

6406

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

DESCRIPTIVE REPORT

~~Topographic~~ } Sheet No. 21-37
Hydrographic }

State California

LOCALITY

~~North Coast of California~~

~~Off Cape Mendocino - Blunts Reef.~~

Blunts Reef & Vicinity

1937

CHIEF OF PARTY

F. H. Hardy

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. 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. 21-37

REGISTER NO. H 6406

State California
 General locality Off Cape Mendocino
~~North Coast of California~~
 Locality Cape Mendocino - Blunta Reef & Vicinity
 Scale 1:20,000 Date of survey June 9, Oct. 8, 19 37
 Vessel U.S.C. & G.S.S. GUIDE, Port M.S., and Launch VIRGINIA I.
 Chief of Party F. H. Hardy
 Surveyed by I. E. Rittenburg and W. J. Chovan
 Protracted by M. G. Ricketts
 Soundings penciled by M. G. Ricketts
 Soundings in fathoms feet
 Plane of reference M.L.L.W.
 Subdivision of wire dragged areas by _____
 Inked by Wallace A. Bruder
 Verified by Wallace A. Bruder
 Instructions dated May 2., 19 35
 Remarks: _____

DESCRIPTIVE REPORT
to accompany (H-6406)
HYDROGRAPHIC SHEET FIELD NO. 21-1937
U.S.C. & G.S.S. GUIDE
F. H. Hardy, Comdg.
Project HT-206

INSTRUCTIONS:

The work on this sheet was done under authority of the Director's instructions for Project HT-206, dated May 2, 1935. ✓

SURVEY METHODS:

This sheet covers the area in the immediate vicinity of Blunts Reef. The usual hydrographic methods were used in the work on this sheet. Three point fixes were used for control, soundings were taken by hand lead, wire and fathometer. Positions of signals are from the 1928-29 Coastal Triangulation, 1869-1871 triangulation adjusted to 1927 datum in the field, and Topographic Sheets Field Nos. ^{N-1936} _{T-6580}, ^{P-1936-37} _{T-6614a} and ^{Q-1937} _{T-6614b}. The work was accomplished by the Ship GUIDE, the Port Motorsailer and the Chartered Launch VIRGINIA I. ✓

DISCREPANCIES:

The work on this sheet consists of only the regular scheme of lines. No development work was intended to be run with the exception, that is, of the Great Break, but time was not available due to closing of the season. (Done in 1938) ✓ See H-6408 (1937-38) W.D.

The wire drag party made a wire drag survey of this area and it was considered that no development work was needed. See par. 9, review

The sounding after Position 38F, VIRGINIA Volume 1, Page 68, notes that the lead hit at 12 fathoms and dropped off to 15.3 fathoms, the latter is plotted and a note about same is on the sheet. There are other shoals in the immediate vicinity and it is recommended that the 12 fathom sounding reduced to $11\frac{1}{2}$ fathoms be plotted. 11 fm sounding accepted

Position 1C to 9C, inclusive, were rejected as the sheave was sticking and failed to come back to zero by as much as five fathoms. ✓

The two positions 1 and 2C, west of False Cape, were obtained by the Port Motorsailer while she was waiting for the Launch FLORENCE to pick up the drag. This rock is a sharp pinnacle and it is certain that the least depth was not obtained as not sufficient time was had to thoroughly develop this area. lat. 40°30.7' long. 124°24.5'

The 9 3/4 fathom shoal found by the hydrographic party, Position 82b, is shown as covered with 65 feet, G day on Wire Drag Sheet No. 22-1937. I feel certain that this sounding exists as the leadman had the launch go ^{H-6408 W.D.} astern until the shoalest sounding was obtained, the sheave reading was ^{See par. 6, review.} verified and the sheave checked. It is recommended that this sounding be retained.

DANGERS:

This area has in part been covered by wire drag; for dangers refer to Wire Drag Sheet No. 22-1937 and Wire Drag Sheet No. 2, 1937. The shoals found by wire drag effecting this area are plotted on this sheet, ^{H-6408 W.D.} and labeled ^{H-6408 W.D.} thus: ^{in color.} Pos. No. (WD).

ANCHORAGES:

There are no anchorages on this sheet. ✓

COMPARISONS WITH PREVIOUS SURVEYS:

It was only intended to run a regular scheme of lines on this sheet, and the development of shoals and verification of previous data be taken ^{See par. 9, review.} care of by the wire drag survey, Sheet No. 22-1937 and Sheet No. 2-1937. There are a few shoals that the wire drag could not take care of such as the 1 1/2 fathom sounding north of the Great Break that was intended to be developed but time was not available due to the closing of the season. *(Done in 1938)*

Chart No. 5795:

The 1 1/2 fathom shoal shown on this chart in Latitude 40° 26.45', Longitude 124° 27.95', falls on the blank space between two sounding lines. There is a slight indication of shoaling on the sounding lines run. It is recommended that this shoal be kept. *(Found in 1938)* ✓

The Great Break, (4 1/2 fathom shoal), in Latitude 40° 26.2, Longitude 124° 28.3', falls about 10 meters inside of an 18 fathom sounding on sounding line, (positions 132a to 133a). The bottom is very irregular in the immediate vicinity and it is recommended that this shoal be retained as this area was not developed. *(Found in 1938)* ✓

The submerged wreck shown in Latitude 40° 26.9', Longitude 124° 27.5', should be retained until it is proven to be nonexistent by the wire drag next season. *(This wreck was cleared in 1938 by 62 & 43 ft. drags & therefore does not constitute a danger.)* See par. 7a, review.

The 1 3/4 fathom shoal in Latitude 40° 30.7', Longitude 124° 24.5', should be retained. The Motorsailer, while waiting for the wire drag guide launch to pick up the drag, ran two drift lines over this shoal and found 3 5/6 fathoms. The time was not sufficient to thoroughly feel out this area, it is certain that the shoalest depth was not obtained. ^{Inshore survey of this area not yet made in office. Disposition will be made in its review.}

A few cuts were taken to verify the position of Blunts Reef. The cuts as taken and plotted tend to show a displacement to the east, however, ✓ these cuts as recorded were to the breakers which probably accounts for the

displacement. On both this sheet and on Wire Drag Sheet Field No. 2-1937, heights were determined for the two rocks of this reef. In both cases the heights determined indicate that this reef should be charted as M.L.L.W. rocks rather than the high water rocks shown on Chart 5795. The heights determined by two different men are in slight disagreement. The recommended heights are as follows:

H-6409 W.D.
Rocks are shown as awash on latest chart.

East Rock bares 5 feet at M.L.L.W. and West Rock bares 3 feet at M.L.L.W. (For explanation see Discrepancies, Wire Drag Sheet No. 2-1937).

Hydrographic Sheet, Register No. 1150:

Same as comparisons with Chart No. 5795. ✓

Comparison With Wire Drag Sheet No. 22-1937: H-6408 (1937-38) W.D.

In only one instance the wire drag was deeper than the depth shown, that was the 9 3/4 fathom sounding at Position 82b. See this Descriptive Report under Discrepancies and also Descriptive Report Wire Drag Sheet No. 22-1937, for further information. See par. 6, review.

H-6408 W.D.

GEOGRAPHIC NAMES:

Blunts Reef is a well established local name. ✓

JUNCTIONS:

The junctions with Ship Sheets No. 41-1937 on the north and west, Ship Sheet No. 41-1936-37 on the south and west and Launch Sheet No. 1-37 on the east, are good.

H-6415

H-6221

H-6407

STATISTICS:

VIRGINIA I

Statute miles of sounding lines. . . . .	.62.0
Soundings (hand lead).	104
Soundings (wire). . . . .	.745
Positions.	396

PORT MOTORSAILER

Statute miles of sounding lines.	53.0
Soundings (hand lead).	2
Soundings (wire). . . . .	.970
Positions.	350

SHIP GUIDE

Statute miles of sounding lines. 7.0
 Soundings (Fathometer fast speed). . . .109
 Positions. 30

TOTALS

Statute miles of sounding lines.122.0
 Soundings (hand lead).106
 Soundings (wire).1715
 Soundings (Fathometer fast speed). . . .109
 Positions.776
 Area, square statute miles 12.3

Respectfully submitted,

Walter J. Chovan

Walter J. Chovan,
Jr. H & G Engineer,
Coast & Geodetic Survey.

Approved, forwarded:

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

STATISTICS
for
SHEET NO. 21-1937

Boat	Vel.	Day	Statute Miles		Soundings		Positions
			Sounding	Lines	H.L.	Wire Fathometer	
VIRGINIA	1	A	3.5			41	24
	1	B	2.4			42	23
	1	C	22.5		42	233	116
	1	D	3.6			61	26
	1	E	11.8		62	103	73
	1	F	6.2			101	50
VIRGINIA			50.0		104	581	312
VIRGINIA	2	F	12.0			164	84
Port M.S.	3	a	23.5			440	160
	3	b	21.1			378	132
Port M.S.			44.6			818	292
Port M.S.	4	b	8.4			152	56
	4	c	0		2		2
Port M.S.			8.4		2	152	58
Ship	5	A	7.0				109
	1		50.0		104	581	312
	2		12.0			164	84
	3		44.6			818	292
	4		8.4		2	152	58
	5		7.0				109
TOTALS			122.0		106	1715	109
							776

Area - 12.3 square statute miles.

LIST OF SIGNALS
to accompany
HYDROGRAPHIC SHEET FIELD NO. 21-1937
Project H.T.206
California Coast

TRIANGULATION

<u>Name</u>	<u>Hydrographic Name</u>
Point, 1928-29	POINT
Coon, 1928-29	COON
Oil, 1928-29	OIL
Mussel Rock, 1869	SEL
False Cape Rock, 1869	FALSE
False Cape Rock 2, 1928-29	SEC
Fortunas 2, 1928-29	TUNA
Bear River 2, 1928-29	BEAR
Mendocino 2, 1928-29	MEN
Cape Mendocino Light House, 1869	DOC
Cape Rock, 1869	CAP
South of Cape 2, 1928-29	SOU
Steambeat Rock, Highest Point, 1928	BOAT
Devil Gate Rock, 1871	DEVIL
New Domingo, 1928	MINGO
Blunts Reef North Rock, 1869	EAST
Blunts Reef South Rock, 1869	WEST

LIST OF PLANE TABLE OBJECTS
FROM SHEETS FIELD NOS.
N-1936, P-1936-7 and Q-1937

RIP
TEL
HIGH
BRIG
BIG
REBEL
GORD
GUS
GOOD
SHEEP
JAG
QUEEN
MAN
KEN
AGE

STATEMENT
to accompany H-6406
HYDROGRAPHIC SHEET FIELD NO. 21-1937

The smooth plotting and penciling of soundings was done by Lieutenant (j.g.) Max G. Ricketts.

The completed smooth sheet and the records have been inspected and are approved.

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

Field Records Section (Charts)

HYDROGRAPHIC SHEET NO. **H6406**

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

Number of positions on sheet	.....776
Number of positions checked	.....11
Number of positions revised	.....0
Number of soundings recorded	.....1930
Number of soundings revised	.....1
Number of signals erroneously plotted or transferred	.....0
No. of sndgs. erroneously spaced	....0

Date:

Verification by *Wallace A. Bruder*

Time: 24 hrs. 0 min.

Review by J.A.M^cCormick, Feb. 16, 1939

Time: 14 hr.

HYDROGRAPHIC SURVEY NO. H-6406

Smooth Sheet Yes

Boat Sheet Two

Records; Sounding 5 Vols., Wire Drag Vols., Bomb Vols.

Descriptive Report Yes

Title Sheet Yes

List of Signals Vol.#1

Landmarks for Charts (Form 567) Yes

Statistics Yes

Approved by Chief of Party Yes

Recoverable Station Cards (Form 524) None

Special Chart for Lighthouse Service -----
(Circular Nov.30, 1933)

Hydrography: Total Days 9; Last Date Oct. 8, 1937

Remarks _____

Remarks

Decisions

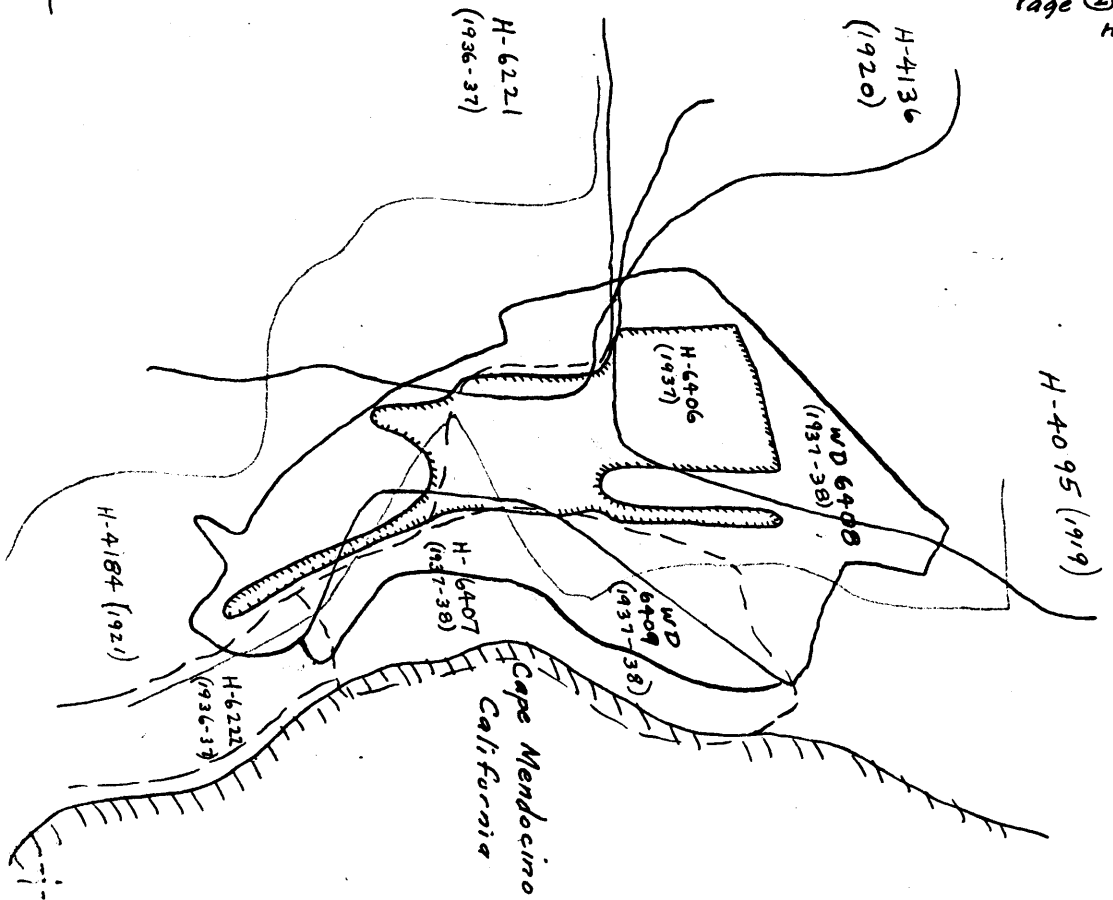
	Remarks	Decisions
1		File No 404244
2	Submitted to USGB vs. Cape Fortunas 1/13/39	" 405 243
3		.. 404244
4		.. 404243
5	a USGB decision	.. 404244
6		
7	Two prominent rocks on Blunts Reef marking the limits of reef. Desc. Names only	}
8		
9	Location of T.G. off limit of survey	.. 400 240
10		.. 404 244
11		.. 405 243
12		
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27		

GEOGRAPHIC NAMES

Survey No. H-6406

Name on Survey	On Chart No. 5602		On previous survey		On U. S. quadrangle Maps		From local information		On local Maps		P. O. Guide or Map		Rand McNally Atlas		U. S. Light List	
	A.	B.	C.	D.	E.	F.	G.	H.	K.							
✓ <u>Cape Mendocino</u>	✓															1
✓ <u>False Cape</u>	✓															2
✓ <u>The Great Break</u>	✓															3
✓ <u>Bear River</u>	✓															4
✓ <u>Blunts Reef</u>	✓															5
^{see above} The Great Break																6
East Rock																7
West Rock																8
Shelter Cove	✓															9
✓ <u>Sugar Loaf</u>	✓															10
✓ <u>False Cape Rock</u>	✓															11
																12
																13
																14
																15
																16
																17
																18
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																23
																24
																25
																26
																27

Names underlined in red approved for H6406
 by GHE on 1/26/39



CH 5602 #2

Hydro Sheet No.	Year	Report Read or Applied	Junction Applied	OK	Scale	Remarks
W.D. 6409	1937-38				10'	
W.D. 6408	37-38				20'	
6407	37-38				10'	
6222	36-37				10'	
6221	36-37		✓		40'	Photostat made
4184	'21				40'	
4136	'20				120'	
4095	'19				120'	

Diagram # 5602 #2

Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 6406 (1937) FIELD NO. 21.

Blunts Reef and Vicinity, Off Cape Mendocino, California
Surveyed in June - October 1937, Scale 1:20,000
Instructions dated May 2, 1935 (GUIDE)

Hand Lead, Fathometer and
Machine Soundings.

3 Point fixes on shore signals.

Chief of Party - F. H. Hardy.
Surveyed by - I. E. Rittenburg, and W. J. Chovan.
Protracted by - M. G. Ricketts.
Soundings plotted by - M. G. Ricketts.
Verified and inked by - W. A. Bruder.

1. Shoreline and Signals.

As this is an offshore survey, no shoreline is shown. Topographic signals originate with T-6560 (1936), T-6614a (1936-38) and T-6614b (1937).

2. Junctions with Contemporary Surveys.

- a. The junction with H-6221 (1936-37) on the south is satisfactory.
- b. The junctions with H-6407 (1937-38) on the east and H-6415 (1937-38) on the north will be considered in the reviews of those surveys.

3. Sounding Line Crossings.

Such crossings as result from the development are satisfactory.

4. Depth Curves.

The usual depth curves can be satisfactorily drawn.

5. Comparison with Prior Surveys.

- a. H-241 (1851), 1:1,000,000; H-401 (1854) 1:375,000.

These reconnaissance surveys cover the general area of the present survey but contain little or no useful information within its actual limits. They should be disregarded in future charting.

- b. H-1150 (1872), 1:20,000; H-1682 (1885-6) 1:20,000.

These surveys cover the major portion of the present work. H-1150 is thickly developed in the vicinity of Blunts

Reef but shows no features which are not better delineated on the present survey as supplemented by wire drag investigations. The old surveys should be superseded in future charting of the common area.

c. H-4095 (1919), 1:120,000; H-4136 (1919-21) 1:120,000.

Each of these surveys contains a few soundings within the area of the present work. Depths are in only approximate agreement with those on the present survey. Because of their scales, the old surveys are necessarily inferior to the present survey in development and control and should be superseded in future charting of the common area.

d. H-4184 (1921), 1:40,000.

This survey overlaps the present survey north and west of Blunts Reef. Depths on the two surveys are in good agreement particularly to the north of Blunts Reef where the old survey is the better developed of the two and shows several soundings of 7 to 10 fathoms which were not found by the present survey, but were substantiated by the drag investigations on H-6408 (1937-38) W.D. Several of the more important soundings from H-4184 (1921) have been added to the present survey in this area and with these additions and those from H-6408 (1937-38) W.D. the present survey is adequate to supersede H-4184 (1921) in future charting of the common area.

6. Comparison with Wire Drag Surveys.

H-6408 (1937-38) W.D., H-6409 (1937-38) W.D.

Three depths of 9-3/4, 10-1/4 and 10-3/4 fathoms in approximate lat. 40° 29.2', long. 124° 29.1', on the present survey conflict with effective depths of 65 and 66 feet on H-6408 (1937-38) W.D. It is possible that the soundings were obtained in the trough of a swell and that the drag slipped over them on a crest. No changes have been made in either survey. There are no further conflicts with H-6408 (1937-38) W.D. and none with H-6409 (1937-38) W.D.

7. Comparison with Chart 5795 (New Print dated Aug. 1, 1938).

Within the area of the present survey the chart is based principally on surveys discussed in the foregoing paragraphs. Wire drag soundings from H-6408 (1937-38) W.D. and H-6409 (1937-38) W.D. have been charted in advance of verification from approximate information furnished by the field party, and should be revised to agree with the verified surveys. Additional sources of charted information are discussed below:

- a. The sunken wreck charted in lat. 40° 26.9', long. 124° 28.5', originates with Chart Letter 250 of 1921. It is the wreck of the S. S. ALASKA and at the time it was

MEMORANDUM

IMMEDIATE ATTENTION

SURVEY
 DESCRIPTIVE REPORT } No. H -6406
~~PHOTOSTAT OF~~ } ~~No. T~~

{ received Dec. 29, 1938
 { registered Jan. 4, 1939
 { 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
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✓ *TBR*

TIDE NOTE FOR HYDROGRAPHIC SHEET

January 6, 1939.

Division of Hydrography and Topography:

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

Plane of reference

Tide Reducers are approved in
5 volumes of sounding records for

HYDROGRAPHIC SHEET 6406

Locality Blunts Reef and Vicinity off Cape Mendocino, California.

Chief of Party: F. H. Hardy in 1937

Plane of reference is mean lower low water reading

3.0 ft. on tide staff at Shelter Cove

7.1 ft. below B.M. 1A

Height of mean high water above plane of reference is 5.6 feet.

Condition of records satisfactory except as noted below:



Chief, Division of Tides and Currents..

- ① The records conform very well to the requirements of the General Instructions ✓
- ② The usual depth curves can be completely drawn. ✓
- ③ The field plotting was complete to the extent prescribed in the Hydro. Manual.
- ④ The office draftsman did not have to do over any part of the field drafting. ✓
- ⑤ The only junction completed of the contemporary sheets is H-6221 (1936-37) This covers the south and south-west. H-6407 (1937-38) is now being verified. This covers the eastern junction of H-6406.

The upper part of H-6406 (north, northeast, northeast) is covered by field sheet No. 41 (1937) ^{H-6415} which has not come in the office as yet.

⑥ Remarks

By authority of the Asst Chief of Field Records, the single line of suds on the s.e. side of the sheet (H-6406) was traced onto H-6221 (1936-37). The remaining half of the junction was made in the usual way.

Shal soundings located by wire drag were left in pencil to be verified and inked at a later date. Inked.

Respectfully submitted

Wallace A. Bruder

1/25/39

reported the masts were showing above water. The charted position was cleared with a 62 foot effective drag depth on H-6408 (1937-38) W.D., but the drag grounded about 200 meters to the north with an effective depth of 35 feet. No sounding was obtained and there is nothing in the drag records to indicate the nature of the obstruction which was later cleared with an effective depth of 24 feet.

It is recommended that the sunken wreck symbol be retained on the chart but moved to the position of the 5-5/6 fathom grounding.

- b. The 14 fathom sounding charted in lat. 40° 30', long. 124° 30' originates with Chart Letter 423 of 1916 and falls in depths of 20 to 22 fathoms on the present survey. It was obtained by the S. S. ADMIRAL DEWEY and located by dead reckoning. Its existence in the charted position is possible but it is extremely probable that the position is in error and that the sounding was obtained on the 9-1/2 fathom shoal 1/2 mile to the westward on the present survey. It should be disregarded in future charting.

8. Condition of Survey.

- a. The sounding records are neat and legible.
 b. The descriptive report is satisfactory.
 c. The field plotting was satisfactory.

9. Compliance with Instructions for the Project.

Too much reliance was placed on the wire drag particularly to the northwest of Blunts Reef where several shoal soundings have been added to the present survey from H-4184 (1921). Sounding lines are spaced 180 meters apart, but closer development would have been desirable in this rocky area.

10. Additional Field Work Recommended.

No additional field work is recommended.

11. Superseded Old Surveys.

H-241	(1851)	in part
H-401	(1854)	in part
H-1150	(1872)	in part
H-1682	(1885-6)	in part
H-4095	(1919)	in part
H-4136	(1919-21)	in part
H-4184	(1921)	in part.

12. Reviewed by - J. A. McCormick, February 16, 1939.

Inspected by - E. P. Ellis.

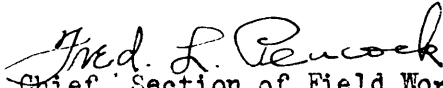
Examined and approved:



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



Chief, Division of Charts.



Chief, Section of Field Work.



Chief, Division of H. & T.