

10185

Diagram No. LS-2

NOAA FORM 76-35A

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

DESCRIPTIVE REPORT

Type of Survey ... Hydrographic
Field No. HFP-10-3-85
Registry No. H-10185

LOCALITY

State New York--Ontario
General Locality ... St. Lawrence River
Sublocality Roxy Islands to Tibbetts
..... Point

1985

CHIEF OF PARTY

..... LCDR. K.W. Perrin

LIBRARY & ARCHIVES

DATE February 9, 1988

☆U.S. GOV. PRINTING OFFICE: 1985-566-054

10185

Area 7
Cht

14768
14767
14802
14800
14800m

TO SIGN OFF SEE
"RECORD OF APPLICATION"

HYDROGRAPHIC TITLE SHEET

H-10185

INSTRUCTIONS - 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.

HFP-10-3-85

State New York -- OntarioGeneral locality St. Lawrence RiverLocality ~~Tibbets Point~~ to Roxy Islands to Tibbets PointScale 1:10,000 Date of survey 26 June, 1985 ⁴³ 24 September 1985Instructions dated 14 March 1985 Ch. 1 5/7/85 Project No. OPR-V276-HFP-85Vessel NOAA Launch 0517Chief of party LCDR Kenneth W. PerrinSurveyed by LT. (jg) Kenneth P. PetersSoundings taken by echo sounder, hand lead, pole AllGraphic record scaled by KPP, RS, DBE, JPO, TMRGraphic record checked by KPP, RS, DBE, JPO, TMRProtracted by _____ Automated plot by Field Sheet PDP8/eVerification by AMC Hydrographic Surveys BranchSoundings in ~~fathoms~~ feet at ~~M.L.W.~~ ~~M.L.W.~~ Low Water Datum
Lower Lake Level (IGLD 1955: 242.8 Feet)REMARKS: RS-Robert Snow; DBE-David B. Elliott; JPO-John P. Oswald;TMR-Thomas M. Rybarski; KPP-Kenneth P. PetersNotes in the Descriptive Report were made in red during
office processing.AW015/surf 5m 9/88SC 4-7-97

PROGRESS SKETCH

OPR V-276

H-10185

HFP-10-3-85 SHEET "A"

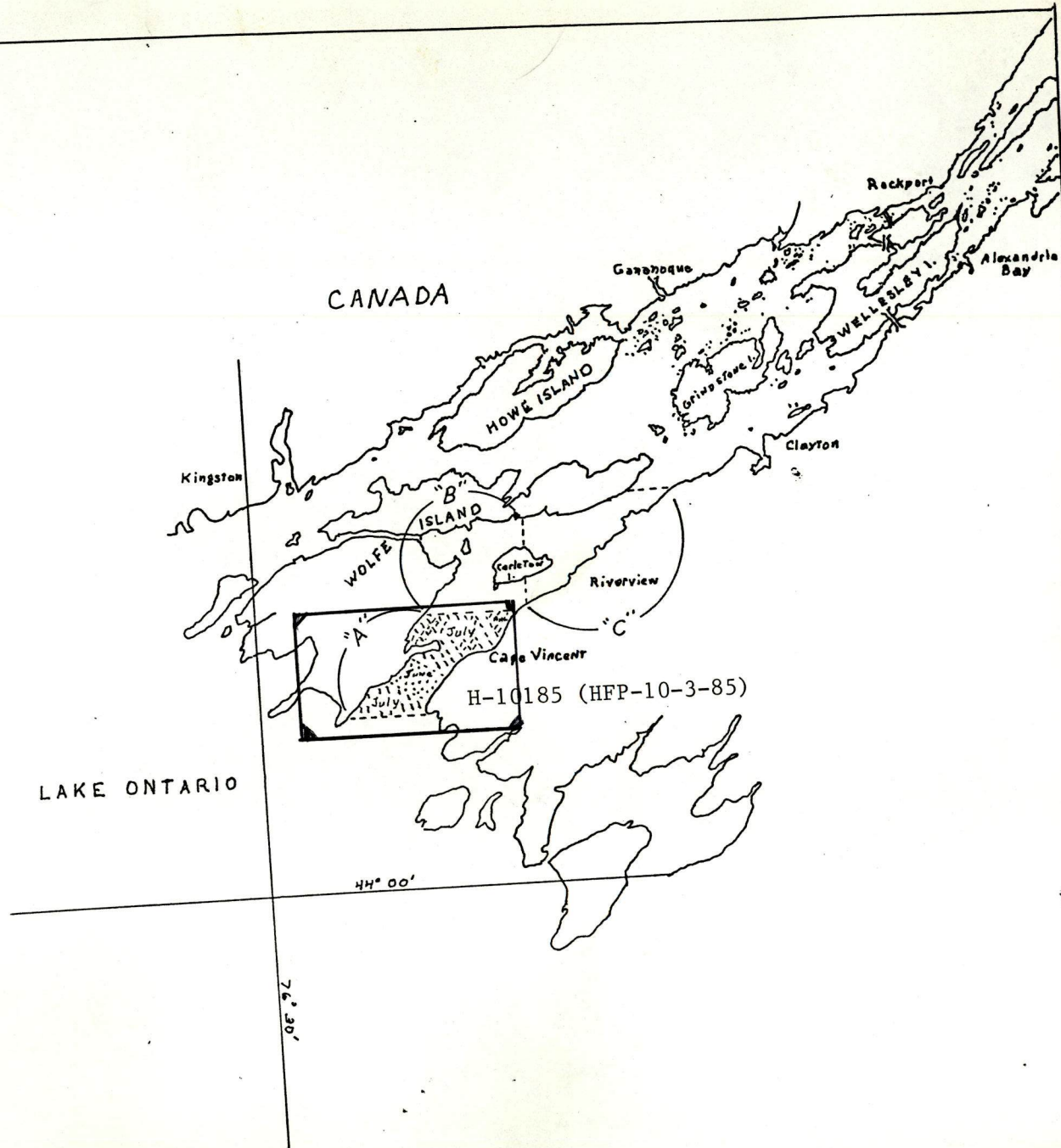
ST. LAWRENCE RIVER, N.Y.

1985

HFPS. HFP-3

KENNETH W. PERRIN, LCDR, N.O.A.A.

FROM CHART 14800



LEGEND

	JUNE	JULY	AUG.	SEP.	OCT.
SQ NM SOUNDING	1.25	18	2.5		
LN M SOUNDING	20.0	159.3	55.7		
LN M DIST. TO/FROM	3.0	56	46.0		
LN M MISC. DIST.	4.0	34	50.0		
BOTTOM SAMPLES	Ø	84	Ø		
CONTROL STA.	14	Ø	Ø		
TIDE GAGE	1	Ø	Ø		
D.P.'S	Ø	37	155		

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* Removed from the Descriptive Report and filed with the original survey records

Nesnet Bond

DESCRIPTIVE REPORT
TO ACCOMPANY
HYDROGRAPHIC SURVEY H-10185
HSB-10-3-85

Scale 1:10,000

Chief of Party: Lt. Cdr. Kenneth W. Perrin
Officer-in-Charge: Lt. (jg) Kenneth P. Peters
Hydrographic Field Parties Section
Hydrographic Field Party 3
Launch 0517

A. PROJECT

This survey was carried out in accordance with Project Instructions for OPR-V276-HFP-85, dated 14 March 1985 and amended by: Change No. 1, dated 7 May 1985.

B. AREA SURVEYED

The area surveyed was the Lake Ontario entrance to the St. Lawrence River from Tibbetts Point to Cape Vincent between Wolfe Island, Ontario and Cape Vincent, New York. The survey is bounded by the following points:

Lat. 44°09' ³⁶ 26 .00" N, Long. 76°17' ¹⁸ 20 .00" W
Lat. 44°08' ³⁰ 55 .00" N, Long. 76°19' ²² 20 .00" W
Lat. 44°06'00.00" N, Long. 76°21' ¹⁸ 10 .00" W
Lat. 44°06'00.00" N, Long. 76°26' ¹⁸ 20 .00" W
Lat. 44°09' ³⁶ 26 .00" N, Long. 76°23' ²¹ 17 .00" W

This survey was conducted from 26 June 1985 to ²⁴~~24~~ September 1985 (JD 177 to JD ²⁴⁶~~267~~) inclusive.

C. SOUNDING VESSEL

All soundings obtained on this survey were obtained from NOAA Launch 0517 (EDP # 0517). All survey records are annotated with the vessel number 0517. No unusual vessel configurations or problems with the vessel were encountered.

D. SOUNDING EQUIPMENT AND CORRECTIONS TO ECHO SOUNDINGS

A Raytheon Model DE 719B Fathometer, serial number 5799 was used during the entire survey.

The Fathometer was monitored continuously while sounding and was under constant adjustment to insure that no initial corrections were necessary.

Aquatic weeds caused random echoes that would often obscure the true bottom in depths of 1 to 20 feet. To resolve the problem, pole soundings were taken when necessary while simultaneously running the Fathometer. The pole soundings were recorded on the fathogram and in the sounding volumes. It was later determined that in many areas the bottom was covered with a thick, vine-like mat of aquatic weeds that were impenetrable by the echo sounder. This layer of grass floated a foot or more off the bottom. As a result, the pole soundings, which penetrated this layer, were one to two feet deeper than the bottom recorded on the fathogram. The hydrographer believes that because of the thickness of the matted weeds, they should be considered as the bottom for charting purposes. The recorded pole soundings should only be used as a simultaneous check of the fathogram and as an indication of the true bottom. The semi-smooth field sheet was plotted with the pole soundings. When it was determined that the pole soundings did not accurately depict the bottom characteristics, fathograms were re-scanned and the values obtained were used for plotting the smooth field sheet. The pole soundings originally recorded are still on the fathograms and in sounding volumes and have a line drawn through them to signify they have been superseded by the fathogram trace. *Concur - Area delineated on smooth sheet. E & W side of sheet* ✓edH

A settlement and squat test was conducted on Launch 0517 on 10 July 1985 at the Cape Vincent breakwater. The results of these tests are included in the Appendix of this report. Settlement and squat corrections will be applied via the TC/TI tape during plotting of the smooth sheet at the Atlantic Marine Center and were not applied to the field sheets.

Velocity and instrument corrections were determined by bar checks and TDC casts. Twenty-five bar checks and eight TDC casts were taken when wind and sea conditions allowed accurate results. Bar checks were performed with the fathometer set on the X-1 scale (0-200 feet) with the exception of one taken on the X-2 scale (0-400 feet) on JD 226. Depths for position numbers 2307 through 2338 were acquired while the fathometer was set on the X-2 scale. Velocity tables were generated from the bar check and TDC data and a graphic representation of the results is included in the Appendix of this report. The TDC used to obtain velocity corrections was a Martek Mark VII, model 167, serial #205. Bar check chains were measured before the beginning of the survey and the lengths verified again upon completion of the project. No corrections are necessary.

A draft correction of 1.2 feet was applied to all soundings obtained with the Raytheon Fathometer via the electronic corrector tape. Pole soundings require only the application of water level corrections. The calibration report for the Martek is included with the bar check data in the accordion file containing fathograms. No Nansen casts were taken because equipment was not available. The TDC field data are recorded in the sounding volumes at the end of the day observed.

The technique used to determine field corrections for water levels is discussed in the Field Tide Note contained in the Appendix of this report.

E. SURVEY SHEETS (FIELD)

The field sheets were prepared in the field using a PDP8/e computer and a DP-3 Complot plotter. Work sheets, semi-smooth sheets, smooth field sheets and overlay sheets are included with this survey. Mainscheme hydrography and 50 meter development arcs were plotted on the smooth field sheet. One development (Pos# 2339-2443) from a station set up unlike other mainscheme arcs was plotted on the smooth sheet by accident. Bottom samples, shoreline, prior survey soundings, charted soundings, Presurvey Review items, and aids to navigation are shown on various overlay sheets. A projection parameter tape listing for the field sheets is included in the Appendix of this report. The final smooth sheet and verification of this survey will be accomplished at the Atlantic Marine Center on the Harris ~~7~~ computer and Xynetics 1201 plotter.

H-700

F. CONTROL STATIONS

Control stations used during this survey were either existing geodetic control stations published by NGS or were established by N/MOA2x1 to Third-Order, Class I standards. All stations are referred to the North American 1927 datum. A list of all control stations used during this survey is included in the Appendix of this report. It should be noted that stations Carleton West and Carleton South were not plotted on any smooth field sheet. Both of these stations are located outside the survey area.

G. HYDROGRAPHIC POSITION CONTROL

Range-Range position control was used throughout the entire survey with the following exceptions:

JD	POSITION(S)	CONTROL	HYDRO
177	34	SFS	MS
182	188,189,210,232-234,256,257,280-282	SFS	MS
190	601-654	R/Az	SL
192	679-700	R/Az	SL
196	813,814,820,821	SFS	MS
210	1401,1428,1437,1447,1456,1457,1466, 1474,1498,1509	SFS	MS
212	1638	SFS	MS
217	1886-1888	R/Az	DP
218	1889	SFS	DP
234	2576-2577	R/Az (HP)	DP,D

Abbreviations are as follows: Main Scheme (MS); Detached Positions (DP); Shoreline (SL); Development (D). Positions having control annotated "See Field Sheet" (SFS) were determined by dead reckoning. These dead reckoning positions are marked SFS in the sounding volumes. Psuedo fixes, calculated from course and speed, were made for these positions. In all cases where it was necessary to use SFS, the areas were inshore and accurate Del Norte rates were impossible because of shoreline features. Two methods of determining positions by Range-Azimuth (R/Az) were used. The first utilized the Del Norte and T-2 Theodolite. The second, annotated above as R/Az(HP), utilized only the HP-3808A.

The following is a list of equipment used for position control:

<u>EQUIPMENT</u>	<u>SERIAL NUMBER</u>
Sextant, Tamaya	T-2983
Theodolite, T-1, Nikon, NT-2D	031045
Hewlett Packard, 3808-A	1723A00712
Del Norte DMU, DNTI	179
Del Norte Master, DNTI	250
	1068
Del Norte Remote, DNTI	72 - 1316
	74 - 218
	76 - 667
	78 - 253

The control equipment was calibrated by baseline calibrations during the survey and daily calibration checks. Baseline calibrations were conducted between Third-Order horizontal control stations or at a point established with the HP-3808A. The baseline calibration forms are contained in the accordion folder with the survey data. Baseline data obtained at the completion of the survey agree with the daily correctors obtained from the daily calibrations. Abstracts of all electronic equipment and correctors are contained in the Appendix of this report.

On July 16, 1985 the Del Norte Master Unit (S/N 250) was damaged and had to be replaced. A closing baseline calibration could not be performed on the damaged unit. When a baseline calibration was attempted on the spare master unit (S/N 1318) it too was found to be inoperational. Both units were returned to AMC for repair and a replacement master (S/N 1068) was dispatched by AMC. A baseline calibration was performed on this unit and it was used throughout the rest of the survey.

Electronic corrections to positions were applied via corrector tape. The daily correctors were used for each hydro day because of the inconsistency in the Del Norte. Variations in weather changed daily checks but all values remained at an acceptable level with the exception of JD 227, when the right

station had an average corrector of -6 which was applied to this days data. Although this procedure does not follow OP-Order 79, it is the hydrographer's opinion that the daily systems check on this survey was a more accurate method of determining position correction, especially when consideration is given to the fact that opening baselines are zero and the unit may be subject to failure with no closing baseline determined. As noted above, this situation did occur during this survey. It is the hydrographer's opinion, therefore, that daily correctors for this survey should be used as the final correctors. *Concur*

H. SHORELINE - *See also sections 2.b. of the Evaluation Report.*

Shoreline detail for this survey was obtained from Class III maps, TP-01168 and TP-01170, with final review dates of December 1984. These maps are 1:20,000 scale photographically enlarged to 1:10,000.

There were very few changes between the mapped shoreline and the surveyed shoreline. The rocky characteristics of the shoreline resist any dynamic changes due to wind and sea action.

A spit of land lying due north at the east end of Hickley Point (lat. 44°08.52'N, long. 76°21.35'W) is charted as several small islands on chart 14768 and as a solid spit of land on TP-01170. The entire spit is within the zero foot contour, it only bares in spots and is awash in others. The feature is discussed in more detail as a note to hydrographer in this section of the descriptive report. *See page 9 of this report.*

Three control stations were located seaward of the shoreline. All three of these stations were on the Cape Vincent Breakwater. They are: Cape Vincent West Light 1985 (105); Cape Vincent Breakwater 1985 (106); Cape Vincent East Light 1985 (107).

A number of questionable map features which could not be satisfactorily identified or delineated from photo manuscripts are addressed in the notes to hydrographer and appear in blue on copies of the shoreline maps. All such questions were resolved and the results portrayed on the field sheets. The following are the findings of the field investigations:

(Note: Many of the investigated features were designated as presurvey review items. The results of these investigations are documented in the Appendix of this report.)

-Crib and submerged pipe (lat. 44°06.06'N, long. 76°22.38'W) - This feature was designated as PSR#3931. - *See page 24*

-Rock (lat. 44°07.63'N, long. 76°23.00'W) - This feature was designated as PSR# 3929. - *See page 24*

- Submerged cables (lat. 44°08.75'N, long. 76°21.26'W) - Several submerged cables run between Cape Vincent, NY. and Wolfe Island, Ontario. The New York terminations of the submerged cables are marked by cables crossing signs and detached positions (pos#'s 1906, 1917, 1927, 1991) were taken on these signs. Two of the submerged cables terminate at the Wolfe Island, Ontario Ferry Terminal. The offshore end of the ferry terminal is marked by a detached position (pos# 678). There are no cable crossing signs on the Wolfe Island Ferry Terminal.
- Pier (lat. 44°08.12'N, long. 76°17.46'W) - This feature was designated as PSR# 3932. - *See also section 4. a. of the Evaluation Report*
- Wreck (lat. 44°08.01'N, long. 76°19.27'W) - This item was designated as PSR# 3883. - *See page 17.*
- Rock (lat. 44°08.20'N, long. 76°21.23'W) - This item was designated as PSR# 3853 *See page 16.*
- Wrecks (lat. 44°09.10'N, long. 76°20.90'W) - These features were designated PSR#'s 3926, 3927, 3862. *See page 19.*
- Wreck (lat. 44°08.68'N, long. 76°20.00'W) - This feature was designated as PSR# 3863. *See page 16.*
- Islet now part of shoreline (lat. 44°08.68'N, long. 76°22.88'W) - This feature is a small spit of land protruding into a small, shallow bay at the southwest end of Button Bay. The spit of land is about 100 meters long and extends northeast into the bay. The southwest end of the spit, where it begins to extend from the shoreline, is marshy and does not rise far above the low water datum. Moving northeast along the spit the elevation of the land increases to about five feet above the low water datum and several trees are growing. The hydrographer recommends that this feature should be charted as part of the shoreline. *Concur - Shoreline taken from TP-φ 117φ of 1982.*
- Pier and boat house (lat. 44°08.^{47.9φ}80'N, long. 76°18.^{12.3φ}18'W) - This feature was designated as PSR# ~~3863~~. *See also sections 4. a and 7. a. (1) of the 3938 Evaluation Report*
- Piers (lat. 44°09.30'N, long. 76°17.50'W) - These features were designated as PSR#'s 3933, 3934, 3935, 3936, 3937. - *See page 21*
- Rocks (lat. 44°09.50'N, long. 76°21.75'W) - These features were designated as PSR#'s 3908, 3909, 3898, 3899. - *See page 19*
- Radio mast (lat. 44°07.95'N, long. 76°19.79'W) - This feature, was verified by field investigation. The Radio mast belongs to Seaway pilots and is located on the pilot station property. The position listed in the dipfile was verified, ~~by a detached position (pos.# 2600).~~ *Retain as charted.*
- Pilings (lat. 44°07.90'N, long. 76°20.^{19.6φ}45'W) - This feature was designated as PSR# 3881. - *See page 17*

-Rock (lat. 44°07.98'N, long. 76°19.40'W) - This feature was designated as PSR# 3882. - See page 17

-Islet (lat. 44°08.52'N, long. 76°21.35'W) - This item, located at Hinckley Point, is an islet at the offshore end of a spit of land that submerges at its offshore end and terminates at the islet. The spit of land lies due north and appears as a series of five small islands on chart 14768 and as a solid spit of land with a single islet at the offshore end on TP-01170. A field investigation of the feature showed that the southern portion of the spit is above the shoreline out to lat. 44°08.30'N. At this point the elevation of the spit decreases and bares less than one foot in spots and is awash in others at the low water datum. At lat. 44°08.40'N the spit rises above the shoreline and forms an islet having several trees on it. Detached positions (pos# 2570-2573) mark the location of this islet. The location of this islet corresponds to the north end of the spit as it appears on TP-01170. Continuing north beyond this islet, the spit is awash at low water datum and then uncovers about 1 foot at the north most end at low water datum. This area is charted as an islet on chart 14768 and on TP-01170. The entire length of the spit is above the zero contour of the present survey. The hydrographer is aware that the Hydrographic Manual stipulates that in the Great Lakes, the shoreline is the line formed by the intersection of land with the water surface at the time of the survey. During the course of the survey, however, neither a high water datum or low water datum was observed. - Shoreline transferred from the field sheets. Chart as shown on present survey.

I. CROSSLINES - See also section 3.2. of the Evaluation Report

Crosslines constitute 18.8% of the mainscheme hydrography. 99% of the crossings agree within ±1 feet. No soundings are in disagreement at crossings by more than 5 feet. The reasons for the disagreement of sounding at crossings are due to rapid changes in the bottom contour.

J. JUNCTIONS - See also section 5. of the Evaluation Report.

This survey does not junction with any recent surveys.

K. COMPARISON WITH PRIOR SURVEYS - See also section 6. of the Evaluation Report.

This survey was previously covered by the following surveys:

LS-536 (1873), 1:10,000 scale
 LS-568 (1874), 1:10,000 scale
 LS-1255 (1912-1914) 1:20,000 scale
 LS-1716 (1936), 1:20,000 scale
 LS-571 (1874) 1:10,000 scale

LS-536 - This prior survey encompasses all areas of the present survey east of the line defined by the points lat. 44°07.0'N, long. 76°21.5'W and lat. 44°08.0'N, long. 76°22.3'W.

LS-536 is over one hundred years old and the area has been subjected to considerable development. In 1873 only three piers existed on the shoreline. Remnants of two of these piers still exist as ruins and were designated as pre-survey review item 3897 and 3886. These are discussed in the comparison with LS-1716. While the shoreline showed very little alteration as a result of natural forces, soundings and contour lines have changed in some areas. Hinkley Flats Shoals exhibit a shoaling trend. The soundings from the prior survey are consistently one to three feet deeper than those of the present survey. This may be attributed to changes in the low water datum. Soundings throughout Bottom Bay also indicate shoaling. Depths inside the present 18 foot contour have decreased as much as 14 feet. Elsewhere in Button Bay the depths of the prior survey are regularly one to five feet deeper. Feather Bed Shoal shows very little evidence of change. The most significant changes between this survey and the prior survey is seen inside the 80 foot contours from lat. 44°08.0'N Long. 76°20.0'W. Present depths are as much as 72 feet deeper than those of LS-536. North of this area, within the 80 foot contours, the current soundings are regularly 10 feet, and as much as 50 feet deeper than those of LS-536.

LS-568 - This prior survey covers approximately 1.5 square miles of the current survey, west of long. 76°23.3'W. Comparison shows very little change to the shoreline. Soundings, however, are uniformly five to ten feet shoaler on the present survey. The uniform difference in soundings may be attributed in part to a difference in datums.

LS-1255 - This prior survey has a common area with the entire area of the present survey. All soundings agree within ±3 feet. The Cape Vincent shoreline has undergone considerable development since 1914. These features are discussed in the comparison with LS-1716 and in the comparison with the chart.

LS-1716 - This prior survey covers all the area of the presents survey north of lat. 44°07.25'N. The following AWOIS items originated with this prior survey and were investigated:

- PSR# 3878 - rock awash - *see page 15*
- PSR# 3879 - rock - *see pages 15-16*
- PSR# 3883 - non-dangerous submerged wreck - *see page 17*
- PSR# 3884, 3885 - pier in ruins - *see pages 17-18*
- PSR# 3886 - pier in ruins - *see page 18*
- PSR# 3887 - pier - *see page 18*
- PSR# 3888 - "L" shaped pier in ruins - *see page 18.*
- PSR# 3890 - rock awash - *see page 20*
- PSR# 3896 - "L" shaped pier - *see page 19*
- PSR# 3897 - pier - *see page 19*
- PSR# 3898, 3899, 3908 - rocks and rocks awash - *see page 19*
- PSR# 3906 - rock awash - *see page 20*
- PSR# 3907 - rock awash *see pages 20-21*
- PSR# 3929 - rock - *see page 20*
- PSR# 3932 - pier - *see page 106*

These items are discussed in the Deficiency Item Report included with this report and in section L, "Comparison With The Chart" of this report. All rocks charted on the prior survey were designated as pre-survey review items. In general the two surveys are in very good agreement. Soundings agree within one foot throughout the entire survey and contour lines exhibit very little evidence of movement. Development of two 18 foot soundings (lat. 44°07.7'N, long. 76°22.7'W and lat. 44°08.2'N, long. 76°19.2'W) in areas characterized by significantly deeper depths were conducted. In both of these places least depths of 19 feet were discovered ^{and 17} ~~before~~ ^{after} the application of smooth water level corrections. The only significant difference in soundings between the two surveys is seen at lat. 44°08.1'N, long. 76°20.2'W. The prior survey has charted depths not exceeding 166 feet. The current survey shows depths as great as ²³² ~~240~~ feet. Comparison of shoreline features indicates very little change due to natural forces. An exception to this is the narrow spit at Hinckley Point (lat. 44°08.5'N, long. 76°21.2'W) that is about 500 meters long. This area has shown evidence of erosion. The length of the spit is accurately charted on the prior survey, however, some portions have become submerged, or awash at low water datum creating a small island where the spit terminates. This island is oblong, lying in a north-south direction and has three trees growing on it. Detached positions 2570 - 2573 were taken on the island. There are no other significant natural differences between the two surveys. The shoreline has undergone considerable development over the 49 years separating the surveys. Several features charted on the prior survey require description revisions. There is no evidence of two piers charted on the previous survey on Hinckley Point at lat. 44°08.52'N, long. 76° 21.55'W and lat. 44°08.47'N, long. 76°21.35'W. Neither of these features appear on the current chart, Chart 14768. An "L" shaped breakwater located at lat. 44°07.65'N, long. 76°20.55'W is now in ruins. Detached position ³⁷ 1909 marks the off-shore end of these ruins. All other revisions to the descriptions of man made features appearing on the prior survey are addressed as pre-survey review items listed above.

Position 1909: 44°07'38.93"N, 76°20'32.65"W - off shore end of breakwater

L. COMPARISON WITH THE CHART - *See also section 7. of the Evaluation Report.*

This survey was compared as the survey progressed with two charts. The western portion of the survey (west of long. 76°19.7'W) was compared with the 16th edition of Chart 14768, dated 12 June 1982. Areas east of 76°20.4'W were compared to the 16th edition of Chart 14767, dated 25 September 1982. For the comparison the 1:30,000 scale charts were photographically enlarged to 1:10,000 scale.

Chart 14768:

The charted depths and contours agree very well with the present survey. Almost all soundings agree within ±2 ft and aids to navigation are accurately charted with the following exceptions:

-Buoy 243, a green, flashing, four second interval buoy, is not shown on the chart, This item is discussed further in section N. "Aids To Navigation", of this report.

-The present survey shows significantly deeper water in a three-hundred meter swath from lat. 44°08.0'N, long. 76°20.7'W, to lat. 44°08.4'N, long. 76°20.0'W This area is approximately at a position charted as a calling point for vessel traffic. The maximum charted depth in this area is 166 feet. The present survey shows that the actual depths are as great as 240²³² feet. In general the survey depths are 20 to 40 feet deeper than the charted. The only exception is a charted depth of 166 feet at lat. 44°08.2'N, long. 76°20.2'W that corresponds to the 80 foot curve of the present survey. This area is characterized by sharp increases in depth and the mischart could be attributed to distortion in the blow-up.

Chart 14767:

The charted depths and contours agree well with this survey, usually within ±2 feet. The only exception is in the area noted above in the Chart 14768 comparison where the present survey has depths of up to 240²⁴ feet and the charted depths do not exceed 166 feet. This area is in the southwest corner of Chart 14767 between lat. 44°08.0'N, long. 76°20.5'W, and lat. 44°08.5'N, long. 76°20.0'W.

The charted Coast Guard Station in Cape Vincent at lat. 44°07.9'N, long. 76°20.1'N is no longer owned or operated by the Coast Guard. The building and property are now owned and operated by the St. Lawrence Seaway Development Corporation.

Very few "natural" changes occur in the features charted in the area of the present survey, however, the shoreline has been developed in many places by local property owners. Detached positions were taken on numerous man-made features along the shoreline. Many of these features do not appear on the charts or T-sheets. This may be due to the scaling factor used when compiling T-sheets at 1:20,000 or the charts at 1:30,000. The following man-made features, listed west to east, on the New York shore from Tibbetts Point to Cape Vincent and on the Wolfe Island, Ontario shore from Bear Point to Button Bay were noted: (All positions listed are 44°N, 77°W. The degrees have been dropped from the listing. RAC-Remain as Charted NE- No Evidence)

ITEM	POS#	CHART 14768	TP-01170	RECOMM
SUBM. CRIB	NE	06'02",22'18"	NO	PSR# 3931-p.24
BREAKWATER	702-703	YES	YES	RAC
BREAKWATER	707	NO	NO	BREAKWATER
PIER	709	NO	NO	PIER
JETTY	1904	NO	YES	JETTY

ITEM	POS#	CHART 14768	TP-01170	RECOMM
CABLE X-ING SIGN	1906	NO	NO	CABLE X-ING SIGN
PIER	1907	NO	YES	PIER
PIER	1908	YES	YES	PIER
BREAKWATER RUINS	1909	NO	NO	BKW RUINS
PIER	1910	NO	NO	PIER
"L" PIER	1911	YES	YES	PSR# 3887 - p. 18
BKHD	1913	YES	YES	RAC

ITEM	POS#	CHART 14747	TP-01170	RECOMM
CONCRETE BKHD	1914	YES	YES	RAC
PIER	NE 07,42.02",20"24.11"		NO	DELETE
PIER	1915	YES	YES	RAC
"L" PIER	1916		YES	
CONCRETE BLKHD	1917	NO	YES	CONCRETE BKHD
PIER RUINS	1918	PIER	PIER	PIER RUINS
"L" PIER	1919	YES	YES	RAC
BKHD & BOAT HOUSE	1920	YES	YES	RAC
BKHD	1921	YES	YES	RAC

ITEM	POS#	CHART 14768	TP-01180	RECOMM
PIER	1922	YES	YES	RAC
FINGER PIER	1923	NO	YES	FINGER PIER
L-PIER	1925-1926	YES	YES	RAC
PIER	1927	YES	YES	RAC
PIER RUINS	1928	NO	NO	PSR# 3888 - p. 18
FERRY PIER	1929	YES	YES	PSR# 3889 - p. 18
PIER	1930-1931	YES	YES	PIER 1
BOAT HOUSE	1932	YES	YES	RAC
PIER	1933	YES	YES	RAC
DOCK	1934	YES	YES	RAC
BOAT HOUSE	1935	NO	NO	BOAT HOUSE
PIER	1936	YES	YES	RAC
BOAT HOUSE	1937	NO	NO	BOAT HOUSE
BKHD	1938	YES	YES	BKHD
PIER	1939	YES	YES	RAC
DOCK	1940	YES	YES	RAC
BKHD RUINS	1941	BLK. HD.	YES	BKHD RUINS
FUEL DOCK	1942	YES	YES	RAC
FUEL DOCK	1943	YES	YES	RAC
MARINA	2565-2569	YES	YES	RAC

ITEM	POS#	CHART 14768	TP-01170	RECOMM
PIER	1944	YES	YES	RAC
BKHD	1945-1946	YES	YES	RAC
PILES	1947-1949	YES	YES	PSR# 3881 - p. 17
BREAKWATER	1990-1991	YES	YES	RAC
BKHD	1950-1951	YES	YES	RAC
PIER RUINS	1952-1953	YES	YES	PSR# 3886 - p. 18

ITEM	POS#	CHART 14767	TP-01170	RECOMM
BOAT RAMP	1954	NO	NO	BOAT RAMP 2
PIER RUINS	1955-1956	YES	YES	PSR#'S 3884, -p. 17 3885 - p. 17
SUBM. CRIB	1957	WRECK	WRECK	PSR# 3883 - p. 17
2 HOUSES	1959	YES	NO	TWO HOUSES
BKHD	1960	NO	NO	BLK. HD
BKHD	1961	NO	NO	BLK. HD
ROCK BRK. WT	1968	YES	YES	RAC
DOCK	1968-1970	YES	YES	RAC
DOCK	1971	NO	NO	DOCK
PIER RUINS	1972	NO	NO	PIER RUINS
BOAT HOUSE	1973	NO	NO	BOAT HOUSE
PIER	1974	NO	YES	PIER
PIER	1975	NO	YES	PIER
PIER	1976	YES	YES	PIER
BREAKWATER	1977-1978	YES	YES	RAC
BREAKWATER	1979	NO	YES	BREAKWATER
PIER	1981-1982	YES	YES	RAC
PIER	1983	YES	YES	RAC
BREAKWATER	1984, 1986	YES	YES	RAC
DOCK	1988	YES	YES	RAC
ROCK JETTY	2445-2446	NO	YES	ROCK JETTY 3
ROCK JETTY	2447	NO	YES	ROCK JETTY
ROCK OUTCROP	2448	NO	NO	PSR# 3937 - p. 21
ROCK OUTCROP	2449	YES	NO	PSR# 3936 - p. 21
PIER	2450	YES	YES	RAC
FOUL W/ROCKS	2451	PIER	NO	PSR# 3935 - p. 21
ROCKS	2452	PIER	NO	PSR# 3934 - p. 21
ROCK OUTCROP	2453	PIER	NO	PSR# 3933 - p. 21
DOCK	2454	YES	YES	RAC
PIER	2455	NO	YES	PIER
DOCK	2456	NO	NO	DOCK
DOCK	2458	NO	YES	DOCK
PIER	2459	NO	YES	PIER

WOLFE ISLAND, ONTARIO

ITEM	POS#	CHART 14768	TP-01170	RECOMM
BKHD	2595	NO	NO	BLK. HD.
BKW RUINS	2596	NO	YES	BKW RUINS
ROCK OUTCROP	2597	NO	NO	ROCK OUTCROP
DOCK	2599	NO	NO	DOCK
BOAT SLIP	1893	NO	NO	BOAT SLIP
PIER	677-678	YES	YES	RAC

ITEM	POS#	CHART 14768	TP-01168	RECOMM
BREAKWATER	668,669	NO	YES	BREAKWATER

A list of geographic positions for the position numbers listed in this tabulation is appended to this report.

Several of these ~~items~~ ^{items} require more explanation than is possible in this listing. Some of these features are discussed as Pre-Survey Review items, others are annotated and discussed here.

1.

The wooden pier located at lat. $44^{\circ}07'47.74''$ N, long. $76^{\circ}20'07.30''$ W appears on chart 14767 incorrectly as a straight pier. It is in fact L-shaped, extending perpendicular to the shore and parallel to the ferry pier (pos# 1929, PSR 3889), it then bends east. This offshore end of the L-pier supports fuel pumps. Two finger piers are located in the protected area behind the pier. Position number 1930 marks the offshore western end of the L-pier and position number 1931 marks the eastern end. *1930: $44^{\circ}07'47.80''$ N, $76^{\circ}20'07.41''$ W - 1931: $44^{\circ}07'47.67''$ N, $76^{\circ}20'06.64''$ W*
Chart 25 shown on the present survey.

2.

A boat ramp, currently under construction is located at lat. $44^{\circ}07'59.30''$ N, long. $76^{\circ}19'20.40''$ W and detached position number 1954 marks the offshore center. This ramp is being built by the State of New York for public use. It is anticipated that the ramp will be completed this season. The hydrographer recommends that this feature be charted. *-Concur - 1954: $44^{\circ}07'59.39''$ N, $76^{\circ}19'20.40''$ W*

3.

A rock jetty approximately 300 feet long, located at lat. $44^{\circ}09'11.13''$ N, long. $76^{\circ}17'47.64''$ W is accurately charted on TP-01170 but is not charted on Chart 14767. Detached position 2445 and 2446 mark the offshore western and eastern ends of the jetty respectively. Position 2447 marks a second smaller rock jetty. Together these jetties form a protected harbor. These jetties and harbor are a significant change to the charted shoreline and should be charted. *Concur - 2445: $44^{\circ}09'11.13''$ N, $76^{\circ}17'47.69''$ W
 2446: $44^{\circ}09'12.98''$ N, $76^{\circ}17'44.64''$ W
 2447: $44^{\circ}09'13.21''$ N, $76^{\circ}17'44.10''$ W*

PSR ITEMS

The following PSR items were investigated during the survey

PSR #3878: An obstruction, lat. $44^{\circ}07'49.00''$ N, long. $76^{\circ}20'15.90''$ W from LS-1716--US Lake Survey. A visual search for this items was conducted. The charted position of the item was in water with depths of less than six feet. The water clarity at the time of the investigation was excellent and investigators were able to visually search the bottom for the item. After a thorough search the item could not be located. Local property owners and boat owners that use the area had no knowledge of the rock awash. ~~Because an investigation in shoal water and local knowledge could not locate the item the existence is doubtful and should be charted as such.~~ *Recommend rock be deleted from the chart.*

PSR# 3879: An obstruction, lat. $44^{\circ}07'49.30''$ N, long. $76^{\circ}20'14.80''$ W, from LS--1716--US Lake Survey. A visual verification of the item was conducted in water with five to six

feet of visibility. The item was found to be a rock awash at LWD, determined by pole sounding. ~~The item should remain charted.~~ *Recommend charting rock awash in 44°47'48.97"N, 76°21'15.46"W.* ✓ CSM

PSR# 3854: An obstruction, original source unknown, rock charted at lat. 44°08'31.10" N, long. 76°21'28.6" W. A visual search for the item was conducted. The item is located in a small, shallow, unnavigable bay having average depths of one foot and littered with rocks and boulders. A detached position was taken on the most prominent of the rocks in the area. A chain drag was impractical in this area because of all the rocks, the shoal depths and excellent water visibility. The area in which the rock was located should be charted as "~~area~~ foul with rocks." ✓

PSR# 3853: An obstruction, original source unknown, rock charted at lat. 44°08'^{12.24"}32.00" N, long. 76°21'^{30.38"}30.00" W. The location of the item was verified visually from the position scaled from chart 14768. Because of the shoal depths and water clarity in the area a chain drag was impractical. The item was found to be a rock jetty perpendicular to the shoreline in water depths ranging from zero feet at the shoreline to six feet at the offshore end. A detached position (pos# 1890) was taken at the offshore end of the jetty. *Chart as shown on present survey. 1890: 44°48'12.46"N, 76°21'14.49"W* ✓

PSR# 3855: an obstruction, original source unknown, rock charted at lat. 44°08'32.00" N, long. 76°21'30.00" W. The existence of this item was verified visually. It is located in the same small shallow bay as PSR#3854. A detached position was taken on the most prominent rock in the vicinity in an area foul with rocks and boulders. Position number 1892 marks a four foot diameter rock slab baring 1.5 feet at LWD. This bay in which these two PSR items are located should be charted as foul with rocks. - *Chart as shown on present survey. 1892: 44°48'31.38"N, 76°21'28.93"W.* ✓

PSR# 3863: A wreck, position doubtful, presented as a six-foot sounding with danger curve charted at lat. 44°08'41.1" N, long. 76°22'01.7" W. A chain drag and a fatho search of the charted are was conducted but the wreck could not be located. From local knowledge it was learned the wreck does exist but that natural forces had moved it into 25 feet of water. Divers searched the 25 foot curve in the area indicated by local knowledge and located the wreck of the HARVEY J. KENDALL. The KENDALL was a coal fired steam-cargo ship built in 1892 and sunk in 1920. It was 142 feet long and 31 feet wide at the beam. The KENDALL is presently lying north-south in about 25 feet of water. Position #2562 marks the bow of the wreck an a least depth of 7.5 feet at LWD was determined by pole sounding. - *Recommend deleting charted wrecks and chart as shown on the present survey. 2562: 44°48'31.25N, 76°21'59.44"W* ✓

PSR# 3880: An obstruction, original source unknown, rock charted at lat. 44°07'40.6" N, long. 76°20'27.1" W. A visual verification of this item was conducted in water having seven-foot visibility. Detached position 1912 was taken at the center of a three-foot diameter rock with a least depth of 1.5 feet at LWD determined by pole sounding. This item should be deleted ~~remain charted.~~ *and a rock charted as shown on the present survey - See also page 86 of this report.* ✓ CSM

PSR# 3881: Obstruction, original source unknown, lat. 44°07'40.6"^{53.34} N, long. 76°20'27.4"¹⁹ W to lat. 44°07'55.1" N, long. 76°19'35.6" W. A visual verification of this item was performed. The item was found to be a decaying row of piles extending SW-NE approximately parallel with the shoreline. The piles have a six-inch diameter. Many of the piles are flush with the bottom and none rise more than two feet above the bottom. The piles do not create a prominent feature. At the present water level most of the piles are above the water line. Position 1947 marks the western most end of the piles and bares 2.5 feet at LWD. Position 1949 marks the eastern most end of the same row of piles. The area between these positions is foul with rocks. A slab of concrete baring 7.2 feet at LWD lies in front of the eastern most pile. Detached position 1948 marks the offshore most of the three foot diameter rocks that foul a 25-foot diameter area immediately offshore of the row of piles. ~~The area should be charted as foul with rocks.~~ Chart as shown on the present survey. *SAH*

PSR# 3882: An obstruction, lat. 44°07'58.8" N, long. 76°19'24.10" W, original source unknown. A visual search for the item was conducted. The charted position of the item, a rock awash, is inside a small cove surrounded by the ruins of a coal pier (PSR# 3886). The cove is foul with rocks, inaccessible to navigation, and has depths of less than three feet. A party member walking inside the cove searched for thirty minutes but was unable to locate the item. ~~The area inside the cove should be charted as "foul with rocks".~~ Recommend the rock awash be deleted and the area be charted foul as shown on the present survey. *SAH*

PSR# 3883: A non dangerous submerged wreck at lat. 44°08'00.80" N, long. 76°19'15.90" W. A visual search for this item was conducted. The water depths in the area were six to seven feet and water clarity allowed investigators to search the bottom. The item was found to be a submerged rock and wood crib, 50-feet long, six-foot wide and having a least depth of three feet at LWD determined by pole sounding. The crib is lying in a northwest direction and a detached position (pos# 1957) was taken at the center of the crib. The wood ribs of the crib could give a surface observer the impression of a wreck. This item should be revised from "non dangerous submerged wreck" to a "submerged crib". "Crib awash" as shown on the present survey. See page 89 of this report. *SAH*

PSR# 3884, 3885: Pre-survey review item 3884, a pier ruins located at lat. 44°08'01.5" N, long. 76°19'17.6" W, and pre-survey review item 3885, described as pier ruins extending from lat. 44°08'01.2" N, long. 76°19'16.9" W to the shoreline, are, in fact the ruins of the same structure. Average water depths in the area were about three feet and water clarity allowed investigators to search the bottom. The pier ruins are comprised primarily of 2X5X6 foot concrete blocks that begin at a point of land and then extends in an easterly direction parallel to the shoreline. A detached position (pos# 1955) was taken at the western offshore part of the inshore end of the pier ruins. This position corresponds with the location of PSR item 3884. The pier ruins at this position bare 7.5 feet at LWD. The pier ruins *5.4*

then extend in an easterly direction to a second detached position (pos# 1956) corresponding to the charted location of PSR# 3885. The least depth at this location was ~~one-foot~~ ^{bare 2 feet} determined by pole sounding. Several wood piles baring six-feet lie along the south side of the ruins. The hydrographer recommends that these items be charted as pier ruins with ^{as shown on} ~~location as described by positions 1955 and 1956.~~ ^{the present survey.}

PSR# 3886: Pier ruins located at lat. 44°07'58.9" N, long. 76°19'24.60" W. A visual verification of the pier ruins was conducted. The ruins are composed primarily of concrete. The pier ruins lie at the offshore, north end of an outcropping piece of land. The north-eastern end of the ruins appearing to be more of a bullhead than a pier. The south western end extending from the outcropping approximately parallel to the shoreline. Two detached positions were taken on the ruins. Position 1952 marks the southwest offshore end of the ruins where a bollard is still set in a concrete block. Debris in the water from this position to the shoreline gives evidence that the pier may have extended toward the shoreline. A small, shallow cove is formed by the ruins here. Pre-survey review item 3882's charted position is inside of this cove. A second detached position (pos# 1953) was taken at the northeast offshore end of the pier. The ruins bare 5.5 feet at LWD. ~~The ruins should be charted and the cove formed by the western end of the ruins should be charted as "area foul with rocks".~~ ^{Chart as shown on the present survey.}

PSR# 3887: Pier ruins located at lat. 44°07'41.1" N, long. 76°20'26.20" W. The existence of the item was verified by visual investigation. The item is a dog-legged shaped wooden pier, ten-feet wide, 40 feet long (total) and bares 4.5 feet at LWD. A detached position (pos# 1911) was taken at the ^{5.4} center offshore end of the pier in ruins. - ^{Chart as shown on the present survey.}

PSR# 3888: Pier ruins located at lat. 44°07'48.9" N, long. 76°20'11.1" W. A visual search of the area was conducted in one to five feet of water with water visibility that allowed investigators to thoroughly search the bottom. A detached position was taken at the pier ruins, now no longer extending beyond the shoreline. The pier was composed of concrete, rock and steel, the remains of which litter the shoreline. The ruins were probably removed to facilitate ferry traffic at the ferry terminal (pos# 1929, PSR# 3889), however it could not be verified from local knowledge. These ruins at the shoreline do not pose a hazard to navigation. - ^{Concur. Chart as shown on the present survey.}

PSR# 3889: Pier ruins charted at lat. 44°07'48.00" N, long. 76°20'08.9" W. A visual verification of the item was conducted. The pier ruins have been rebuilt and is now used as a terminal for the ferry that runs to Wolfe Island. The pier is 30 feet wide, 60 feet long and bares 4.5 feet at LWD. A detached position (pos# 1929) was taken at the center offshore end of the pier. The description of this item should be revised from "pier ruins" to "pier". ^{Recommend pier ruins be deleted and a pier charted as shown on the present survey.}

PSR# 3895: A rock awash located at lat. 44°07'01.00" N, long. 76°24'20.7" W. This item was verified by a visual search. The item was part of a rock outcrop baring ~~5.5~~⁶ feet at LWD in an area foul with rocks and boulders. A detached position (pos# 666) was taken to mark the offshore end of the rock outcrop. *Chart as shown on the present survey 666: 44°07'01.21"N, 76°24'20.98"W - See also p. 97 of this report.*

PSR# 3896: An "L" shaped pier ruins located at lat. 44°07'27.9" N, long. 76°20'51.9" W. A visual verification of the item was conducted. The item is an "L" shaped boulder jetty recently rebuilt and now bares ~~seven~~⁴-feet. The pier extends perpendicular to the shore and then bends east, parallel to the shoreline. The pier bares 9.5 feet at LWD. There are several large submerged boulders lying at the offshore end of the jetty. A detached position (pos# 1904) was taken at the offshore end of the jetty. Horizontal control station "Mills" is set at the offshore end of the jetty. A second detached position (pos# 1905) was taken at the offshore center of a 60 foot long, ten-foot wide pier baring ~~two~~⁵-feet and extending perpendicular to the shore line. The jetty and this pier form a protected harbor. *Recommend charting as shown on the present survey. - See also p. 98 of this report*

PSR# 3897: The north end of pier ruins located at lat. 44°09'25.5" N, long. 76°21'44.00" W. The item was located and verified by a visual search. A detached position (pos# 1918) was taken at the offshore end of the pier in ruins with rocks. The item was 30 feet wide, 60 feet long bares one foot at LWD. *-Chart as shown on the present survey. 1918: 44°09'25.5"N, 76°21'44.00"W - See also p. 99.*

PSR#'s 3898, 3899, 3908, 3909: These items were all listed as rocks or rocks awash and are located in the same general area centered around lat. 44°09'26.8" N, long. 76°21'47.5" W. A visual search of the area was conducted and the entire area was found to be foul with rocks and boulders. Position 2076 marks the western most extremity of the foul area and position 2082 marks the eastern and offshore extremity of the foul area. Position 2077-2081 marked various prominent boulders in the area singled out as pre-survey review items. This area should be charted as foul with rocks and boulders. *-Concur - chart as shown on the present survey.*

PSR#'s 3926, 3927, 3862: All three of these items are charted as wrecks located in the same general area centered at lat. 44°09.1' N, long. 76°20.4' W. A chain drag investigation was conducted in the charted area of the three wrecks. The search located two wood wrecks, from local knowledge it was discovered that the wrecks are the ruins of one ship, the OATLAND. The OATLAND was a 262 foot long, 37 foot beam grain ship sunk by the Canadians in 1931. The wreck of the OATLAND later broke apart under natural forces. Both parts of the wreck are visible from the surface and least depths were determined by a snorkel search in 10 to 15 feet of water. The largest piece of the OATLAND is lying in a north south direction direction, is about 30 feet wide and 200 feet long. Detached position 2010 marks the north end and detached position 2009 marks the south end. The least depth was approximately at the center and is marked by detached position 2008. The second part of the wreck is lying 250°M and is marked on west end by detached position 2041. This is also the location of the least depth, ~~4.0~~¹ feet determined by pole sounding. Position

2040 marks the east end of this piece of the wreck. The third wreck ^(AWOIS 3862) could not be located by chain drag or fatho search. The ~~description of this item should be revised to position approximate.~~ It is recommended that AWOIS item 3862 be retained as charted in lat $44^{\circ}09'48.4''$ N, long $76^{\circ}24'53.4''$ W

PSR# 3929: A rock located at lat. $44^{\circ}07'38.00''$ N, long. $76^{\circ}22'58.2''$ W. A visual search for this item was conducted in zero to six-feet of water. Water clarity allowed investigators to search the bottom. It was determined that this item is part of a rock outcrop and a least depth of 1.5 feet (baring ~~one foot~~ ⁵ feet at LWD) was taken by pole sounding. Chart 25 shown on the present survey - see p. 144 of this report.

PSR# 3931: A submerged crib at the end of a potable water intake. The center of the crib is charted at lat. $44^{\circ}06'02.5''$ N, long. $76^{\circ}22'18.3''$ W. The number of rocks and boulders in the vicinity made a chain drag or fatho search impractical and a diver investigation was conducted. Divers performed two 150-foot circle searches, the centers of which are marked by pos.'s 1886-1887. Anchoring one end of a 150-foot line, one diver swam the circumference while the second diver swam up and down the line investigating any snags. The area was found to be littered with rocks and boulders, however, the crib was not located. Most of the area surrounding the charted position is within the six-foot curve, and as the reported depth of water over the crib is six-feet, the position of the crib is doubtful and should be removed. - Do not concur - areas searched were not in vicinity of crib - retain as charted

PSR# 3890: A rock awash located at lat. $44^{\circ}09'26.30''$ N, long. $76^{\circ}18'13.60''$ W. A visual search at chart datum was conducted. The item is located on the west side of Roxy Islands, an area generally characterized by shoal depths and a rocky bottom. a detached position (pos# 2444) was taken on the most prominent rock in the vicinity, a two-foot diameter rock, and a least depth of two-feet was determined by pole sounding (0.5 feet at low water datum). Concur - chart as shown on present survey. - See p. 96 of this report. EDM

PSR# 3906: ^{charted} A rock awash located at lat. $44^{\circ}09'14.00''$ N, long. $76^{\circ}18'46.10''$ W. A visual search at the was conducted. A detached position (pos# 2462) was taken on a four-foot diameter boulder having a least depth of 5.2 feet (~~2.7~~ ^{3.7} feet at low water datum) determined by pole sounding. This was the most prominent boulder in an area characterized by numerous rocks flush with the bottom. - Chart as shown on present survey, bottom characteristic rky added to present survey in vicinity - see p. 141 of this report. EDM

PSR# 3907: This item is a ^{charted} rock awash located at lat. $44^{\circ}09'15.20''$ N, long. $76^{\circ}18'46.10''$ W. A visual search at chart datum was conducted in the vicinity of Roxy Islands. This area is characterized by shoal depths and a rock bottom. Detached position were taken on the two most prominent rocks in this area. Position number 2460 marks a four foot diameter boulder having a least depth of 3.5 feet (~~1.2~~ ⁰⁰ feet at low water datum) determined by pole sounding. Position number 2461 marks a three-foot. Concur - chart as shown on the present survey - see p 142 of this report. EDM

diameter bolder having a 2.2 foot (0.3 feet at low water datum) least depth determine by pole sounding. It could not be determined from the information provided from the AWOIS which of the rocks was the designated PSR item. - Delete charted rock - Chart as shown on the present survey. ✓ EDM

PSR# 3933: This item, designated as a pier, is located at lat. 44°09'22.30" N, long. 76°17'27.80" W. A visual search at chart datum was conducted. The item was found to be a 30 foot long rock outcrop, ^{bare 3 ft} awash. A detached position (pos# 2453) was taken at the offshore end of the outcrop. A thorough search of the area could not locate any item definitely identifiable as a pier or pier ruins. ~~This item should be revised to a rock outcrop.~~ Delete pier - chart as shown on present survey. ✓ EDM

PSR# 3934: This item, designated as a pier, is located at lat. 44°09'21.60" N, long. 76°17'28.50" W. A visual search for the item was conducted at chart datum. At the time of the investigation, water visibility was excellent. A thorough search of the area could not locate any feature definitely identifiable as a pier or pier ruins. Instead the area was found to be foul with rocks and boulders. A detached position (pos# 2452) was taken at the offshore end of the foul area and a least depth of three-feet (0.7 feet at low water datum) was determined by pole sounding. ~~This item should be revised to area foul with rocks and boulders.~~ Delete pier - chart rock as shown on present survey - see p 108 of this report. ✓ EDM

PSR# 3935: This item, designated as a pier, is located at lat. 44°09'19.30" N, long. 76°17'28.10" W. A visual search, at chart datum, was conducted. The area was found to be foul with boulders awash. The search did not locate any item that could definitely be identified as a pier or pier ruins. A detached position (pos# 2451) was taken at the offshore end of a 30 square-foot foul area. This item should be revised to "area foul". - Delete pier - chart as shown on present survey, - see p. 109 of this report. ✓ EDM

PSR# 3936: This item is designated as a pier located at lat. 44°09'16.60" N, long. 76°17'28.80" W. A visual search at chart datum was conducted. The item was found to be a rock outcrop 20 feet long and awash. This item should be charted as a rock outcrop. Delete pier - chart as shown on present survey - see p 110 of this report ✓ EDM

PSR# 3937: This item, designated as a pier, is located at lat. 44°09'16.10" N, long. 76°17'30.50" W. A visual search at chart datum was conducted. Visibility at the time of the investigation was excellent. A detached position (pos# 2448) was taken at the offshore end of a rock outcrop. The outcrop is 50 feet long and bares 5.5 feet at LWD. This item should be revised to a rock outcrop. There is not enough evidence to identify these items as pier ruins, although that may be the case. Many piers in this area are constructed by filling a wooden frame with rocks and boulders. As the wood rots the structures collapse leaving a rock outcrop. It is difficult to determine if these outcrops are natural or man-made because the shoreline is characterized by rocks and boulders and they often form natural outcrops. Delete pier - chart as shown on present survey, - see p. 111 of this report. ✓ EDM

M. ADEQUACY OF SURVEY

This survey is complete and adequate to warrant its use to supersede prior surveys for charting in the common areas.

N. AIDS TO NAVIGATION

All floating and fixed aids to navigation in the survey area were located and comparisons between their charted, Light List (Vol. IV, 1985), and surveyed positions and descriptions were made. All aids were found to adequately serve the apparent purpose for which they were established.

In addition to the charted buoys, lighted buoy 243 does not appear on the chart. This buoy, a flashing green, four second interval light is located about a half-mile west of the Cape Vincent Breakwater and marks the south side of the Saint Lawrence Seaway Channel. The buoy is listed in the Great Lakes Light List, Volume IV, page 18, Light List number 1725, and is maintained by the Saint Lawrence Seaway Cooperation. A detached position (pos# 1677) was taken on this buoy during the course of the survey at lat. 44°07'46.00" N, long. 76°20'43.15" W. Prev
charted

The surveyed position of all other buoys within the project limits agreed well with the charted and Light List location and descriptions.

There are four submerged cables within the area of the survey. Three of these run from the New York shoreline to the ferry pier on Wolfe Island, Ontario. The other cable runs from the St. Lawrence Seaway Corp. to the Cape Vincent Breakwater. Cable crossing signs have been erected at their termination points on the New York shore and detached positions (pos# 1906, 1917, 1927, 1991) were taken to mark each. There are no cable crossing signs on Wolfe Island, Ontario.

A ferry runs from Cape Vincent to Wolfe Island. The Wolfe Island ferry pier is marked by a flashing red four second light set atop a 30 foot white circular tower (item 1720, page 18, volume IV of the Light List).

There were no bridge clearances within the limits of the survey.

The following charted landmarks were verified:

ITEM	Lat (N)	Long (W)	
1 Silo	44°09'21.3"	76°17'15.2"	no elev. obtained
2 Silos	44°09'00.154"	76°17'44.093"	no elev. obtained
1 Silo	44°08'59.201"	76°17'52.228"	no elev. obtained
1 Silo	44°08'22.6"	76°18'24.6"	no elev. obtained

ITEM	LAT (N)	LONG (W)
1 Cape Vincent Water Tank	44°07'15.856"	76°19'47.333" no elev. obtained
1 Silo	44°07'05.8"	76°24'26.7" no elev. obtained

O. STATISTICS

Number of positions.....	2600
Nautical miles of sounding line.....	165.7
Nautical miles of crossline.....	31.1
Nautical miles development.....	34.2
Nautical miles of chain drag.....	4.0
Total miles of hydrography.....	235.0
Number of diver investigation.....	4
Number of bottom samples.....	88
Number of detached positions.....	182
Number of barchecks.....	24
Number of TDC casts.....	8

P. MISCELLANEOUS

Aquatic weeds caused random echoes that obscured the true bottom in depths of 1 to 25 feet. These areas were surveyed by pole soundings and lead lines at regular hydro speeds. At the beginning of the survey several inserts were made that were later determined to be grass and should be taken into consideration by verifiers. Areas of this nature were shallow and represent no danger to navigation since they seem to follow a natural bottom configuration. - Concur

T-sheets originally provided to the field party were extremely distorted. The cumulative error over the length of the survey was over 200 meters at the scale of the survey. The hydrographer felt that this error was too large for the accurate transfer of shoreline to the field sheets. On June 25, 1985 a request for new T-sheets was made. New T-sheets were received by the field party on September 23, 1985. Distortion in these sheets was minimal and shoreline verification was performed. See also section 2.6 of the Evaluation Report.

There are two positions numbered 1931 in this survey.

No unusual magnetic variations were encountered during the survey. The sublocality for this survey was incorrectly entered in the sounding volumes. Instead of reading "Tibbetts Point to Cape Vincent" the sublocality should read "~~Tibbetts Point to Roxy Islands~~" in all cases.
Roxy Islands Tibbetts
Point

Q. RECOMMENDATIONS

See Sections H, K, L, N for specific recommendations.

R. AUTOMATED DATA PROCESSING

Programs used during field data acquisition and field processing of this survey are as followed:

PROGRAM	DESCRIPTION	VERSION DATE
RK201	Grid, Signal, and Lattice Plot	04/18/75
RK211	Range/Range Non-Real Time Plot	01/15/74
RK212	Visual Station Table Load	04/01/74
RK216	Range/Azimuth Non-Real Time Plot	02/05/76
RK300	Utility Computations	02/05/76
RK330	Reformat and Data Check	05/04/76
RK407	Geodetic Inverse/Direct Computation	09/25/78
AM500	Predicted Tide Generator	11/10/72
RK530	Layer Corrections for Velocity	09/25/78
AM602	Elinore-Line Oriented Editor	05/20/75

S. REFERENCE TO REPORTS

Control Report for OPR-V276, dated 14 March 1985. Coast Pilot Report (NOAA Form 77-6). St. Lawrence Seaway User Evaluation 19 November 1985.

Respectfully submitted,



Kenneth P. Peters
Lt. (jg), NOAA
OIC, HFP-3

SIGNAL TAPE LISTING

OPR-V276

HFP-10-3-85

H-10185

SHEET "A" ST. LAWRENCE RIVER, N.Y.

101	2	44	05	46586	076	26	26073	250	0000	0000000	Bear Pt. 1985 - Not used
102	4	44	06	02237	076	22	14204	250	0000	0000000	Tibbetts Pt. Lt. House 1985
103	7	44	07	28306	076	20	50864	250	0000	0000000	Mills 1985 USLS 18+2
104	3	44	08	07331	076	21	15499	250	0000	0000000	Ferry 1985
105	1	44	07	53205	076	20	07078	250	0000	0000000	Cape Vin. West Lt. 1985 Breakwater
106	1	44	07	55499	076	19	57256	250	0000	0000000	Cape Vin. Breakwater 1985
107	1	44	07	57124	076	19	49498	250	0000	0000000	Cape Vin. East Lt. 1985 Breakwater
108	4	44	08	31441	076	21	34150	250	0000	0000000	Hinckley Pt. 1985
109	3	44	09	40284	076	21	35692	250	0000	0000000	215 Sub Ref. Mark 1985 194φ
110	4	44	10	10235	076	18	42179	250	0000	0000000	210 Sub Ref. Mark 1985 194φ
111	2	44	10	16311	076	17	19971	250	0000	0000000	Carleton South 1985
112	4	44	10	52109	076	18	38584	250	0000	0000000	Carleton West 1985
113	2	44	11	18990	076	19	58310	250	0000	0000000	Bayfield Island 1985
114	7	44	11	23704	076	17	12396	250	0000	0000000	Carleton North 1985
115	2	44	12	08298	076	18	35610	250	0000	0000000	Irving Pt. 1985

* All stations established or recovered by N.O.S. 1985
AMC Hor. Con.



U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SURVEY

Date : 4 November 1985

Reply to Attn. of:

To : Commander, Ninth Coast Guard District, OAM
1240 East 9th Street
Cleveland, Ohio 44199

From : OIC Hydrographic Field Party Two/Three
439 West York Street
Norfolk, VA 23510

Subject: Dangers To Navigation

The following dangers to navigation were located during a basic hydrographic survey for the St. Lawrence Seaway, New York. They should be charted on charts 14767 and 14768.

1. Sunken wrecks: Two wrecks charted at latitude $44^{\circ}09.1'N$, longitude $76^{\circ}20.4'W$, are shown on chart 14768 as Position Approximate (PA). During the course of the survey both wrecks were located. The wrecks are the ruins of one vessel, the OATLAND, that broke apart. The OATLAND was a 262 foot long, 37 foot beam, grain ship sunk by the Canadians in 1931. The largest piece of the OATLAND lies north-south, is about 30 feet wide and 200 feet long. The north end is located at lat. $44^{\circ}09'01.86''N$, long. $76^{\circ}20'57.46''W$, and the southern end at lat. $44^{\circ}09'00.05''N$, long. $76^{\circ}20'57.46''N$. A least depth of 1.0 feet at low water datum (LWD) is located approximately in the center at lat. $44^{\circ}09'01.18''N$, long. $76^{\circ}20'56.46''W$. The second part of the wreck is lying $238^{\circ}T$, is 30 feet wide, about 200 feet long, and has a least depth of 1.2 feet at LWD located at its western most end at lat. $44^{\circ}09'05.33''N$, long. $76^{\circ}20'54.01''W$. The east end of the wreck is located at lat. $44^{\circ}09'04.82''N$, long. $76^{\circ}20'52.64''W$.
2. Wreck: A wreck charted as Position Doubtful (PD) and presented as a six foot danger curve on chart 14768 at lat. $44^{\circ}08'41.1''N$, long. $76^{\circ}22'01.7''W$, was located 200 meters south of the charted position. The wreck is the ruins of the HARVEY J. KENDALL, a 142 foot, 31 foot beam, coal fired cargo ship sunk in 1920. The KENDALL is lying north-south in 25 feet of water. The wreck is 30 feet wide and has a least depth of 7.5 feet at LWD on its bow at lat. $44^{\circ}08'32.55''N$, long. $76^{\circ}21'59.36''W$. The stern is located at lat. $44^{\circ}08'31.15''N$, long. $76^{\circ}21'59.38''W$.
3. Shoal: An uncharted five foot shoal in an area generally characterized by depths of 11 to 16 feet at lat. $44^{\circ}08'48.0''N$, long. $76^{\circ}18'47.0''W$ on chart 14767.
4. Shoal: An uncharted 33 foot depth at lat. $44^{\circ}06'54.6''N$, long. $76^{\circ}23'34.5''W$ in an area with charted depths of 36 to 40 feet on chart 14768.

5. Zero foot rocky shoal: Two uncharted zero foot shoals at lat. $44^{\circ}08'30.6''N$, long. $76^{\circ}08'25.8''W$ and lat. $44^{\circ}08'25.8''N$, long. $76^{\circ}21'00.0''W$, located in areas in which the charted depths range from four feet to 11 feet on chart 14768.
6. Shoal: An uncharted 50 foot shoal in an area with charted depths of 65 to 74 feet located at lat. $44^{\circ}07'00.7''N$, long. $76^{\circ}22'34.0''W$ on chart 14768.

cc: N/CG222
N/CG24
N/MOA2x1



U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SURVEY

Date : 2 December 1985

To : Commander, Ninth Coast Guard District, OAM
1240 East 9th Street
Cleveland, Ohio 44199

From : OIC Hydrographic Field Party Two/Three
439 West York Street
Norfolk, VA 23510

Subject: Dangers To Navigation

The location and description of a shoal was incorrectly transmitted to your office and subsequently incorrectly published in the NOTICE TO MARINERS. The source of the error was a letter dated 4 November 1985, in which six items were designated as dangers to navigation. The fifth item, listed in the letter as:

5. Zero foot rocky shoal: Two uncharted zero foot shoals at lat 44°08'30.6"N, long. 76°08'25.8"W and lat. 44°08'25.8"N, long. 76°21'00.0"W, located in areas in which the charted depths range from four feet to 11 feet on chart 14768.

should be revised to read:

Rocky shoal: Two uncharted two foot shoals at lat. 44°08'30.6"N, long. 76°21'00.0"W and lat. 44°08'25.8"N, long. 76°21'00.0"W, located in areas in which the charted depths range from eight feet to 12 feet on chart 14768.

CHART # 14768

ITEM # 3853

ITEM DESCRIPTION: Rock

SOURCE: Original source unknown

INVESTIGATION DATE: 6 August 1985 TIME: 141900 VESSEL: Launch 0517

OIC: Lt. (jg) Peters

REFERENCE:

Position No: 1890

Volume: 7 Page: 50

CORRECTORS APPLIED:

Velocity

TRA Correctors

Predicted or

Actual Tide Correctors

GEODETTIC POSITION:

Charted:
Observed:

Latitude
44°08'12.2"N
44°08'12.38"N
46

Longitude
76°21'13.80"W
76°21'14.02"W
09

POSITION DETERMINED BY: Range-Range, Del Norte
Visual check angle, sextant

METHOD OF ITEM INVESTIGATION: Visual verification of rocks with detached position 1890. The position is the offshore end of a rock jetty that extends perpendicular to the shore line and lies in water 0 to 6 feet in depth.

Rock jetty awash @ LWD.

CHARTING RECOMMENDATIONS: ~~Charted rock should remain charted.~~
Chart rock jetty as shown on the present survey

Compilation Use Only

CHART

APPLIED AS

CHART # 14768

ITEM # 3854

ITEM DESCRIPTION: Rock

SOURCE: Unknown original source - PSR

INVESTIGATION DATE: 6 Aug 1985 TIME: 1439 UTC VESSEL: Launch 0517

OIC: Lt. (jg) Peters

REFERENCE:

Position No: 1891

Volume: 7

Page: 50

CORRECTORS APPLIED:

<input type="checkbox"/>]	Velocity	<input type="checkbox"/>]	TRA Correctors
<input type="checkbox"/>]	Predicted or	<input checked="" type="checkbox"/>]	Actual Tide Correctors

GEODETTIC POSITION:

	Latitude	Longitude
Charted:	44°08'12.2" ^{31.1} W	76°21'13.80" ^{28.6} W
Observed:	44°08'30.48" ⁵⁶ N	76°21'27.82" ⁸⁷ W

POSITION DETERMINED BY: Range-Range: Del Norte, Check angle by sextant

METHOD OF ITEM INVESTIGATION: The item was located by visual search of the charted area. The item was found to be a 3 foot diameter rock ~~swash~~. This item is located in a small, shallow, and unnavigable bay littered with rocks, with average depths about 1 foot at present water level.

Rock bare's 3 feet @ LWD.

CHARTING RECOMMENDATIONS: ~~Remain charted but as area foul with rocks.~~ - *Chart as shown on present survey*

Compilation Use Only

CHART

APPLIED AS

CHART # 14768

ITEM # 3855

ITEM DESCRIPTION: Rock

SOURCE: Original source unknown - PSR

INVESTIGATION DATE: 6 Aug 1985 TIME: 1446 UTC VESSEL: Launch 0517

OIC: Lt. (jg) Peters

REFERENCE:

Position No: 1892

Volume: 7

Page: 50

CORRECTORS APPLIED:

[] Velocity
[] Predicted or

[] TRA Correctors
[x] Actual Tide Correctors

GEODETTIC POSITION:

	Latitude	Longitude
Charted:	44°08'32.0"N	76°21'30.0"W
Observed:	44°08'31.50"N 38	76°21'28.88"W 93

POSITION DETERMINED BY: Range-Range: Del Norte, Sextant check angle

METHOD OF ITEM INVESTIGATION: A visual search was conducted at the charted area. A four foot diameter rock slab was found ~~with a least depth of 1.0 feet. (Not reduced for low water lake datum).~~ This item and item 3854 were located in a small, shallow, and unnavigable bay with average depths of about one foot at the present water level. The bay is littered with rocks.

Rock bares 2 ft @ LWD

CHARTING RECOMMENDATIONS: ~~Remain charted but as area foul with rocks.~~ *Chart as shown on the present survey.*

Compilation Use Only

CHART

APPLIED AS

CHART # 14768

ITEM # 3863

ITEM DESCRIPTION: WK PD presented as 6 ft sdg with danger curve

SOURCE: Unknown

INVESTIGATION DATE: 21 Aug 1985 TIME: 1756 VESSEL: Launch 0517

OIC: Lt. (jg) Peters

REFERENCE:

Position No: 2561-2562 Volume: 10

Page: 10

CORRECTORS APPLIED:

<input type="checkbox"/>	Velocity	<input type="checkbox"/>	TRA Correctors
<input type="checkbox"/>	Predicted or	<input type="checkbox"/>	Actual Tide Correctors

GEODETTIC POSITION:

	Latitude	Longitude
Charted:	44°08'41.10"N	76°22'01.70"W
Observed:	44°08'32.55 ⁶⁵ "N	76°21'59.38 ⁴¹ "W to
	44°08'31.15 ²⁵ "N	76°21'59.38 ⁴⁴ "W

POSITION DETERMINED BY: Range-Range - Del Norte

METHOD OF ITEM INVESTIGATION: A wire drag and a fatho search in the charted area were conducted, but the wreck could not be located. From local knowledge it was discover that the wreck does exist, but that ice and current had moved it into 25 feet of water. Divers search the 25 ft curve in the area indicated by local knowledge and located the wreck of "HARVEY J. KENDALL". Built in 1892, 141'7" long, 30'9" beam sunk in 1920. Presently the wreck is in good condition, broken up at stern. Position 2561 marks the bow of the wreck, now lying N-S and has a least depth of 10⁷ ft. Position 2562 marks the stern of the KENDALL and a 10 ft least depth was determined by pole sounding.

CHARTING RECOMMENDATIONS: ~~Revise to new position indicated by detached position 2561-2562.~~ *Cancel Delete charted wrecks chart as shown on present survey.*

Compilation Use Only

CHART

APPLIED AS

CHART # 14767

ITEM # 3878

ITEM DESCRIPTION: Rock awash

SOURCE: LS-1716-US Lake Survey

INVESTIGATION DATE: 6 August 1985

TIME:

VESSEL: Launch 051

OIC: Lt. (jg) Peters

REFERENCE:

Position No:

Volume:

Page:

CORRECTORS APPLIED:

Velocity

TRA Correctors

Predicted or

Actual Tide Correctors

GEODETTIC POSITION:

Charted:

Latitude

Longitude

Observed:

44°07'49.00"N

76°20'15.90"N

POSITION DETERMINED BY:

METHOD OF ITEM INVESTIGATION: A visual search for the item was conducted in water with depths of 0 to 5 feet with clear visibility and nothing was found. An inquiry with property owners in the vicinity revealed that the item does not exist. Because investigation in shoal water with good visibility and local knowledge could not locate the item, its existence is doubtful.

CHARTING RECOMMENDATIONS: Delete "Rock Awash" - *Concur*

Compilation Use Only

CHART

APPLIED AS

CHART # 14767

ITEM # 3879

ITEM DESCRIPTION: Rock

SOURCE: PSR: LS-1716-USLS

INVESTIGATION DATE: 6 August 1985 TIME: 1842UTC VESSEL: Launch 0517

OIC: Lt. (jg) Peters

REFERENCE:

Position No: 1924

Volume: 7 Page: 58

CORRECTORS APPLIED:

Velocity

TRA Correctors

Predicted or

Actual Tide Correctors

GEODETTIC POSITION:

Charted:
Observed:

Latitude	Longitude
44°07'49.3"N	76°20'14.8"
44°07'48.62N	76°20'17.12"

POSITION DETERMINED BY: Range-Range: Del Norte. Sextant Check angle ⁹⁷ ^{15.06}

METHOD OF ITEM INVESTIGATION: Visual Search item located at position recorded in sounding volume. A least depth of 2.5⁹ feet was determined by pole sounding. At the time of the search the water visability was five feet.

Rock awash @ LWD

CHARTING RECOMMENDATIONS: ~~remain charted~~ - Chart rock in position found by present survey.

Compilation Use Only

CHART

APPLIED AS

CHART # 14767

ITEM # 3880

ITEM DESCRIPTION: Rock

SOURCE: Original Source unknown

INVESTIGATION DATE: 6 August 1985 TIME: 1758 VESSEL: Launch 0517

OIC: Lt. (jg) Peters

REFERENCE:

Position No: 1912 Volume: 7 Page: 55

CORRECTORS APPLIED:

Velocity

TRA Correctors

Predicted or

Actual Tide Correctors

GEODETTIC POSITION:

Charted:
Observed:

Latitude	Longitude
44°07'40.6"N	76°20'27.1"W
44°07'39.85"N	76°20'29.81"W
11	12

POSITION DETERMINED BY: Range-Range, Del Norte; sextant check angles

METHOD OF ITEM INVESTIGATION: A visual search was conducted. A detached position was taken at the center of a 3 foot diameter rock, ~~least depth 1.0 feet by pole sounding~~. The water visibility was 7 feet.

Rock bares 2 ft @ LWD.

CHARTING RECOMMENDATIONS: *Delete charted rock. Remain charted. Chart the rock in the location found by the present survey.*

SM

Compilation Use Only

CHART

APPLIED AS

CHART # 14767

ITEM # 3881

ITEM DESCRIPTION: Row of visible piles extending SW-NE parallel to water line.

SOURCE: Original source unknown

INVESTIGATION DATE: 7 Aug 1985 TIME: 1409- VESSEL: Launch 0517
141500

OIC: Lt. (jg) Peters

REFERENCE:

Position No: 1947-1949 Volume: 7 Page: 65

CORRECTORS APPLIED:

[] Velocity [] TRA Correctors
[] Predicted or [X] Actual Tide Correctors

GEODETIC POSITION:

	Latitude	Longitude
Charted:	44°07'53.3"N	76°19'41.6"W to
	44°07'55.1"N	76°19'35.6"W
Observed:	44°07'53.1 ²⁸ N	76°19'40.1 ¹² W to
	44°07'53.3 ⁴¹ N	76°19'40.1 ¹¹ W

POSITION DETERMINED BY: Range-Range, Del Norte; sextant check angles

METHOD OF ITEM INVESTIGATION: The item was located by a visual search. The item was found to a row of piles, 0.5 ft in diameter, set on or above the level of present shoreline and rise about 2 ft above ground level. Position 1947 marks the east end. The area between is foul with rocks and a slab of concrete baring 2 ft was lying offshore of the eastern most pile which is above the shoreline. Detached position 1948 marked the most offshore boulder fouling the area. The foul area is approximately 25 foot in diameter with 3 ft diameter boulders baring 3 ft. The value of the charting the piles is questionable as they do not present a dominant feature for use in the navigation and because the seaward approaches are foul with rocks and the piles are located above the water line they do not pose a hazard to navigation.

Piles bare 5A @ LWD

CHARTING RECOMMENDATIONS: ~~The Hydrographer recommends that the area define by position 1947-1949 be charted as foul with rocks.~~ *Chart a row of piles as shown on the present survey.*

Compilation Use Only

CHART

APPLIED AS

CHART # 14767

ITEM # 3882

ITEM DESCRIPTION: Rock awash

SOURCE: Original source unknown

INVESTIGATION DATE: 6 Aug 1985 TIME: VESSEL: Launch 0517

OIC: Lt. (jg) Peters

REFERENCE:

Position No:

Volume:

Page:

CORRECTORS APPLIED:

[] Velocity
[] Predicted or

[] TRA Correctors
[] Actual Tide Correctors

GEODETTIC POSITION:

Latitude

Longitude

Charted:
Observed:

44°07'58.80"N

76°19'24.10"W

POSITION DETERMINED BY:

METHOD OF ITEM INVESTIGATION: A visual search for the item was conducted. The item is located in a small bay created by the ruins of the coal pier (PSR # 3886, Pos# 1952-1953) and is inaccessible except by land. A pile of rocks were observed in the vicinity of the item. These rocks were, however, an extension of the shoreline. A detached position was not taken because the area is foul with rocks and inaccessible to any navigation. The depth of the water was 1-3 ft and water visibility was clear. A party member walking in the area was unable to locate the item. Thirty minutes were spend searching for this item.

Delete charted rock.

CHARTING RECOMMENDATIONS: Should be charted as area foul with rocks. - *Concur*

Compilation Use Only

CHART

APPLIED AS

CHART # 14767

ITEM # 3883

ITEM DESCRIPTION: Non-dangerous submerged wrecks

SOURCE: LS-1716/36

INVESTIGATION DATE: 7 August 1985 TIME: 145300 VESSEL: Launch 0517

OIC: Lt. (jg) Peters

REFERENCE:

Position No: 1957

Volume: 7 Page: 67

CORRECTORS APPLIED:

Velocity

TRA Correctors

Predicted or

Actual Tide Correctors

GEODETTIC POSITION:

	Latitude	Longitude
Charted:	44°08'00.80"N	76°19'15.90"W
Observed:	44°08'00.61"N 70	76°19'16.10"W 18

POSITION DETERMINED BY: Range-Range: Del Norte
Visual check angles; sextant

METHOD OF ITEM INVESTIGATION: The item was located by a visual search of the area in water 6 to 7 feet deep and visibility to the bottom. The item was found to be a submerged rock & wood crib, 50' long, 6' wide, and a least depth of 3 ft by pole sounding. A detached position was taken at the center of the crib which was lying in a NW direction.

Crib is awash @ LWD

CHARTING RECOMMENDATIONS: Revise "Non dangerous submerged wreck" to
"submerged crib" - *concur*

Compilation Use Only

CHART

APPLIED AS

CHART # 14767

ITEM # 3884 (3885)

ITEM DESCRIPTION: Pier in ruins

SOURCE: LS1716/36

INVESTIGATION DATE: 7 August 1985 TIME:143500 VESSEL: Launch 0517

OIC:Lt. (jg) Peters

REFERENCE:

Position No: 1955

Volume: 7

Page: 67

CORRECTORS APPLIED:

Velocity

TRA Correctors

Predicted or

Actual Tide Correctors

GEODETIC POSITION:

Charted:

Latitude

Longitude

Observed:

44°08'01.50"N

76°19'17.60"W

44°07'59.80"N

76°19'19.36"W

89

35

POSITION DETERMINED BY: Range-Range; Del Norte

METHOD OF ITEM INVESTIGATION: The item was located by a visual search. Detached position 1955 was taken at the western most offshore end of pier ruin. The pier ruins are comprised of large, 2'x5'x6' concrete blocks that bare 2 ft and extend to east to pos# 1956 (PSR# 3885). It is apparent from visual search of the area that PSR# 3884 & 3885 are the ruins of the same pier. Several wood poles or piles baring 6 ft lie along the south face of the pier ruins. The water visibility was 6 ft and the average depths of the area were 3 ft.

Blocks bare 5 ft @ LWD

CHARTING RECOMMENDATIONS: ~~Remain charted as described.~~

Chart pier ruins as shown on the present survey

Compilation Use Only

CHART

APPLIED AS

CHART # 14767

ITEM # 3885 (3884)

ITEM DESCRIPTION: Pier in ruins

SOURCE: LS 1716/36

INVESTIGATION DATE: 7 Aug 1985 TIME: 1440 VESSEL: Launch 0517

OIC: Lt. (jg) Peters

REFERENCE:

Position No: 1956

Volume: 7

Page: 67

CORRECTORS APPLIED:

[] Velocity
[] Predicted or

[] TRA Correctors
[X] Actual Tide Correctors

GEODETTIC POSITION:

	Latitude	Longitude
Charted:	44°08'01.20"N	76°19'16.90"W
Observed:	44°08'01.08"N	76°19'16.87"W

POSITION DETERMINED BY: Range-Range: Del Norte, Visual check
angle: sextant

METHOD OF ITEM INVESTIGATION: The item was located by visual search and detached position 1956 was taken at the north-eastern tip of the pier ruins. The pier ruins are comprised of 2'x5'x6' concrete blocks and debris. The least depth of the eastern most end of the ruins was ~~one foot~~ determined by pole soundings. The south side of the pier ruins had pile baring 6 ft. The water visibility was clear for the depth of the water in that area. Visual inspection of the ruins indicated that PSR# 3884, Pos# 1955, is the inshore end of the same structure.

Bares 2 ft @ LWD

CHARTING RECOMMENDATIONS: ~~Remain charted~~ *Chart as shown on the present survey.*

Compilation Use Only

CHART

APPLIED AS

CHART # 14767

ITEM # 3886

ITEM DESCRIPTION: Pier (ruins)

SOURCE: PSR-LS1716/36

INVESTIGATION DATE: 7 August 1985

1424-
TIME 1430

VESSEL: Launch 0517

OIC: Lt. (jg) Peters

REFERENCE:

Position No: 1952-1953

Volume: 7

Page: 66

CORRECTORS APPLIED:

Velocity

TRA Correctors

Predicted or

Actual Tide Correctors

GEODETTIC POSITION:

Charted:

Latitude

Longitude

Observed:

44°07'58.9"N

76°19'24.6"W

44°07'58.60"N

76°19'24.7"W

69

16

POSITION DETERMINED BY: Range-Range: Del Norte

Visual check angle: sextant

METHOD OF ITEM INVESTIGATION: A visual verification of the item was conducted. The item is the ruins of a coal dock composed primarily of concrete. Two position were taken on the ruins, at the offshore NE end and at the offshore SW end. The ruins bare ⁶3 feet. Position 1952 marks the SW end of the pier ruins, this area is characterized by a small bay, foul with rock, formed by the pier ruins (see sounding volume for diagram)

CHARTING RECOMMENDATIONS: ~~Remain charted.~~ Chart as shown on the present survey

Compilation Use Only

CHART

APPLIED AS

CHART # 14767

ITEM # 3887

ITEM DESCRIPTION: Pier

SOURCE: PSR-LS1716/36, Unknown source

INVESTIGATION DATE: 6 August 1985 TIME: 1746 VESSEL: Launch 0517

OIC: Lt. (jg) Peters

REFERENCE:

Position No: 1911 Volume: 7 Page: 55

CORRECTORS APPLIED:

Velocity

TRA Correctors

Predicted or

Actual Tide Correctors

GEODETTIC POSITION:

Charted:

Latitude

Longitude

Observed:

44°07'41.10"N

76°20'26.20"

44°07'40.10"N

76°20'27.91"

16

28.02

POSITION DETERMINED BY: Range-Range: Del Norte, Check angle: sextant

METHOD OF ITEM INVESTIGATION: Visual verificaiton of dog legged shaped wooden pier, 10 ft wide, 40 ft long (total) and bares 2 ft. The position was taken at the offshore (North) center of the pier. 5

Bares 5ft @ LWD

CHARTING RECOMMENDATIONS: ~~Remain charted.~~ Revise to pier in location on present survey.

Compilation Use Only

CHART

APPLIED AS

CHART # 14767

ITEM # 3888

ITEM DESCRIPTION: "L" shaped pier in ruins

SOURCE: LS 1716/36

INVESTIGATION DATE: 6 Aug 1985 TIME: 190300 VESSEL: Launch 0517

OIC: Lt. (jg) Peters

REFERENCE:

Position No: 1928

Volume: 7

Page: 59

CORRECTORS APPLIED:

<input type="checkbox"/>]	Velocity	<input type="checkbox"/>]	TRA Correctors
<input type="checkbox"/>]	Predicted or	<input checked="" type="checkbox"/>]	Actual Tide Correctors

GEODETTIC POSITION:

	Latitude	Longitude
Charted:	44°07'48.90"N	76°20'11.10"W
Observed:	44°07'47. 79 ⁷⁹ "N	76°20'08. 97 ⁰⁸ "W

POSITION DETERMINED BY: Range-Range: Del Norte, Sextant check angle

METHOD OF ITEM INVESTIGATION: A visual search of the area was conducted in one to five feet of water with water visibility to five feet. A detached position was taken at the offshore end of the pier ruins which is now even with the shoreline. The pier was composed of rock, concrete, and steel: the remains of which are littering the shoreline. The ruins were probably removed to facilitate ferry traffic at the ferry terminal. (Pos# 1929, PSR 3889). The ruins at the shoreline does not pose a hazard to navigation.

CHARTING RECOMMENDATIONS: ~~The hydrographer recommends that PSR# 3888 "pier ruins" be removed from the charts. Chart as shown on the present survey - as chart scale allows.~~

Compilation Use Only

CHART

APPLIED AS

CHART # 14767

ITEM # 3889

ITEM DESCRIPTION: Pier in ruins

SOURCE: Unknown

INVESTIGATION DATE: 6 August 1985 TIME: 190400 VESSEL: Launch 0517

OIC: Lt. (jg) Peters

REFERENCE:

Position No: 1929 Volume: 57 Page: 59

CORRECTORS APPLIED:

Velocity

TRA Correctors

Predicted or

Actual Tide Correctors

GEODETTIC POSITION:

Charted:
Observed:

Latitude	Longitude
44°07'48.00"N	76°20'08.9"W
44°07'47.79"W	76°20'08.47"W
85	58

POSITION DETERMINED BY: Range-Range; Del Norte
Visual check angle: sextant.

METHOD OF ITEM INVESTIGATION: A visual verification of the item was conducted. The pier ruins have been rebuilt and is now used as a ferry terminal. The pier is 30 ft wide, 60' long, and bares 5 feet.

CHARTING RECOMMENDATIONS: ~~The hydrographer recommends that the item be revised from "pier ruins" to pier.~~ Remove pier ruins and chart as shown on the present survey.

Compilation Use Only

CHART

APPLIED AS

CHART # 14767

ITEM #3890

ITEM DESCRIPTION: Rock awash

SOURCE:LSL716/36

INVESTIGATION DATE: 15 August 1985 TIME:1837 VESSEL:Launch 0517

OIC:Lt. (jg) Peters

REFERENCE:

Position No: 2444 Volume: 9 Page: 40

CORRECTORS APPLIED:

Velocity

TRA Correctors

Predicted or

Actual Tide Correctors

GEODETTIC POSITION:

	Latitude	Longitude
Charted:	44°09'26.30"N	76°18'37.60"W
Observed:	44°09'26.66"N	76°18'37.40"W
	.27.φ2	48

POSITION DETERMINED BY: Range-Range: Del Norte

METHOD OF ITEM INVESTIGATION: The existence of this item, a rock awash, was verified by a visual search. The item is located in an area generally characterized by shoal depths in the vicinity of Roxy Island. ~~At the present water level a least depth of two-feet was determined by a pole sounding.~~ The rock has a diameter of two-feet.

Rock bares 1ft @ LWD.

OK

CHARTING RECOMMENDATIONS: ~~Remain Charted~~ *Chart as shown on the present survey*

CHART

APPLIED AS

Compilation Use Only

CHART #14768

ITEM # 3895

ITEM DESCRIPTION: Rock

SOURCE: LS568/1874--COE

INVESTIGATION DATE: 9 July 1985 TIME: 1528 VESSEL: Launch 0517

OIC: Lt. (jg) Peters

REFERENCE:

Position No: 666

Volume: 3 Page: 17

CORRECTORS APPLIED:

Velocity

TRA Correctors

Predicted or

Actual Tide Correctors

GEODETTIC POSITION:

Charted:
Observed:

Latitude	Longitude
44°07'01.00"N	76°24'20.70"W
44°07'01. ²⁹ 29"N	76°24'21. ⁹³ 93"W
	²¹ 24.98

POSITION DETERMINED BY: Range-Azimuth: Del Norte-T2 Theodolite

METHOD OF ITEM INVESTIGATION: The item was verified by a visual search and it was determined that the item was part of a rock outcrop in an area foul with boulders. A position was taken of the offshore end off the outcrop that

⁶

CHARTING RECOMMENDATIONS: ~~Remain charted~~ *Chart as shown on the present survey.* ✓

OK

Compilation Use Only

CHART

APPLIED AS

CHART # 14768

ITEM # 3896

ITEM DESCRIPTION: "L" Shaped Pier

SOURCE: PSR LS 1716/36

INVESTIGATION DATE: 6 Aug 1985 TIME: 1719 VESSEL: Launch 0517

OIC: Lt. (jg) Peters

REFERENCE:

Position No: 1904

Volume: 7

Page: 53

CORRECTORS APPLIED:

<input type="checkbox"/>	Velocity	<input type="checkbox"/>	TRA Correctors
<input type="checkbox"/>	Predicted or	<input checked="" type="checkbox"/>	Actual Tide Correctors

GEODETTIC POSITION:

	Latitude	Longitude
Charted:	44°07'27.90"N	76°20'51.90"W
Observed:	44°07'28. 30 ⁴⁶ "N	76°20'50. 74 ⁸⁵ "W

POSITION DETERMINED BY: Range-Range: Del Norte
Visual check angle: Sextant

METHOD OF ITEM INVESTIGATION: Visual verification of "L" shaped boulder jetty. A detached position was taken at the center offshore end of the jetty. The jetty was recently rebuilt and now bares ~~10~~¹⁴ ft. Several large submerged boulders are laying at the offshore end of the pier. Horizontal control station "MILLS" is set at the end of the pier.

A second position was taken (DP 1905) at the center of a 60 ft long, 10 ft wide, pier baring 2 ft. The jetty and the pier form a small protected harbor.

CHARTING RECOMMENDATIONS: ~~Retain as~~ ^{Retain as} ~~Remain charted.~~ Chart as shown on the present survey ✓

Compilation Use Only

CHART

APPLIED AS

CHART # 14767

ITEM # 3897

ITEM DESCRIPTION: Pier

SOURCE: LS 1716/36

INVESTIGATION DATE: 6 August 1985 TIME: 1822 VESSEL: Launch 0517

OIC: Lt. (jg) Peters

REFERENCE:

Position No: 1918 Volume: 7 Page: 57

CORRECTORS APPLIED:

Velocity

TRA Correctors

Predicted or

Actual Tide Correctors

GEODETTIC POSITION:

Charted:

Latitude

Longitude

Observed:

44°07'47.50"N

76°20'22.10"W

44°07'46.53"N

76°20'22.05"W

64

15

POSITION DETERMINED BY: Range-Range: Del Norte
Visual Check: sextant

METHOD OF ITEM INVESTIGATION: The item was located and verified by visual search. A detached position was taken at the offshore end of pier ruins with rocks. The item was 30 feet wide, 60 feet long, with a least depth of 1.5 feet (pole).

Ruins bare 1ft @ LWD

CHARTING RECOMMENDATIONS: ~~Remain charted~~ *Chart as shown on the present survey.*

Compilation Use Only

CHART

APPLIED AS

CHART # 14768

ITEM # 3899, 3898
3909, 3908

ITEM DESCRIPTION: Rocks and Rocks awash

SOURCE: LS 1716/36

INVESTIGATION DATE: 9 Aug 1985 TIME: 1812-2085 VESSEL: Launch 0517

OIC: Lt. (jg) Peters

REFERENCE:

Position No: 1904

Volume: 7

Page: 53

CORRECTORS APPLIED:

[] Velocity
[] Predicted or

[] TRA Correctors
[X] Actual Tide Correctors

GEODETTIC POSITION:

Latitude

Longitude

Charted:

Observed:

44°09'26.13"N

76°21'50.49"W

POSITION DETERMINED BY: Range-Range: Del Norte
Visual Check angle: Sextant

METHOD OF ITEM INVESTIGATION: A visual search of the area was conducted and the entire area was found to be foul with numerous rocks and boulders. Position 2076 marks the western extreme of the foul area and position 2082 the eastern and offshore end of the foul area. It is difficult to understand the reasoning behind requiring the investigation of four items in a 300 meter square foul with rocks and boulders. It was impossible at the time of the investigation to determine which of the hundreds of rocks were signaled out for item investigation.

*Foul area - W end in Lat 44°09'26.18"N, Long. 76°21'50.32" (rk bares 3ft @ LWD)
E end in Lat 44°09'29.62"N, Long. 76°21'42.69"W (rk bares 1ft @ LWD)*

CHARTING RECOMMENDATIONS: The area defined by the limits described by position 2076-2082 should be charted as foul with rocks. - *Concur - chart as shown on the present survey* ✓

Compilation Use Only

CHART

APPLIED AS

CHART # 14768

ITEM # 3906

ITEM DESCRIPTION: Rock awash - obstruction

SOURCE: LS 1716/36

INVESTIGATION DATE: 19 Aug 1985 TIME: 1455

VESSEL: Launch 0517

OIC: Lt. (jg) Peters

REFERENCE:

Position No: 2462

Volume: 9

Page: 46

CORRECTORS APPLIED:

[] Velocity
[] Predicted or

[] TRA Correctors
[X] Actual Tide Correctors

GEODETIC POSITION:

Latitude

Longitude

Charted: 44°09'14.00"N

76°18'57.50"W

Observed: 44°09'~~12.98~~"N

76°18'~~56.48~~"W

13.18

45

POSITION DETERMINED BY: Range-Range: Del Norte

METHOD OF ITEM INVESTIGATION: A visual search for this item was conducted at chart datum. A four foot diameter boulder in an area characterized by numerous rocks flush with the bottom was marked by position 2462. A least depth of ~~5.2~~³ feet was determined by pole sounding at the present water level.

least depth of 3ft @ LWD

CHARTING RECOMMENDATIONS: ~~Remain charted.~~ *Chart as shown on the present survey.*

Compilation Use Only

CHART

APPLIED AS

CHART # 14758

ITEM # 3907

ITEM DESCRIPTION: Rock Awash

SOURCE: LS 1716/36

INVESTIGATION DATE: 16 Aug 1985 TIME: 1435-1445 VESSEL: Launch 0517

OIC: Lt. (jg) Peters

REFERENCE:

Position No: 2460-2461 Volume: 9 Page: 46

CORRECTORS APPLIED:

[] Velocity [] TRA Correctors
[] Predicted or [X] Actual Tide Correctors

GEODETTIC POSITION:

	Latitude	Longitude
Charted:	44°09'15.20"N	76°18'46.10"W
Observed:	44°09'18.1 ³⁹ 17 "N	76°18'48.5 ⁵⁵ 52 "W
	and 44°09'19.0 ²⁴ 02 "N	76°18'48.8 ⁸⁹ 85 "W

POSITION DETERMINED BY: Range-Range: Del Norte

METHOD OF ITEM INVESTIGATION: A visual search at the charted position was conducted. The item is located in the vicinity of Roxy Islands in the area generally characterized by shoal depths and a rocky bottom. Detached positions were taken on the most prominent boulders. Position number 2460 marks a four-foot diameter boulder having a least depth of ~~3.5~~¹ foot (pole) at the present water level. Position number 2461 marks a three foot diameter boulder with a least depth of ~~2.2~~ feet awash (pole) at the present water level. It couldn't be determined from the information provided from the AWOIS which of these rocks were the designated PSR item.

CHARTING RECOMMENDATIONS: The general area should be charted as shoal and rocky, and the two rocks addressed above charted as shown on the present survey

Compilation Use Only

CHART APPLIED AS

CHART # 14768

ITEM # 3926,3927,
386a

ITEM DESCRIPTION: Wrecks

SOURCE: Unknown

INVESTIGATION DATE: 8 Aug 1985 TIME: 1845-1907 VESSEL: Launch 0517
9 Aug 1985 1435-1510

OIC: Lt. (jg) Peters

REFERENCE:

Position No: 2008-2010 Volume: 10 Page: 9,10,19

CORRECTORS APPLIED:

[] Velocity [] TRA Correctors
[] Predicted or [x] Actual Tide Correctors

GEODETTIC POSITION:

	Latitude	Longitude
Charted:	44°09'01.18"N	76°21'56.46"W
Observed:		

POSITION DETERMINED BY: Range-Range: Del Norte

METHOD OF ITEM INVESTIGATION: A chain drag investigation was conducted in the charted area of the three wrecks. The search located two wooden wrecks. From local knowledge it was discovered that the ruins were the vessel. "OATLAND" is a 262 ft long, 37 ft beam grain ship sunk by the Canadians in 1931 which broke apart. Both wrecks are visible from the surface and the least depths were determined by snorkel search, 10'-15' of water. Detached position 2008 marks the center and least depth (1.5 ft pole), DP 2009 marks the southern most end, DP 2010 marks the northern most end of one piece of the wreck which is 30 ft wide and 200 ft long. The ground part the "OATLAND", lies 250° magnetic, is marked on the west end by DP 2041 (L/D ~~4.0~~^{1.5}) and on the east end by DP 2040. The third wreck could not be located by chain drag or fatho search. While we could not disprove it existence the Hydrographer believes that the search was thorough and that the wreck should be revised to position approximate.

Wk-M/N "OATLAND" - broken into two pieces, largest in Lat 44°09'01.16"N, Long 76°21'55.56"W to 44°09'01.97"N, Long 76°21'57.47"W. Small in Lat 44°09'05.47"N, Long 76°21'53.99"W - covers 1 ft @ LWD

CHARTING RECOMMENDATIONS: The two parts of the "OATLAND" located should be charted as indicated by Pos. 2008-2010 and 2040. The third wreck should be revised to PA (position approximate). -concur

Retain AWOIS item 386z as charted.

Compilation Use Only

CHART

APPLIED AS

CHART # 14768

ITEM # 3929

ITEM DESCRIPTION: Rock

SOURCE: LS1716/36

INVESTIGATION DATE: 9 July 1985

TIME: 164000 VESSEL: Launch 0517

OIC: Lt. (jg) Peters

REFERENCE:

Position No: 672

Volume: 3 Page: 18

CORRECTORS APPLIED:

Velocity

TRA Correctors

Predicted or

Actual Tide Correctors

GEODETTIC POSITION:

Charted:

Latitude

Longitude

Observed:

44° 97' 38.00"N

76° 22' 58.20"W

44° 07' 37.45"N

76° 23' 00.00"W

32

2 59.94

POSITION DETERMINED BY: Range-Azimuth: Del Norte-T2 theadolite

METHOD OF ITEM INVESTIGATION: A visual search for the item was conducted in 0-6 ft of water with good visibility and it was determine that the item is part of a rock outcrop in an area foul with rocks. A detached position was taken at the offshore end of the outcrop and ~~least depth of 1.5 feet was determined by pole soundings.~~ *at bays 1ft @ LWD*

CHARTING RECOMMENDATIONS: ~~Rock should be revised to rock outcrop, area foul with rocks~~ *- Chart as shown on the present survey.*

Compilation Use Only

CHART

APPLIED AS

ART # 14768

ITEM # 3931

ITEM DESCRIPTION: Subm crib at end of PWI

SOURCE: Unknown original source and PSR

INVESTIGATION DATE: 5 Aug 1985 TIME: 1505 UTC VESSEL: Launch 0517
to 1830 UTC

OIC: Lt. (jg) Peters

REFERENCE:

Position No: 1886-1887 Volume: 7 Page: 47

CORRECTORS APPLIED:

[] Velocity [] TRA Correctors
[] Predicted or [] Actual Tide Correctors

GEODETTIC POSITION:

	Latitude	Longitude
Charted:	44°06'02.5"N	76°22'18.3"W
Observed:	N/A	N/A

POSITION DETERMINED BY: HP-3808-A

METHOD OF ITEM INVESTIGATION: The number of rocks and boulders in the vicinity made a chain drag or fatho search impracticable, therefore a diver investigation was conducted. Divers conducted two 150 ft circle searches, the centers of which are indicated by the detached positions noted above. Anchoring one end of a 150 ft line, one diver swam the circumference. While the other swam up and down the line investigating any snags. The area was found to be littered with rocks and boulders, however, the crib was not located. Most of the area surrounding the charted position is within the 6 ft curve and as the reported depth over the crib is 6 ft, the existence of the crib is doubtful.

Investigations conducted in wrong areas

CHARTING RECOMMENDATIONS: *Retain as charted -*
~~Submerged crib - existence doubtful~~

Compilation Use Only

CHART

APPLIED AS

CHART # 14768

ITEM # 3932

ITEM DESCRIPTION: Pier

SOURCE: LS 1716/36

INVESTIGATION DATE: 6 Aug 1985 TIME:

VESSEL: Launch 0517

OIC: Lt. (jg) Peters

REFERENCE:

Position No: N/A

Volume: N/A

Page: N/A

CORRECTORS APPLIED:

<input type="checkbox"/>]	Velocity	<input type="checkbox"/>]	TRA Correctors
<input type="checkbox"/>]	Predicted or	<input type="checkbox"/>]	Actual Tide Correctors

GEODETTIC POSITION:

	Latitude	Longitude
Charted:	44°08'07.6"N	76°21'22.8"W
Observed:	N/A	N/A

POSITION DETERMINED BY: Range-Range: Del Norte

METHOD OF ITEM INVESTIGATION: A visual search for the item revealed that the pier no longer exists beyond the water line. Concrete ruins were found 15 feet from the present shoreline, but visual inspection of the area could not locate any part of the ruins in the adjacent waters. From interviews with local residents it was discovered that the pier has not existed for over 30 years and that any remains have been removed by natural forces, such as ice. The charted pier ruins were the original ferry pier. The area of the charted ruins had depths less than 4 feet with clear visibility at the time of the investigation. As the ruins on shore do not create a prominent feature or a hazard to navigation there is no value in charting these ruins. A position was not taken because the ruins were inaccessible.

CHARTING RECOMMENDATIONS: The Hydrographer recommends that the charted "pier" be removed from the chart. - *Concur*

Compilation Use Only

CHART

APPLIED AS

CHART # 14767

ITEM # 3933

ITEM DESCRIPTION: Pier - Obstruction

SOURCE: Unknown

INVESTIGATION DATE: 16 Aug 1985 TIME: 1401

VESSEL: Launch 0517

OIC: Lt. (jg) Peters

REFERENCE:

Position No: 2453

Volume: 9

Page: 44

CORRECTORS APPLIED:

[] Velocity
[] Predicted or

[] TRA Correctors
[X] Actual Tide Correctors

GEODETTIC POSITION:

	Latitude	Longitude
Charted:	44°09'22.30"N	76°17'27.80"W
Observed:	44°09'22. 41 ⁵⁴ "N	76°17'28. 20 ²⁸ "W

POSITION DETERMINED BY: Range-Range: Del Norte

METHOD OF ITEM INVESTIGATION: A visual search at chart datum was conducted. The item is a 30-foot long rock outcrop, ~~awash~~. A detached position (pos# 2453) was taken at the offshore end of the outcrop. *Bares 3ft @ LWD.*

Delete charted rock.
CHARTING RECOMMENDATIONS: Chart as ~~Rock outcrop~~. *Shown on the present survey*

Compilation Use Only

CHART

APPLIED AS

CHART # 14767

ITEM # 3934

ITEM DESCRIPTION: Pier - Obstruction

SOURCE: Unknown

INVESTIGATION DATE: 16 August 1985 TIME: 1400 VESSEL: Launch 517

OIC: Lt. (jg) Kenneth P. Peters

REFERENCE:

Position No: 2452

Volume: 9 Page: 44

CORRECTORS APPLIED:

Velocity

TRA Correctors

Predicted or

Actual Tide Correctors

GEODETTIC POSITION:

Charted:

Observed:

Latitude	Longitude
44° 09' 21.60"N	76° 17' 28.50"W
44° 09' 21.41"N	76° 17' 28.30"W
53	37

POSITION DETERMINED BY: Range-Range: Del Norte

METHOD OF ITEM INVESTIGATION: A visual search for this item, at chart datum, was conducted. Detached position number 2452 marks the offshore end of rocks and boulders and a least depth of ~~three feet~~, determined by pole soundings, was taken. *Awash @ LWD*

CHARTING RECOMMENDATIONS: *Delete pier chart as shown on present*
"Pier" should be revised to "area foul".
correct survey.

Compilation Use Only

CHART

APPLIED AS

CHART # 14767

ITEM # 3935

ITEM DESCRIPTION: Pier - Obstruction

SOURCE: Unknown

INVESTIGATION DATE: 16 August 1985 TIME: 1356 VESSEL: Launch 0517

OIC: Lt. (jg) Peters

REFERENCE:

Position No: 2451

Volume: 9

Page: 44

CORRECTORS APPLIED:

Velocity

TRA Correctors

Predicted or

Actual Tide Correctors

GEODETTIC POSITION:

Charted:

Latitude

Longitude

Observed:

44°09'19.30"N

76°17'28.10"W

44°09'19.72"N

76°17'28.43"W

85

54

POSITION DETERMINED BY: Range-Range: Del Norte

METHOD OF ITEM INVESTIGATION: A visual search at chart datum was conducted. The area was found to foul with boulders ~~awash~~. A detached position was taken at the offshore end of a 30 square-foot foul area. Visual inspection of the foul area have no indication that the foul area was man made.

Blds bare 3 ft @ LWD

Delete pier.
CHARTING RECOMMENDATIONS: ~~The vicinity of this item, describe by pos# 2451 should be charted as foul with boulders. Chart as shown on the present survey.~~

Compilation Use Only

CHART

APPLIED AS

CHART # 14767

ITEM # 3936

ITEM DESCRIPTION: Pier - Obstruction

SOURCE: Unknown

INVESTIGATION DATE: 16 August 1985 TIME: 1340 VESSEL: Launch 0517

OIC: Lt. (jg) Peters

REFERENCE:

Position No: 2449

Volume: 9

Page: 43

CORRECTORS APPLIED:

Velocity

TRA Correctors

Predicted or

Actual Tide Correctors

GEODETTIC POSITION:

Charted:
Observed:

Latitude
44°09'16.60"N
44°09'15.78"N
91

Longitude
76°17'28.80"W
76°17'29.35"W
42

POSITION DETERMINED BY: Range-Range: Del Norte

METHOD OF ITEM INVESTIGATION: A visual search, at chart datum, was conducted. The item was found to be a rock outcrop in ruins 20 feet long and ~~wash~~ *bases 2 ft @ LWD.*

Delete pier.
CHARTING RECOMMENDATIONS: ~~Description should be revised to "in Ruins" and charted as a rock outcrop. Chart as "jetty ruins" as shown on present survey.~~

Compilation Use Only

CHART

APPLIED AS

CHART # 14767

ITEM # 3937

ITEM DESCRIPTION: Pier

SOURCE: Unknown

INVESTIGATION DATE: 16 August 1985 TIME: 1337 VESSEL: Launch 0517

OIC: Lt. (jg) Peters

REFERENCE:

Position No: 2448 Volume: 9 Page: 43

CORRECTORS APPLIED:

- Velocity
- Predicted or
- TRA Correctors
- Actual Tide Correctors

GEODETTIC POSITION:

	Latitude	Longitude
Charted:	44°09'16.10"N	76°17'30.50"W
Observed:	44°09'15.49"N 62	76°17'30.18"W 24

POSITION DETERMINED BY: Range-Range: Del Norte

METHOD OF ITEM INVESTIGATION: This item was verified by a visual search at chart datum. The item was found to be a rock outcrop in ruins, extending 50 feet from the shoreline and baring ~~three~~ ⁶ feet. A detached position was taken at the offshore end of the rock outcrop.

CHARTING RECOMMENDATIONS: *Delete pier*
~~This item should be charted as rock outcrop. Chart "jetty ruins" as shown on present survey.~~

Compilation Use Only

CHART

APPLIED AS

DIVE INVESTIGATION REPORT
PROJECT NUMBER OPR-V276
SURVEY H-10185
FIELD NUMBER HFP-10-3-85

DIVE NUMBER 5.1/5.2

DATE August 5, 1985

I. AREA OF INVESTIGATION

- A. STATE/COUNTRY New York/USA SUB-LOCALITY Cape Vincent
- B. POSITION: Lat. 44°06'00.82"N, Long. 76°22'18.24"W
(Dive site or center of search area)
- C. METHOD OF POSITIONING: Del Norte & HP-3808A R/AZ

II. PURPOSE OF INVESTIGATION

- A. AWOIS ITEM NUMBER: PSR# 3931 Subm Crib W/6' L.D
- B. SOURCE OF ITEM BEING INVESTIGATED (if other than AWOIS listing): _____
- C. CONTACTS (e.g. USCG, C of E, Harbor Masters, Owners, etc.): _____
- D. NAMES, ADDRESSES AND PHONE NUMBERS, ETC. OF CONTACTS: _____

III. SURVEY PROCEDURES

- A. DETERMINATION OF DIVE SITE (e.g. wire drag, side scan, development): Fatho Search, Development
- B. SEARCH PROCEDURE (e.g. following a ground wire, circle search, sweep along known feature, etc.):
Circle Search W/150' Radius
Ground-Wire, Compass Radials
- C. KNOWN REFERENCE TO FEATURES NEARBY: Tibbette Pt. Light-house
- D. AREA AND DEPTHS COVERED: From 20' to 4', 2-circle searches covering 100m + at known location

IV. DIVE DATA

- A. DIVERS: David Elliott/Tom Rybarski
5.1 5.2
- B. TIME OF DIVE (in UTC): Real 141500 174500
Elapsed 45 min. 30 min
- C. GENERAL BOTTOM DEPTHS (units and method of determination):
20'-4', Depth gauge and Fathometer
- D. CURRENT AND CONDITIONS: Lt. chop 1', wind 5-10 kts West
Current 1-2 kts
- E. VISIBILITY (number of feet - horizontally and vertically):
10' Hor./8'Vert.
- F. BOTTOM TYPE (mud, sand, rocks, etc.): Rocks, sand, grass

IV. RESULTS

- A. DETACHED POSITIONS NUMBER(s): 1886 & 1887
TIME OF D.P.'s (UTC): DESCRIBE IF OTHER TIME ZONE:
UTC 150500/183000
LEAST DEPTH AND FIX NUMBERS (raw depth): _____
METHOD OF DETERMINING DEPTH (The raw sounding should be recorded. The reduced least depth should be plotted on the field sheet.): _____
- B. DESCRIPTION OF FINDINGS: DPs were circle search positions only. No items found in this area resembling crib or water intake. Area has numerous rocks and boulders flush with bottom.
- C. DIMENSIONS OF ITEM OR FEATURE (attach sketch if appropriate):
- D. UNUSUAL CONDITIONS:

VI. CHARTING RECOMMENDATIONS

POSITION: Lat. 44°06'00"N Long. 76°22'18"W
REDUCED Depth: _____

TYPE OF FEATURE (Reference Chart No. 1): Subm Crib L.D. 6'
~~*Feature should be removed from chart since no apparent remains exist. Most likely destroyed by ice and storms. * See recommendation on p. 105 of this Descriptive Report.~~

DIVE INVESTIGATION REPORT
PROJECT NUMBER OPR-V276
SURVEY H-10185
FIELD NUMBER HFP-10-3-85

DIVE NUMBER 8.1

DATE DATE August 8, 1985

I. AREA OF INVESTIGATION

- A. STATE/COUNTRY New York/Canada SUB-LOCALITY Cape Vincent
- B. POSITION: Lat. 44°09'01.18"N, Long. 76°20'56.46"W
(Dive site or center of search area)
- C. METHOD OF POSITIONING: Del Norte R/R

II. PURPOSE OF INVESTIGATION

- A. AWOIS ITEM NUMBER: PSR# 3926
- B. SOURCE OF ITEM BEING INVESTIGATED (if other than AWOIS listing): Hunt Dive Shop Wreck Log
- C. CONTACTS (e.g. USCG, C of E, Harbor Masters, Owners, etc.):
Hunt Underwater Specialties Dive Shop
- D. NAMES, ADDRESSES AND PHONE NUMBERS, ETC. OF CONTACTS:
H.U.S. Clayton, NY 315-686-9824

III. SURVEY PROCEDURES

- A. DETERMINATION OF DIVE SITE (e.g. wire drag, side scan, development): Chain drag - 30' tow, 50' chain
- B. SEARCH PROCEDURE (e.g. following a ground wire, circle search, sweep along known feature, etc.):
Item found in 10-15 feet of water, visible from surface. Snorkel search for positioning of northern and southern ends. ~~Least depth 1.5 feet at center.~~
Bases 1ft @ LWD.
- C. KNOWN REFERENCE TO FEATURES NEARBY: Hinkley Shoal
- D. AREA AND DEPTHS COVERED: 100m + area, 15' to 2'

IV. DIVE DATA

- A. DIVERS: David Elliott/Standby K. Peters
- B. TIME OF DIVE (in UTC): Real 180000
Elapsed 25 min.
- C. GENERAL BOTTOM DEPTHS (units and method of determination):
10'-15', Pole Sounding and Fathometer
- D. CURRENT AND CONDITIONS: 0-current, calm seas
- E. VISIBILITY (number of feet - horizontally and vertically):
12'- 15' Hor./10' Vert.
- F. BOTTOM TYPE (mud, sand, rocks, etc.): Grass, Rocks

IV. RESULTS

- A. DETACHED POSITIONS NUMBER(S): center S N 2008, 2009, 2010
- TIME OF D.P.'s (UTC): DESCRIBE IF OTHER TIME ZONE:
UTC 184500, 185100, 190700
- LEAST DEPTH AND FIX NUMBERS (raw depth): Bares 1ft 4.5' at center
- METHOD OF DETERMINING DEPTH (The raw sounding should be recorded. The reduced least depth should be plotted on the field sheet.): Pole Sounding
- B. DESCRIPTION OF FINDINGS: Vessel OATLAND wood 30' wide approx. 200' long, stripped and sunk by Canadians. Vessel broken up by storm and lays in two different locations.
- C. DIMENSIONS OF ITEM OR FEATURE (attach sketch if appropriate): 30'x200'
- D. UNUSUAL CONDITIONS:

VI. CHARTING RECOMMENDATIONS

POSITION: Lat. 44°09'01.²⁹~~18~~"N Long. 76°20'56.⁴⁷~~46~~"W

REDUCED Depth: Bares 1ft 4.5 at CENTER

TYPE OF FEATURE (Reference Chart No. 1): Wooden Wreck

*Revise to new position

Prior History: Vessel OATLAND built in 1884 262'L, 37' Beam, laid up in 1925, stripped in 1931, and towed to St. Lawrence and sunk by Canadians. *See also page 143 of this Descriptive Report.*

DIVE INVESTIGATION REPORT
PROJECT NUMBER OPR-V276
SURVEY H-10185
FIELD NUMBER HFP-10-3-85

DIVE NUMBER 9.1

DATE August 9, 1985

I. AREA OF INVESTIGATION

A. STATE/COUNTRY New York/Canada SUB-LOCALITY Cape Vincent

B. POSITION: Lat. 44°09'04.82"N, Long. 76°20'52.64"W
(Dive site or center of search area)

C. METHOD OF POSITIONING: Del Norte R/R

II. PURPOSE OF INVESTIGATION

A. AWOIS ITEM NUMBER: PSR# 3927

B. SOURCE OF ITEM BEING INVESTIGATED (if other than AWOIS listing): Hunt Dive Shop Wreck Log

C. CONTACTS (e.g. USCG, C of E, Harbor Masters, Owners, etc.):
Hunt Underwater Specialties Dive Shop

D. NAMES, ADDRESSES AND PHONE NUMBERS, ETC. OF CONTACTS:
H.U.S., Clayton, NY 315-686-9824

III. SURVEY PROCEDURES

A. DETERMINATION OF DIVE SITE (e.g. wire drag, side scan, development): Chain Drag 30' tow, 50' chain

B. SEARCH PROCEDURE (e.g. following a ground wire, circle search, sweep along known feature, etc.): Item found in 10-12' of water visible from surface, snorkel search for positioning of eastern and western ends. Least depth 4.0' at west end.

C. KNOWN REFERENCE TO FEATURES NEARBY:
Hinkley Shoal

D. AREA AND DEPTHS COVERED: 100m. + area, 12' to 2'

IV. DIVE DATA

- A. DIVERS: David Elliott/Standby K. Peters
- B. TIME OF DIVE (in UTC): Real 1400
Elapsed 20 min.
- C. GENERAL BOTTOM DEPTHS (units and method of determination):
10'-12', Pole soundings, Fathometer
- D. CURRENT AND CONDITIONS: 0 current, calm seas
- E. VISIBILITY (number of feet - horizontally and vertically):
10' Hor./8' Vert.
- F. BOTTOM TYPE (mud, sand, rocks, etc.): Grass, rocks

IV. RESULTS

- A. DETACHED POSITIONS NUMBER(s): E 2040 & 2041 W
- TIME OF D.P.'s (UTC): DESCRIBE IF OTHER TIME ZONE:
UTC 143500/151000
- LEAST DEPTH AND FIX NUMBERS (raw depth): E ^{3.0'} ~~5.0'~~ W ^{1.0'} ~~4.0'~~
- METHOD OF DETERMINING DEPTH (The raw sounding should be recorded. The reduced least depth should be plotted on the field sheet.): Pole soundings
- B. DESCRIPTION OF FINDINGS: Vessel OATLAND, wooden 40' wide, approx. 100' long. This wooden wreckage is 2nd piece of item as describe in PSR# 3926.
- C. DIMENSIONS OF ITEM OR FEATURE (attach sketch if appropriate): 40'x100'
- D. UNUSUAL CONDITIONS:

VI. CHARTING RECOMMENDATIONS

POSITION: Lat. 44°09'05.33"N Long. 76°20'54.01"W

REDUCED Depth: ^{1.0'} ~~4.0'~~ L.D

TYPE OF FEATURE (Reference Chart No. 1): Wooden Wreck

*Revise to new position. *See also page 1 of 3 of this Descriptive Report.*

DIVE INVESTIGATION REPORT
PROJECT NUMBER OPR-V276
SURVEY H-10185
FIELD NUMBER HFP-10-3-85

DIVE NUMBER 21.1

DIVE DATE August 21, 1985

I. AREA OF INVESTIGATION

- A. State/Country New York/Canada Sub-Locality Cape Vincent
- B. Position: Latitude ° ' " Longitude ° ' "
(Dive site or center of search area)
- C. Method of Positioning Del Norte R/R

II. PURPOSE OF INVESTIGATION

- A. AWOIS item number: N/A
- B. Source of item being investigated (if other than AWOIS listing): Fathometer spike in 50' channel
- C. Contacts (e.g. USCG, C of E, Harbor Masters, Owners, etc.):
- D. Names, Addresses and Phone Numbers etc. of contacts:

III. SURVEY PROCEDURES

- A. Determination of dive site (e.g. wire drag, side scan, development): Chain drag 65' tow, 30' chain. Fath search
- B. Search Procedure (e.g. following a groundwire, circle search, sweep along known feature, etc.)
Compass patterns revealed grass growing at this depth. No material object found.
- C. Known reference to features nearby:
- D. Area and depths covered:
100m + Circle @ 55'

IV. DIVE DATA

- A. Divers: David Elliott/Tom Rybarski
- B. Time of Dive (in UTC) - Real 143000
Elapsed 30 min.
- C. General Bottom Depths (units and method of determination):
55' by Fathometer
- D. Current and conditions: 1kt current Lt. Chop
- E. Visibility (number of feet - horizontally and vertically):
6' Hor. 6' Vert
- F. Bottom type (mud, sand, rocks, etc.): Mud, silt w/grass

IV. RESULTS

- A. Detached Positions Number(s): 0
Time of D.P.'s (UTC): Describe if other time zone: _____
Least Depth and Fix Numbers (raw depth): _____
Method of determining depth (The raw sounding should be recorded. The reduced least depth should be plotted on the field sheet.) _____
- B. Description of findings:
No items found, grass growing @ this depth creating spike appearing to be a chartable feature.
- C. Dimensions of item or feature (attach sketch if appropriate):
- D. Unusual Conditions:

VI. CHARTING RECOMMENDATIONS

N/A

Position Lat. _____ Long. _____
Reduced Depth _____
Type of Feature (Reference Chart No.1) _____

DIVE INVESTIGATION REPORT
PROJECT NUMBER OPR-V276
SURVEY H-10185
FIELD NUMBER HFP-10-3-85

DIVE NUMBER 21.2

DATE August 21, 1985

I. AREA OF INVESTIGATION

- A. STATE/COUNTRY New York/Canada SUB-LOCALITY Cape Vincent
- B. POSITION: Lat. 44°08'32.55"N, Long. 76°21'59.36"W
(Dive site or center of search area)
- C. METHOD OF POSITIONING: Del Norte R/R

II. PURPOSE OF INVESTIGATION

- A. AWOIS ITEM NUMBER: PSR# 3863
- B. SOURCE OF ITEM BEING INVESTIGATED (if other than AWOIS listing): Hunt Dive Shop Wreck Log
- C. CONTACTS (e.g. USCG, C of E, Harbor Masters, Owners, etc.):
Hunt Underwater Specialties Dive Shop
- D. NAMES, ADDRESSES AND PHONE NUMBERS, ETC. OF CONTACTS:
H.U.S. Clayton, NY 315-686-9824

III. SURVEY PROCEDURES

- A. DETERMINATION OF DIVE SITE (e.g. wire drag, side scan, development): Fatho Search
- B. SEARCH PROCEDURE (e.g. following a ground wire, circle search, sweep along known feature, etc.):
Compass search revealed wreck in 25' of water. Diver search for positioning of Bow and Stern. Least depth 10.0 at each end
- C. KNOWN REFERENCE TO FEATURES NEARBY: Hinkley Pt.
- D. AREA AND DEPTHS COVERED: 100m area, 25' to 5'

IV. DIVE DATA

- A. DIVERS: David Elliott/Tom Rybarski
- B. TIME OF DIVE (in UTC): Real 170000
Elapsed 45 min.
- C. GENERAL BOTTOM DEPTHS (units and method of determination):
25' Depth gauge and Fathometer
- D. CURRENT AND CONDITIONS: 0 current, calm seas
- E. VISIBILITY (number of feet - horizontally and vertically):
15' Hor./15' Vert.
- F. BOTTOM TYPE (mud, sand, rocks, etc.): Mud, rocks, grass

IV. RESULTS

- A. DETACHED POSITIONS NUMBER(s): bow stern
2561 & 2562
- TIME OF D.P.'s (UTC): DESCRIBE IF OTHER TIME ZONE:
UTC 175600/181600
- LEAST DEPTH AND FIX NUMBERS (raw depth): 7
10' @ each end
- METHOD OF DETERMINING DEPTH (The raw sounding should be recorded. The reduced least depth should be plotted on the field sheet.): Pole soundings
- B. DESCRIPTION OF FINDINGS: Vessel KENDALL wooden hull in good condition broken up at stern, 30' wide and approx. 150' long. Excellent sport dive, many fish and abundant amounts of plant growth.
- C. DIMENSIONS OF ITEM OR FEATURE (attach sketch if appropriate): 30'/150'
- D. UNUSUAL CONDITIONS:

VI. CHARTING RECOMMENDATIONS

POSITION: Lat. 44°08'32.⁶⁵55"N Long. 76°21'59.⁴¹36"W
44°08'31.²⁵15"N 76°21'59.⁴⁴38"W

REDUCED Depth: 7.0
10.0' POLE

TYPE OF FEATURE (Reference Chart No. 1): Wooden Wreck P.D.

*Revise to new Position

Prior History: HARVEY J. KENDALL built in 1892 141'7"L. 30'9" beam, sunk about 1920. *See p:83 of this Descriptive Report.*

<u>Position No.</u>	<u>Latitude (N)</u>	<u>Longitude (W)</u>
668	44°07'03.70"	76°24'10.28"
669	44°07'03.19"	76°24'08.26"
677	44°08'08.79"	76°21'17.87"
678	44°08'07.17"	76°21'15.91"
702	44°06'28.93"	76°22'00.81"
703	44°06'30.74"	76°22'00.24"
707	44°06'59.23"	76°21'26.15"
709	44°07'14.41"	76°21'07.09"
1893	44°08'17.52"	76°21'59.07"
1904	44°07'28.46"	76°20'50.85"
1906	44°07'28.34	76°20'46.79"
1907	44°07'33.89"	76°20'39.40"
1908	44°07'35.87"	76°20'37.38"
1909	44°07'38.93"	76°20'32.65"
1910	44°07'39.42"	76°20'31.24"
1911	44°07'40.16"	76°20'28.02"
1913	44°07'40.31"	76°20'25.52"
1914	44°07'41.10"	76°20'25.00"
1915	44°07'42.09	76°20'24.22"
1916	44°07'43.87"	76°20'22.52"
1917	44°07'43.87"	76°20'22.32"
1918	44°07'46.60"	76°20'22.15"
1919	44°07'46.04"	76°20'19.78"
1920	44°07'46.53"	76°20'18.70"
1921	44°07'47.21"	76°20'18.49"
1922	44°07'48.46"	76°20'17.63"
1923	44°07'48.68"	76°20'17.23"
1924	44°07'48.97"	76°20'15.06"
1925	44°07'49.35"	76°20'14.16"
1926	44°07'49.24"	76°20'13.00"
1927	44°07'49.18"	76°20'11.94"
1928	44°07'47.79"	76°20'09.08"
1929	44°07'47.85"	76°20'08.58"
1930	44°07'47.80"	76°20'07.41"
1931	44°07'47.67"	76°20'06.64"
1932	44°07'48.34"	76°20'05.83"
1933	44°07'48.50"	76°20'03.43"
1934	44°07'46.92"	76°20'01.64"
1935	44°07'47.19"	76°20'01.00"
1936	44°07'47.83"	76°20'00.10"
1937	44°07'47.31"	76°19'59.95"
1938	44°07'48.38"	76°19'57.56"
1939	44°07'49.57"	76°19'56.72"
1940	44°07'50.06"	76°19'55.59"
1941	44°07'50.88"	76°19'53.68"
1942	44°07'52.02"	76°19'49.86"
1943	44°07'52.70"	76°19'46.73"
1944	44°07'52.61"	76°19'45.37"
1945	44°07'53.06"	76°19'42.50"
1946	44°07'53.48"	76°19'40.57"
1947	44°07'53.28"	76°19'40.12"
1948	44°07'53.41"	76°19'40.11"

1949	44°07'53.73"	76°19'38.16"
1950	44°07'56.36"	76°19'31.14"
1951	44°07'56.50"	76°19'29.56"
1952	44°07'58.69"	76°19'24.16"
1953	44°07'59.70"	76°19'23.00"
1954	44°07'59.39"	76°19'20.40"
1955	44°07'59.89"	76°19'19.35"
1956	44°08'01.12"	76°19'16.87"
1957	44°08'00.70"	76°19'16.18"
1958	44°07'59.66"	76°19'14.82"
1959	44°07'59.20"	76°19'14.32"
1960	44°07'58.33"	76°19'11.91"
1961	44°07'59.48"	76°19'07.32"
1968	44°08'42.98"	76°18'19.50"
1969	44°08'42.93"	76°18'19.14"
1970	44°08'43.78"	76°18'18.09"
1971	44°08'43.30"	76°18'16.10"
1972	44°08'44.18"	76°18'15.88"
1973	44°08'44.78"	76°18'15.18"
1974	44°08'44.85"	76°18'14.33"
1975	44°08'45.20"	76°18'13.46"
1976	44°08'45.75"	76°18'13.45"
1977	44°08'49.69"	76°18'10.22"
1978	44°08'50.30"	76°18'09.50"
1979	44°08'51.65"	76°18'07.67"
1980	44°08'54.80"	76°18'05.47"
1981	44°08'57.09"	76°18'01.50"
1982	44°08'58.16"	76°17'59.97"
1983	44°08'59.49"	76°17'58.22"
1984	44°08'58.80"	76°17'59.97"
1988	44°09'07.40"	76°17'52.12"
2445	44°09'11.13"	76°17'47.55"
2446	44°09'12.85"	76°17'44.64"
2447	44°09'13.14"	76°17'44.10"
2448	44°09'15.62"	76°17'30.24"
2449	44°09'15.91"	76°17'29.42"
2450	44°09'18.04"	76°17'29.12"
2451	44°09'19.85"	76°17'28.50"
2452	44°09'21.53"	76°17'28.37"
2453	44°09'22.54"	76°17'28.28"
2454	44°09'24.48"	76°17'27.30"
2455	44°09'25.93"	76°17'24.19"
2456	44°09'26.87"	76°17'22.14"
2458	44°09'28.46"	76°17'19.92"
2459	44°09'29.15"	76°17'18.69"
2595	44°09'02.64"	76°22'29.90"
2596	44°08'56.51"	76°22'39.98"
2597	44°08'55.55"	76°22'40.51"
2599	44°08'14.79"	76°22'05.04"

APPROVAL SHEET
SURVEY H-10185 (HFP-10-3-85)

The hydrographic records transmitted with this report are complete and adequate.

No direct supervision was given by me during field work.

This survey is complete and adequate with no additional field work recommended.

Kenneth W. Perrin
Kenneth W. Perrin
Lt. Cdr., NOAA
Chief, Hydrographic Field Parties Section

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

WATER LEVEL NOTE FOR HYDROGRAPHIC SHEET

Processing Division: Atlantic Marine Center, N/MOA23

Hourly heights are approved for: Capt. Vincent, NY (905-2000)
Water Level Station

Period: June 26 to September 3, 1985

HYDROGRAPHIC SHEET: H-10185

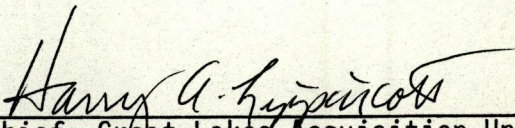
OPR- V276-HFP-85

Locality: St. Lawrence River

Plane of reference: Low Water Datum (IGLD 1955: 242.8 Feet)

Remarks:

Zoning not required, data from Alexandria Bay, NY and Oswego, NY gages indicates no unusual water level movement during hours of hydrography


Chief, Great Lakes Acquisition Unit

GEOGRAPHIC NAMES

H-10185

Name on Survey	Source of Name										
	A	B	C	D	E	F	G	H	K		
	ON CHART NO.	ON PREVIOUS SURVEY NO.	ON U.S. QUADRANGLE MAPS	FROM LOCAL INFORMATION	ON LOCAL MAPS	P.O. GUIDE OR MAP	RAND McNALLY ATLAS	U.S. LIGHT LIST			
BUTTON BAY										1	
CAPE VINCENT										2	
FEATHER BED SHOALS										3	
HINCKLEY FLAT SHOALS										4	
HINCKLEY POINT										5	
HORNES POINT										6	
LAKE ONTARIO										7	
NEW YORK (title)										8	
ONTARIO (title)										9	
POPLAR TREE BAY										10	
POINT ALEXANDRIA										11	
ROXY ISLANDS										12	
SAIN'T LAWRENCE RIVER (title)										13	
TIBBETT'S POINT										14	
WOLFE ISLAND										15	
										16	
										17	
										18	
										19	
										20	
										21	
										22	
										23	
										24	
										25	

Approved:

Charles E. Harrington
Chief Geographer - N/CG2x5

MAR 23 1987

REFERENCE NO.
MOA23-10-88

LETTER TRANSMITTING DATA

DATA AS LISTED BELOW WERE FORWARDED TO YOU BY (Check):

- ORDINARY MAIL
- AIR MAIL
- REGISTERED MAIL
- EXPRESS
- GBL (Give number) _____

TO:

Chief, Data Control Branch, N/CG243
 Room 151, WSC-1
 National Ocean Service - NOAA
 Rockville, MD 20852

DATE FORWARDED
28 Jan 1988

NUMBER OF PACKAGES
Two (2) (1 Box) (1 TUBE)

NOTE: A separate transmittal letter is to be used for each type of data, as tidal data, seismology, geomagnetism, etc. State the number of packages and include an executed copy of the transmittal letter in each package. In addition the original and one copy of the letter should be sent under separate cover. The copy will be returned as a receipt. This form should not be used for correspondence or transmitting accounting documents.

H-10185 (HFP-10-3-85)
OPR-V276-HFP-85, New York--Ontario
St. Lawrence River
Roxy Island to Tibbetts Point

PKG. 1 (TUBE)

- 1 SMOOTH SHEET
- 2 FINAL SMOOTH POSITION OVERLAY
- 2 FINAL EXCESS OVERLAYS
- 4 FINAL FIELD SMOOTH SHEETS
- 1 ORIGINAL DESCRIPTIVE REPORT

PKG. 2 (BOX)

- 1 CAHIER containing FINAL POSITION PRINTOUT
- 1 CAHIER containing FINAL SOUNDING PRINTOUT and L-FILE
- 1 ENVELOPE containing SUPPLEMENTAL DATA from PRINTOUT
- 10 NOAA FORM 77-44 (SOUNDING VOLUMES)
- 1 ENVELOPE containing DATA REMOVED FROM ORIGINAL DESCRIPTIVE REPORT

FROM: (Signature)
NORRIS A. WIKER

Norris A. Wiker

RECEIVED THE ABOVE
(Name, Division, Date)

Return receipted copy to:

Chief, Hydrographic Surveys Branch,
 N/MOA23
 Atlantic Marine Center
 439 W. York Street
 Norfolk, VA 23510-1114

D. S. Clark
2-9-88
N/CG243

REFERENCE NO.
MOA23-10-88

LETTER TRANSMITTING DATA

DATA AS LISTED BELOW WERE FORWARDED TO YOU
BY (Check):

- ORDINARY MAIL
- AIR MAIL
- REGISTERED MAIL
- EXPRESS
- SBL (Give number) _____

TO:

Chief, Data Control Branch, N/CG243
 Room 151, WSC-1
 National Ocean Service - NOAA
 Rockville, MD 20852

DATE FORWARDED
28 Jan 1988

NUMBER OF PACKAGES
Two (2) (1 BOX) (1 TUBE)

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H-10185 (HFP-10-3-85)
OPR-V276-HFP-85, New York--Ontario
St. Lawrence River
Roxy Island to Tibbetts Point

PKG 2 CONT

- ENVELOPE containing POSITION CALIBRATION DATA
- ENVELOPE containing DIRECT COMPARISON LOGS
- ACCORDION FILE containing MASTER TAPE PRINTOUTS, CORRECTOR TAPE PRINTOUTS, and FATHOGRAMS for following JD,s: VESNO 517: 177, 182-183, 189-190, 192-193, 196, 204-205, 210-213, 217 no fathogram 218-221, 225-228, 232-234, 240, 246

FROM: (Signature)

NORRIS A. WIKE

Norris A. Wike

RECEIVED THE ABOVE
(Name, Division, Date)

Return receipted copy to:

Chief, Hydrographic Surveys Branch,
 N/MOA23
 Atlantic Marine Center
 439 W. York Street
 Norfolk, VA 23510-1114

D. S. Clark
2-9-88
N/CG243

12/09/87

HYDROGRAPHIC SURVEY STATISTICS
REGISTRY NUMBER: H-10185

NUMBER OF CONTROL STATIONS	10
NUMBER OF POSITIONS	2474
NUMBER OF SOUNDINGS	8270

	TIME-HOURS	DATE COMPLETED
PREPROCESSING EXAMINATION	34	02/07/86
VERIFICATION OF FIELD DATA	224	08/12/86
QUALITY CONTROL CHECKS	153	
EVALUATION AND ANALYSIS	66	06/26/87
FINAL INSPECTION	20	06/05/87
TOTAL TIME	497	
MARINE CENTER APPROVAL		06/26/87

ATLANTIC MARINE CENTER
EVALUATION REPORT

SURVEY NO.: H-10185

FIELD NO.: HFP-10-3-85

New York--Ontario, St. Lawrence River, Roxy Island to Tibbetts Point

SURVEYED: 26 June 1985 through 3 September 1985

SCALE: 1:10,000

PROJECT NO.: OPR-V276-HFP-85

SOUNDINGS: RAYTHEON DE-719B Fathometer, Lead line, Sounding pole

CONTROL: DEL-NORTE (Range/Range), DEL-NORTE/T-2 Theodolite (Range/Azimuth), HP-3808A (Range/Azimuth), Sextant

Chief of Party.....K. W. Perrin

Surveyed by.....K. P. Peters
.....R. Snow
.....D. B. Elliott
.....J. P. Oswald
.....T. M. Rybarski

Automated Plot by.....XYNETICS 1201 Plotter (AMC)

1. INTRODUCTION

a. The personnel of Hydrographic Field Party 3 are to be commended for the effort and initiative used in performing work on this survey. Their efforts have provided the program with valuable charting information, and, as a result, the effected charts will provide the mariner with the most complete information available.

b. The sounding datum for this survey is Low Water Datum (IGLD 1955: 242.8 Feet) based on water levels obtained from the water level station at Cape Vincent, New York.

c. Notes in the Descriptive Report were made in red during office processing.

2. CONTROL AND SHORELINE

a. Control is adequately discussed in sections F., G., and S. of the Descriptive Report.

b. Shoreline originates with 1:10,000 scale enlargements of 1:20,000 scale final reviewed Class III Photogrammetric Manuscripts TP-01168 and TP-01170 of 1982.

Photogrammetric manuscript surveys in this area were

compiled at a scale of 1:20,000. The present survey was conducted at a scale of 1:10,000. The shoreline manuscripts were enlarged to a scale of 1:10,000. The enlargements of the shoreline manuscripts provided were not at a 1:10,000 scale, and as a result the transfer of the shoreline and alongshore features to the smooth sheet and the resolution of hydrography and shoreline proved to be a formidable task requiring additional time and effort by office personnel. This situation also existed for the field unit, and the verification of shoreline and alongshore features by the field unit required considerable time and effort. In the future, shoreline mapping projects in support of hydrographic surveys of similar areas should be compiled at survey scale with aerial photography of an appropriate scale.

3. HYDROGRAPHY

a. Soundings at crossings are in excellent agreement and comply with the criteria found in sections 4.6.1 and 6.3.4.3. of the HYDROGRAPHIC MANUAL.

b. The standard depth curves could not be drawn in their entirety; the zero (0) curve was not delineated in its entirety because of vessel safety and proximity to the shore. The supplemental twenty-four (24) foot depth curve was drawn to correspond to the charted twenty-four (24) foot depth curve. The supplemental three (3) and thirty-six (36) foot depth curves were also drawn to show additional bottom relief. Some brown and dashed depth curves were also drawn to delineate bottom relief.

c. The development of the bottom configuration and determination of least depths is considered adequate with the following exceptions:

1. The following shoal soundings were not developed.

<u>Depth</u>	<u>Latitude</u>	<u>Longitude</u>	<u>Surrounding Depths</u>
30	44°07'39.86"N	76°21'48.76"W	33-48
0	44°08'30.34"N	76°21'00.09"W	4-8
0	44°08'25.98"N	76°21'00.14"W	3-9

2. The field unit did not perform an adequate development of Cape Vincent Channel charted in the vicinity of Latitude 44°07'53"N, Longitude 76°20'00"W. Fifty (50) meter line spacing would have provided a better delineation of the bottom configuration in the channel area.

Additional lines of hydrography in the vicinity of the items listed above would have provided a better delineation of the bottom configuration. The lack of development of these items above does not degrade the overall quality of the this survey.

4. CONDITION OF SURVEY

The smooth sheet and accompanying overlays, hydrographic records and reports are adequate and conform to the requirements of the HYDROGRAPHIC MANUAL with the following exceptions:

a. Section K. of the Descriptive Report did not provide the required discussions on Automated Wreck and Obstruction Information System (AWOIS) Items #3932 and #3938. Section 5.3.4.(K) of the HYDROGRAPHIC MANUAL outlines the necessary information to be provided in the Descriptive Report. See page 106 of the Descriptive Report for a recommendation for item #3932, and section 7.a.1) of this report for recommendation for item #3938.

b. The field did not obtain a bottom samples in the vicinity of the following shoal features:

<u>Latitude (N)</u>	<u>Longitude (W)</u>
44°06'56.27"	76°23'34.80"
44°07'16.6"	76°22'42.1"
44°07'51.6"	76°21'39.4"

Section 4.5.9.2. of the HYDROGRAPHIC MANUAL outlines the requirements for obtaining bottom characteristics on shoal features.

c. The hydrographer should be commended for his work on the AWOIS items that reside within the survey limits; however, geographic positions should be listed in the Descriptive Report when discussed. The position number does will provide the verifier, evaluator, or chart compiler with a physical location of the item on the survey sheet.

d. The hydrographer did not take twice daily bar checks as required by sections 1.5.2 and 4.9.5.1.1. of the HYDROGRAPHIC MANUAL. The hydrographer took twenty-six (26) out of a possible fifty-four (54) bar checks. The overall quality of the survey was not effected because TDC casts were used to generate the sound velocity correctors for the survey. In this case the bar checks were used to determine the instrument error for the fathometer.

5. JUNCTIONS

There are no contemporary surveys presently in this area. Charted depths in the junctional areas are in general harmony with present survey depths.

6. COMPARISON WITH PRIOR SURVEYS

LS-536	(1873)	1:10,000
LS-568	(1874)	1:10,000
LS-571	(1874)	1:10,000
LS-1255	(1912-14)	1:20,000
<u>LS-1716</u>	<u>(1936)</u>	<u>1:20,000</u>

The five (5) prior surveys listed above cover the present survey area in its entirety.

a. Prior survey LS-536 (1873) compares favorably with the present survey and shows a general trend of being three (3) to ten (10) feet deeper than the present survey. Any charted hydrography originating with this prior survey is three (3) feet shoaler than the prior survey depths because of vertical datum adjustments.

b. Prior survey LS-568 (1874) shows a general trend of being five (5) to ten (10) feet deeper than present survey depths in the common area. Any charted hydrography originating with this prior survey is three (3) feet shoaler than the prior survey depths because of vertical datum adjustments.

c. Prior survey LS-571 (1874) soundings compare favorably with the present survey and shows a general trend of being one (2) to six (6) feet deeper than present survey depths. A charted twenty-four (24) foot sounding in Latitude 44°06'01.0"N, Longitude 76°22'43.0"W originating with prior survey LS-571 (1874) was not developed by the field unit. Present survey depths in the vicinity of the charted sounding range from twenty-nine (29) to forty (40) feet. A careful examination of the fathograms in the area was made and no indication was seen. Considering the line spacing ,100 meters, and the present survey depths there is insufficient insonification of the bottom to cover the entire area between the sounding lines. It is recommended that the sounding be retained on the chart and further development of the area be done at a convenient time. The sounding was not brought forward to the present survey because the prior survey lacked an appropriate grid to make an accurate transfer to the present survey. Any charted hydrography originating with this prior survey is three (3) feet shoaler than the prior survey depths because of vertical datum adjustments.

d. Prior survey LS-1255 (1912-14) soundings compare favorably with the present survey and shows a general trend of being one (1) foot deeper than present survey depths. Any charted hydrography originating with this prior survey is one (1) foot shoaler than the prior survey depths because of vertical datum adjustments.

e. Prior survey LS-1716 (1936) soundings compare favorably with the present survey, and depths vary plus or

minus (+/-) one foot between the two (2) surveys. Several bottom features from prior survey H-1716 (1936) were brought forward to supplement the present survey. The following should be noted:

1) Automated Wreck and Obstruction Information System (AWOIS) Item #3898, a charted rock awash, in Latitude 44°09'25.5"N, Longitude 76°21'44.0"W originates with prior survey H-1716 (1936). The position given in the AWOIS listing is the most easterly of four (4) rocks shown on the prior survey. The rock awash was neither verified or disproved by the present survey. Nine (9) rocks were found in the area during present survey. The closest rock to the AWOIS item was located in Latitude 44°09'27.46"N, Longitude 76°21'47.83"W. This is approximately 104 meters northwest of the AWOIS position. It has been determined during office processing that the rock found by the present survey is not the rock awash. The rock awash has been brought forward from the prior survey to supplement the present survey. It is recommended that the charted rock awash be retained as charted and the foul area and rocks in the vicinity of Latitude 44°09'28.68"N, Longitude 76°21'46.57"W be charted as shown on present survey.

2) A charted 1-ft sounding, in Latitude 44°09'18.6"N, Longitude 76°18'53.2"W originates with prior survey LS-1716 (1936). The original delineation on the prior survey was a rock with no depth or elevation. The delineation was later altered to show a 1-ft sounding. The rock was neither verified nor disproved during the present survey. The rock was brought forward from the prior survey as a submerged rock to supplement the present survey. Additionally, a second rock was brought forward as a rock awash from the prior survey in Latitude 44°09'15.6"N, Longitude 76°18'45.8"W. It is recommended the charted 1-ft sounding be retained as charted, and the rock awash also be charted as shown on the present survey. *1 ft not charted*

The difference between the present and prior surveys may be attributed to the natural changes in the bottom and technological advances in surveying. As stated in section 6.11.1. of the Project Instructions the shoaler/deeper depths are attributable to variations in the low water datum in the area surveyed.

Except as noted above the present survey is adequate to supersede the above prior surveys within the common area.

7. COMPARISON WITH CHART 14767 (16th Ed., Sept. 25/82)
14768 (16th Ed., June 12/82)

a. Hydrography

The charted hydrography originates with the previously discussed prior surveys and a not readily ascertainable source. The previously discussed prior surveys require no further

consideration. The hydrographer makes adequate chart comparisons in section L. of the Descriptive Report. In addition to the recommendations in section L. of the Descriptive Report the following should be noted:

1) AWOIS Item #3938, a charted obstruction, (pier and boathouse), in Latitude 44°08'47.90"N, Longitude 76°18'12.30"W originates with unknown source. The obstruction was neither verified nor disproved during the present survey. It is recommended the obstruction, (pier boathouse) be retained as charted.

2) A charted potable water intake (PWI) in Latitude 44°07'42.0"N, Longitude 76°20'28.4"W was neither verified or disproved by the field unit. It is recommended that the PWI be retained as charted.

Except as noted the present survey is adequate to supersede the charted hydrography in the common area.

b. Controlling Depths

There are no conflicts between the present survey depths and the project depth in Cape Vincent Channel. Mr. Jack La Fontaine of the U. S. Army Corps of Engineers, Buffalo District (FTS 473-2287) was contacted to verify the controlling depth tabulations.

c. Aids to Navigation

The hydrographer located all fixed and floating aids to navigation in the survey area. These aids appear adequate to serve their intended purpose.

8. COMPLIANCE WITH INSTRUCTIONS

This survey complies with the Project Instructions except as noted in other sections of this report.

9. ADDITIONAL FIELD WORK

This is a good basic survey. Additional work would be desirable at an opportune time to determine items discussed in section 7.a. of this report.

Franklin L. Saunders

Franklin L. Saunders
Cartographic Technician
Verification of Field Data

Robert A. Robinson

for Norris A. Wike
Cartographer
Evaluation and Analysis

Robert R. Hill

Robert R. Hill
Senior Cartographic Technician
Verification Check

ADDENDUM TO ACCOMPANY SURVEY H-10185

The average values for shifting surveyed NAD 1927 positions to NAD 1983 positions for this survey are as follows:

Position shifts (NAD 1983 minus NAD 1927):


Average latitude shift = 0.183 seconds = 5.6 meters

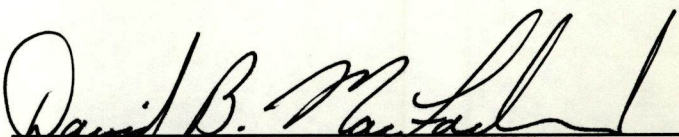
Average longitude shift = -1.243 seconds = -27.6 meters

INSPECTION REPORT
H-10185

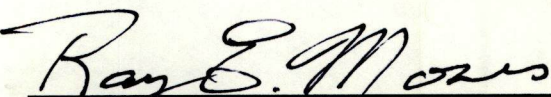
The completed survey has been inspected with regard to survey coverage, delineation of depth curves, development of critical depths, cartographic symbolization, and verification or disapproval of charted data. The digital data have been completed and all revisions and additions made to the smooth sheet during survey processing have been entered in the magnetic tape record for this survey. Final control, position, and sounding printouts of the survey have been made. The survey complies with National Ocean Service requirements except as noted in the Evaluation Report. The survey records comply with NOS requirements except where noted in the Evaluation Report.

Inspected


Robert G. Roberson
Chief, Evaluation and Analysis
Group
Hydrographic Surveys Branch


David B. MacFarland, Jr., CDR, NOAA
Chief, Hydrographic Surveys Branch

Approved: 26 June 1987


Ray E. Moses, RADM, NOAA
Director, Atlantic Marine Center

76° 22' 30"

76° 22' 00"

44° 09' 30"

44° 09' 00"

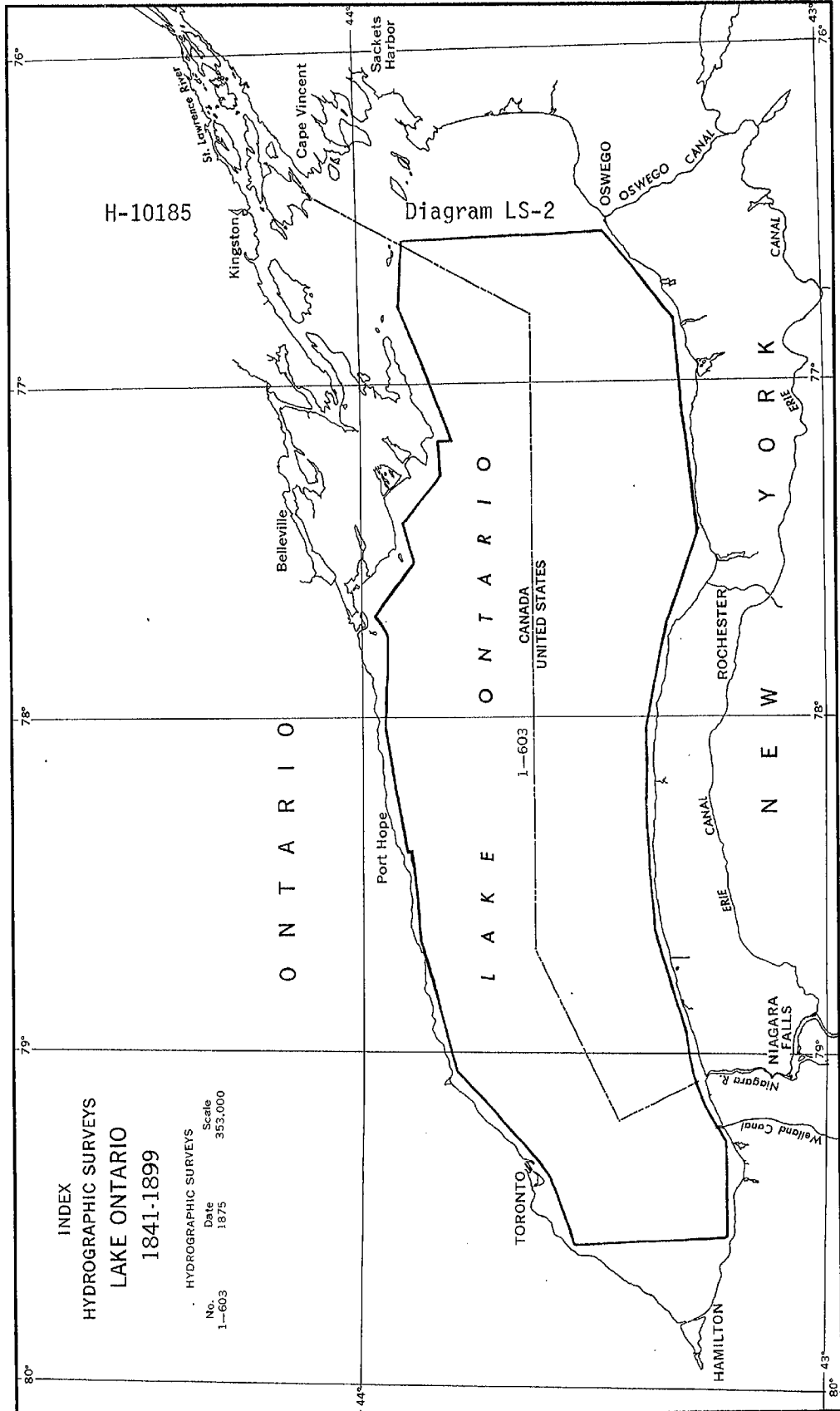
44° 08' 30"

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H-10185

Chain Drag Positions

AWOIS ITEM Nos. 3862, 3926, 3927



MARINE CHART BRANCH
RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. H-10185

INSTRUCTIONS

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart.

1. Letter all information.
2. In "Remarks" column cross out words that do not apply.
3. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.

CHART	DATE	CARTOGRAPHER	REMARKS
14767	8-18-89	Ed Martin	Full Part Before After Marine Center Approval Signed Via Drawing No. 5 revise in full sdgs, curves and shoreline
14800	3-15-90	ALMACEW	Full Part Before After Marine Center Approval Signed Via FULL APPLICATIONS OF Drawing No. #6 SOUNDINGS
14768	1-26-93	STANWARD	Full Part Before After Marine Center Approval Signed Via Drawing No. 6 Revised Sdgs & Curves
14802	2-3-93	STANWARD	Full Part Before After Marine Center Approval Signed Via Drawing No. 5 Revised Sdgs & Curves
			Full Part Before After Marine Center Approval Signed Via Drawing No.
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appld To STds 2-12-88 PM