**Form 504**

**U. S. DEPARTMENT OF COMMERCE**

**COAST AND GEODETIC SURVEY**

**DESCRIPTIVE REPORT**

**PH-6409**

**Type of Survey** SHORELINE (PHOTOMGRAMMETRIC)

**Field No.** Edition No. 1, Office No. T-12650

**LOCALITY**

**State** ALASKA

**General locality** ORCA INLET

**Locality** CORDOVA CREEK

**1964-1966**

**CHIEF OF PARTY**

CHIEF OF PARTY H. J. SEABORG

COMPILATION OFFICE P. A. STARK

**LIBRARY & ARCHIVES**

**DATE**
# DESCRIPTIVE REPORT - DATA RECORD

## PROJECT NO. (I) :
21423 (2) PH-6409

## FIELD OFFICE (II) :
SHIP PATHFINDER

## CHIEF OF PARTY :
H. J. SEABORG

## PHOTOGRAMMETRIC OFFICE (III) :
Portland, Oregon

## OFFICER-IN-CHARGE :
P. A. STARK

## INSTRUCTIONS DATED (II) (III) :
December 7, 1964

## METHOD OF COMPILATION (III) :
KELSH INSTRUMENT

## ANUSCRIPT SCALE (III) :
1:10,000

## STEREOSCOPIC PLOTTING INSTRUMENT SCALE (III) :
1:8,000

## PANTOGRAPH SCALE :
1:10,000

## DATE RECEIVED IN WASHINGTON OFFICE (IV) :
May 1977

## DATE REPORTED TO NAUTICAL CHART BRANCH (IV) :

## DATE REGISTERED (IV) :
AUG. 1977

## GEOGRAPHIC DATUM (III) :
N.A. 1927

## VERTICAL DATUM (III) :
MHD

MEAN SEA LEVEL, EXCEPT AS FOLLOWS:
- Elevations shown as (25) refer to mean high water
- Elevations shown as (5) refer to sounding datum
  i.e., mean low water or mean lower low water

## REFERENCE STATION (III) :
SLIDE, 1964

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<th>LONG.</th>
<th>ADJUSTED</th>
<th>UNADJUSTED</th>
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<tr>
<td>60° 39' 29.010&quot;</td>
<td>145° 36' 35.374&quot;</td>
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## PLANE COORDINATES (IV) :

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<th>Y</th>
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<tr>
<td>570,001.5 FT.</td>
<td>2,432,661.9 FT.</td>
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<table>
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<tbody>
<tr>
<td>ALASKA</td>
<td>3</td>
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Roman numerals indicate whether the item is to be entered by (II) FIELD PARTY, (III) PHOTOGRAMMETRIC OFFICE, or (IV) WASHINGTON OFFICE. When entering names of personnel on this record give the surname and initials, not initials only.
Form C&GS-187b  
(12-61)

DESCRIPTIVE REPORT - DATA RECORD

FIELD INSPECTION BY (II):  
None

DATE:

MEAN HIGH WATER LOCATION (III) (STATE DATE AND METHOD OF LOCATION):

**KELSH INSTRUMENT**

PROJECT AND GRIDS RULED BY (IV):

A. E. Roundtree

DATE: 11-24-64

PROJECT AND GRIDS CHECKED BY (IV):

P. Hawkins

DATE

CONTROL PLOTTED BY (III):

W. Masula

DATE: 12-14-64

CONTROL CHECKED BY (III):

R. H. Meyer

DATE: 12-14-64

RADIAL PLOT OR STEREOSCOPIC CONTROL EXTENSION BY (III):

W. Heinbaugh

DATE: 11-18-64

STEREOSCOPIC INSTRUMENT COMPILATION (III):  
PLANIMETRY

D. N. Williams

DATE: 12-22-64

CONTOURS

DATE

MANUSCRIPT DELINEATED BY (III):

DATE

DRAFTED FOR HYDRO SUPPORT:

D. N. Williams

DATE: 12-24-64

SCIBING BY (III):

W. Place

DATE: Nov. 1966

PHOTOGRAMMETRIC OFFICE REVIEW BY (III):

R. H. Meyer

DATE: 1-10-65

REMARKS:

Field Edit  

Sept. 1965 and May 1966
# DESCRIPTIVE REPORT - DATA RECORD

**Camera (Kind or Source) (III):**

C&GS Single Lens "S"

## PHOTOGRAPHS (III)

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<th>DATE</th>
<th>TIME</th>
<th>SCALE</th>
<th>STAGE OF TIDE</th>
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<tr>
<td>64 S 6909 AND</td>
<td>8-25-64</td>
<td>1005</td>
<td>1:30,000</td>
<td>4 FT ABOVE M.L.L.W.</td>
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<td>64 S 6910</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>64 S 6897 AND</td>
<td>&quot;</td>
<td>0955</td>
<td>&quot;</td>
<td>4 FT &quot; &quot;</td>
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<tr>
<td>64 S 6898</td>
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<tr>
<td>64 S 6951 THRU</td>
<td>&quot;</td>
<td>1035</td>
<td>1:15,000</td>
<td>5.4 FT &quot; &quot;</td>
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<tr>
<td>64 S 6954</td>
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## TIDE (III)

**Reference Station:** Cordova, Alaska

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<tr>
<th>Reference Station</th>
<th>Ratio of Ranges</th>
<th>Mean Range</th>
<th>Secondary Range</th>
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<tbody>
<tr>
<td>Cordova, Alaska</td>
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<td>10.0 FT</td>
<td>12.4 FT</td>
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**Subordinate Station:** Corca

<table>
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<th>Mean Range</th>
<th>Secondary Range</th>
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</thead>
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<tr>
<td>Corca</td>
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<td>9.9 FT</td>
<td>12.4 FT</td>
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**Washington Office Review By (IV):**

Leo F. Bump, Atlantic Marine Center

**Proof Edit By (IV):**

J.B. Phillips, Rockville, Md.

**DATE:** May 1967

**Date:** June 1977

**Number of Triangulation Stations Searched for (III):**

**Recovered:**

**Identified:**

**Number of BMs (S) Searched for (III):**

**Recovered:**

**Identified:**

**Number of Recoverable Photo Stations Established (III):**

None

**Number of Temporary Photo Hydro Stations Established (III):**

None

**Remarks:**

USCOM-DC 16376C-PS1
<table>
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<th>Completion Date</th>
<th>Remarks</th>
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<td>Alongshore area for hydro</td>
<td>Dec. 1964</td>
<td>Superseded</td>
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<tr>
<td>Field Edit applied: subject to further verification</td>
<td>Nov. 1965</td>
<td>Superseded</td>
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<td>Second Field Edit applied</td>
<td>May 1966</td>
<td></td>
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<tr>
<td>Final Review</td>
<td>May 1967</td>
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SUMMARY TO ACCOMPANY
DESCRIPTIVE REPORT T-12650

Shoreline survey T-12650 is one of fifteen similar surveys in project PH-6409. It covers a part of the shoreline of the upper reaches of Nelson Bay. The primary purpose of the survey was to provide new shoreline for nautical charts and photo-hydro support data for hydrographic surveys to be made in the same area.

Field work preceding compilation, by Kelsh Instrument methods, consisted of recovery and identification of horizontal control. There was no field inspection prior to compilation.

Compilation was at 1:10,000 scale using the panchromatic photography of August 25, 1964. A cronaflex copy of the manuscript along with specially prepared ratio photographs were furnished for preparation of the hydrographers boatsheet, location of hydrographic signals and for field edit purposes.

The manuscript is a vinylite sheet 3 minutes 45 seconds in latitude by 5 minutes 00 seconds in longitude which was scribed and reproduced on cronaflex. One cronar positive and one cronar negative are provided for record and registry.
FIELD INSPECTION REPORT

MAP MANUSCRIPT T-12650

PROJECT 21423 (2)

None submitted. There was no field inspection before compilation.
<table>
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<tr>
<th>STATION</th>
<th>SOURCE OF INFORMATION (INDEX)</th>
<th>DATUM</th>
<th>LATITUDE OR Y COORDINATE LONGITUDE OR X COORDINATE</th>
<th>DISTANCE FROM GRID OR PROJECTION LINE IN METERS (1 m = 39.3701 inches)</th>
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<td>N.A.</td>
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<td>1927</td>
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<td>ORCA BAY, WEST BASE, 1909</td>
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<td>TENT, 1909</td>
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<tr>
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<td>570,001.5</td>
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</table>

COMPUTED BY C.H.B. DATE 12-14-64 CHECKED BY W.M. DATE 12-14-64
Aerotriangulation Report  
Project 21423  
Orca Inlet, Alaska

21. Area Covered
The area covered by this report on aerotriangulation bridging encompasses the shoreline of Orca Inlet, Alaska (T-12648 through T-12652 and the northeast portion of T-12653).

22. Method
Three strips of photography (64S 6892-98), (64S 6787-92) and (64S 6909-15) were bridged on the stereoplanigraph and were adjusted by IRM 1620 methods.

Plotting coordinates are furnished at 1:5,000 scale for T-12804, T-12805 and T-12806 and at 1:10,000 scale for T-12548 through T-12653.

Positions of tie points were meaned when necessary.

23. Adequacy of Control
Horizontal control provided was adequate as to location and quality to control the bridges within the limits of accuracy required by National Map Accuracy Standards. However, a portion of the shoreline of T-12653 cannot be compiled since control station, Travel 2, could not be held. Each attempt to use Travel 2 as the terminal point (Strip 3) resulted in large residuals for other control stations in that bridge. An adjustment of the bridge, with Orca Bay, South Bldg., West Gable (1955) as the terminal station, was made and the resulting foreshortened bridge held satisfactorily. No explanation of the failure of station Travel 2 to hold is apparent. The station should be re-identified to provide control for that portion of the shoreline.

24. Supplemental Data
USGS quadrangles Cordova, Alaska (B-5, B-6, C-5 and C-6) scale 1:63,360, 1953 edition were used to provide vertical control where needed.

25. Photography
Photography was adequate as to coverage, overlap and definition.

Approved by:  
John D. Ferron, Jr.  
Submitted by:  
W. Heinbaugh
31. **DELINEATION:**

   Planimetry was compiled by Kelsh Instrument from office interpretation of the photography.

32. **CONTROL:**

   Adequate supplemental control, based on field identified horizontal control, was established by aerotriangulation.

33. **SUPPLEMENTAL DATA:**

   None

34. **CONTOURS AND DRAINAGE:**

   Contours not applicable.

   Drainage was compiled by the Kelsh Operator using the U.S.G.S. quadrangle as a guide.

35. **SHORELINE AND ALONGSHORE DETAILS:**

   Shoreline and alongshore details were delineated from office interpretation of the photographs as no field inspection was available.

36. **OFFSHORE DETAILS:**

   None

37. **LANDMARKS AND AIDS:**

   None

38. **CONTROL FOR FUTURE SURVEYS:**

   None
39. JUNCTIONS:

Satisfactory junctions were made with T-12649 on the west and with 1:5,000 scale overlapping survey T-12804. There are no contemporary surveys to the north, east or south.

40. HORIZONTAL AND VERTICAL ACCURACY:

46. COMPARISON WITH EXISTING MAPS:

Comparison was made with U.S.G.S. 15 minute, CORDOVA (C-5) ALASKA quadrangle, scale 1:63,360 edition of 1951.

47. COMPARISON WITH NAUTICAL CHARTS:

Comparison was made with the following Nautical Charts:

- 8525, scale 1:30,000    July 27, 1964
- 8520, scale 1:80,000    July 20, 1964
- 8551, scale 1:200,000   April 15, 1963

Items to be applied to nautical charts immediately:

None

Items to be carried forward:

None

Approved:  Submitted:

[Signature]

P. A. Stark, CDR, C&GS  Donnel N. Williams
Portland Field Officer  Cartographer
48. **Geographic Name List:**

The approved geographic names listed below were furnished by the Washington Office on U.S.S.S. Cordova (C-5) Alaska 15 minute quadrangle, scale 1:63,360, edition 1951.

- Robinson Creek
- Snyder Falls Creek

*Nelson Bay*

*From Nautical Chart 8525*
49. **Notes to the Hydrographer:**

    None.
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<tr>
<th>1. PROJECTION AND GRIDS</th>
<th>2. TITLE</th>
<th>3. MANUSCRIPT NUMBERS</th>
<th>4. MANUSCRIPT SIZE</th>
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<tr>
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**CONTROL STATIONS**

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<th>5. HORIZONTAL CONTROL STATIONS OF THIRD ORDER OR HIGHER ACCURACY</th>
<th>6. RECOVERABLE HORIZONTAL STATIONS OF LESS THAN THIRD-ORDER ACCURACY (Topographic stations)</th>
<th>7. PHOTO HYDRO STATIONS</th>
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**BENCHMARKS**

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<th>8. BENCHMARKS</th>
<th>9. PLOTTING OF SEXTANT FIXES</th>
<th>10. PHOTOGRAMMETRIC PLOT REPORT</th>
<th>11. DETAIL POINTS</th>
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**ACTIONS AREAS (Nautical Chart Data)**

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<th>12. SHORELINE</th>
<th>13. LOW-WATER LINE</th>
<th>14. ROCKS, SHOALS, ETC.</th>
<th>15. BRIDGES</th>
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**PHYSICAL FEATURES**

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<th>16. AIDS TO NAVIGATION</th>
<th>17. LANDMARKS</th>
<th>18. OTHER ALONGSHORE PHYSICAL FEATURES</th>
<th>19. OTHER ALONGSHORE CULTURAL FEATURES</th>
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<tbody>
<tr>
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**WATER FEATURES**

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<th>20. WATER FEATURES</th>
<th>21. NATURAL GROUND COVER</th>
<th>22. PLANETABLE CONTOURS</th>
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**STEREOSCOPIC INSTRUMENT CONTOURS**

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<th>23. STEREOSCOPIC INSTRUMENT CONTOURS</th>
<th>24. CONTOURS IN GENERAL</th>
<th>25. SPOT ELEVATIONS</th>
<th>26. OTHER PHYSICAL FEATURES</th>
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**CULTURAL FEATURES**

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<th>27. ROADS</th>
<th>28. BUILDINGS</th>
<th>29. RAILROADS</th>
<th>30. OTHER CULTURAL FEATURES</th>
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**BOUNDARIES**

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**MISCELLANEOUS**

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<th>33. GEOGRAPHIC NAMES</th>
<th>34. JUNCTIONS</th>
<th>35. LEGIBILITY OF THE MANUSCRIPT</th>
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<tbody>
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**DISCREPANCY OVERLAY**

<table>
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<tr>
<th>36. DISCREPANCY OVERLAY</th>
<th>37. DESCRIPTIVE REPORT</th>
<th>38. FIELD INSPECTION PHOTOGRAPHS</th>
<th>39. FORMS</th>
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<tr>
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**REVIEWER**

Richard H. Meyer
Leo F. Beugnet

**REMARKS (See attached sheet)**

**FIELD COMPLETION ADDITIONS AND CORRECTIONS TO THE MANUSCRIPT**

42. Additions and corrections furnished by the field completion survey have been applied to the manuscript. The manuscript is now complete except as noted under item 43.

**COMPILER**

K. Boyle

**SUPERVISOR**

Albert C. Rauck Jr.

**REMARKS**

Reviewed C. Bishop

A.C. Rauck
Memorandum

TO: Chief, Photogrammetry Division

FROM: Commanding Officer
USCGS Ship HD-10

SUBJECT: Field Edit - Orea Inlet
Project 21423 (2) Job PH-6409

Photographs, manuscripts and ozalids for the above project are returned under separate cover. The required field edit has been accomplished and appropriate notes made on the photographs and ozalids. Upon re-compilation the advance manuscripts and photos should be returned to Seattle processing office for application of shoreline to smooth sheets and final signal location.

John B. Watkins, Jr.

cc: PACIFICEN
Sheet T-12606

Discrepancies as noted were verified in the field. See photo no. 64,86942, 1/5000. Please note the changes to the area about the small boat basin. A sketch has been made of the area as found in May 1966. Other changes are contemplated and it is recommended that a stereo triplet be obtained in mid-summer for updating. The NW line is shown in purple about the fill area as requested.

Sheet T-12609

Discrepancies as noted were verified in the field and appropriate notes made in purple on photo no. 64,86765, 1/10,000.

Sheet T-12652

Discrepancies as noted were verified in the field and appropriate notes made in purple on photo no. 64,86765, 64,86767, 64,86949, 1/10,000. Please note new NW line for western side of observation island.

Sheet T-12604

Discrepancies as noted were verified in the field. Applicable notes were made on the osaid.

Sheet T-12605

Discrepancies as noted were checked in the field. See also sheet T-12652.

Sheet T-12653

All discrepancies as noted were verified on photo nos. 64,87353, 64,8691, 64,87350, 1/10,000 and 64,86943, 1/5000. All shoreline verified is shown in purple on the photo.

In the area SW of station KQUD 2, 1964, photo no. 64,86941 considerable activity by the Corps of Engineers makes M&I verification impractical at this time. More recent photography is required. It is recommended that a stereo triplet be made of the area in mid-summer for final shoreline detail of this area.

On photo no. 64,86943, changes were made to shoreline from that shown in 1965 in red. These changes (1966) are shown in purple on the photo.
Sheet T-12648

All discrepancies as noted by the compiler were checked and appropriate notes made on the original with the exception of Simpson Bay. This area was not within the project limits.

Sheet T-12650

Discrepancies as noted were verified in the field. HML was inked in purple on photo no. 6456952 and 6456953, 1/10,000.

Sheet T-12651

Discrepancies as noted were verified in the field. All references are made to photo no. 6456784, 1/10,000. Notes with "LL" indicate a lead line sounding at the applicable time. Shoreline verification is shown in purple on the photo. Several rocks not noted on the discrepancy sheet were added and applicable notes made.
61. **GENERAL STATEMENT**

   See Summary accompanying Descriptive Report.

62. **COMPARISON WITH REGISTERED TOPOGRAPHIC SURVEYS**

   Comparison was made with Registered Survey No. 3649, 1:20,000 scale made in June-August 1916 on Valdez datum. The comparison of the two surveys has been shown on the comparison print in blue.

   Survey T-12650 supersedes the older survey for nautical chart construction.

63. **COMPARISON WITH MAPS OF OTHER AGENCIES**

   Comparison was made with U.S.G.S. CORDOVA (C-5) ALASKA, 15 minute quadrangle, 1:63,360 scale edition of 1951 with minor revisions made in 1962. Because of the difference in scale of the two surveys only a visual comparison was made. The two surveys are in good general agreement.

64. **COMPARISON WITH CONTEMPORARY HYDROGRAPHIC SURVEYS**

   Comparison was made with a copy of boatsheet H-8854, HO-20-1-65. The mean-high-water line of the boatsheet and the Advance Manuscript are not in agreement, particularly along the southeast shore.

   A rock at approximate latitude 60° 39' 30" longitude 115° 39' 15" is not shown on the boatsheet.

65. **COMPARISON WITH NAUTICAL CHARTS**

   Comparison was made with Nautical Chart 8520, 1:80,000 scale, 13th edition, March 7, 1966. There are no outstanding differences between the chart and this survey.

66. **ADEQUACY OF RESULTS AND FUTURE SURVEYS**

   This survey complies with instructions and meets the National Standards of Map Accuracy.