

5854

5854

Form 504
Rev. Dec. 1933
DEPARTMENT OF COMMERCE
U.S. COAST AND GEODETIC SURVEY
R. S. PATTON, DIRECTOR

DESCRIPTIVE REPORT

~~Topographic~~
Wire Drag } Sheet No. 4
~~Hydrographic~~

State California

LOCALITY

California Coast

Pescadero Point to Tunitas Creek

1934

CHIEF OF PARTY

F. H. Hardy

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

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REG. NO.

Acc. No. _____

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. 4

REGISTER NO. **5854**

State CALIFORNIA

General locality CALIFORNIA COAST

Locality PESCADERO POINT to ¹⁷ 1 MILE ²⁵ NORTH SAN GREGORIO CREEK ^S

Scale 1 : 10,000 Date of survey Aug. 26, to Oct. 5, 1934

Vessel Chartered Launches PT. REYES (Guide Launch) & FLORENCE (End Launch)

Chief of Party F. H. Hardy

Surveyed by G. C. Jones

Protracted by T. A. Renton

Soundings penciled by _____

Soundings in fathoms ~~XXXX~~ DRAG DEPTHS IN FEET.

Plane of reference M L L W.

Subdivision of wire dragged areas by R.H. McCarthy Jr. & T.M. Means

Inked by R. H. McCarthy Jr. and T. M. Means.

Verified by Jame McCormick

Instructions dated May
~~March 31,~~ _____, 1934

Remarks: Dual Control Wire Drag, position by visual fixes.

DESCRIPTIVE REPORT
to accompany
WIRE DRAG SHEET FIELD NO. 4
Project H. T. 184
Coast of California
U.S.C. & G.S.S. GUIDE
1934

INSTRUCTIONS: Instructions for the wire drag on this sheet are dated ~~March~~ ^{May} 31, 1934, and office letter dated April 2, 1934.

CHARACTER OF WORK: Control for the wire drag on this sheet was by means of visual fixes.

Dual control was used for all the work on this sheet.

The effective depth range is from 7 to 90 feet.

The position interval was usually five minutes, with supplemental positions at radical changes of course and speed.

The scale of this sheet is 1 : 10,000.

This work includes that portion from Pescadero Point to approximately 1 mile north of San Gregorio Creek, and from approximately 1/3 mile of the shore to beyond the 20 fathom curve.

The area of the work on this sheet is 24.5 square statute miles.

CONTROL: Control for the work on this sheet consisted of hydrographic signals over triangulation stations of the 1931 scheme executed by Lieutenant C. D. Meany, plotted on the North American 1927 Adjusted Datum.

Shoreline and Topographic signals "Gay" to "Pet" were transferred from a photostat of Topographic Sheet T 4793 and shoreline and Topographic signals "Fag" to "Tan" were transferred from a photostat of Topographic Sheet T 4796.

DATES OF SURVEY: Work on this sheet began August 26, 1934 and was completed October 5, 1934.

TIDAL REDUCERS: Tidal reducers for the work on this sheet were obtained from the Princeton and Monterey Portable Automatic Tide Gages.

For further information on this subject the reader is referred to the Season's Tidal Report.

OVERLAPS: The overlap of buoy path lines is more than sufficient throughout this sheet.

The overlap of drag lines at the beginning and ending of days work, on this sheet are good.

JUNCTIONS: The overlapping junctions with Wire Drag Sheet Field No. 3 on the north and Wire Drag Sheet Field No. 5 on the south are more than sufficient. For the most part the lines are continued from one sheet to the other. Common position numbers are noted in pencil on this sheet.

GROUNDINGS:

Pos. No. Letter Day	Latitude & Longitude	Grounded Eff. Depth.	Least Sounding Depth.	Cleared Eff. Depth.	Depth Plotted.
25 B	37 16.77 122 25.19	23 ft.	3 fms.	13 ft.	3 fms. ✓
"	37 16.81 122 25.35	23	3 2/6	15	3 2/6 ✓
7 C	37 16.76 122 25.22	Sloping Section 13 -15	2 4/6 <i>shown as 13 foot grounding</i>	8	2 2/6 *
21 C	37 16.3 122 25.27	27	4 1/6	7 <i>should have been greater See para 2 of review</i>	4 1/6
D	37 14.62 122 25.53		2	<i>This grounding discussed in report Field Sheet No. 5 not cleared, close inshore</i>	
11 G	37 18.7 122 27.5 ⁰⁵	59	9 1/2	49	9 1/2 ✓
46 H	37 18.21 122 27.02	78	12 4/6 <i>plotted as 12 fms.</i>	57	12 4/6
"	37 18.06 122 26.8	68	14 1/2 <i>plotted as 11 fathom grounding</i>	57	11 2/6

On position 25 B day the drag grounded on two separate shoals, with an effective depth of 23 feet. On the east of these two groundings, the least depth obtained with the hand lead was 3 fathoms. This was cleared on C day with an effective depth of 13 feet. The least depth obtained on the west grounding was 3 2/6 fathoms. This was cleared on C day with an effective depth of 15 feet. Approximately midway between these two groundings a shoal sounding of 4 4/6 fathoms was obtained this was cleared by the drag ~~on this day~~, with an effective depth of 13 feet. The 3 fathom grounding is in depths slightly greater than 5 fathoms

* Breaks at low tide and moderate swell. See note Page 13, Vol. 1 drag record.

GROUNDINGS CON'T.:

as shown on H 5296. This is approximately 43 meters east of the "rk" shown on this survey. The westerly grounding and the sounding midway between the two groundings fall in depths of 7 1/2 to 9 fathoms of water as shown on H 5296.

On C day the drag grounded (position no. 7) on a sloping section, with the effective depths of 13 to 15 feet. This grounding is in the same position as the "rk" marked on H 5296. The least depth obtained with the lead was 4 4/6 fathoms. The depth plotted is 2 2/6 fathoms. This grounding or "rk" as shown on H 5296 was cleared on D day with an effective depth of 8 feet.

plotted as 2 1/6 fathom grounding

On position 21 C day the drag grounded with an effective depth of 27 feet. The least depth obtained with the hand lead was 4 1/6 fathoms. This was cleared with an effective depth of 7 feet.* This grounding was in depths of 6 to 7 fathoms as shown on H 5296. * See par 2a of this revision

The grounding at the end of D day this sheet, and A day sheet No. 5, was discussed in the report of that sheet.

In Latitude 37 18.7, on position 11 G day the drag grounded with an effective depth of 59 feet. The least sounding obtained was 9 1/2 fathoms. This was cleared with an effective depth of 49 feet. This grounding is approximately 118 meters south of the 12 fathom sounding found in the development of this shoal on H 5294. It falls in approximately 13 fathoms on that survey.

On position 46 H day the drag grounded on two separate shoals. On the north westerly of the two groundings the drag grounded with an effective depth of 78 feet. The least depth obtained with the hand lead was 12 4/6 fathoms, *plotted as 12 fathoms* this was cleared with an effective depth of 57 feet. This grounding is in 14 to 15 fathoms as shown on H 5296. The southeasterly shoal is in depths of 17 fathoms as shown on the above survey. The drag grounded on this shoal with an effective depth of 68 feet. It was cleared with an effective depth of 57 feet. The least sounding obtained on this shoal with the hand lead was 14 1/2 fathoms. The effective depth of the uprights has been used as the sounding at point of grounding. Thus 11 2/6 fathoms is the plotted depth. Further examination at the time of grounding was prevented as noted page 19 Tender Record.

plotted as 11 fathom grounding

In connection with this grounding there is a note in the Tender Record, "Drag grounded here at 75' less 2' lift" The drag grounded at 1:50 P.M., at this time there was a 3 foot reduction for tide, the drag tested a 2 foot lift from F to 1 and 3 foot 1 to N. As noted in Vol. No.1 W.D., page 51 an additional 2 feet was allowed for swell, thus making a total correction of 7 feet at time of grounding. The upright length from N to 7 was 75 feet. The drag grounded between bouys No. 5 and 6, thus the effective depth of uprights at point of grounding is 68 feet.

COMPARISON WITH PREVIOUS SURVEYS:

Comparison with H 5294: The two shoals mentioned in the descriptive report of this sheet, only the one in Latitude 37 18.5, falls within the limits of this survey. As there were three groundings on this shoal area they were taken up under groundings.

Comparison with H 5296: The shoals mentioned in the descriptive report of the above sheet, within the limits of this survey, were cleared by the wire drag as follows.

Latitude	Longitude	Depth shown on H 5296	Cleared Effective Depth.
37 16.95	122 25.9	7 1/2 fms.	27 feet ✓
37 16.8	122 25.2	Discussed under groundings, positions 25 B and 7 C.	
37 16.7	122 25.8	5 4/6 fms.	27 feet ✓
37 16.49	122 25.8	6	31 ✓
37 16.3	122 25.28	Discussed under groundings, position 21 C	
37 15.72	122 25.7	4 2/6	19 ✓
37 15.23	122 26.45	11	48 ✓

COMPARISON WITH CHART NO. 5402: All the shoal groundings found on this survey are charted, or fall within the proper depth curve about such shoals that are shown on this chart except, the grounding on 46 H day, Latitude 37 18.06, Longitude 122 26.8. The effective depth of the uprights were used as the sounding on this grounding, 11 2/6 fathoms. This would fall between a 12 and 14 fathoms on this chart.

See par 5(4) of review

SOUNDING FROM H 555: There is a sounding shown on H 5296, that was transferred from H 555, Latitude 37 14.79, Longitude 122 25.55, of 4 3/4 fathoms. This was cleared by the wire drag with an effective depth of 16 feet. There is also a note with an arrow leading just beyond this sounding, "light green strata water apparently shoal area;" this area was also cleared with an effective depth of 16 feet.

PERSONNEL AND LAUNCHES: Lieutenant Commander Jones was in charge of this work and also in charge of the Guide Launch. Lieutenant (j.g.) Chovan was in charge of the End Launch.

The launches used were the chartered launches POINT REYES (Guide Launch) and FLORENCE (End Launch).

L. O. Jones, H. G. E.
 Forwarded,
 Approved,
F. H. Hardy
 F: H. Hardy,
 Chief of Party, C & G S.
 Commanding Ship GUIDE.

Respectfully submitted,
Lawrence W. Swanson
 Lawrence W. Swanson,
 Jr. H & H. E.
 C & G Survey.


ADDITIONAL NOTE

Supplemental note to descriptive report to accompany Wire Drag Sheet Field No. 4. This note applies equally to all other sheets of this seasons work.

It will be noted that an additional 1 to 3 feet has been arbitrarily added to the measured lift to allow for swell. This allowance is considered safe for the reason that the Drag-master in testing has taken near the least depth registered on the testing wire which in itself partly compensates for lift due to swell.

In this connection it is desired to call attention to the drag clearances over shoals. For example the grounding at Position 7,C Day, Vol. No.1, is plotted as 2 2/6 fathoms or 14 feet and the drag is shown clearing at 8 feet, or 6 feet over the shoal. In that case 2 feet additional lift had been allowed for swell and the drag had been actually set for an effective depth of 10 feet, or a 4 foot clearance. Obviously the drag can also drop below its mean plane between swells so that a hookup of less than 4 feet clearance is impracticable.

In several cases the clearance may appear as too large but if reduced by twice the assigned lift for swell it does not appear excessive.


G. C. Jones
Lieutenant Commander
U.S.C & G. Survey.

LIST OF SIGNALS
to accompany
WIRE DRAG SHEET FIELD NO. 4

TRIANGULATION

Hydrographic Name	Location
Gor	Gregorio 1931
San	San 1931
Cat	Cat 1932
Dera	Dero 1931
Los	Los 1931
Tank	Tank on Beach by Hotel 1931

TOPOGRAPHIC

	Located on Topographic Sheet T 4793	
Gay	Dip	Bul
Slant	Jas	Dog
Tub	Bug	Pet
Die	Pen	
	Located on Topographic Sheet T 4796	
Fag	But (Bul on T 4796)	Der
Ten	Big	Tan

STATISTICS

DATE 1934	DRAG				DRAG LENGTH	TENDER	
	DAY	VOL.	STATUTE MILES	NO. POS.		NUMBER SOUNDINGS	POSITIONS
Aug. 26	A	1	1.0	13	4800	-	-
Sept. 5	B	1	4.0	48	4800	6	6
6	C	1	2.9	42	4800	2	2
12	D	1	3.5	50	6000	3	3
14	E	1	2.5	39	4800	-	-
20	F	1	6.5	93	9000	-	-
21	G	1	2.6	64	10000	1	5
23	H	1	3.8	88	10000	2	2
24	J	2	4.7	75	9500	-	-
Oct. 5	K	2	<u>3.5</u>	<u>53</u>	9500	-	<u>2</u>
	TOTALS		35.0	565		<u>14</u>	<u>20</u>

AREA 24.5 SQUARE STATUTE MILES.

STATEMENT
to accompany
WIRE DRAG SHEET FIELD NO. 4

The protracting and plotting of buoy positions was done by Mr. T. A. Renton, draftsman, drag areas were subdivided and inked Mr. R. H. McCarthy Jr. and Mr. T. M. Means, draftsmen, under the direct supervision of Lieutenant (j.g.) L.W. Swanson.

The completed smoothe sheet has been inspected and is approved.

F. H. Hardy

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

Oakland, California.

HYDROGRAPHIC SURVEY NO. 5854

Smooth Sheet 1

Boat Sheet 2

Sounding Records 5 Vols. Wire Drag

Descriptive Report Yes

Title Sheet Yes

List of Signals Yes in Vol. 1

Landmarks for Charts (Form 567) None

Statistics Yes

Approved by Chief of Party F. H. Hardy

Recoverable Station Cards (Form 524) None

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

Remarks _____

Field Records Section (Charts).

HYDROGRAPHIC SHEET NO.5854

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

Number of positions on sheet	...565
Number of positions checked17
Number of positions revised0
Number of soundings recorded14
Number of soundings revised 20
Number of signals erroneously plotted or transferred0

Date: Aug. 14, 1935

Verification by *Jamecannick*

Time: 4 hr.

Review by *R L Johnston*

Time: 13 hr

August 12, 1935.

TIDE NOTE FOR HYDROGRAPHIC SHEET

Division of Hydrography and Topography:

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

Tide Reducers are approved in
1 volume of sounding records for
3 volumes of wire drag

HYDROGRAPHIC SHEET 5854

Locality Pescadero Point to Tunitas Creek, California.

Chief of Party: F. H. Hardy in 1934

Plane of reference is mean lower low water reading

2.5ft. on tide staff at Monterey

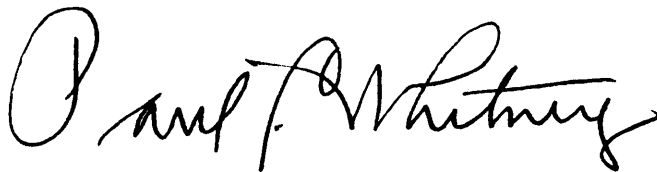
12.5ft. below B.M. 3

2.2 ft. on tide staff at Princeton

14.6 ft. below B.M. 5

Height of mean high water above plane of reference is 4.6 feet at Monterey;
4.8 feet at Princeton.

Condition of records satisfactory except as noted below:



Chief, Division of Tides and Currents.

Verifier's Report on H-5854 (Wire Drag)

Records: Records conform to General Instructions.

Drafting: Drafting is excellent.

Remarks: In general this party does not make depth changes and tidal changes in accordance with the Wire Drag manual. They also plot several curves where they have reversed the drag and started the line before the height is anywhere near normal. Two such cases occur on this sheet at 12.8 and 17.6. Verifier has not changed them but it is his opinion that portions of strips thus shown have little value.

Sounding of $2\frac{1}{2}$ fathoms at position 10 has been plotted by the verifier as a grounding of $2\frac{1}{2}$ fathoms despite the fact that sounding record says the grounding was at buoy 6 (effective depth 15 feet). The grounding plots inside a strip with an effective depth of 13 feet although it is in a sloping section. It is verifier's opinion that as long as actual sounding cannot be shown anyway grounding might as well be plotted to agree with the drag strip.

Cancelled strip on the north end of the sheet is probably from the adjoining sheet. Junction was made with H-5855 on the south. Adjoining sheet to the north has not been received in this office.

Aug. 14, 1935.

Submitted,

Jamclarmick

Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 5854 W. D. (1934) - FIELD NO. 4

Pescadero Point to 1 Mile North San Gregorio Creek, California Coast
Surveyed in August - October, 1934
Instructions dated May 31, 1934 (GUIDE)

Wire Drag, with Hand Lead Soundings 3 Point Fixes on Shore Signals.

Chief of Party - F. H. Hardy.
Surveyed by - G. C. Jones.
Protracted by - T. A. Renton.
Subdivision of dragged areas by - R. H. McCarthy, Jr., T. M. Means.
Inked by - R. H. McCarthy, Jr., T. M. Means.
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 S. P. 118, except as follows:

- a. No bottom characteristics were recorded on the soundings obtained at drag groundings.
- b. In some cases the drag position number at time of grounding was not entered in the remarks column opposite sounding position in sounding record. (3rd par., page 36, S. P. 118).
- c. In some cases a cut to the grounding was not recorded, nor was the nearest buoy to grounding recorded. (Next to last paragraph, page 32, S. P. 118).
- d. Position angles on shoals were not checked by taking an angle to a fourth object. (Page 33, S. P. 118).

The Descriptive Report is clear and comprehensive and adequately covers all matters of importance.

2. Compliance with Instructions for the Project.

- a. The plan, character and extent of the survey comply with the instructions for the project. This is a well executed survey and shows that careful consideration was given to such matters as overlaps and proper speed. However, a deeper drag than 7 feet should have been used in re-dragging the 25 foot shoal in lat. $37^{\circ} 16.3'$, long. $122^{\circ} 25.27'$.

- b. No description of equipment was contained in this descriptive report, but the descriptive report of H-5712 (1934) states that a report on equipment used will be forwarded. It is assumed that standard drag equipment was used.

3. Junctions with Wire Drag Surveys.

The junction with H-5862 (1934) W. D. on the north and with H-5855 (1934) W. D. on the south is satisfactory. Most of the drag strips continue from one sheet to the other.

4. Comparison with Latest Hydrographic Surveys.

H-5245 (1932-3), H-5294 (1932), H-5296 (1932).

The present survey covers portions of the above surveys and the effective drag depths are consistent with the depths shown on these surveys.

5. Comparison with Chart No. 5402 (corrected to August 6, 1935).

The chart is on a scale too small to afford a comparison of much value, however none of the charted soundings conflict with the effective depths of the drag.

Some of the shoals found on the present survey which have been charted from advance information (chart letter No. 708 (1934)), should now be revised to agree with the final reduced depths.

- a. The 9 fathom sounding charted in lat. $37^{\circ} 18.7'$, long. $122^{\circ} 27.05'$ is actually $9\frac{1}{2}$ fathoms.
- b. The $2\frac{1}{2}$ fathom sounding charted in lat. $37^{\circ} 16.75'$, long. $122^{\circ} 25.2'$ is now shown as a 13 foot grounding and should be charted as $2\frac{1}{4}$ fathoms.
- c. The $2\frac{1}{4}$ fathom sounding charted in lat. $37^{\circ} 14.62'$, long. $122^{\circ} 25.52'$ should be changed to 2 fathoms.
- d. The 11 fathom grounding in lat. $37^{\circ} 18.06'$, long. $122^{\circ} 26.8'$ has not been charted, however on the present scale of the chart it is not possible to show both the 11 and also the 12 fathom sounding about 400 meters northwest of it.
- e. The remaining soundings of the present survey are correctly shown on the chart.

6. Field Plotting.

The field drafting was neatly done and the protracting and subdivision of areas was very accurate. The plotting of depth changes and tide changes was not in strict accordance with the Wire Drag Manual (page 39), however, the error is negligible. Where the drag was reversed, reverse curves were plotted instead of using the bight of the drag at the last forward position as the forward limit of the drag.

In one case (pos. 12G) the questionable area was covered by two other drag strips and therefore the field plotting was not changed in the office. The other drag strip (pos. 17K) falls on the western limits of the work and was not covered by another strip. The plotting of the bight of the drag at this position was corrected in the office in order that the doubtful area where the drag was being reversed would not be shown as having been covered.

With these exceptions the general character of the field plotting is excellent.

7. Results of Survey.

Several offlying shoals were located but these were cleared later by depths sufficient to prove the offshore areas free from dangers to navigation.

On the drag strip furthest inshore in the vicinity of lat. 37° 16' (pos. 7D to pos. 21D), the effective depth of the drag is only 7 feet. The general depths on H-5296 (1932) indicate that a clearance of at least 20 feet could have been obtained over this area.


8. Additional Field Work Recommended.


Except as noted in the preceding paragraph, this survey is complete and no additional work is required.

9. Reviewed by - R. L. Johnston, September 23, 1935.


Inspected by - A. L. Shalowitz.

Examined and approved:

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

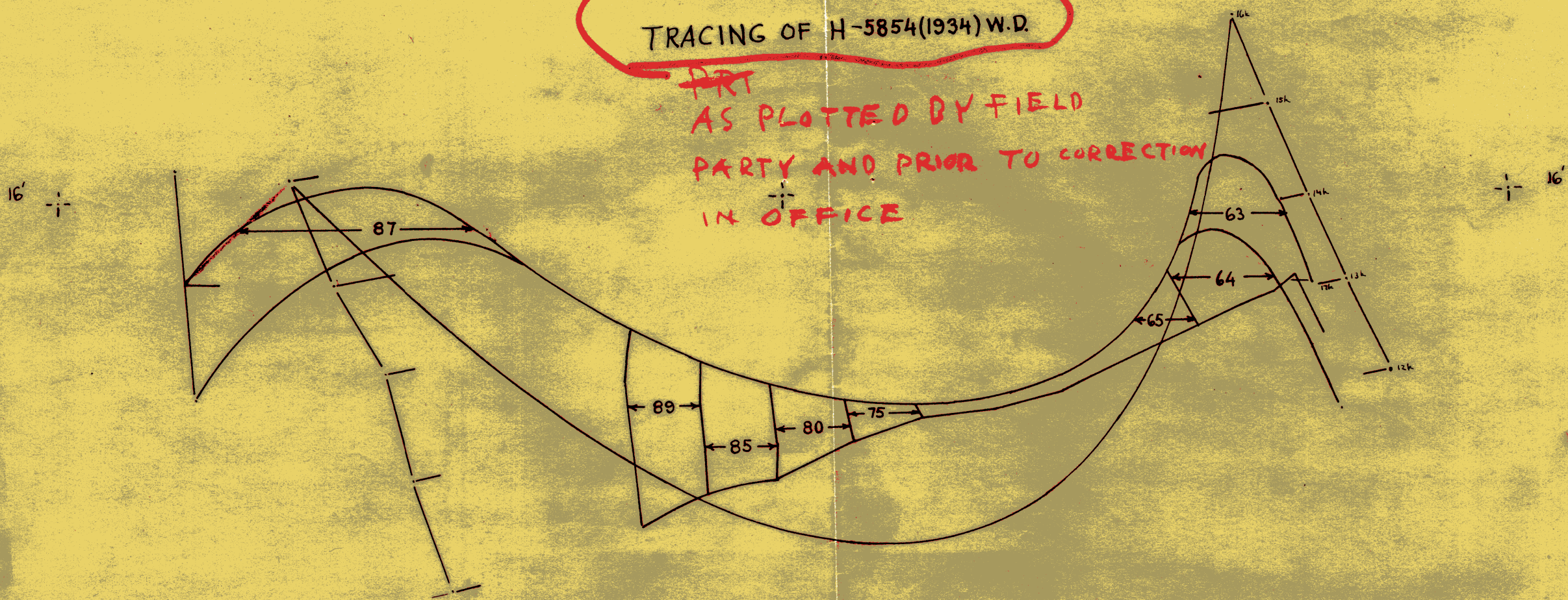

Chief, Division of Charts.


Chief, Section of Field Work.


Chief, Division of H. & T.

TRACING OF H-5854(1934) W.D.

PART
AS PLOTTED BY FIELD
PARTY AND PRIOR TO CORRECTION
IN OFFICE



ATTACH TO DESCRIPTIVE REPORT

37° 15'
122° 29'

28'

37° 15'
122° 27'

25. Feb 31-1935

E.H.S.

Applied to Chart 5402 - Feb 21, 1936 R.M.Z