

FE70

WIRE DRAG

Diagram No. 1221-2 & 1222-3

NOAA FORM 76-35A

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SURVEY

DESCRIPTIVE REPORT

(HYDROGRAPHIC)

Type of Survey Wire Drag.....
Field No. PBS-WD-4448.....
Office No..... FE-70WD.....

LOCALITY

State Virginia.....
General Locality ... Atlantic Ocean.....
Locality Northern Approaches to.....
..... Chesapeake Bay.....

19 48

CHIEF OF PARTY
A.C. Thorson

LIBRARY & ARCHIVES

DATE November 8, 1948.....

☆ U.S. GOV. PRINTING OFFICE: 1976-669-441

NOTE: A new system for registering Field Examinations (FE's) was established in 1980. All FE's are now consecutively numbered as shown hereon. The date shown in the new format is the actual date of survey. This material was previously registered as:

FE No.7 1948

FE70
WIRE DRAG

FE No. 7 1948

Diag'd. on Diag. Chart No. 1221-2 & 1222-3

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

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Field No. PBS-WD-4448 Office No. FE - 7(1948)

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1948

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B-1870-1 (1)

FE No. 7
1948

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

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.

REGISTER NO. F E-7 (1948)

Field No. PBS-WD-4448

State VIRGINIA

General locality ATLANTIC OCEAN

Locality NORTHERN APPROACHES TO CHESAPEAKE BAY

Scale 1:40,000 Date of survey 24 Aug to 14 Sept. 1948

Instructions dated 5 March and 18 August 1948

Vessel PARKER, BOWEN & STIRNI

Chief of party A.C. Thorson

Surveyed by A.C. Thorson

Soundings taken by fathometer, graphic recorder, hand lead, wire

Fathograms scaled by _____

Fathograms checked by _____

Protracted by _____

Soundings penciled by _____

Soundings in fathoms feet at MLW MLW

REMARKS: _____

DESCRIPTIVE REPORT
TO ACCOMPANY

WIRE DRAG SURVEY FIELD SHEET NO. F.E. No. 7 (1948) (PBS-WD-4448)

PARKER, BOWEN & STIRNI

Lt. Comdr. A.C. Thorson, Comdg.

AUTHORITY

This survey was executed in compliance with instructions for Project CS-326, dated 5 March 1948 and 18 August 1948

DATE OF SURVEY

Field work on this sheet commenced on 24 August 1948 and was discontinued on 14 September 1948 due to inclement weather conditions.

SCOPE

This survey was made in order to locate and determine the least depth over Item 17 (paragraph 6), Instructions dated 5 March 1948 and the Items listed in paragraphs 2 thru 5 of the Instructions dated 18 August 1948. Item 17 and the items listed in paragraphs 2 and 4 of the latter instructions were completed.

Reconnaissance hydrography was accomplished in the vicinity of Wrecks No. 728 and 805 to aid in determining drag depths. This hydrography revealed shoaling ^{sounding} in the area south and southwest of Wreck No. 728 (BIRCH LAKE). Consequently three small areas to the southeast, south and southwest of the wreck were developed by the PARKER. This hydrography was plotted on the Guide Vessel boat sheet and records are included with this survey.

CONTROL

This survey was controlled by Shoran methods. The shore stations HEN and MAC were located at Cape Henry Lighthouse and Little Machipongo Coast Guard Stations respectively.

The Cape Henry station with the antenna below the light at an elevation of 150 feet above water was used effectively at a distance of 56 miles but failed to respond at a distance of 60 miles.

The Machipongo station antenna was located on the cupola of the Coast Guard station at an elevation of 35 feet above water and responded at a distance of 30 miles.

SURVEY METHODS

Standard dual control methods were employed thruout this survey. Azimuth to the NEAR and FAR buoys were determined by the Guide and End Vessels respectively, by peloruses mounted on gyro-repeaters located on the flying bridges of the vessels. Plotting of these azimuths was facilitated by inscribing a compass rose graduated in 5-degree intervals on the periphery of the Odessey protractors.

Standard 100-foot lengths of ground wire were used for the towline and the distance from the pilot house to the end of the bridle was added in determining the total length of the towline. The distance from the pilot-house to the towing end of the bridle was approximately 60-feet. The following entries were made for length of towline:

<u>Length of Ground Wire Used in Feet</u>	<u>Length of Towline Entered in Meters</u>
300	120
400	150
500	180

Tests for lift were made by the Tender using a graduated lead filled pipe attached to graduated airplane cord. This line was attached to a standard small-buoy reel mounted on a float. A stray-line attached to the float facilitated picking up the tester. The pipe was coated with a mixture of whitelead and oil just prior to each test in order to accurately determine point of contact with ground wire.

The ship PARKER was used as the Guide Vessel, the ship BOWEN as the End Vessel and the ship STIRNI as the Tender.

Some hydrography was accomplished in connection with this survey. Soundings were taken with an 808 type depth recorder. The usual corrections to this type apparatus have been applied.

RECORDS

Drag settings were based on predicted tides for Hampton Roads, Virginia. The available time and height corrections for the area being dragged were applied to the predicted tides. Actual tides used in the completion of smooth records were furnished this party by the Washington Office. All references to effective depths unless otherwise specified are those indicated in the record books.

Tide reducers and lifts have been entered to the nearest 0.5 foot and checked. Effective depth diagrams for each drag strip have been drawn and checked for the indicated effective depth.

Tide reducers, bar check and scale corrections have been applied to the soundings. The corrections have been applied to the nearest 0.5 foot.

TIDES

Tide gages were not maintained by this party. Hourly heights scaled from the record obtained at the standard gage in Hampton Roads Virginia, with corrections for the applicable area, were furnished this party by the Washington Office and were used to process the records.


OBSTRUCTIONS, CLEARANCES, DISCREPANCIES, ETC.

Special reports relative to this survey were submitted to the Director during the progress of this survey and duplicates of these reports were forwarded to the Supervisor, S.E. District. Copies of these reports are attached hereto and become a part of this report.

RECOMMENDATIONS

When work in this area is resumed it is recommended that additional Sonar search be conducted in the vicinity of Wreck No. 265. ^{negative results}
^{in 1949-}
^{see C.L. 417 (1948)}

It is recommended that the critical soundings in the area south of Wreck No. 728 be incorporated on the charts covering the area. The hydrography accomplished indicates that additional hydrographic surveys in this area should be expedited.


A.C. Thorson, Lt. Comdr.
Comdg. PARKER, BOWEN & STIRNI

OBSTRUCTION DATA SHEET

LOCATION	GENERAL DEPTH FEET	MAXIMUM HANG	POSITION NUMBER	MAXIMUM CLEARANCE FEET	POSITION NUMBER	CHARACTER of OBSTRUCTION	REMARKS
Lat. 37° - 14 ¹⁵ + 670M ^{610^m} Long. 75° - 37 + 520M ^{520^m}	60	43 ✓	45-C ✓	41 ✓	46-56 C ✓	#728 ✓	
Lat. 37° - 38 ² 000M ✓ Long. 75° - 26 92M ✓	45	42	15-D	40	24-31 D 32-49 D	#262 ✓	
Lat. 37° - 27.80 Long. 75° - 16.70	74-105	--	--	76-78 82-85 84-86	1-42 E 43-74 E 1-50 F	#265 ✓	Additional work recommended <i>done in 1949</i>

STATISTICS FOR SHEET NO. _____ (PBS-WD-4448)
 Ships PARKER, BOWEN & STIRNI (Project CS-326)

<u>Date</u> 1948	<u>Day</u> <u>Letter</u>	<u>Stat. Miles</u> <u>Drag</u>	<u>Number</u> <u>Positions</u>	<u>No.</u> <u>H.L.</u>	<u>Soundings</u> <u>Fath.</u>
24 Aug.	A	3.3	30	-	3
25 Aug.	B	3.4	43	-	-
26 Aug.	C	5.7	56	-	-
8 Sept.	D	4.6	49	-	1
9 Sept.	E	6.5	74	-	-
13 Sept.	F	3.5	50	-	-
14 Sept.	G	1.7	19	-	-
Totals		28.7	321	-	4

Total square statute miles of area dragged -- 16.4

RECONNAISSANCE HYDROGRAPHY

<u>Date</u> 1948	<u>Day</u> <u>Letter</u>	<u>Stat. Miles</u> <u>Sounding</u>	<u>Number</u> <u>Positions</u>
Ship PARKER			
24 Aug.	A ✓	3.2	6
13 Sept.	F ✓	10.5	36
20 Sept.	H ✓	100.0	224
Totals		113.7	266
Ship BOWEN			
24 Aug	A ✓	8.3	18
13 Sept.	B ✓	8.2	19
Totals		16.5	37
Total for Sheet		130.2	303

Total area 7.1 sq. statute miles.

418 P.O. Building, Norfolk, Virginia

25 September 1948

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

Subject: Special Report on Wreck No. 265,
(bow portion) FRANCIS E. POWELL

The area in the vicinity of the charted position of this wreck was searched with SONAR with negative results. The GENTIAN REPORT states that this wreck made an excellent sound target.

About 5 square miles in the vicinity of the charted position of the wreck was covered by drag strips to an effective depth of 79 to 85 feet. The charted position was covered to an effective depth of 85⁺ feet.

From the above it is evident that the charted position of this wreck is in error. Although instructions for the operation have been complied with it is recommended that further Sonar search be made in this vicinity next season. *negative results
see C.L. 417 (1948)*

This survey was based on predicted tides for the vicinity.

cc: Supervisor
S.E. District

/s/ A.C. Thorsen
Lt. Comdr.
Comdg. Ships
PARKER, BOWEN & STIRNI

L. 579 (1948) #8

418 P.O. Building, Norfolk, Virginia

25 September 1948

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

Subject: Special Report on Wreck No. 262 (MENOMINEE)

Location of Parramore Banks Lighted Whistle Buey
10 P; Lat. 37° - 31.89'
Long. 75° - 25.99'

Small Nun Marker Buey; ^{32.00}
Lat. 37° - ~~31.94~~
Long. 75° - 26.03'

Location of the Wreck of the MENOMINEE;
Lat. 37° - 32.0'
Long. 75° - 26.08'

A drag set to an effective depth of ^{41.0}~~42.5~~ feet hung
the wreck.

A drag set to an effective depth of ⁴⁰~~41.0~~ feet cleared
the wreck.

Depths are based on predicted tides for the vicinity.

Recommended charting depth ^{clearance} ~~41~~⁴⁰ feet.

cc: Supervisor
S.E. District

A.C. Thorson
Lt. Comdr.
Comdg. Ships
PARKER, BOWEN & STIRNI

L. 579 (1948) #7

418 P.O. Building, Norfolk, Virginia

13 September 1948

To: The Director
U.S. Coast & Geodetic Survey
Washington, 25, D.C.

Subject: Special Report on Wreck No. 728
(BIRCH LAKE)

Lighted Whistle Buoy No. 12A is located in Lat. $37^{\circ}-15.35'$
and Long. $75^{\circ}-37.38'$.

Wreck No. 728 (BIRCH LAKE) is located in Lat. $37^{\circ}-15.34'$
and Long. $75^{\circ}-37.28'$.

A drag set to an effective depth of ~~42~~⁴³ feet hung the
wreck.

A drag set to an effective depth of 41 feet cleared the
wreck.

Depth are based on predicted tides for the area.

Recommended charting ^{clearance} depth 41 feet.

During dragging operations the drag fowled on the wreck
and one small buoy submerged and remained attached to the
wreckage. Several hangs were obtained on this buoy before the
upright was parted. These shoaler hangs were later disproved.

Some hydrography was executed in the vicinity and the
following soundings (reduced for tide) are submitted. They
indicate a need for new hydrographic surveys in the vicinity.

P. 579 (1948) #6

<u>SOUNDING</u>	<u>LATITUDE</u>	<u>LONGITUDE</u>
39 Feet	37° 13.32'	75° 40.55'
34 Feet	37° 13.82'	75° 39.80'
34 Feet	37° 14.13'	75° 39.42'
<u>32½</u> Feet	37° 13. 65 ⁹⁰ '	75° 39. 22 ⁵⁵ ' <i>checked</i>
35 Feet	37° 12.56'	75° 37.40'

/s/ A.C. Thorson
 Lt. Comdr.
 Comdg. Ships
 PARKER, BOWEN & STIRNI

cc: Supervisor, S.E.
 District.

applied to 1222
 L. 579 (1948) #6

TIDE NOTE FOR HYDROGRAPHIC SHEET

~~Division of Hydrography and Topography~~

23 November 1948

Division of Charts: R. H. Carstens

Plane of reference approved in
7 volumes of sounding records for

~~HYDROGRAPHIC SHEET~~ F.E. No. 7 1948

Locality - Northern approaches to Chesapeake Bay, Virginia

Chief of Party: A. C. Thorson in 1948
Plane of reference is mean low water, reading
3.6 ft. on tide staff at Hampton Roads (N.O.B.)
13.4 ft. below B. M. 6(1927)

Height of mean high water above plane of reference
is 2.5 feet.

Condition of records satisfactory except as noted below:

E.C. McKay
Section

Chief, ~~Division of Tides and Currents.~~

REVIEW OF F.E. No. 7, 1948

The scope of this field examination is adequately covered in the Descriptive Report. The work is plotted on the enclosed sections of boat sheets, and a summary for each of the areas investigated is given below.

1. Wreck No. 728 (BIRCH LAKE) in lat. $37^{\circ} 15.34'$, long. $75^{\circ} 37.28'$: A 43-ft. grounding on the wreck was cleared by 41-ft. effective depth. A graphic record of the wreck appears on a section of fathogram included with records of the wire drag tender STIRNI. Fathometer corrections for this vessel are unavailable; however, the least depth on the fathogram is approximately 4 ft. deeper than the wire-drag grounding depth.

Reconnaissance hydrography executed southeast and southwest of the wreck reveals a lumpy and undulating bottom. Depths on ridges are as much as 15 ft. shoaler than 41-to 55-ft. depths indicated on the surveys of 1921. Differences between prior and present depths are slightly exaggerated, however, by two factors. First, the prior leadline soundings on lines spaced one quarter mile apart do not reveal the bottom in as much detail as the present closely spaced fathometer sounding lines. Second, many of the depths on the present examination were scaled from irregular fathogram profiles which resulted from choppy sea swells over undulating bottom.

About fifteen soundings of the present examination were applied to Chart 1222 before verification. The position of one of these soundings, 32-ft. charted in lat. $37^{\circ} 13.65'$, long. $75^{\circ} 39.22'$, was listed erroneously in advance information (Chart Letter 579, 1948) and should be deleted from the chart.

Instructions for investigation of this wreck have been complied with.

2. Wreck No. 262 (TUG MENOMINEE) in lat. $37^{\circ} 32.0'$, long. $75^{\circ} 26.05'$: A 41-ft. grounding on the wreck was probably cleared, according to field determination. However, because of the proximity of buoy "10P" and its station buoy to the wreck, actual clearance of the wreck cannot be verified graphically on the boat sheet. The Chief of Party notes that the wreck was cleared by 40-ft. effective depth, and it is assumed that the clearance was visually evident from the relative positions of the drag, wreck and station buoy. A graphic re-

Cord of the wreck appears on a section of fathogram included with records of the wire drag tender STIRNI. Fathometer corrections for this vessel are unavailable; however, the least depth on the fathogram is about 2 ft. deeper than the wire drag grounding depth.

Verification of the plotting was made difficult because of the failure to include notes on both buoy "10P" and its marker buoy when grounding. Moreover, on the drag strip which grounded on buoy "10P", also on the wreck and on the station buoy, several cuts taken by the end vessel to buoy "10P" intersect 200 meters southeast of the plotted position. The plotted position is established by detached position and several cuts from other drag strips. This discrepancy involves the position of the wreck.

Instructions for the investigation of this wreck have been complied with, subject to the considerations noted above.

3. Wreck No. 805 (Barges ALLEGHENY and BARNEGAT) reported in lat. $37^{\circ} 33.5'$, long. $75^{\circ} 24.2'$: Only reconnaissance hydrography was executed in this area during the present examination. Wire-dragging was subsequently accomplished in 1949 (Chart Letter 417, 1949), and the wreck symbol has been deleted from Chart 1221.

A comparison of depths on H-5715 (1934) with present depths shows little change in the lumpy and undulating bottom.

4. Wreck No. 265 (Tanker FRANCIS E. POWELL) reported in lat. $37^{\circ} 27.8'$, long. $75^{\circ} 16.7'$: The position of this wreck was cleared with an effective depth of 83 ft. The area within a one mile radius of this position was cleared with effective depths of 76 to 86 feet. Further search in 1949 (Chart Letter 417, 1949) failed to reveal the wreck in areas adjacent to the limits of the present examination.

The wreck symbol on Chart 1221, dated Sept. 12, 1949, is at the position reported by the U.S.C.G. GENTIAN, approximately one mile north of the position reported by the YP-449 and listed in the instructions. This symbol has been marked for deletion on the current Aid Proof Chart, as a result of the additional investigation in 1949.

January 30, 1950

G. F. Jordan

Approved by: R. H. Carstens

No. 7
40 FT

16' 16'

75° 40' 38' 36' 34'

MAC

14

HEN

30

(WRECK NO. 728)

43 ft. hang on wreck cleared by 41 ft.

F. E. No. 7, 1948

Northern Approaches to Chesapeake Bay

A. C. Thorson, Chief of Party 37° 14'

scale 1:40,000

N. A. 1927 Datum

SHEET 1 of 3

14'

least depth 32 ft.

least depth 33 ft.

28

least depth 34 ft.

least depth 35 ft.

12'

26

MAC

18

HEN

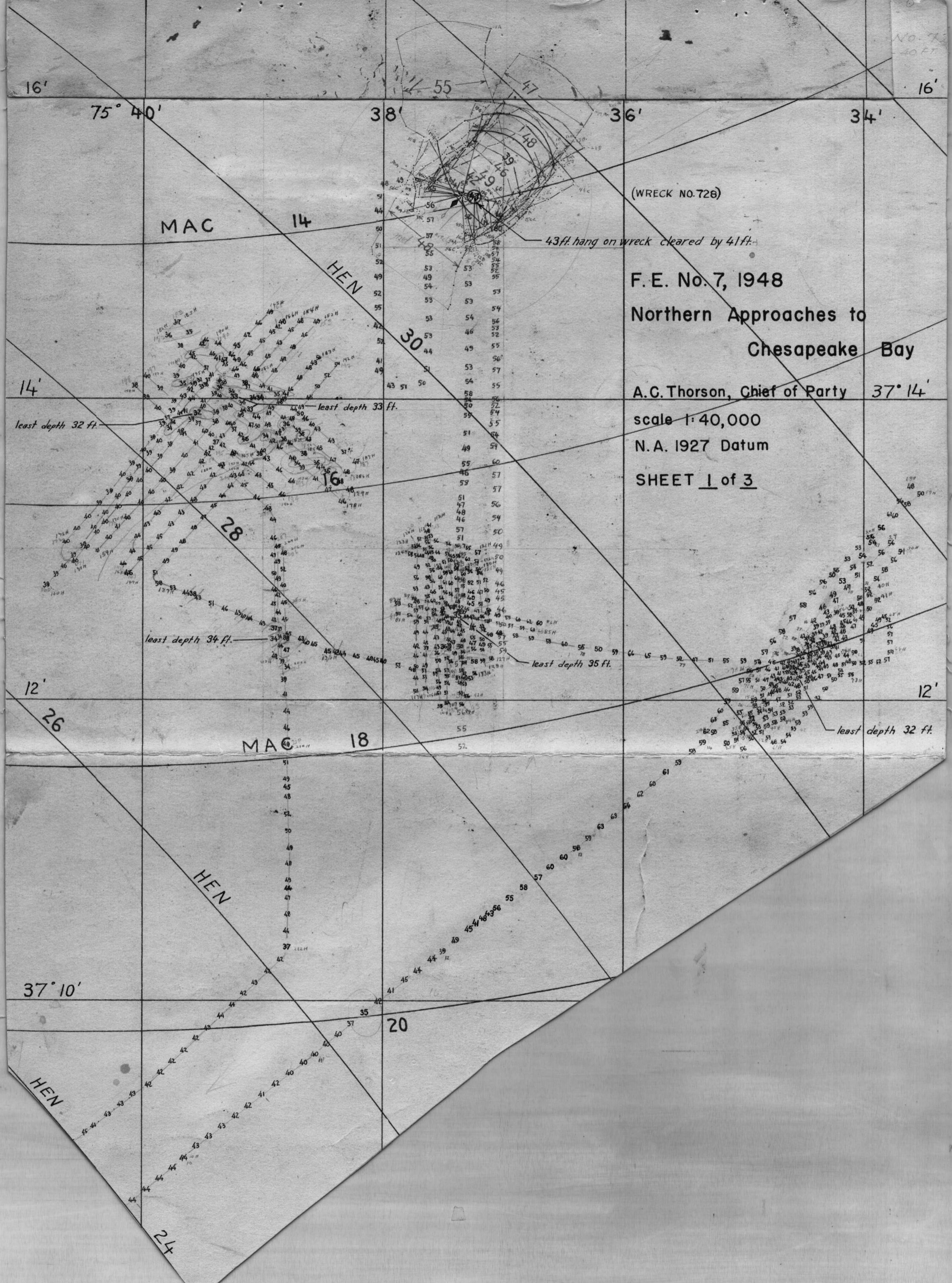
37° 10'

20

HEN

24

least depth 32 ft.



42'

MAC

22

08'

22

44'

HEN

24

20

06'

18

46'

26

MAC

HEN 16

48'

37°04'

28

21514

2104

221

21 14

Bury 14

28'

26'

24'

75° 22'

34'

32'

18

37° 30'

28'

26'

24'

75° 22'

54

52

MAC

40

Sta. Buoy "10 P"

WHISTLE "10 P"

(WRECK NO. 262)

40

38

41

HEN

14

Wreck 805 was investigated on F.E. No. 6, 1949

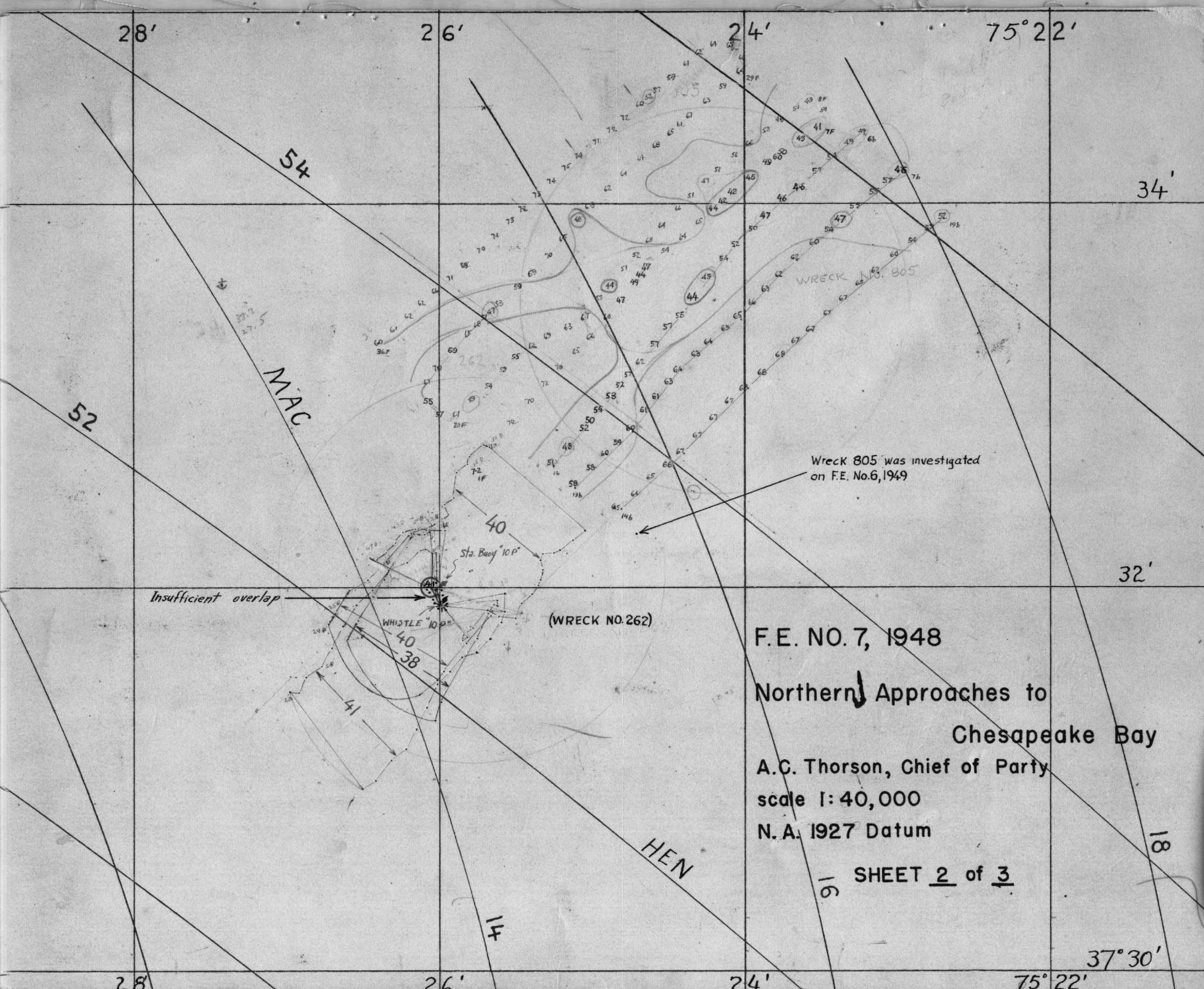
F.E. NO. 7, 1948

Northern Approaches to Chesapeake Bay

A.C. Thorson, Chief of Party
scale 1:40,000
N.A. 1927 Datum

SHEET 2 of 3

Insufficient overlap



F. E. No. 7, 1948

Northern Approaches to 37° 30'

Chesapeake Bay

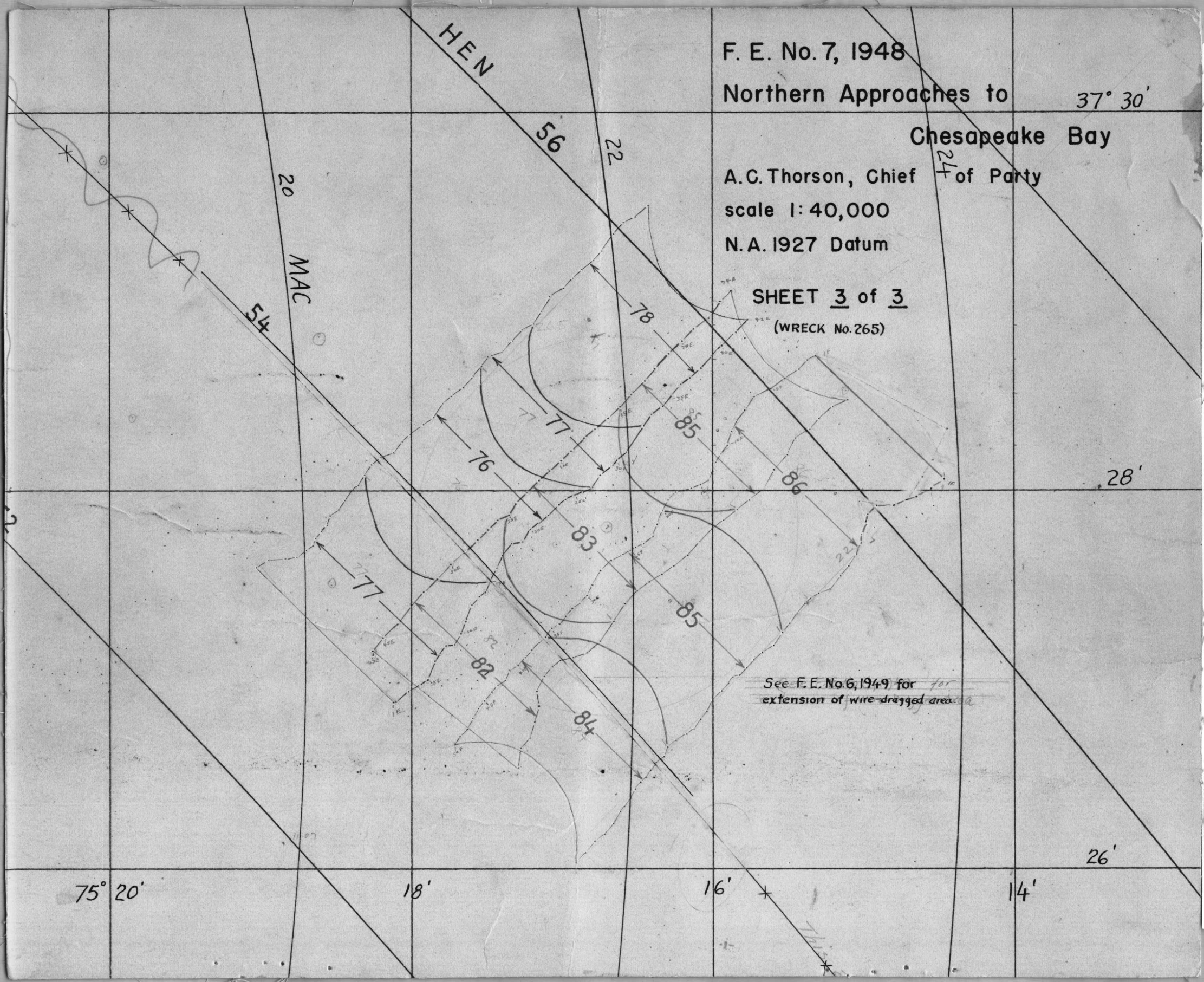
A.C. Thorson, Chief ²⁴ of Party

scale 1:40,000

N.A. 1927 Datum

SHEET 3 of 3

(WRECK No. 265)



40'

38'

36'

75° 34'

16

MAC

14

WHISTLE
"12A" 6.0

951	50	60
44	50	60
50	57	60
51	57	58
52	55	54
49	53	55
52	47	52
55	54	53
42	53	54
52	53	56
47	44	52
44	53	55
43	51	56
50	54	52
	54	54
	55	54
	51	55
	43	54
	55	59
	46	60
	53	57
	51	57
	47	56
	48	54
	48	50
	57	49
	51	50
	45	49
	58	49
	58	46
	45	45
	35	46
	41	50
	50	57
	50	55
	59	59
	50	
	54	
	56	
	55	
	52.8	

30

F. E. No. 7, 1948

These soundings are shown in blue on Sheet I.

37° 14'

28

26

MAC

18

12'

Chart 1222 - Examined before V&R - Not applied
JTW 11/12/48

Chart 1221 Applied before V + R. J.A.M. 11/12/48

Chart 1109 Applied before V + R HWB 4/24/49

" 1222 Partially applied before V&R + Review
6-5-49 JAW

Chart 1222 Completely Applied L.S.S. 3/30/50

" 1221 " " A. Stegman 9/25/50