

# FE99

## WIRE DRAG

Diagram No. 1000-3

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-4550-WD  
Office No..... FE-99

#### LOCALITY

State ..... New Jersey  
General Locality .. Atlantic Ocean  
Locality ..... Northern New Jersey Coast

19 50

CHIEF OF PARTY  
G.R. Fish

#### LIBRARY & ARCHIVES

DATE ..... October 9, 1951

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

NOTE: A new system for registering Field Examinations 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.8 1951

FE99  
WIRE DRAG

FE No. 8  
1951

FE99

Diag. Cht. No. 1000 = 3

Form 504

U. S. COAST AND GEODETIC SURVEY  
DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey WIRE DRAG

Field No. PBS-4550-WD Office No. FE No. 8 (1951)

LOCALITY

State NEW JERSEY

General locality ATLANTIC OCEAN

Locality OFF NORTHERN NEW JERSEY COAST

194 50

CHIEF OF PARTY

G. R. FISH

LIBRARY & ARCHIVES

DATE OCT 9 1951

B-1870-1 (1)

8  
FE No. 8  
1951

DESCRIPTIVE REPORT  
TO ACCOMPANY

WIRE DRAG SURVEY FIELD SHEET No.

(PBS - 4550, WD)

Ships PARKER, BOWEN, STIRNI.

COMDR. G. R. Fish  
Chief of Party

AUTHORITY

This survey was executed in compliance with Supplemental Instructions for Project CS-326, dated 5 March 1948 and 12 December 1949.

DATE OF SURVEY

The wire drag surveys on this field sheet were made on 17 and 22 August 1950.

SCOPE

The wire drag surveys on this sheet were made to locate and determine the least depth over wrecks and obstructions, or to disprove the existence of wrecks and obstructions by wire dragging the area within one mile of the reported position.

The surveys were made in accordance with the procedure outlined in the Wire Drag Manual and Supplemental Instructions dated 5 March 1948.

The wrecks surveyed on this sheet were Items 32 and 38 of Supplemental Instructions dated 12 December 1949

CONTROL

Shoran distances from two shore stations were used to control all positions on this sheet. Station BARN was established in the abandoned lighthouse at Barnegat Inlet, elevation about 155 feet. This is triangulation station BARNEGAT LIGHT, 1872. The shoran antenna was mounted on the railing around the walkway at the top of the tower. Station MAN was located at the Manasquan Inlet Coast Guard Station. The shoran antenna was mounted on top of a 100 foot portable mast, elevation about 110 feet above sea level. The position of the mast was determined by triangulation using a three-point fix on natural objects previously located by triangulation as intersection stations. A fourth object was used as a check. The computed position of station MAN is latitude  $40^{\circ} 06' 323.6 M (-1527.1 M)$ , longitude  $74^{\circ} 02' 409.8 M (-1011.4M)$ .

SURVEY METHODS

Standard dual control methods were used. The positions of the end buoys were plotted from the ship position by using gyro azimuth bearings and the length of the towline in meters. The length of the towline,

in meters, used for plotting purposes was the length of ground wire, in feet, between the towing bridle and the end buoy, plus 100 feet, and the sum multiplied by 0.3. Thus when 500 feet of ground wire was used the length of towline for plotting purposes was 180 meters.

Tests for lift were made by the Tender using a graduated lead filled pipe, 3/4" x 10 feet long, attached to a graduated airplane cord and suspended from a small float on which a buoy reel was mounted. The pipe was coated with a mixture of white lead and oil to accurately determine the point of contact with the ground wire. Tests for lift were taken as soon as the drag was towing smoothly and were repeated as thought necessary to take care of changing conditions.

Changing the depth of the upright setting while the drag is in the water is too cumbersome with a Tender the size of the STIRNI and it was found more expedient to take in the drag, reset the uprights aboard ship and put the drag out again. This was no handicap when clearing wrecks but in searching for wrecks or obstructions it meant that in areas of uneven bottom the uprights sometimes had to be set at depths which allowed the drag to ground in the shoaler areas. No difficulty was experienced in towing the grounded drag except where the shoal spot was in the middle of the drag and the water depth was considerably less than the upright setting.

#### FIELD OPERATIONS

Special Reports were written for each wreck during the progress of the field work. These reports and the obstruction data sheet give all pertinent information about the individual wrecks. Copies of the reports are attached to this report.

Wreck No. 225, Item 38, is listed in the instructions as being the LILLIAN, sunk before World War II. Item 57 of the same instructions lists wreck no. 591, freighter LILLIAN, in a different position. The N. Y. District Engineer, Corps of Engineers, U. S. Army, made the following comment under Item 57 when the list of wrecks was submitted to his office, "Tentatively identified by this office as Bull Line S. S. LILLIAN (3,482 gross tons) which is vessel described on Item No. 38, Wreck No. 225."

Not found.

The wreck was not found near the position given under Item No. 38 and it is quite likely that the position listed under Item No. 57 may be a more nearly true position. (Also see FE-9, 1951)

Not searched for.

Wreck No. 218, Item 32, was found by sonar. The signals from the two shoran shore stations were strong during the morning but began to decrease in strength as the day advanced. After the second drag strip and while picking up the ground wire, which was hung on the wreck, the signal from one shore station failed completely and the signal from the other station was materially decreased in strength. Past experience has shown that, as a general rule, shoran signals will not gain in strength in the afternoon after receding from a high strength in the morning. On other days weak shoran signals in the morning may be

followed by strong signals in the afternoon. On many days the shoran signals can not be received at all at distances over the horizon from the shore station antenna.

Experience has shown that in this area readable shoran signals are usually received to distances, in statute miles, about 1.5 x the sums of the square roots of the heights above sea level, in feet, of the shore station and ship antennas, regardless of atmospheric conditions. For station BARN this distance is about  $29\frac{1}{2}$  statute miles and for station MAN about  $26\frac{1}{2}$  statute miles. Shoran returns beyond these distances are controlled by atmospheric conditions and complete information concerning the conditions necessary for returns from longer distances are not available. Experience has shown though, that the forward side of a high pressure area will usually lengthen the reception distance.

When the shoran signals failed at Wreck No. 218 the remainder of the day was spent in making a sonar search for Item No. 57 outside of the area covered by wire drag.

#### RECORDS

Drag settings were based on predicted tides for Sandy Hook, New Jersey, corrected for time and height on information obtained from the tide tables. Actual tides were furnished by the Washington Office for the vicinity of each wreck and were used to process the records. In this report all references to effective depths, unless otherwise specified, are those indicated in the record books.

Bar checks were taken to obtain fathometer corrections for the several vessels. The corrections obtained have been applied to the soundings recorded in the records.

Tide reducers and lifts have been entered to the nearest 0.5 foot and checked. Drag strip diagrams showing effective depth in integral feet have been drawn and checked in the record books.

#### TIDES

Tide gages were not maintained by this party. Hourly heights were furnished by the Washington Office from the tide gages at Atlantic City and Sandy Hook, New Jersey, and were used to process the records.

#### OBSTRUCTIONS, CLEARANCES, DISCREPANCIES, ETC.

Special Reports were written for each wreck during the progress of the field work and copies of these reports are attached to and become a part of this report.

An obstruction data sheet showing the minimum hang and maximum clearance and based on the final corrections is included in this report, and the values therein take precedence over the values listed in the special reports.

RECOMMENDATIONS

It is recommended that work on all wrecks covered by this sheet be classified as being completed.

*G R Fish*

G. R. Fish

COMDR., USC&GS

Comdg. Ships PARKER, BOWEN, STIRNI.

OBSTRUCTION DATA SHEET

Survey No. 4550 WD

LOCATION	GENERAL DEPTH FEET	FATH.SDG. ON WRECK FEET	MINIMUM HANG FEET	POSITION NUMBER	MAXIMUM CLEARANCE FEET	POSITION NUMBER	CHARACTER OF OBSTRUCTION	REMARKS
Lat. 39° 37' 00" / long. 73° 39' 00" /	102.0				94.5	2 - 63A	Item #38 - Wreck #225	LILLIAN - Not found
Lat. 39° 46' 36" (1108m) / Long. 73° 25' 18" (420m) /	115.0	93.0 (1-B) / 114.0 / (15K-B) Bottom / 72.0 / (16-B) /	66.0	13.8B	60.0	2 - 9B	Item #32 - Wreck #218	R. P. RESOR

STATISTICS FOR SHEET NO.

(PBS - WD - 4550)

SHIPS PARKER, BOWEN, STIRNI.

(PROJECT CS - 326)

DATE 1950	DAY LTR	STAT.MI. WD	NO. POSITIONS	H.L. NO.	NO. FATH. SOUNDINGS
17 August	A	6.9	63	0	0
22 August	B	<u>1.7</u>	<u>17</u>	<u>0</u>	<u>3</u>
	TOTAL	8.6	80	0	3

TOTAL SQUARE MILES OF WIRE DRAG - 9.6

General Delivery, Atlantic City, N. J.

22 August 1950

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

Subject: Special Report on Wreck No. 225, LILLIAN.

This wreck is Item 38 of Supplemental Instructions for Project CS-326, dated 12 December 1949. The instructions state that the LILLIAN, 3,482 tons, was sunk before World War II in reported latitude  $39^{\circ} 37' 00''$ , longitude  $73^{\circ} 39' 00''$ . Item 57 of the same instructions lists the position of the wreck of the LILLIAN, freighter, as being about twenty-five miles to the north and east of this position. Fishermen who drag for scallops in the vicinity of the second reported position of the wreck report a wreck in that area, see Special Report for Item 57.

See FE9,  
1951

An area extending out about one and one-fourth miles from the position of the wreck listed in Item 38 was covered by wire drag set at effective depths of 94 to 95 feet and the entire area was clear of any obstruction.

F.E.#9 (1951)

Small,  
2/15/52

Depths are based on predicted tides for the area.

It is recommended that no further search be made for the wreck in this area and that the wreck symbol shown on Chart 1108 be deleted from the chart.

G. R. Fish  
Commander, USCGS  
Comdg. Ships PARKER, BOWEN, STIRNI

200: Supervisor, Eastern District

General Delivery, Atlantic City, N. J.

22 August 1950

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

Subject: Special Report on Wreck No. 218, R. P. RESOR.

This wreck is Item 32 of Supplemental Instructions for Project CS-326, dated 12 December 1949. The instructions list this vessel as a tanker of 4,620 tons, sunk in 1942.

The wreck of the R. P. RESOR was located by sonar in latitude  $39^{\circ}46'36''$ , longitude  $73^{\circ}25'18''$ . A fathometer sounding of 72.5 feet was obtained on the wreck in a general depth of 115 feet.

A wire drag set at an effective depth of 66.0 feet hung the wreck and the ground wire was well fouled. The instructions state that the least depth on the wreck is 62 feet.

A wire drag set at an effective depth of 60.0 feet cleared the wreck.

A drag at an intermediate depth between 60 and 66 feet could not be made due to one shoran signal fading out completely and the other signal being weak.

It is recommended that a clear depth of 60 feet be charted for this wreck.

Depths are based on predicted tides for the area.

G. R. Fish  
Commander, USCGCS  
Comdg. Ships PARKER, BOWEN, STIRNI

2CC: Supervisor, Eastern District

837

CAC

### TIDE NOTE FOR HYDROGRAPHIC SHEET

~~HYDROGRAPHIC SHEET NO. 8, 1951~~

22 October 1951

Division of Charts: R. H. Carstens

Plane of reference approved in  
3 volumes of sounding ~~records~~  
and wire drag records for

~~HYDROGRAPHIC SHEET~~ FE NO. 8, 1951.

Locality: New Jersey Coast, Atlantic Ocean

Chief of Party: G. R. Fish in 1950  
Plane of reference is mean low water, reading  
4.3 ft. on tide staff at Atlantic City  
15.6 ft. below B. M. 32 (1922)

Height of mean high water above plane of reference is 4.1 feet.

Condition of records satisfactory except as noted below:

*E. C. McKay*  
*Section*  
Chief, ~~Division~~ of Tides and ~~Currents~~.

GEOGRAPHIC NAMES

Survey No. FE No. 8 (1951)

Name on Survey											
	A	B	C	D	E	F	G	H	K		
<u>Atlantic Ocean</u>				(for title)							1
<u>New Jersey</u>				"	"				B.G.N		2
											3
											4
											5
											6
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											26
											27

Names underlined in red  
are approved. 10-11-57  
L. Heck

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. FE.No. 8.(1951)

Records accompanying survey:

Boat sheets .2...; sounding vols. <sup>Smooth Tender Record</sup> .4...; wire drag vols. 2.....; bomb vols. ....; graphic recorder rolls 1. ~~env~~; special reports, etc. 1. Descriptive Report;.....  
 .....

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

Number of positions on sheet	.....	80
Number of positions checked	.....	9
Number of positions revised	.....	1
Number of soundings revised (refers to depth only)	.....	0
Number of soundings erroneously spaced	.....	—
Number of signals erroneously plotted or transferred	.....	—
Topographic details	Time .....	0
Junctions	Time .....	0
Verification of soundings from graphic record	Time .....	1

Verification by *Lu Jeskind* ..... Total time ..... 5 ..... Date 7-29-52  
 Reviewed by *Lu Jeskind* ..... Time ..... 4 ..... Date 7-29-52

REVIEW OF FIELD EXAMINATION No. 8 (1951)

Project CS-326

The Field Examination was made to locate and determine the least depths over wrecks or obstructions which are designated Items 32 and 38 of the Supplemental Instructions dated 12 December 1949.

The results of the wire-drag examinations are tabulated on the obstruction sheet in the Descriptive Report and are plotted on the accompanying 2 sections of boat sheet.

This work was applied to charts No. 1000 (drawing dated 3-5-52) and No. 1108 (print date 6-9-52); the charted information is correct.

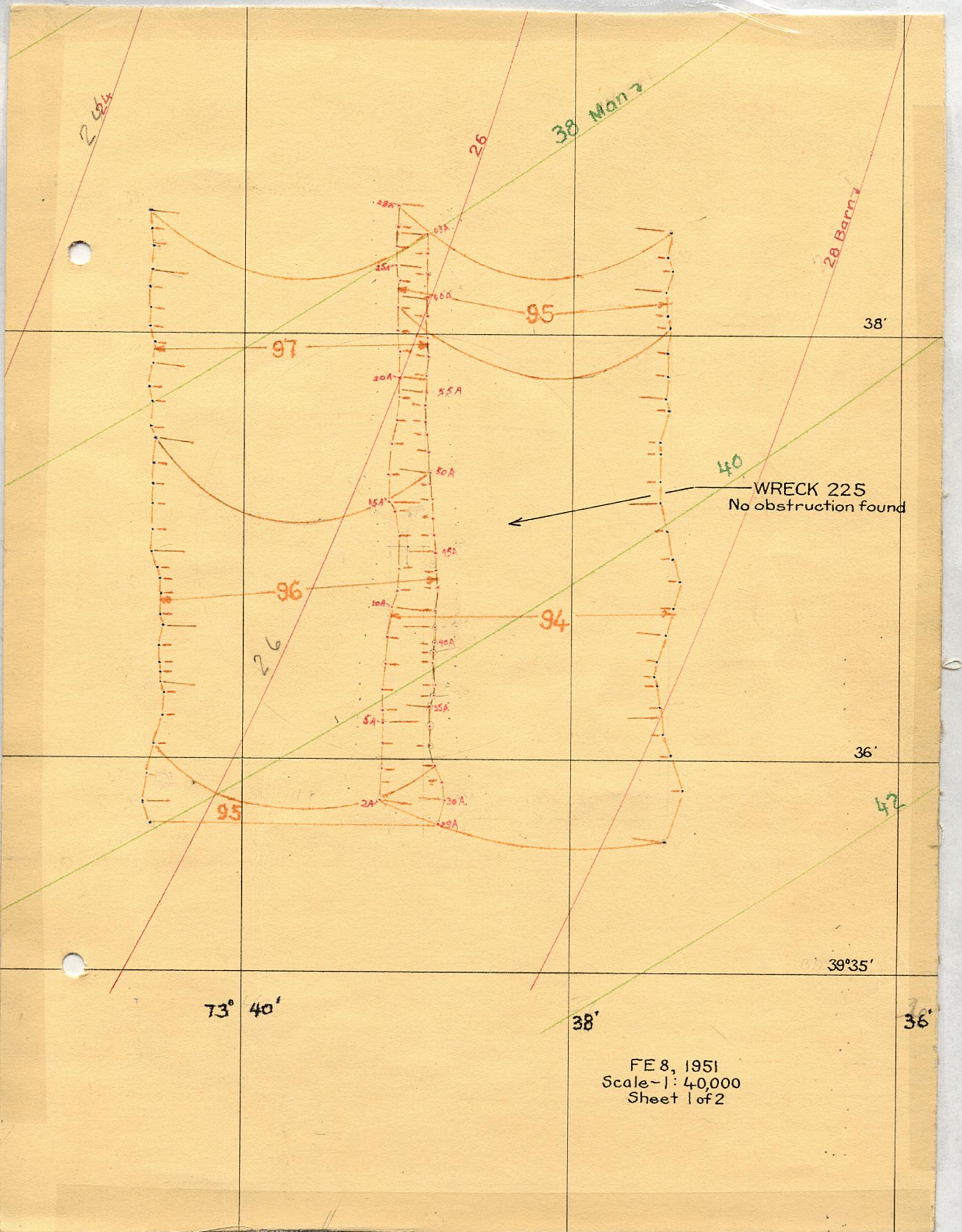
The Descriptive Report and attached correspondence adequately cover all other matters pertaining to this examination. No further discussion is considered necessary.

Reviewed by:

I. M. Zeskind  
29 July 1952

Inspected by:

R. H. Carstens



FE 8, 1951  
 Scale - 1:40,000  
 Sheet 1 of 2

50'

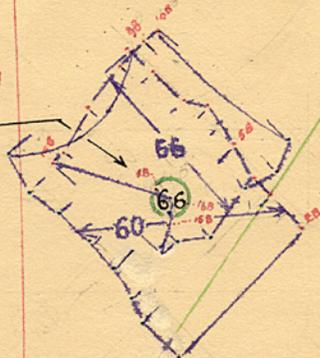
39°48'

34 Barnz

38 Manz

36

WRECK 218  
Actual sounding 72 ft.  
Cleared by 60 ft.



46'

40

FE 8, 1951  
Scale - 1 : 40,000  
Sheet 2 of 2

28'

73° 26'

24'

42

36

