U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT
PH-6409

Type of Survey SHORELINE (PHOTOGRAMMETRIC)

FIELD No. Edition No. 1 Office No. T-12653

LOCALITY

State ALASKA
General locality ORCA INLET
Locality CORDOVA

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. (iii):**

21423 (2)  PH-6409

**Field Office (iii):**

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

**Manuscript Scale (iii):**

1:10,000

**Stereoscopic Plotting Instrument Scale (iii):**

1:6,000

**Pantograph Scale:**

1:10,000

**Date Received in Washington Office (iv):**

May 1977

**Date Reported to Nautical Chart Branch (iv):**

AUG 1977

**Applied to Chart No.:**


**Geographic Datum (iii):**

N.A. 1927

**Vertical Datum (iii):**

NAVD

Mean Sea Level Except as Follows:

Elevations shown as (5) refer to mean high water
Elevations shown as (8) refer to sounding datum
i.e., mean low water or mean lower low water

**Reference Station (iii):**

TOWN 1933

**Latitude:**

60° 33' 01.406"

**Longitude:**

145° 45' 28.633"

**Adjusted:**

X

**State:**

Alaska

**Zone:**

3

**Plane Coordinates (iv):**

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<th>X</th>
<th>State</th>
<th>Zone</th>
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<tbody>
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<td>543,570.75 FT</td>
<td>Alaska</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.
### DESCRIPTIVE REPORT - DATA RECORD

**FIELD INSPECTION BY (II):**

| None | DATE: |

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

| KELSH INSTRUMENT - AUGUST 25, 1964 |

**PROJECTION AND GRIDS RULED BY (IV):**

| A. E. Roundtree | DATE 11-25-64 |

**PROJECTION AND GRIDS CHECKED BY (IV):**

| P. Hawkins |

**CONTROL PLOTTED BY (III):**

| W. Masula | DATE 12-15-64 |

**CONTROL CHECKED BY (III):**

| R. H. Meyer | DATE 12-15-64 |

**RADIAL PLOT OR STEREOSCOPIC CONTROL EXTENSION BY (III):**

| W. Heinbaugh | DATE 11-18-64 |

**STEREOSCOPIC INSTRUMENT COMPILATION (III):**

| PLANIMETRY | DATE 1-6-65 |
| CONTOURS | NONE |

**MANUSCRIPT DELINEATED BY (III):**

| C. C. Harris | DATE 1-19-65 |

**SCRIBING BY (III):**

| A. Stahls | DATE Dec. 1966 |

**PHOTOGRAHMATIC OFFICE REVIEW BY (III):**

| D. N. Williams | DATE 1-21-65 |

**REMARKS:**

| Field Edit | Sept. 1965 and May 1966 |
**DESCRIPTIVE REPORT - DATA RECORD**

**CAMERA (KIND OR SOURCE) (III):**

C&GS SINGLE LENS "G"

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<td>8-25-64</td>
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<td>3.8 FT ABOVE M.L.W.</td>
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**TIDE (III):**

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**DIURNAL:**

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**WASHINGTON OFFICE REVIEW BY (IV):**

Leo F. Bepagel, Atlantic Marine Center

**DATE:** May 1967

**PROOF EDIT BY (IV):**

J. B. Phillips, Rockville, Md

**DATE:** June 1977

**NUMBER OF TRIANGULATION STATIONS SEARCHED FOR (II):**

RECOVERED: 2

IDENTIFIED: 2

**NUMBER OF BM(S) SEARCHED FOR (II):**

RECOVERED: IDENTIFIED

**NUMBER OF RECOVERABLE PHOTO STATIONS ESTABLISHED (III):**

NONE

**NUMBER OF TEMPORARY PHOTO HYDRO STATIONS ESTABLISHED (III):**

NONE

**REMARKS:**
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<th>Completion Date</th>
<th>Remarks</th>
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<td>Second Field Edit applied</td>
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JOB PH-6409
ORCA INLET
ALASKA

Shoreline Mapping

SCALE, 1:5,000, 1:10,000 & 1:20,000
SUMMARY TO ACCOMPANY
DESCRIPTIVE REPORT T-12653

Shoreline survey T-12653 is one of fifteen similar surveys in project PH-6409. It covers a part of the shoreline of Orca Inlet in the vicinity of Cordova, Alaska. 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 consisted of recovery and identification of horizontal control. There was no field inspection prior to compilation.

Compilation was by Kelsh Instrument, at 1:10,000 scale, using the panchromatic photography obtained August 25, 1964. The area around Cordova Harbor was later revised from photography of July 9, 1966.

The manuscript is a vinylite sheet 3 minutes 45 seconds in latitude by 7 minutes 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-12653

Project 21423 (2)

NONE SUBMITTED. THERE WAS NO FIELD INSPECTION BEFORE
COMPILATION.
<table>
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<th>SOURCE OF INFORMATION</th>
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<th>LATITUDE OR Y COORDINATE</th>
<th>LONGITUDE OR X COORDINATE</th>
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<td></td>
<td>60145</td>
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<td>544,073.8</td>
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</table>

COMPUTED BY C.H.B. DATE 12-15-64 CHECKED BY R.H.M. DATE 12-15-64
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 6906-15) were bridged on the stereoplanigraph and were adjusted by IBM 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-12648 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:  
Submitted by:

[Signatures]
Re-identification of Station Travel 2, 1964 provided means of extending Strip #1 to the southern limits of T-12653. A straight line adjustment was run from Cordova Jetty Lt. 1964 to Travel 2, 1964 with Across 1933 plus four tie points as checks.

Residuals plus ties indicate the bridge is good. However, if future work is planned to the south of T-12653 it is recommended that bridging extend to Cordova Jetty Lt. 1964 in order to obtain proof of the tie.

John D. Perrow, Jr.
COMPILATION REPORT
T-12653

31. **DELINEATION:**

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

32. **CONTROL:**

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

33. **SUPPLEMENTAL DATA:**

None

34. **CONTOURS AND DRAINAGE:**

Contours inapplicable.

The drainage was delineated by the Kelsh operator using the U.S.G.S. quadrangle as a guide.

35. **SHORELINE AND ALONGSHORE DETAILS:**

The mean high water line, mean lower low water line and all alongshore details were delineated from office interpretation of the photographs.

36. **OFFSHORE DETAILS:**

None

37. **LANDMARKS AND AIDS:**

Two fixed aids to navigation are reported on form 567.

One landmark, HOUSE, shown on Chart 8525 at latitude 60°35.5' longitude 145°44.9' was not visible on the photographs and is not shown on this survey.
38. **CONTROL FOR FUTURE SURVEYS:**

None

39. **JUNCTIONS:**

Satisfactory junctions were made with T-12651 and T-12652, L 1:10,000 scale manuscripts, on the north; T-12807, 1:20,000 scale manuscript on the west, and with T-12806 a 1:5,000 scale manuscript which lies within the limits of this manuscript. There are no contemporary surveys to the east and south.

40. **HORIZONTAL AND VERTICAL ACCURACY:**

46. **COMPARISON WITH EXISTING MAPS:**

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

47. **COMPARISON WITH NAUTICAL CHARTS:**

Comparison was made with the following nautical charts:

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

Items to be applied to nautical charts immediately:

None

Items to be carried forward:

None

Approved by:  

Submitted by:

[Signature]

P. A. Stark, CDR, C&GS  

Donnel N. Williams  

Portland Field Office  

Cartographer
48. **Geographic Name List:**

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

- Cordova
- Hawkins Island
- Mud Bay
- Odiak Slough
- Orca Inlet
- Spike Island
49. **Notes to the Hydrographer:**

None.
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<th>Item</th>
<th>Description</th>
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<tbody>
<tr>
<td>1.</td>
<td>Projection and grids</td>
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<td>2.</td>
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<td>3.</td>
<td>Manuscript numbers</td>
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<td>5.</td>
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<td>6.</td>
<td>Recoverable horizontal stations of less than third-order accuracy (Topographic stations)</td>
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<td>7.</td>
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<td>8.</td>
<td>Bench marks</td>
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<td>9.</td>
<td>Plotting of sextant fixes</td>
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<td>10.</td>
<td>Photogrammetric plot report</td>
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<td>11.</td>
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<td>12.</td>
<td>Shoreline</td>
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<td>13.</td>
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<td>14.</td>
<td>Rocks, shoals, etc.</td>
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<td>17.</td>
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<td>18.</td>
<td>Other alongshore physical features</td>
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<td>19.</td>
<td>Other alongshore cultural features</td>
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<td>20.</td>
<td>Water features</td>
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<td>21.</td>
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<td>Geographic names</td>
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<td>Legibility of the manuscript</td>
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<td>36.</td>
<td>Discrepancy overlay</td>
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<td>38.</td>
<td>Field inspection photographs</td>
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<td>Forms</td>
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<td>Reviewer</td>
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<td>41.</td>
<td>Remarks (See attached sheet)</td>
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**Photogrammetric Office Review**

**Donnel N. Williams**

**Leo F. Beugnet**

---

**Field Completion Additions and Corrections to the Manuscript**

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.

---

**Reviewed**

C. Bishop

**A. C. Rauck**
Memorandum

TO: Chief, Photogrammetry Division

FROM: Commanding Officer
USCGS Ship HODGSON

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

Photographs, manuscripts and envelopes for the above project are returned under separate cover. The required field edit has been accomplished and appropriate notes made on the photographs and envelopes. 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: PACIFIC
Sheet T-12656

Discrepancies as noted were verified in the field. See photo no. 64565742 1/5000. Please note the changes to the area about the small boat basin. To scale 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 MFL line is shown in purple about the fill area as requested.

Sheet T-12659

Discrepancies as noted were verified in the field and appropriate notes made in purple on photo no. 64565789 1/10,000.

Sheet T-12652

Discrepancies as noted were verified in the field and appropriate notes made in purple on photo no. 64565756, 64567577, 6456949, 1/10,000. Please note new MFL for western side of observation island.

Sheet T-12654

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

Sheet T-12655

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. 6437333, 6456571, 6457350, 1/10,000 and 6456943, 1/5000. All shoreline verified is shown in purple on the photos.

In the area SW of station NAUD 2, 1964, photo no. 64565791 considerable activity by the Corps of Engineers makes MFL 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. 6456943 changes were made to shoreline from that shown in 1965 in red. These changes (1966) are shown in purple on the photo.
All discrepancies as noted by the compiler were checked and appropriate notes made on the scale with the exception of Simpson Bay. This area was not within the project limits.

Sheet T-12648

Discrepancies as noted were verified in the field. MML was inked in purple on photo no. 6436952 and 6436953, 1/10,000.

Sheet T-12650

Discrepancies as noted were verified in the field. All references are made to photo no. 6436784, 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. 3648, 1:20,000 scale, made in 1916, Valdez datum. The comparison between the two surveys is shown on the comparison print.

Shoreline survey T-12653 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 quadrangle, 1:63,360 scale, edition of 1951 with minor revisions made in 1962. The two surveys are in good general agreement.

64. COMPARISON WITH CONTEMPORARY HYDROGRAPHIC SURVEYS

Comparison was made with copies of boatsheets H-3853, PF-10-1-64 and HO-05-0-65. The shoreline on neither boatsheet is in agreement with the advance manuscript. The source of the shoreline for HO-05-1-65 was probably obtained from an Incomplete Manuscript.

65. COMPARISON WITH NAUTICAL CHARTS

To the north of latitude 60° 32' comparison was made with Chart 8525, 1:30,000 scale, 8th edition, March 14, 1966, Revised November 14, 1966. This comparison is shown on the comparison print.

To the south of latitude 60° 32' comparison was made with Chart 8520, 1:80,000 scale, 13th edition, March 7, 1966.

66. ADEQUACY OF RESULTS AND FUTURE SURVEYS

This survey complies with instructions and meets the National standards of Map Accuracy.
Reviewed by:

Leo F. Beugnet

Approved by:

J. Bull, RADM
Director, Atlantic Marine Center

Approved by:

Chief, Photogrammetric Branch

Chief, Photogrammetry Division

Chief, Nautical Chart Division
NOTES TO THE REVIEWER

The approximate low water line has been retained on the manuscript for any value it may have to the nautical chart compiler.
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<th>Chart No.</th>
<th>Date</th>
<th>Chart Name</th>
<th>Description</th>
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<td>1965</td>
<td>Cordova Harbor Light 2</td>
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<tr>
<td>8550</td>
<td>1965</td>
<td>Cordova Light 1</td>
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 вечер All of Party

The positions shown have been checked after being by charted on (description) the chart. In the case of such objects which have not been inspected from seaward to determine their value as landmarks be recommended that the following objects which have not been inspected from seaward to determine their value as landmarks be:

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<td>Date</td>
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February 1965

Oregon

To be charted

NONFARADIC AIDS OR LANDMARKS FOR CHARTS

Coast and Geodetic Survey

U.S. Department of Commerce