers in drag launch operations due to swell, off-lying rocks awash, etc.

Wire Drag Field Sheets No. 11 joins to the eastward and No. 10 to the northward.

CHARACTER OF WORK:

The scale of the projection is 1:20,000.

Dual control by sextant angle fixes was used with usual position interval of five minutes except doubling Point Reyes where two and one-half minute intervals were used for closer control.

Drag tests were made as often as appeared necessary and at least once a day and usually after every hook-up unless prevented by unavoidable circumstances. Drag speed was maintained as far as practicable at not over 1/2 miles per hour to minimize or eliminate lift. Effective drag depths ranged from 26 to 90 feet. Standard wire drag equipment was used.

Due to strong irregular currents and chop it was particularly difficult at times dragging around Point Reyes. In troubled weather this point is one of the conspicuously disagreeable spots along our Pacific Coast, and the dragging was completed here with much gratification by all.

DATUM AND CONTROL:

This sheet is on the adjusted North American 1927 datum. Triangulation stations were located in 1870- 1874, 1907, 1921 and 1930. Topographic signals are from T-4495, T-4639 and from 1937 topographic field sheets "F" and "G" Ship GUIDE. Topographic signals from T-4495 and T-4639 were scaled from

Changed in accordance with letter dated Feb. 19, 1938 from C.O. Guide 1938

H-6250

C.S. 6250a C.S. 6250b

bromides, and reduced to 1927 adjusted North American datum. Two hydrographic signals were located by sextant fixes, season 1937. All shore-line, off-lying rocks, etc., were reduced and transferred from sheets T-4495, T-4517, T-4518, T-4519 and T-4639 and none of the topographic features such as off-lying rocks, etc., were located by the 1937 field party, except signal CHIM (Chimney Rock). The location of Hydrographic Signal CAT-1937 checks the highest part of the off-lying rock as shown on the boat sheet. Signals transferred from bromides were checked against original sheets in the office.

DATES OF SURVEYS:

Wire drag work on this sheet was done on November 4, 5, 21st, December 3, 6, 7 and 8th, 1937. All work was done by the chartered launches.

TIDAL REDUCERS:

Tidal reducers for this sheet were taken from the records of the standard automatic tide gage at San Francisco maintained by the San Francisco Field Station. See attached Tidal Data Sheet for further tidal information.

JUNCTIONS AND OVERLAPS:

This sheet joins with Wire Drag Field Sheet No. 11, 1937 on the east and Wire Drag Field Sheet No. 10, 1937 on the north. "H" day, this sheet is continued as "A" day, Sheet No. 10, and hence the junction of the two sheets is good. The junction between this sheet and Sheet No. 11 is good. The overlaps of the adjacent and adjoining lines are also good and with the sheet junctions conform to first class wire drag practice with the possible exception of a small split around Drakes Bay Lighted Bell Buoy No. 1. H-6250

On "E" day this sheet and "C" day Sheet No. 11 the drag was brought well up and joined Drakes Bay Lighted Bell Buoy endeavoring by slowly over-running it somewhat, but not dragging it, to minimize the split to the narrowest limit. The bell buoy was well located on Sheet No. 11, and the discrepancy in plotting the drag at the buoy on Sheet No. 23 can be accounted for probably only by the large scope of the bell buoy. This shows that positions of the navigation buoys under these circumstances should be checked each day a drag is brought up to them so as to eliminate uncertainties and better control the size of the unavoidable split.

GROUNDINGS:

Near Position 2 a, least sounding 5 3/6 fathoms, rocky, there was a general rocky area of about 6 fathoms as shown also by positions 1 a, 3 a, and 4 a. The charted depths were between 8 and 9 fathoms. On "E" day an attempt was made to carry an effective depth of 27 or 28 feet over these sounding positions and yet keep clear of the generalized foul area immediately inshore. An unexpectedly strong current at this time swept southward past Chimney Rock over this area, and the drag just grazed this area but did not quite cover the shoal. It was planned to drag over this area again but due to much severe southeast

weather the occasion never came before the season terminated by adverse weather conditions. However, it is believed this additional work may be properly omitted as the area is at the inshore limit of the dragged area, inshore from the Drakes Bay Lighted Bell Buoy and quite close to the foul area extending off Chimney Rock.

The Position 1 b plots at Buoy No. 1 at Position 36 B at 12:00. As the guide launch stopped at 12:03 while the end launch towed ahead slowly to hold the ground and at the same time attempt to form the "V" in the drag to the grounded spot the drag was pulled around the shoal spot so that at 12:15 the time of taking the Position 1 b the N buoy was at this spot as noted in the sounding record. Although the tender was unable to find less than 32 feet, rocky, in a lumpy bottom the drag was set at 28 feet effective depth and this latter depth has been plotted at Position 1 b. On "D" day this shoal was cleared with an effective depth of 26 feet.

At Position 1 d the drag grounded near N buoy and a least sounding of 2 fathoms, rocky, was found. As this is not far off the general foul area of the shore, and is quite shoal, no further work was deemed necessary nor practicable.

At Position 2 c the drag grounded with an effective depth of 69 feet on a charted shoal of 78 feet. The least depth found was 65 feet, rocky uneven bottom, and was cleared on "F" day later by a drag with an effective depth of 56 feet. The buoys were set to clear this shoal with 60 feet effective, but due to a 4 foot lift on the offshore end of the drag the resultant clearance was 56 feet.

The groundings are listed as follows:

Pos.No. & Day Letter	Latitude & Longitude	Grounded Eff. Depth	Least Sdg. Depth	Cleared Eff. Depth	Depth Plotted	Remarks
	o ' "	Feet	Fms.	Feet	Fms.	
2 a	37 59.00 122 57.52	41	5 3/6	Not Cleared	5 3/6	Inshore limit dragged area.
1 b	37 59.20 122 58.68	28	5 2/6	26	4 4/6	Upright length plotted
2 c	38 00.24 123 02.20	69	10 5/6	56	10 5/6	
1 d	37 59.18 122 58.33	26	2	Not Cleared	2	Inshore limit dragged area.

PLOTTING "F" DAY:

In plotting "F" day, in making the subdivision of area, it has been necessary to be on the safe side to apply the 2 1/2 percent grade rule between adjacent drag strip depths at the hook-up on Page 6 of the drag volume because the upright of Buoy No. 14 parted when the tender attempted to make a hook-up from 91 to 76 feet. The No. 14 weight remained attached in its proper place and thus depths are really deeper than claimed on the sheet.

At the end of the drag day at the hook-up on Page 9 the change actually made was from buoys 11 to N while the hook-up was to include buoys 12 and 13 to 76 feet also. However, due to these two latter buoys at this time being slightly submerged below the surface, probably due to current and Buoy No. 14 up-right having previously parted, buoys 12 and 13 were not located readily by the tender and thus were not changed from 64 feet. Hence there are two narrow strips here plotted to effective depths of 56 and 68 feet instead of effective depths of 68 and 80 feet, respectively, as intended to drag.

COMPARISON WITH PREVIOUS SURVEYS AND CHARTS:

There are no soundings on hydrographic sheets H-4974, 4979, 5164 and 5169 nor on charts 5402, 5502 and 5599 shoaler than the dragged depths shown on this sheet.

PERSONNEL AND LAUNCHES:

Lieutenant-Commander Charles Shaw was in charge of this work and in charge of the guide launch. Lieutenant W. H. Bainbridge, Lieutenants (j.g.) G. M. Marchand and Walter J. Chovan were in charge of the end launch on different days.

Chartered launch FLORENCE was used as guide launch and chartered launch VIRGINIA I as end launch. Chartered launch No. 28 A 889 was used as tender.

Respectfully submitted,

Charles Shaw

Charles Shaw,
H & G Engineer,
C. & G. Survey.

Approved, forwarded:

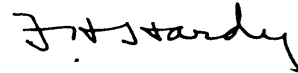
F. H. Hardy
F. H. Hardy,
Chief of Party, C. & G. S.,
Commanding Ship GUIDE.

STATEMENT
to accompany
WIRE DRAG SHEET FIELD NO. 23
1937

The plotting and protracting of buoy positions was done by
Lieutenant (j.g.) M. G. Ricketts.

The drag areas were subdivided and inked by Lieutenant (j.g.)
M. G. Ricketts.

The completed smooth sheet has been inspected and is approved.



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

LIST OF SIGNALS
USED
SHEET 23-1937 WD

TRIANGULATION

EAST --- Point Reyes East 2 - 1930
LAG --- Lagoon 1930
LIGHT --- Point Reyes Lighthouse 1870-74
STA --- Point Reyes Radio Compass Station 1921
CAB --- Cabesa 1930
HEAD --- Point Reyes Head 2-1907

TOPOGRAPHIC SIGNALS

SHEET G-1937	SHEET F-1937	SHEET T-4495	SHEET T-4639
TEX	LA	NO	REP
CON		GUAN	LIP
DID		FLAG	OUT
HOT		CALF	HIT
CHIM			JEF
LOOK			SAP
BIG			WED
BEN			TOM
CUPS			VAP

HYDROGRAPHIC SIGNALS

CAT --- Hydrographic signal CAT; Vol. 1, Page 10 & 11
DOG --- " " DOG; Vol. 1, Page 11

STATISTICS
to accompany
WIRE DRAG SHEET FIELD NO. 23
1937

Date 1937	Day Letter	Volume	Statute Miles	Positions	Drag Length	Tender Soundings	Positions
Nov. 4	A	1	2.1	23	10,000	4	4
5	B	1	4.3	36	10,000	1	1
21	C	1	4.3	48	10,000	2	2
Dec. 3	D	1	1.0	16	10,000	1	4
6	E	1	2.3	23	7,200	-	-
7	F	2	6.5	51	10,000	-	-
8	G	2	0.8	6	10,000	-	-
TOTALS			21.3	203		8	11

AREA 20.0 SQUARE STATUTE MILES.

TIDE NOTE FOR HYDROGRAPHIC SHEET

Division of Hydrography and Topography:

March 19, 1938.

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

Tide Reducers are approved in
and wire drag
4 volumes of sounding/records for

HYDROGRAPHIC SHEET 6249

Locality Point Reyes and Vicinity, Coast of Calif.

Chief of Party: F. H. Hardy
Plane of reference is mean lower low water reading
5.55 ft. on tide staff at Presidio
10.3 ft. below B.M. 165

Time of tide used is 45 minutes earlier than San Francisco with
the range the same.

Height of mean high water above plane of reference is 5.1 feet.

Condition of records satisfactory except as noted below:



Chief, Division of Tides and Currents.

GEOGRAPHIC NAMES

Survey No. **H6249** W.D.

On Chart No. 5502
 On previous survey No. 7-403
 On U. S. quadrangl. 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>Point Reyes</u> Punta de los Reyes	✓					✓	✓	1
✓	<u>Drakes Bay</u> Sir Francis Drakes Bay	✓					✓	✓	2
	<u>chimney Rock</u> 7-4485	✓							3
									4
									5
									6
									7
									8
									9
									10
									11
									12
									13
									14
									15
									16
									17
									18
									19
									20
									21
									22
									23
									24
Names underlined in red approved									25
by <u>JAE</u> on 3/24/38									26
									27

Remarks

Decisions

	Remarks	Decisions
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		

Field Records Section (Charts).

H6249 W. D.

HYDROGRAPHIC SHEET NO.

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

Number of positions on sheet214.
Number of positions checked13.
Number of positions revised0.
Number of soundings recorded8.
Number of soundings revised0.
Number of signals erroneously plotted or transferred0.

Date: April 19, 1938.

Verification by *J. A. Mc Cormick*

Time: 8 hrs.

Review by *J. A. Mc Cormick*

Time: 5 hrs.

HYDROGRAPHIC SURVEY NO. H-6249 W.D.

Smooth Sheet Yes

Boat Sheet Two

Records; Sounding One Vols., Wire Drag 3 Vols., Bomb --- Vols.

Descriptive Report Yes

Title Sheet Yes

List of Signals In D.R.

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)

Hydrography: Total Days 7; Last Date Dec. 8, 1937

Remarks _____

MEMORANDUM

IMMEDIATE ATTENTION

SURVEY
 DESCRIPTIVE REPORT } No. H-6249 W.D.
~~PHOTOSTAT OF~~ } ~~No. 7~~

{ received Feb. 23, 1938
 { registered Mar. 15, 1938
 { verified
 { reviewed
 { approved

This is forwarded in order that your attention may be directed to the matters as indicated below. Please initial in column 3 as an acknowledgement that your attention has been thus directed. The complete original records are available if desired. If you cannot give this your immediate attention, please initial, note, and forward to the next section marked, calling for the records at your convenience.

ROUTE		Initial	Attention called to
20			
22			
24			
25			
26			
30			
40			
62			
63			
82			
83			
88			
90			

RETURN TO

82	T. B. Reed
----	------------



Verifier's Report on H-6249 (1937) W. D.

No comments other than those contained
in the review are considered necessary.

April 19, 1938.

J. A. McCormick.

Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 6249 (1937) W. D. FIELD NO. 23

Point Reyes and Vicinity, Point Reyes, California
Surveyed in Nov.-Dec. 1937, Scale 1:20,000
Instructions dated May 2, 1935 and March 6, 1937 (GUIDE)

Wire Drag with Hand Lead Soundings. Dual control on shore signals.

Chief of Party - F. H. Hardy.
Surveyed by - Charles Shaw.
Protracted by - M. G. Ricketts.
Subdivision of Wire Dragged Areas by - M. G. Ricketts.
Inked by - M. G. Ricketts.
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 of S. P. 118.

The Descriptive Report is complete and satisfactorily covers all items of importance.

2. Compliance with Instructions for the Project.

The survey satisfies the instructions for the project.

3. Shoreline and Signals.

- a. Shoreline on this survey originates with T-4495 (1929), T-4517 (1929), T-4518 (1929), T-4519 (1929) and T-4639 (1931).
- b. Topographic signals originate with T-4495 (1929). T-4639 (1931) and control sheets. CS-6250 (1937) (2 sheets) only one of which has at present been received from the field.
Second control sheet received and compared. J.A.M. 8/10/38.
- c. Hydrographic signals originate with the present survey, the cuts being recorded and indexed in the drag volumes.

4. Junctions with Wire Drag Surveys.

The junctions with H-6250 (1937) W. D. on the east and the survey on the north which has not been received from the field will be considered in the reviews of those sheets.

5. Comparison with Latest Hydrographic Surveys.

H-4974 (1929), 1:20,000; H-4979 (1929), 1:40,000; H-4980a (1929), 1:80,000; H-5164 (1931), 1:20,000; H-5169 (1931-32), 1:40,000.

The present survey covers portions of the above hydrographic surveys. There are no conflicts between the effective drag depths and the soundings shown.

6. Comparison with Chart 5402 (New Print dated Sept. 28, 1937).
Chart 5502 (New Print dated Oct. 12, 1937).
Chart 5599 (New Print dated Oct. 9, 1936).

The charts contain no soundings which conflict with the effective drag depths. The 2 fathom depth charted off Point Reyes, originates with Chart Letter 935 of 1937 and is advance information of the 2 fathom shoal found in the present survey.

7. Field Plotting.

The field plotting, protracting and subdivision of dragged areas were satisfactory.

8. Results of Survey.

a. Shoals discovered and clearance depths obtained.

- (1) A 5-1/2 fathom sounding in latitude 37° 59.00', longitude 122° 57.52' falling in depths of 7-1/2 to 11 fathoms on H-4974 (1929). Not cleared.
- (2) A 2 fathom sounding in lat. 37° 59.18', long. 122° 58.33', falling in depths of 4-1/6 to 7-3/4 fathoms on H-4974 (1929). Not cleared.
- (3) A 4-4/6 fathom grounding in latitude 37° 59.20', longitude 122° 58.69' falling in depths of 7-3/4 to 8 fathoms on H-4974 (1929). Cleared with an effective depth of 26 feet.
- (4) A 10-3/4 fathom sounding in latitude 38° 00.24', longitude 123° 02.20' falling in depths of 13 to 17 fathoms on H-5164 (1931). Cleared with an effective depth of 56 feet.

b. Effective Depths.

The effective depths of the various drag strips are sufficient to insure safety to surface navigation to within 1/4 to 1/2 mile ~~in~~ of the shore.

c. Splits and insufficient overlaps.

There is a split at the junction of the present survey with H-6250 (1937) W. D. caused by the navigational buoy in latitude 37° 58.92', longitude 122° 57.25'.

9. Additional Field Work Recommended.

The survey is in general very satisfactory. If feasible, and if opportunity affords, the 5-1/2 fathom sounding in latitude 37° 59.00', longitude 122° 57.52' should be cleared and the size of the split at the navigational buoy to the eastward reduced (see par. 8a (1), this review and also Descriptive Report page 2 - Groundings).

10. Area and Depth Sheet.

An area and depth tracing has been prepared for this sheet in the office.

11. Reviewed by - J. A. McCormick, April 19, 1938.

Inspected by A. L. Shalowitz.

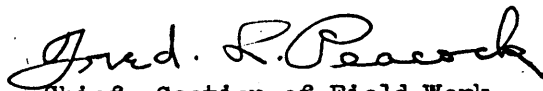
Examined and approved:



T. B. Reed,
Chief, Field Records Section.



Chief, Division of Charts.



Chief, Section of Field Work.

Chief, Division of H. & T.

Applied to drawing of Chart 5402 - JTW - 6/26/39
Applied to C.P. of Chart 5599 October 5-1939 (Bush)

Appd 5601 Helmer 11/21/63

Appd to New chet 5072 thru other surveys and chet 5599 *Anthony 4-2069*