Form 504
U. S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT
PH-6409

Type of Survey   SHORELINE (PHOTOGRAMMETRIC)


LOCALITY

State     ALASKA

General locality   ORCA INLET

Locality     HUMPBACK CREEK

1964-66

CHIEF OF PARTY

Chief of Party     H. J. Seaborg
Compilation Office   P. A. Stark

LIBRARY & ARCHIVES

DATE

USGPO: 78-9587
**DESCRIPTIVE REPORT - DATA RECORD**

**T-12804**

**PROJECT NO. (III):**

PH-6109 (21423 (2))

**FIELD OFFICE (III):**

Ship PATHFINDER

**CHIEF OF PARTY**

H. J. Seaborg

**PHOTOMETRIC OFFICE (III):**

Portland, Oregon

**OFFICER-IN-CHARGE**

P. A. Stark

**INSTRUCTIONS DATED (III) (IV):**

III December 7, 1964

**METHOD OF COMPILATION (III):**

Kelsh Instrument

**MANUSCRIPT SCALE (III):**

1:5,000

**STEREOSCOPIC PLOTTING INSTRUMENT SCALE (III):**

1:6,000; pantograph 1:5,000

**DATE RECEIVED IN WASHINGTON OFFICE (IV):**

May 1977

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

AUG 1977

**APPLIED TO CHART NO.**


**GEOGRAPHIC DATUM (III):**

H.A. 1927

**REFERENCE STATION (III):**

Shingle 3, 1964

**LAT.:**

60° 37' 54.557"

**LONG.:**

145° 40' 14.866"

**ADJUSTED**

\[2,423,011.65 \text{ ft.} \times 559,110.90 \text{ ft.}\]

**STATE**

Alaska

**ZONE**

3

**NOTE:** Roman numerals indicate whether the item is to be entered by (III) Field party, (III) Photogrammetic 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 using photography of August 25, 1964  

**PROJECTION AND GRIDS RULED BY (IV):**  
- A. E. Roundtree  
  **DATE:** 12-2-64  

**PROJECTION AND GRIDS CHECKED BY (IV):**  
- P. Hawkins  
  **DATE:** 12-2-64  

**CONTROL PLOTTED BY (III):**  
- D. N. Williams  
  **DATE:** 12-18-64  

**CONTROL CHECKED BY (III):** 

**RADIAL PLOT OR STEREOSCOPIC CONTROL EXTENSION BY (III):**  
- J. S. Place  
  **DATE:** 12-18-64  

**STEREOSCOPIC INSTRUMENT COMPILATION (III):**  
- W. Heinbaugh  
  **DATE:** 11-18-64  

**PLANIOMETRY:**  
- J. S. Place  
  **DATE:** 12-24-64  

**CONTOURS:** 

**MANUSCRIPT DELINEATED BY (III):**  
- C. C. Harris  
  **DATE:** 1-4-65  

**SCRIBING BY (III):**  
- A. Shands  
  **DATE:** Nov. 1966  

**PHOTOGRAMMETRIC OFFICE REVIEW BY (III):**  
- R. H. Meyer  
  **DATE:** 1-8-65  

**REMARKS:**
# Descriptive Report - Data Record

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

**$3$" Camera**

<table>
<thead>
<tr>
<th>NUMBER</th>
<th>DATE</th>
<th>TIME</th>
<th>SCALE</th>
<th>STAGE OF TIDE</th>
</tr>
</thead>
<tbody>
<tr>
<td>64S6895 thru 6897</td>
<td>8-25-64</td>
<td>0955</td>
<td>1:30,000</td>
<td>3.8 ft. above MLLW</td>
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<tr>
<td>64S6948 thru 6951</td>
<td>8-25-64</td>
<td>1037</td>
<td>1:15,000</td>
<td>5.1 ft. above MLLW</td>
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## Tide (III)

<table>
<thead>
<tr>
<th>REFERENCE STATION</th>
<th>DIURNAL</th>
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<tbody>
<tr>
<td>CORDOVA</td>
<td>10.0</td>
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<table>
<thead>
<tr>
<th>SUBORDINATE STATION</th>
<th>RATIO OF RANGES</th>
<th>MEAN RANGE</th>
<th>SEMICYClical RANGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>ORCA</td>
<td>9.9</td>
<td>12.4</td>
<td></td>
</tr>
</tbody>
</table>

## Washington Office Review by (IV):

Leo F. Beugnet, Atlantic Marine Center, April 1967:

Proof Edit by (IV):

J. B. Phillips, Rockville, Md., June 1977

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

<table>
<thead>
<tr>
<th>RECOVERED</th>
<th>IDENTIFIED</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

## Number of BM(S) Searched for (III):

None

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

None

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

None

## Remarks:

-
<table>
<thead>
<tr>
<th>Compilation Record</th>
<th>Completion Date</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alongshore area for hydro</td>
<td>Jan. 1965</td>
<td>Superseded</td>
</tr>
<tr>
<td>Field Edit applied: subject to further verification</td>
<td>Nov. 1965</td>
<td>Superseded</td>
</tr>
<tr>
<td>Second Field Edit applied</td>
<td>May, 1966</td>
<td></td>
</tr>
<tr>
<td>Final Review</td>
<td>April 1967</td>
<td></td>
</tr>
</tbody>
</table>
JOB PH-6409
ORCA INLET
ALASKA

Shoreline Mapping

SCALE, 1:5,000, 1:10,000 & 1:20,000
SUMMARY TO ACCOMPANY
DESRIPTIVE REPORT T-12804

Shoreline survey T-12804, compiled at 1:5,000 scale, is one of fifteen similar maps in project PH-6409. The primary purpose of the project was to furnish new shoreline for nautical charts and provide photo-hydro support data for hydrographic surveys to be conducted in the same area.

Field work preceding compilation consisted of recovery and/or establishment and identification of horizontal control. There was no field inspection prior to compilation.

Compilation was at 1:5,000 scale using the panchromatic photography of August 25, 196x, and control established by aero-triangulation. A cronaflex copy of the manuscript along with specially prepared 1:5,000 scale ratio photographs was subsequently provided for preparation of the hydrographers' boatsheet and for photo-hydro support purposes.

The manuscript is a vinylite sheet 2 minutes 15 seconds in latitude by 3 minutes 30 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
T-1260h

There was no field inspection prior to compilation.
<table>
<thead>
<tr>
<th>Field Position</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>SHINGLE 3, 1964</td>
<td></td>
</tr>
<tr>
<td>SAMLILL STAX, 1909</td>
<td></td>
</tr>
<tr>
<td>SAMLILL GABLE, 1909</td>
<td></td>
</tr>
<tr>
<td>POINT 2, 1964</td>
<td></td>
</tr>
<tr>
<td>POINT, 1900</td>
<td></td>
</tr>
<tr>
<td>PEAK H, 1909</td>
<td></td>
</tr>
<tr>
<td>PEAK G, 1909</td>
<td></td>
</tr>
<tr>
<td>PEAK F, 1909</td>
<td></td>
</tr>
</tbody>
</table>

**Form 10 (2)**

**Coast and Geodetic Survey**

**U.S. Department of Commerce**

**Scale Factor**

**1:5,000**

**Scale of Map**

**1:250,000**

**Project No.**

**12493**

**Description Report Control Record**
Aerotriangulation Report  
Project 21423  
Orca Inlet, Alaska

21. Area Covered

The area covered by this report on aerotriangulation bridging encompassed 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 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 Blég., West Gable (1955) as the terminal station, was made and the resulting forshortened 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 1:50,000, 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. Peacock, JR.  
Submitted by:  
W. Heinbaugh
31. **DELINEATION:**

The planimetry was compiled by Kelsh Instrument using the panchromatic photography of August 25, 1964.

32. **CONTROL:**

Adequate supplemental control, based on field identified control, was established by aerotriangulation for the Kelsh Instrument models.

33. **SUPPLEMENTAL DATA:**

None

34. **CONTOURS AND DRAINAGE:**

Contours not applicable.

The drainage was delineated 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:**

Two landmarks; HOUSE (S. GABLE) near latitude 60° 38.0' longitude 115° 40.0' and HOUSE (S. GABLE) near latitude 60° 36.8' longitude 115° 40.1', shown on chart 8525, were not visible on the photographs and are not shown on the manuscript. There are no fixed aids to navigation within the limits of the manuscript.
38. CONTROL FOR FUTURE SURVEYS:

No supplemental control for future surveys was established.

39. JUNCTIONS:

Satisfactory junctions were made with 1:5,000 scale manuscript T=12805 on the south and with the surrounding 1:10,000 scale manuscripts T-12649, 12650 and 12652.

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 63,360, edition of 1951.

47. COMPARISON WITH NAUTICAL CHARTS:

Comparison was made with the following Nautical charts:

<table>
<thead>
<tr>
<th>Number</th>
<th>Scale</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>8525</td>
<td>1:30,000</td>
<td>July 27, 1964</td>
</tr>
<tr>
<td>8520</td>
<td>1:80,000</td>
<td>July 20, 1964</td>
</tr>
<tr>
<td>8551</td>
<td>1:200,000</td>
<td>April 15, 1963</td>
</tr>
</tbody>
</table>

Items to be applied to Nautical charts immediately:

None

Items to be carried forward:

None

Approved: P. A. Stark, CDR, C&GS

Submitted: Donnel N. Williams

Portland Field Officer

Cartographer
48. **GEOGRAPHIC NAME LIST:**

The following geographic names for this survey were furnished on U.S.G.S. CORDOVA (C-5) ALASKA quadrangle, 1:63,360 scale, edition of 1951:

- HUMBACK CREEK
- SHEPARD POINT
49. NOTES TO THE HYDROGRAPHER:

Verify piling and marine railway at Shepard Point. Verify landmarks, HOUSE (S. GABLE) near Humpback Creek and HOUSE (S. GABLE) at Shepard Point.
## PHOTOGRAVIMETRIC OFFICE REVIEW

### 1. PROJECTION AND GRIDS
- RHM

### 2. TITLE
- RHM

### 3. MANUSCRIPT NUMBERS
- RHM

### 4. MANUSCRIPT SIZE
- RHM

### CONTROL STATIONS

#### 5. HORIZONTAL CONTROL STATIONS OF THIRD-ORDER OR HIGHER ACCURACY
- RHM

#### 6. RECOVERABLE HORIZONTAL STATIONS OF LESS THAN THIRD-ORDER ACCURACY (Topographic stations)
- NONE

#### 7. PHOTO HYDRO STATIONS
- NONE

### ALONGSHORE AREAS (Nautical Chart Data)

#### 8. BENCH MARKS
- NONE

#### 9. PLOTTING OF SEXTANT FIXES
- NONE

#### 10. PHOTOGRAMMETRIC PLOT REPORT
- RHM

#### 11. DETAIL POINTS
- RHM

### PHYSICAL FEATURES

#### 12. SHORELINE
- RHM

#### 13. LOW-WATER LINE
- RHM

#### 14. ROCKS, SHOALS, ETC.
- RHM

#### 15. BRIDGES
- NONE

#### 16. AIDS TO NAVIGATION
- RHM

#### 17. LANDMARKS
- RHM

#### 18. OTHER ALONGSHORE PHYSICAL FEATURES
- RHM

#### 19. OTHER ALONGSHORE CULTURAL FEATURES
- RHM

### CULTURAL FEATURES

#### 20. WATER FEATURES
- RHM

#### 21. NATURAL GROUND COVER
- RHM

#### 22. PLANETABLE CONTOURS
- RHM

#### 23. STEREOSCOPIC INSTRUMENT CONTOURS
- NONE

#### 24. CONTOURS IN GENERAL
- NONE

#### 25. SPOT ELEVATIONS
- NONE

#### 26. OTHER PHYSICAL FEATURES
- RHM

### BOUNDARIES

#### 27. ROADS
- RHM

#### 28. BUILDINGS
- RHM

#### 29. RAILROADS
- RHM

#### 30. OTHER CULTURAL FEATURES
- RHM

#### 31. BOUNDARY LINES
- RHM

#### 32. PUBLIC LAND LINES
- NONE

### MISCELLANEOUS

#### 33. GEOGRAPHIC NAMES
- RHM

#### 34. JUNCTIONS
- RHM

#### 35. LEGIBILITY OF THE MANUSCRIPT
- RHM

### 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.

### REVIEWER

Richard H. Meyer

Leo F. Beugnet

### 41. REMARKS

41. REMARKS (See attached sheet)

### SUPERVISOR

Albert C. Rauck, Jr.

### 40. REVIEWER

K. Boylæ

Reviewed: A. C. Rauck

Richard H. Meyer

Leo F. Beugnet

### 43. REMARKS
Memorandum

TO: Chief, Photogrammetry Division

FROM: Commanding Officer
USCGS Ship ROGERSON

SUBJECT: Field Edit - Orca Inlet
Project 214.23 (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 advanced 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: PACMARIN

BUY U.S. SAVINGS BONDS REGULARLY ON THE PAYROLL SAVINGS PLAN
Sheet T-12606

Discrepancies as noted were verified in the field. See photo no. 6436942 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 HML line is shown in purple about the fill area as requested.

Sheet T-12619

Discrepancies as noted were verified in the field and appropriate notes made in purple on photo no. 6436753 1/10,000.

Sheet T-12642

Discrepancies as noted were verified in the field and appropriate notes made in purple on photo no. 6436756, 6436757, 6436949, 1/10,000. Please note new HML for western side of observation island.

Sheet 12804

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

Sheet 12805

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. 6437553, 6436691, 6437550, 1/10,000 and 6436943, 1/5000. All shoreline verified is shown in purple on the photos.

In the area SW of station HMD 2, 1966, photo no. 6436943 considerable activity by the Corps of Engineers makes HML verification impracticable 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. 6436943 changes were made to shoreline from that shown in 1965 in red. These changes (1966) are shown in purple on the photo.
Sheet T-12643

All discrepancies as noted by the compiler were checked and appropriate notes made on the Oxidal 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. NML 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. 6456761, 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. The comparison between the two surveys is shown on the comparison print. The area south of latitude 60° 36' 15" is not shown on either of the two older surveys, 3648 or 3649.

This survey supersedes the older surveys for nautical chart construction.

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

Comparison was made with U.S.G.S. CORDOVA (C-5) ALASKA quadrangle, 1:62,360 scale edition of 1951 with minor revisions in 1962. The two surveys are in good general agreement with the exception of the area of SHEPARD POINT where shoreline changes have occurred.

64. **COMPARISON WITH CONTEMPORARY HYDROGRAPHIC SURVEYS:**

From latitude 60° 37.6" northeastward to latitude 60° 38.2' a comparison was made with a copy of boatsheet H-05-1-65. The shoreline for this boatsheet was obtained from an Incomplete Manuscript and is not in perfect agreement with the Advance Manuscript.

From latitude 60° 36' 15" northward to latitude 60° 37.6' comparison was made with a copy of boatsheet H-8853, FF-10-1-64. The source of the shoreline for this boatsheet is believed to be from an older survey and is not in agreement with the shoreline of the Advance Manuscript.

An approximate mean lower-low water line has been shown on the manuscript in the area of HUMBACK CREEK, latitude 60° 36' 15", for any value it may be to the chart compiler. It is assumed that the sounding on the boatsheet furnished the reviewer have not been reduced to their final values.
Northward from latitude 60° 38.2' comparison was made with a copy of boatsheet H-8851, HO-20-1-65. The shoreline for this was also from an Incomplete Manuscript and is not in agreement with the Advance Manuscript.

65. **COMPARISON WITH NAUTICAL CHARTS:**

Comparison was made with Chart 8525, 8th edition, March 14, 1966, Revised November 14, 1966, and with Chart 8520, 13th edition, March 7, 1966. Because of the difference in scale only a visual comparison was made.

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

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

Approved by:  
J. Bull, RADM.  
Director, Atlantic Marine Center

Reviewed by:  
Leo F. Beugnet

Approved by:  
Chief, Photogrammetric Branch

Chief, Nautical Chart Division