

8617

Diag'd. on Diag. Ch. No. 8502-3

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey Topographic

Field No. CS-317 Office No. T-8617

LOCALITY

State Alaska

General locality Alaska Peninsula

Locality Chiginagak & Nakalilok Bays

1941-'44

CHIEF OF PARTY

S.B. Grenell

LIBRARY & ARCHIVES

DATE

May 18-1949

B-1870-1 (1)

8617

DATA RECORD

T-8617

Quadrangle (II):

Project No. (II): CS-317

Field Office:

Seattle, Washington

Chief of Party: S. B. Grenell

Louis J. Reed, Stereoscopic

Compilation Office:

Baltimore Photogrammetric Office

Chief of Party: Mapping Section, Wash., D.C.

William F. Deane

Instructions dated (II III):

29 Feb. 1944 (Supp.); 18 Mar. 1944 (Supp.)
 27 Feb. 1945, 21 Aug. 1946 (Supp.)
 30 Dec. 1946 (Memo Instructions) 31 Jan. 1947 (Supp.)

Copy filed in Descriptive

Report No. T-8617 Off (VI) Files of
the Div. of Photogrammetry.

Completed survey received in office:

March 24, 1947

Reported to Nautical Chart Section: April 8, 1947

Partially Applied to Chart 8851 - March 1948
 Reviewed: Dec. 1948 Applied to chart No. Date:

Redrafting Completed: C-27-50

Registered: Feb. 10, 1949

Published:

Compilation Scale: 1:20,000

Published Scale:

Scale Factor (III): 1.000

Geographic Datum (III):

N.A. 1927

(Preliminary

Datum Plane (III): M.S.L.

Reference Station (III): FOUL, 1944 Vol. 5, pg. 33

Lat.:

Long.:

Adjusted

Unadjusted
(Preliminary)

N.A. 1927 Adjusted Datum shown on map manuscript
 by red tick marks.

State Plane Coordinates (VI):

X =

Y =

*N.A. 1927
 application check
 back*

Military Grid Zone (VI)

PHOTOGRAPHS (III)

<u>Number</u>	<u>Date</u>	<u>Time</u>	<u>Scale</u>	<u>Stage of Tide</u>
06062-65 incl.	8-5-41	1350	1:20,000	8.9' above M.L.W.
06122-26 incl.	8-5-41	1525	1:20,000	5.3' above M.L.W.
06131-35 incl.	8-5-41	1525	1:20,000	5.3' above M.L.W.
10960-63 incl.	9-5-42	1312	1:20,000	5.9' above M.L.W.

Rectified prints of originals were furnished for photographs Nos. 06062 06063, 06123-26 incl. and 06131.

Predicted Tide Tables, Pacific Ocean and Indian Ocean
Tide from (III): 1941 and 1942. Reference Station, KODIAK, ALASKA with
corrections to Lee's Cabin, Wide Bay.

Mean Range: 9.8' Spring Range: 11.9'
Diurnal

Camera: (Kind or source)

United States Coast and Geodetic Survey nine lens camera.
Focal length 8 1/4".

Field Inspection by: Lt. Comdr. S. B. Grenell date: June-August 1944

Field Edit by: None date:

Date of Mean High-Water Line Location (III): All of the MHWL along the rocky shore was delineated from photographs taken in August 1941. The MHWL at the head of Chiginagak Bay and from the southern tip of Cape Kuyuyukak west to the head of Nakalilok Bay was located at the time of the field inspection in 1944.

Projection and Grids ruled by (III) S.R. (Washington Office) date: 3/21/46

" " " checked by: S.R. (Washington Office) date: 3/21/46

Control plotted by: F.J. Tarcza date: 4/5/46

Control checked by: E.L. Bauman date: May 1946

Radial Plot by: F.J. Tarcza date: May 1946

Contours by: W.D. Harris

Contours inked by: F.M. Senasack

Detailed by: F.M. Senasack

2-10/2-13-47
date: 2-14/3-12-47

Reviewed in compilation office by: J.W. Vonasek date: 3-10/ 3-19-47

Elevations on ^{manuscript} ~~Exhibit 1000~~ checked
checked by: J.W. Vonasek

date: 3-14-46

STATISTICS (III)

Land Area (Sq. Statute Miles): 57 (incomplete)

Shoreline (More than 200 meters to opposite shore): 45 statute miles

Shoreline (Less than 200 meters to opposite shore): 11 statute miles

Number of Recoverable Topographic Stations established: 18

Number of Temporary Hydrographic Stations located by radial plot: 14

Leveling (to control contours) - miles:

Roman numerals indicate whether the item is to be entered by, (II) Field Party, (III) Compilation Party, or, (VI) the Washington Office.

When entering names of personnel on this record give the surname and initials (not initials only).

Remarks:

See heading #26 for explanation of correction from preliminary geographic position to corrected and adjusted position.

Preface to Descriptive Report T-8617

Project CS-317

Alaska Peninsula

T-8617 is one of six topographic maps in project CS-317 located on the south shore of the Alaska Peninsula between Cape Kunuk and Wide Bay. These maps are not of standard quadrangle size.

The field inspection was accomplished from the Motor Vessel WESTDAHL, E. B. Grenell commanding, whose "Report of Field Inspection of Air Photographs, Alaska Peninsula, Wide Bay to Cape Kunuk, 1944" is filed in the general files of the Division of Photogrammetry.

The radial plot for project CS-317 was made in the Baltimore Office using templates of nine-lens photographs on polyconic projection bases at 1:20,000 on the North American 1927 Datum. The shoreline was compiled by graphic methods on manuscript bases. All of the materials were then forwarded to the Washington Office where the contouring was compiled from rectified nine-lens photographs on the Reading Plotter, using a contour interval of 200 feet. The maps and materials were then forwarded to the Baltimore Office where the final compilation and inking of the manuscript were completed, after which they were again returned to the Washington Office where they were critically examined in the Stereoscopic Mapping Section, reconciling all discrepancies between hydrographic and topographic features.

A cloth-backed, advance, photographic print of the manuscript is registered with the descriptive report. When the map is printed a cloth-backed lithographic print will replace the advance photographic print. Depth curves and critical soundings are not shown on this map because the hydrography is very old and sketchy.


S. V. Griffith
Chief, Review Section
Div. of Photogrammetry

FIELD REPORT

SURVEY NO. T - 8617

1. DESCRIPTION OF THE AREA:

T-8617 is one of six topographic surveys in Project No. 317, located on the Alaska Peninsula. The instructions for this project are dated 29 February 1944 (Supplemental), and 18 March 1944 (Supplemental). Instructions to the compilation office are dated 27 February 1945, 21 August 1946 (Supplemental), 30 December 1946 (Memo Instructions), and 31 January 1947 (Supplemental). Instructions Filed in Office Files of the Div. of Photogrammetry and are Supplemental to project CS 279.

This survey includes the area on the Alaska Peninsula from Cape Providence west to Nakalilok Bay. With the exception of small sand beaches at the heads of narrow bights between cliffs, and a long flat sand beach at the head of Nakalilok Bay, much of the shoreline is steep and rocky. The heads of Chiginagak and Nakalilok Bays have large, sandy, flat, delta areas at the mouths of the rivers. The interior is mountainous and devoid of trees. The only vegetation consists of moss, grass, and low alder brush.

2. COMPLETENESS OF FIELD INSPECTION:

It was impossible to carry out completely the instructions for field inspection because favorable weather conditions were limited. The large low, flat, delta areas at the heads of Chiginagak and Nakalilok Bays are changeable with very indefinite high and low water detail. Landings were made at each of these places and it was found impossible to make definite notes as the area had actually changed since the photos were made. This sand is very light and shifts continually with the storms. However, portions of the mean high-water and mean low-water line were approximated at the head of Chiginagak Bay and nearly all of the mean high-water line from southern Cape Kuyuyukak west to the head of Nakalilok Bay was delineated on the field photographs. A careful study of the photographs under the stereoscope will reveal the shoreline details not noted on the field photographs.

Only a few of the hundreds of rocks in the area have been noted. Detailed notes on the character, formation, and heights of these rocks and reefs will have to be made when the hydrographic survey is executed.

3. INTERPRETATION OF THE PHOTOGRAPHS:

No comment.

4. HORIZONTAL CONTROL:

Eight new horizontal control stations were established within the area. The following is a tabulated list of information concerning them:

STATION	PRICKED ON PHOTO. NO.	SKETCH	STEREOSCOPE USED
CASCADE, 1944	06121	Yes	Yes
CHIG, 1944	06132	Yes	Yes
NAKOLILOK EAST BASE, 1944	06121	Yes	Yes
FOUL, 1944	06132	Yes	Yes
NAKOL, 1944	06121	Yes	Yes
NAKOLILOK WEST BASE, 1944	No	No	No
SLIDE, 1944	06134	Yes	No *
YUYU, 1944	06135	Yes	?

* See note on card

5. VERTICAL CONTROL:

All of the horizontal control stations except SLIDE are also vertical control stations. The elevations of NAKOLILOK EAST BASE and NAKOLILOK WEST BASE* were determined by spirit leveling. The elevations of CASCADE, FOUL, NAKOL, AND YUYU were determined by reciprocal vertical angles. The elevation of CHIG was determined by non-reciprocal vertical angles.

* This station was used only as vertical control.

6. DRAINAGE:

No identification.

7. MEAN HIGH WATER LINE:

Refer to "Report of Field Inspection on Air Photographs - Alaska Peninsula - Wide Bay to Cape Kunmik, 1944", submitted by Lt. Comdr. S.B. Grenell. Refer to Seasons Report Filed in General Files of the Div. of Photogrammetry.

8. MEAN LOWER LOW WATER LINE:

No identification. An approximate position of the MLWL at the head of Chiginagak Bay was identified.

9. WHARVES AND SHORELINE STRUCTURES:

None

MLLWL

10. DETAILS OFFSHORE FROM MEAN HIGH WATER LINE:

Notes on details offshore from the MHWL have been made as complete as time permitted but only a few of the many rocks in the area have been noted. Detailed notes which have been omitted will have to be made at the time of the hydrographic survey.

11. LANDMARKS AND AIDS TO NAVIGATION:

None.

12. HYDROGRAPHIC CONTROL:

No temporary signal sites were identified.

18. GEOGRAPHIC NAMES: 814 ✓

No investigation.

19. SUPPLEMENTAL DATA:

Five reconnaissance sheets without projections were made up by tracing shoreline directly from the photographs and adjusting this shoreline by aligning the centers of the photographs only. This gave fairly good detail on an approximate scale of 1:20,000 for running reconnaissance sounding lines, using rocks, reefs, and tangents for fixes. On these sheets numerous rocks and reefs were located or noted, and other notes as to low water line, etc., were added. These sheets will be forwarded to Washington and should be referred to by the compiler when the airphoto compilations are executed.

(Field report written in the compilation office from information submitted by the field party).

Florence M. Senasack
Photogrammetric Aid

COMPILATION REPORT

MAP MANUSCRIPT * SURVEY NO. T-8617

26. CONTROL:

See radial plot report for layout of control in this area.

Radial Plot Report filed in General Files of the Div. of Photogrammetry.

The radial plot for six sheets in this project was run in May 1946, at which time only the preliminary geographic positions for the horizontal control stations were available. On 17 February 1947 the adjusted geographic positions for this horizontal control was received in the compilation office.

Computations have been made which determined the change in the polyconic projections with respect to the corrected geographic position. The projection lines should be redrawn with the meridional arcs moved 0.60mm to the east and the arcs of the parallel moved 1.06 mm to the north. (Computation sheet is attached to this report).

The final adjusted datum is on T-8617 by ticks drawn with red ink at four minute intervals on the arcs of parallel and two minute intervals on the meridional arcs. This is in accordance with instructions contained in a letter from the Chief, Division of Photogrammetry, No. 711-RCR, dated 25 February, 1947.

27. RADIAL PLOT:

See report for combined radial plot covering the areas of T-8614 to T-8619, inclusive, submitted to the Washington Office, 3 December 1946.

Radial Plot Report filed in General Files of the Div. of Photogrammetry

28. DELINEATION:

The compilation is in accordance with the written instructions pertaining to Project No. CS-317.

Seven rectified photographs were furnished for this survey and were used for delineation wherever practicable.

A reconnaissance survey was supplied by the field party which was used to supplement data for offshore details. (See side heading No. 19 of this report).

The density of field inspection furnished for T-8617 was above the average in the area.

For clarification, the compilation office considered it advisable to include all of the mean high-water line along the western shore of Nakalilok Bay on Survey No. T-8618 and to completely delineate the shoreline of

28. DELINEATION: (cont'd)

Port Wrangell on Survey No. T-8616. Consequently, these areas have not been delineated within the limits of T-8617. The southern tip of Cape Kuyuyukak and as much of the offshore details as possible was completed beyond the southern limits of the survey.

Contouring phase:

This is one of six surveys contoured with the Reading Stereocartograph in the Washington Office and inked in the Baltimore Compilation Office in accordance with the letter 711-RCR dated 30 December 1946 attached to the descriptive report for T-8616. The topography is believed to conform to the standard map accuracy specifications for 200-foot contours. About one-third of the sheet in the northeast corner is believed to conform to standard accuracy for 100-foot contours, but no differentiation is indicated on the map. See also descriptive report for T-8616.

29. SUPPLEMENTAL DATA:

See side heading No. 19 of this report.

30. MEAN HIGH WATER LINE:

Nearly half of the mean high water line was field inspected.

In areas not inspected the mean high water line was delineated after stereoscopic examination of the photographs.

A small portion of the M. H. ^{W.}L. at the head of Chiginagak Bay was shown only approximately because of heavy gravel and boulder wash.

Also shown approximately is a small portion of the M.H.^{W.}L. at Longitude 156° 39' 50" because of dark shadows and relief displacement on the photographs.

31. MEAN LOWER LOW WATER LINE:

None shown.

31A. SHOAL AND REEF LINES:

Shoal and reef lines visible on the photographs have been delineated.

32. DETAILS OFFSHORE FROM THE MEAN HIGH WATER LINE:

The approximate outline of several kelp areas was taken from the reconnaissance survey furnished by the field survey.

33. WHARVES AND SHORELINE STRUCTURES:

None.

18 Recov. Topo. Stations: 524 cards Filed in Div. of
Photogrammetry General Files

✓ Fog, 1944

Rio

Paul

Bak

✓ Rep

✓ Per

Slide

Mis

✓ Low

✓ Con

✓ Nob

✓ Dago

High

✓ Bun

✓ File

✓ Sat

✓ Fal

✓ Bing

34. LANDMARKS AND AIDS TO NAVIGATION:

None.

35. HYDROGRAPHIC CONTROL:

Fourteen hydrographic signal sites have been selected in this office. A list of their descriptions is attached to this report. *see opposite page for Rec. Tupa Stations*

37. GEOGRAPHIC NAMES: *814*

The following geographic names that are shown on T-8617 have been taken from nautical charts Nos. 8502 and 8551:

Cape Kuyuyukak - Chiginagak Bay
Cape Providence - Nakalilok Bay
Logan Reef

38. JUNCTIONS:

Junctions with T-8616 to the east, T-8618 to the west, and T-8619 to the south have been made and are in agreement. The junction with T-8615 to the north is an undelinated interior area.

44. COMPARISON WITH EXISTING TOPOGRAPHIC SURVEYS:

No comparison with the United States Geological Survey topographic map of Kanatak District, Alaska Peninsula, scale 1:250,000 published in 1935 was made because the area common to both maps is unsurveyed on the Geological Survey map.

45. COMPARISON WITH NAUTICAL CHARTS:

No comparison with the United States Coast and Geodetic Survey Chart No. 8502, scale 1:1,000,000 published August 1944 was made because of the great difference in scale.

Comparison was made with Port Wrangell and Chiginagak Bay section of Chart No. 8851, scale 1:80,000, published June 1945.

Details common to the Chart section and the Map are in agreement.

The following topographic information shown on T-8617 is of sufficient importance to warrant immediate application to the chart:

None.

The following topographic details above the plane of mean high water are not shown on this manuscript, but are believed to still exist and should be carried forward on the chart:

None.

45. COMPARISON WITH NAUTICAL CHARTS: (cont'd)

Low water features and kelp areas are shown in part and will be completed by the hydrographic party.

Respectfully submitted:
12 March 1947

Florence M. Smasack
Photogrammetric Aid
Compilation and Descriptive
Report

H. R. Rudolph
Supervisor

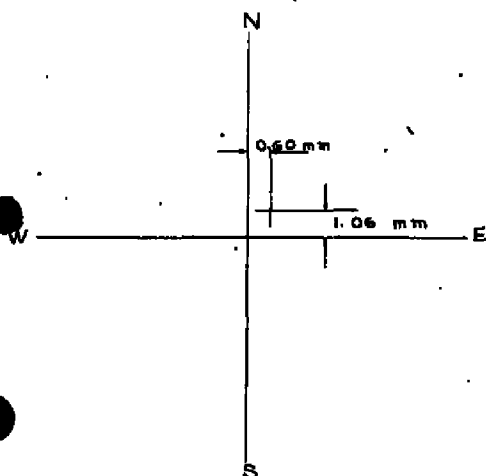
Joseph W. Wonsick
Photogrammetric Engineer
Photogrammetric Office Reviewer

Approved and Forwarded
Date: 24 March 1947

Thos O. Baird
Officer-in-Charge,
Baltimore Photogrammetric Office

COMPUTATIONS SHOWING ADJUSTMENT
REQUIRED TO CORRECT PROJECTION
LINES TO N.A. 1927 ADJUSTED DATUM
FOR SURVEY NO. T-8617

Station	Forward Lash Old Position Meters	Forward Lash New Position Meters	Difference in Meters
✓ CASCADE, 1944	64.4 573.7	43.2 586.0	- 21.2 + 12.3
✓ CHIG, 1944	1345.6 63.2	1324.5 76.1	- 21.1 + 12.9
✓ FOUL 1944	1268.8 87.5	1248.1 100.0	- 20.7 + 12.5
✓ NAKOL 1944	147.1 859.7	125.8 872.0	- 21.3 + 12.3
NAKOLILOK E. Base, 1944	161.4 362.1	140.2 374.6	- 21.2 + 12.5
NAKOLILOK, W. Base, 1944	983.3 916.3	962.0 928.6	- 21.3 + 12.3
✓ YUYU 1944	1025.3 284.2	1004.2 296.4	- 21.1 + 12.2



Average ϕ = 21.129 meters
1.06 millimeters

Average λ = 12.430 meters
0.60 millimeters

Computed by: Mr R. Rudolph
Checked by: J. W. Vonasek

NOTES
FOR
HYDROGRAPHIC PARTIES
ALASKA PENINSULA

MAP MANUSCRIPT, SURVEY NO. T-8617

PROJECT No. CS-317

The $2\frac{1}{2}$ millimeter circles, accompanied with a name and date, are the positions of the recoverable photo (topographic) stations. The $1\frac{1}{2}$ millimeter circles, accompanied with a number only, are the positions of the hydrographic signal sites. Two copies of the list of descriptions of the signal sites have been furnished for your use.

The outline of the shoal and reef areas are approximate and are for your advance information only.

No comparison with United States Coast and Geodetic Survey Chart No. 8502, scale 1:1,000,000 published August 1944 was made because of the great difference in scale.

Comparison was made with Port Wrangell and Chiginagak Bay section of Chart No. 8851, scale 1:80,000, published June 1945.

Details common to the Chart section and the Map are in agreement.

The following topographic information shown on T-8617 is of sufficient importance to warrant immediate application to the chart:

None.

The following topographic details above the plane of mean high water are not shown on this manuscript but are believed to still exist and should be carried forward on the chart:

None.

Low water features and kelp areas are shown in part and will be completed by the hydrographic party.

Respectfully submitted
12 March 1947

Flurence M. Senasack
Photogrammetric Aid

Approved and Forwarded
24 March 1947

Thos B. Baird
Officer-in-Charge,
Baltimore Photogrammetric Office

LIST OF HYDROGRAPHIC SIGNAL SITES

Site No.	Description	Field Photo. No.
15	Point on bluff	06121
16	High point of rocky islet	06121
17	Rocky high Point	06135
18	High point of rock on hill	06135
19	Small Column	06135
20	Prominent rock	06135
21	High point of ledge	06135
22	Pinnacle Prominent column, approximate height 65'	06135
23	Top of 15' rock islet	06133
24	High point of rock	06133
25	Projection on bluff	06133
26	High point of rock	06131
27	Point of wedge-shaped cliff with grassy knob on top	06131
31	Low rock, awash at H. W.	06131

Listed by Florence M. Senasack
Photogrammetric Aid

Checked by Joseph W. Vonack
Photogrammetric Engineer

GEOGRAPHIC NAMES

Survey No.

T-8617

Name on Survey

	A	B	C	D	E	F	G	H	K	
✓ <u>Alaska</u>										1
✓ <u>Alaska Peninsula</u>									USGB	2
✓ <u>Cape Providence</u>										3
✓ <u>Chiginagak Bay</u>										4
✓ <u>Logan Reef</u>										5
✓ <u>Derickson Island</u>			(largest island in Chiginagak Bay)							6
✓ <u>Cape Kuyuyukak</u>										7
<u>Nakalilik Bay</u>										8
										9
										10
										11
					Names underlined in red are approved. 12/28/48 L. Heck					12
										13
										14
										15
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										27

Division of Photogrammetry
Review Report of
Topographic Map Manuscript T-8617

Subject numbers not used in this report have been adequately covered in other parts of the Descriptive Report.

26. Control.-Horizontal control data form No. H-2383-12 listing all triangulation stations, within the limits of the map, on the H.A. 1927 adjusted datum is attached to the descriptive report. The form supplements the previous listing on the Preliminary H.A. 1927 datum.

No position was determined for the monumented triangulation station, Slide 1944, by the triangulation party because only one direction was observed. A complete description, and 4th order position for Slide, determined by radial plot methods has been submitted on form 524.

Triangulation stations, Yuyu 1944 and Makol 1944 were not held in the radial plot. An examination of the photographs, indicates the field identification to have been impracticable by direct pricking, and it is presumed that the field identification was faulty.

Both the geodetic and the radially plotted positions for the questionable stations are being retained on the map manuscript, as an aid for future completion surveys.

28. Detailing.-The final review corrections and changes were made on the map manuscript to insure completeness and conformance with specifications.

The delineation of shoreline was carefully examined and compared with both the office and field inspection photographs. Even though the field inspection of the H.U.M.L. was very meager, the character of the steep rocky bluff shoreline and steep sandy beaches rigidly fix the line within very narrow limits; the same cannot be said of shoreline hidden by shadows, the limits of shallow areas, ledge lines and all other details offshore from the high-water line. Such features are subject to change by the hydrographic party. The delineation of offshore features was based on the interpretation of the office compiler, and shown only as an aid to the hydrographer.

The contours were examined and compared with the photographs by stereoscopic methods. Incomplete contours in several small areas were sketched, using a stereoscope. All sketched contours have been shown on the map manuscript by the appropriate symbol.

37. Geographic Names.--All Geographic Names shown on the map manuscript have been approved by the Geographic Names Section of the Division of Charts. Attached to the Descriptive Report is a list of approved geographic names.

Attention is called to the names of triangulation stations Nakolilok East Base and Nakolilok West Base which are not in agreement with the spelling for the geographic location, Nakalilok Bay.

44. Comparison with Existing Topographic Surveys.--There are no common areas with previously existing surveys.

47. Adequacy of Compilation.--In examination of map manuscript T-3617 indicates it to be complete in all details as a base map for nautical charts and hydrographic surveys. From the U.S.N.L. inland, all delineated details are adequate for incorporating into standard quadrangle maps, of publication scale recommended not to be larger than 1:24,000 and the contour interval not to be less than 200 feet, except for the first 100 ft. contour.

48. Accuracy Tests:

Horizontal

No horizontal accuracy test was made. The combination of adequate nine-lens photographic coverage, nine-lens radial plot methods and adequate horizontal control, insures a horizontal accuracy equal to or better than National Map Accuracy Standards.

Vertical

Vertical accuracy tests have not been made on this map, nor have similar areas, mapped by similar methods been previously tested.

A consultation with the instrument operators, indicates that contour errors have been minimized by the lack of woodland cover, and any discrepancies which occur are caused by datum errors in the nine-lens chamber junctions. Such errors have been minimized by the presence of tide water as a basis for datum corrections at chamber junctions.

51. Application to Nautical Charts.

T-8617 has been applied (partially) to chart 8851, prior to review.

Reviewed by:

Harland R. Cravat
Harland R. Cravat
December 28, 1948

Approved by:

S. V. Griffith
Chief, Review Section K.H.M.

H. C. McMaster
Chief, Nautical Chart Branch
Division of Charts

K.T. Adams
Chief, Div. of Photogrammetry

W.M. Scaife
Chief, Div. of Coastal Surveys

NAUTICAL CHARTS BRANCH

SURVEY NO. T 8617

Record of Application to Charts

[illegible]

M-216B-1

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.