

TP-00729
ORIGINAL

TP-00729

NOAA FORM 76-35

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

DESCRIPTIVE REPORT

Type of Survey Shoreline
Job No. CM-7311 Map No. TP-00729
Classification No. Final Edition No. 1
Field Edited Map

LOCALITY

State Washington
General Locality Tacoma Harbor
Locality Dash Point
.....

1973 TO 1974

REGISTRY IN ARCHIVES

DATE

☆ U.S. GOVERNMENT PRINTING OFFICE: 1974-762-901

RCS 18453 - 9-30-81 DL
RCS 18445-5C 9-30-81 RL
RCS 18448 9-30-81 RL

| | | | |
|--|--|--|--|
| NOAA FORM 76-36A (3-72) | | U. S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMIN. | |
| DESCRIPTIVE REPORT - DATA RECORD | | TYPE OF SURVEY <input checked="" type="checkbox"/> ORIGINAL <input type="checkbox"/> RESURVEY <input type="checkbox"/> REVISED | |
| PHOTOGRAMMETRIC OFFICE Coastal Mapping Division Atlantic Marine Center, Norfolk, VA | | SURVEY TP. <u>00729</u> MAP EDITION NO. <u>(1)</u> MAP CLASS <u>Final</u> JOB <u>PH. CM-7311</u> | |
| OFFICER-IN-CHARGE Jeffrey G. Carlen, Cdr., NOAA | | LAST PRECEDING MAP EDITION TYPE OF SURVEY <input type="checkbox"/> ORIGINAL <input type="checkbox"/> RESURVEY <input type="checkbox"/> REVISED JOB <u>PH.</u> <u>CM-7311</u> MAP CLASS <u>Final</u> SURVEY DATES: 19 <u> </u> TO 19 <u> </u> | |
| I. INSTRUCTIONS DATED | | | |
| 1. OFFICE | | 2. FIELD | |
| Aerotriangulation Aug 30, 1973 Compilation Jan 22, 1974 | | May 17, 1973 | |
| II. DATUMS | | | |
| 1. HORIZONTAL: <input checked="" type="checkbox"/> 1927 NORTH AMERICAN | | OTHER (Specify) | |
| 2. VERTICAL: <input checked="" type="checkbox"/> MEAN HIGH-WATER <input type="checkbox"/> MEAN LOW-WATER <input checked="" type="checkbox"/> MEAN LOWER LOW-WATER <input type="checkbox"/> MEAN SEA LEVEL | | OTHER (Specify) | |
| 3. MAP PROJECTION Polyconic | | 4. GRID(S) STATE Washington ZONE South | |
| 5. SCALE 1:5,000 | | STATE ZONE | |
| III. HISTORY OF OFFICE OPERATIONS | | | |
| OPERATIONS | | NAME | DATE |
| 1. AEROTRIANGULATION BY METHOD: <u>Analytic</u> LANDMARKS AND AIDS BY | | <u>I. O. Raborn</u> | <u>1/74</u> |
| 2. CONTROL AND BRIDGE POINTS PLOTTED BY METHOD: <u>Calcomp</u> CHECKED BY | | <u>R. Robertson</u> | <u>1/74</u> |
| 3. STEREOSCOPIC INSTRUMENT PLANIMETRY BY COMPILATION CHECKED BY INSTRUMENT: <u>Wild B-8</u> CONTOURS BY SCALE: <u>1:7,500</u> CHECKED BY | | <u>R. R. White</u> <u>L. O. Neterer</u> <u>NA</u> <u>NA</u> | <u>2/74</u> <u>2/74</u> |
| 4. MANUSCRIPT DELINEATION PLANIMETRY BY METHOD: <u>Smooth Draft</u> CHECKED BY SCALE: <u>1:5,000</u> CONTOURS BY CHECKED BY HYDRO SUPPORT DATA BY CHECKED BY | | <u>R. R. White</u> <u>A. L. Shands</u> <u>NA</u> <u>NA</u> <u>R. R. White</u> <u>A. L. Shands</u> | <u>2/74</u> <u>2/74</u> <u>2/74</u> <u>2/74</u> |
| 5. OFFICE INSPECTION PRIOR TO FIELD EDIT BY | | <u>A. L. Shands</u> | <u>2/74</u> |
| 6. APPLICATION OF FIELD EDIT DATA BY | | <u>J. R. Minton</u> | <u>3/75</u> |
| 7. COMPILATION SECTION REVIEW BY | | <u>A. L. Shands</u> | <u>5/75</u> |
| 8. FINAL REVIEW BY | | <u>A. L. Shands</u> | <u>5/75</u> |
| 9. DATA FORWARDED TO PHOTOGRAMMETRIC BRANCH BY | | <u>A. L. Shands</u> | <u>Jan. 1978</u> |
| 10. DATA EXAMINED IN PHOTOGRAMMETRIC BRANCH BY | | <u>J. B. Phillips</u> | <u>Mar. 1978</u> |
| 11. MAP REGISTERED - COASTAL SURVEY SECTION BY | | <u>R. T. Cator</u> | <u>MAY 1978</u> |

NOAA FORM 76-36B
(3-72)U. S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SURVEY

COMPILATION SOURCES

1. COMPILATION PHOTOGRAPHY

| | | | | | |
|---|---------|---|----------|--------------------|--|
| CAMERA(S) Wild RC-8 "E" | | TYPES OF PHOTOGRAPHY LEGEND | | TIME REFERENCE | |
| TIDE STAGE REFERENCE | | (C) COLOR (P) PANCHROMATIC (I) INFRARED | | ZONE Pacific | <input checked="" type="checkbox"/> STANDARD |
| <input checked="" type="checkbox"/> PREDICTED TIDES <input type="checkbox"/> REFERENCE STATION RECORDS <input type="checkbox"/> TIDE CONTROLLED PHOTOGRAPHY | | | | MERIDIAN 120th | <input type="checkbox"/> DAYLIGHT |
| NUMBER AND TYPE | DATE | TIME | SCALE | STAGE OF TIDE | |
| 73E(c) 9072 and 9073 | 6/22/73 | 09:36 | 1:15,000 | 7.9 ft. above MLLW | |
| 73E(c) 9118 thru 9120 | 6/22/73 | 10:18 | 1:15,000 | 7.4 ft. above MLLW | |

REMARKS

2. SOURCE OF MEAN HIGH-WATER LINE:

The mean high water line was delineated from the above listed photographs.

3. SOURCE OF MEAN LOW-WATER OR MEAN LOWER LOW-WATER LINE:

None compiled.

4. CONTEMPORARY HYDROGRAPHIC SURVEYS (List only those surveys that are sources for photogrammetric survey information.)

| SURVEY NUMBER | DATE(S) | SURVEY COPY USED | SURVEY NUMBER | DATE(S) | SURVEY COPY USED |
|---------------|---------|------------------|---------------|---------|------------------|
| | | | | | |

5. FINAL JUNCTIONS

| NORTH | EAST | SOUTH | WEST |
|-----------|-----------|----------|-----------|
| No Survey | No Survey | TP-00732 | No-Survey |

REMARKS

TP-00729

HISTORY OF FIELD OPERATIONS

I. ☒ FIELD INSPECTION OPERATION☐ FIELD EDIT OPERATION

| OPERATION | NAME | DATE |
|-------------------------------------|--|------|
| 1. CHIEF OF FIELD PARTY | R. B. Melby | 6/73 |
| 2. HORIZONTAL CONTROL | RECOVERED BY R. B. Melby | 6/73 |
| | ESTABLISHED BY None | |
| | PRE-MARKED OR IDENTIFIED BY R. B. Melby | 6/73 |
| 3. VERTICAL CONTROL | RECOVERED BY NA | |
| | ESTABLISHED BY NA | |
| | PRE-MARKED OR IDENTIFIED BY NA | |
| 4. LANDMARKS AND AIDS TO NAVIGATION | RECOVERED (Triangulation Stations) BY None | |
| | LOCATED (Field Methods) BY None | |
| | IDENTIFIED BY None | |
| 5. GEOGRAPHIC NAMES INVESTIGATION | TYPE OF INVESTIGATION | |
| | <input type="checkbox"/> COMPLETE | |
| | <input type="checkbox"/> SPECIFIC NAMES ONLY | |
| | <input checked="" type="checkbox"/> NO INVESTIGATION | |
| 6. PHOTO INSPECTION | CLARIFICATION OF DETAILS BY None | |
| 7. BOUNDARIES AND LIMITS | SURVEYED OR IDENTIFIED BY NA | |

II. SOURCE DATA

1. HORIZONTAL CONTROL IDENTIFIED

2. VERTICAL CONTROL IDENTIFIED

NA

| PHOTO NUMBER | STATION NAME | PHOTO NUMBER | STATION DESIGNATION |
|--------------|--------------|--------------|---------------------|
| 73E(C) 9073 | DASH 3, 1935 | | |

3. PHOTO NUMBERS (Clarification of details)

None

4. LANDMARKS AND AIDS TO NAVIGATION IDENTIFIED

None

| PHOTO NUMBER | OBJECT NAME | PHOTO NUMBER | OBJECT NAME |
|--------------|-------------|--------------|-------------|
| | | | |

5. GEOGRAPHIC NAMES: ☐ REPORT ☒ NONE6. BOUNDARY AND LIMITS: ☐ REPORT ☒ NONE

7. SUPPLEMENTAL MAPS AND PLANS

None

8. OTHER FIELD RECORDS (Sketch books, etc. DO NOT list data submitted to the Geodesy Division)

1 Form 152
2 Form 526
1 Form 526a

TP-00729

HISTORY OF FIELD OPERATIONS

I. ☐ FIELD INSPECTION OPERATION☒ FIELD EDIT OPERATION

| OPERATION | NAME | DATE |
|-------------------------------------|--|----------------------|
| 1. CHIEF OF FIELD PARTY | M. Fleming | 3/74 - 4/74 |
| 2. HORIZONTAL CONTROL | RECOVERED BY ESTABLISHED BY PRE-MARKED OR IDENTIFIED BY | None None None |
| 3. VERTICAL CONTROL | RECOVERED BY ESTABLISHED BY PRE-MARKED OR IDENTIFIED BY | NA NA NA |
| 4. LANDMARKS AND AIDS TO NAVIGATION | RECOVERED (Triangulation Stations) BY LOCATED (Field Methods) BY IDENTIFIED BY | None None None |
| 5. GEOGRAPHIC NAMES INVESTIGATION | TYPE OF INVESTIGATION <input type="checkbox"/> COMPLETE <input type="checkbox"/> SPECIFIC NAMES ONLY <input checked="" type="checkbox"/> NO INVESTIGATION | |
| 6. PHOTO INSPECTION | CLARIFICATION OF DETAILS BY | None |
| 7. BOUNDARIES AND LIMITS | SURVEYED OR IDENTIFIED BY | NA |

II. SOURCE DATA

| | | | |
|---|--------------|--|---------------------|
| 1. HORIZONTAL CONTROL IDENTIFIED None | | 2. VERTICAL CONTROL IDENTIFIED NA | |
| PHOTO NUMBER | STATION NAME | PHOTO NUMBER | STATION DESIGNATION |
| | | | |
| 3. PHOTO NUMBERS (Clarification of details) None | | | |
| 4. LANDMARKS AND AIDS TO NAVIGATION IDENTIFIED None | | | |
| PHOTO NUMBER | OBJECT NAME | PHOTO NUMBER | OBJECT NAME |
| | | | |
| 5. GEOGRAPHIC NAMES: <input type="checkbox"/> REPORT <input checked="" type="checkbox"/> NONE | | 6. BOUNDARY AND LIMITS: <input type="checkbox"/> REPORT <input checked="" type="checkbox"/> NONE | |

7. SUPPLEMENTAL MAPS AND PLANS

None

8. OTHER FIELD RECORDS (Sketch books, etc. DO NOT list data submitted to the Geodesy Division)

1 Field Edit Ozalid and Field Edit Report

TP-00729
HISTORY OF FIELD OPERATIONSI. ☐ FIELD INSPECTION OPERATION☒ FIELD EDIT OPERATION

| OPERATION | NAME | DATE |
|-------------------------------------|--|--------------|
| 1. CHIEF OF FIELD PARTY | M. Fleming | 12/74 - 1/75 |
| 2. HORIZONTAL CONTROL | RECOVERED BY L. Riggers - D. Eilers | 12/74 |
| | ESTABLISHED BY None | |
| | PRE-MARKED OR IDENTIFIED BY None | |
| 3. VERTICAL CONTROL | RECOVERED BY NA | |
| | ESTABLISHED BY NA | |
| | PRE-MARKED OR IDENTIFIED BY NA | |
| 4. LANDMARKS AND AIDS TO NAVIGATION | RECOVERED (Triangulation Stations) BY L. Riggers - D. Eilers | 12/74 |
| | LOCATED (Field Methods) BY None | |
| | IDENTIFIED BY None | |
| 5. GEOGRAPHIC NAMES INVESTIGATION | TYPE OF INVESTIGATION <input type="checkbox"/> COMPLETE <input type="checkbox"/> SPECIFIC NAMES ONLY <input checked="" type="checkbox"/> NO INVESTIGATION | |
| 6. PHOTO INSPECTION | CLARIFICATION OF DETAILS BY None | |
| 7. BOUNDARIES AND LIMITS | SURVEYED OR IDENTIFIED BY NA | |

II. SOURCE DATA

| | | | |
|---|--------------|--|---------------------|
| 1. HORIZONTAL CONTROL IDENTIFIED None | | 2. VERTICAL CONTROL IDENTIFIED NA | |
| PHOTO NUMBER | STATION NAME | PHOTO NUMBER | STATION DESIGNATION |
| | | | |
| 3. PHOTO NUMBERS (Clarification of details) None | | | |
| 4. LANDMARKS AND AIDS TO NAVIGATION IDENTIFIED None | | | |
| PHOTO NUMBER | OBJECT NAME | PHOTO NUMBER | OBJECT NAME |
| | | | |
| 5. GEOGRAPHIC NAMES: <input type="checkbox"/> REPORT <input checked="" type="checkbox"/> NONE | | 6. BOUNDARY AND LIMITS: <input type="checkbox"/> REPORT <input checked="" type="checkbox"/> NONE | |
| 7. SUPPLEMENTAL MAPS AND PLANS None | | | |

8. OTHER FIELD RECORDS (Sketch books, etc. DO NOT list data submitted to the Geodesy Division)

- 1 Form 76-40
- 1 Original Field Edit Ozalid
- Addenda Field Edit Report

TP-00729
RECORD OF SURVEY USE

I. MANUSCRIPT COPIES

| COMPILATION STAGES | | | DATE MANUSCRIPT FORWARDED | |
|--|-----------|------------------------------------|---------------------------|---------------|
| DATA COMPILED | DATE | REMARKS | MARINE CHARTS | HYDRO SUPPORT |
| Compilation complete, pending field edit. | 2/74 | Class III Manuscript Superseded | 3/74 | 3/74 |
| Field edit applied. Compilation complete. | 5/75 | Class I Manuscript | 5/31/77 | |
| Final Review | Jan. 1978 | Final | Feb. 1978 | |
| | | | | |

II. LANDMARKS AND AIDS TO NAVIGATION

1. REPORTS TO MARINE CHART DIVISION, NAUTICAL DATA BRANCH

| NUMBER | CHART LETTER NUMBER ASSIGNED | DATE FORWARDED | REMARKS |
|--------|---------------------------------|-------------------|---------|
| 1 | | 6/16/77 | Aid |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

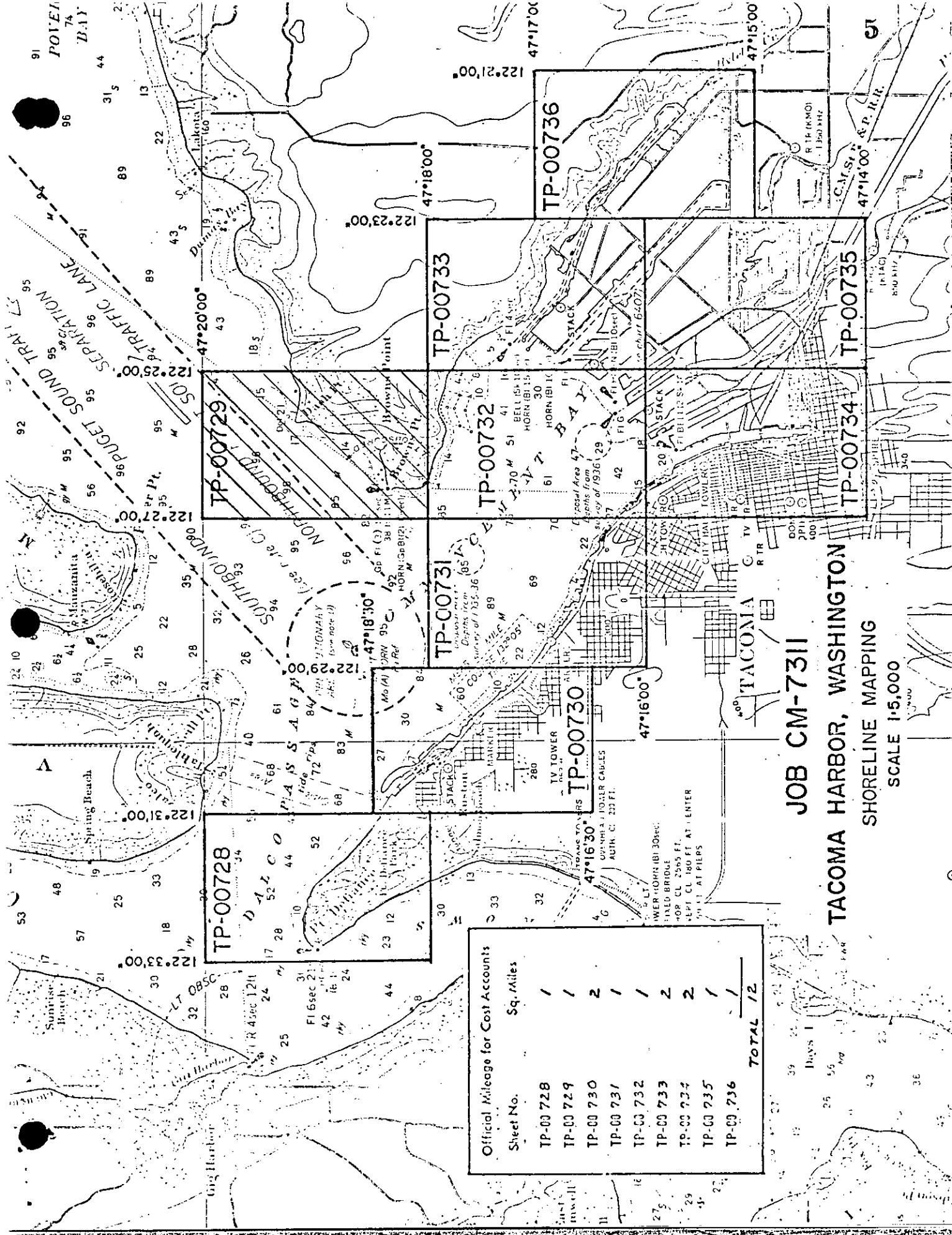
2. ☐ REPORT TO MARINE CHART DIVISION, COAST PILOT BRANCH. DATE FORWARDED: June 16, 1977
3. ☐ REPORT TO AERONAUTICAL CHART DIVISION, AERONAUTICAL DATA SECTION. DATE FORWARDED: _____

III. FEDERAL RECORDS CENTER DATA

1. ☒ BRIDGING PHOTOGRAPHS; ☒ DUPLICATE BRIDGING REPORT; ☒ COMPUTER READOUTS.
2. ☒ CONTROL STATION IDENTIFICATION CARDS; ☒ FORM NOS 567-568 SUBMITTED BY FIELD PARTIES.
3. ☒ SOURCE DATA (except for Geographic Names Report) AS LISTED IN SECTION II, NOAA FORM 76-36C.
ACCOUNT FOR EXCEPTIONS:
4. ☐ DATA TO FEDERAL RECORDS CENTER. DATE FORWARDED: _____

IV. SURVEY EDITIONS (This section shall be completed each time a new map edition is registered)

| | | | |
|-------------------|---------------------------------|--------------------------|---|
| SECOND EDITION | SURVEY NUMBER TP - _____ (2) | JOB NUMBER PH - _____ | TYPE OF SURVEY <input type="checkbox"/> REVISED <input type="checkbox"/> RESURVEY MAP CLASS <input type="checkbox"/> II. <input type="checkbox"/> III. <input type="checkbox"/> IV. <input type="checkbox"/> V. <input type="checkbox"/> FINAL |
| | DATE OF PHOTOGRAPHY | DATE OF FIELD EDIT | |
| THIRD EDITION | SURVEY NUMBER TP - _____ (3) | JOB NUMBER PH - _____ | TYPE OF SURVEY <input type="checkbox"/> REVISED <input type="checkbox"/> RESURVEY MAP CLASS <input type="checkbox"/> II. <input type="checkbox"/> III. <input type="checkbox"/> IV. <input type="checkbox"/> V. <input type="checkbox"/> FINAL |
| | DATE OF PHOTOGRAPHY | DATE OF FIELD EDIT | |
| FOURTH EDITION | SURVEY NUMBER TP - _____ (4) | JOB NUMBER PH - _____ | TYPE OF SURVEY <input type="checkbox"/> REVISED <input type="checkbox"/> RESURVEY MAP CLASS <input type="checkbox"/> II. <input type="checkbox"/> III. <input type="checkbox"/> IV. <input type="checkbox"/> V. <input type="checkbox"/> FINAL |
| | DATE OF PHOTOGRAPHY | DATE OF FIELD EDIT | |



Official Mileage for Cost Accounts

| Sheet No. | Sq. Miles |
|--------------|-----------|
| TP-00 728 | 1 |
| TP-00 729 | 1 |
| TP-00 730 | 2 |
| TP-00 731 | 1 |
| TP-00 732 | 1 |
| TP-00 733 | 2 |
| TP-00 734 | 2 |
| TP-00 735 | 1 |
| TP-00 736 | 1 |
| TOTAL | 12 |

JOB CM-7311

TACOMA HARBOR, WASHINGTON

SHORELINE MAPPING

SCALE 1:5,000

SUMMARY TO ACCOMPANY

DESCRIPTIVE REPORTS TP-00728 thru TP-00736

The maps covered in this summary comprise all of Project CM-7311. They are all standard shoreline maps covering Commencement Bay and including the Hylebos, Blair, Sitcum, Milwaukee, Puyallup, St. Paul, Middle and City Waterways. The purpose of the project is to provide up-to-date shoreline and alongshore delineation in support of contemporary hydrographic surveys and for nautical chart construction. All maps are 1: 5,000 scale.

Photography of the area was flown at 1:15,000 scale in June, 1973. Both onshore and offshore flights were flown. Ratios of the offshore flights were processed by the compilation office for photo-hydro support.

Field work prior to compilation was limited to the recovery and identification of horizontal control used in bridging. There was no clarification of details.

Bridging was done at the Washington Science Center in January, 1974, using the onshore flights. Analytic triangulation methods were used. Points common to the offshore flights were established to determine ratio scales.

The maps were compiled at the Atlantic Marine Center during February and March, 1974, by Wild B-8 instrument method.

Many buildings currently charted are not shown on the maps. In most cases, buildings are shown on the chart as they appear on the photographs. However, in a few instances buildings shown on the chart are not visible on the photographs. Where this is so, that fact is stated in the review report of the affected map.

Field edit was partially done in April, 1974 and completed in December, 1974. It was applied to the maps at the Atlantic Marine Center in May, 1975.

Final review was performed at the Atlantic Marine Center in January, 1978. The original base maps and all pertinent data was forwarded to the Washington Science Center for final registration.

FIELD INSPECTION

TP-00729

There was no field inspection prior to compilation. Field work accomplished was limited to the recovery and identification of the horizontal control necessary for the aerotriangulation of the project.

PHOTOGRAMMETRIC PLOT REPORT
Tacoma Harbor
Washington
Job CM-7311
January 1974

21. Area Covered

The area covered by this report pertains to the shoreline of Commencement Bay, Tacoma, Washington. This area is covered by nine 1:5,000 scale sheets, TP-00728 thru TP-00736.

22. Method

Three strips of 1:15,000 scale color photography were bridged by analytic aerotriangulation methods. Strip No. 1 was measured on the David W. Mann Company mono comparator Model 422 and strips 2 and 3 were measured on the Wild stereo comparator. Sketch number 1 shows the flight lines of the photography and the placement of the control used in the adjustment. The three strips were controlled by field identified control paneled in 1973. Old control, which was office identified, was floated for checks. Ties were made between all bridging strips. Common points were located between the bridging photography and the offshore flights to determine the ratio scale. One cronapaque and one matte each were ordered of the offshore flights. Sketch number 2 shows the flight lines of the offshore photography. Data for ruling projections were furnished to the Coradomat to be plotted on the Washington South Plane Coordinate System.

23. Adequacy of Control

The control was adequate.

24. Supplemental Data

USGS quadrangles were used to provide vertical control for the adjustment.

25. Photography

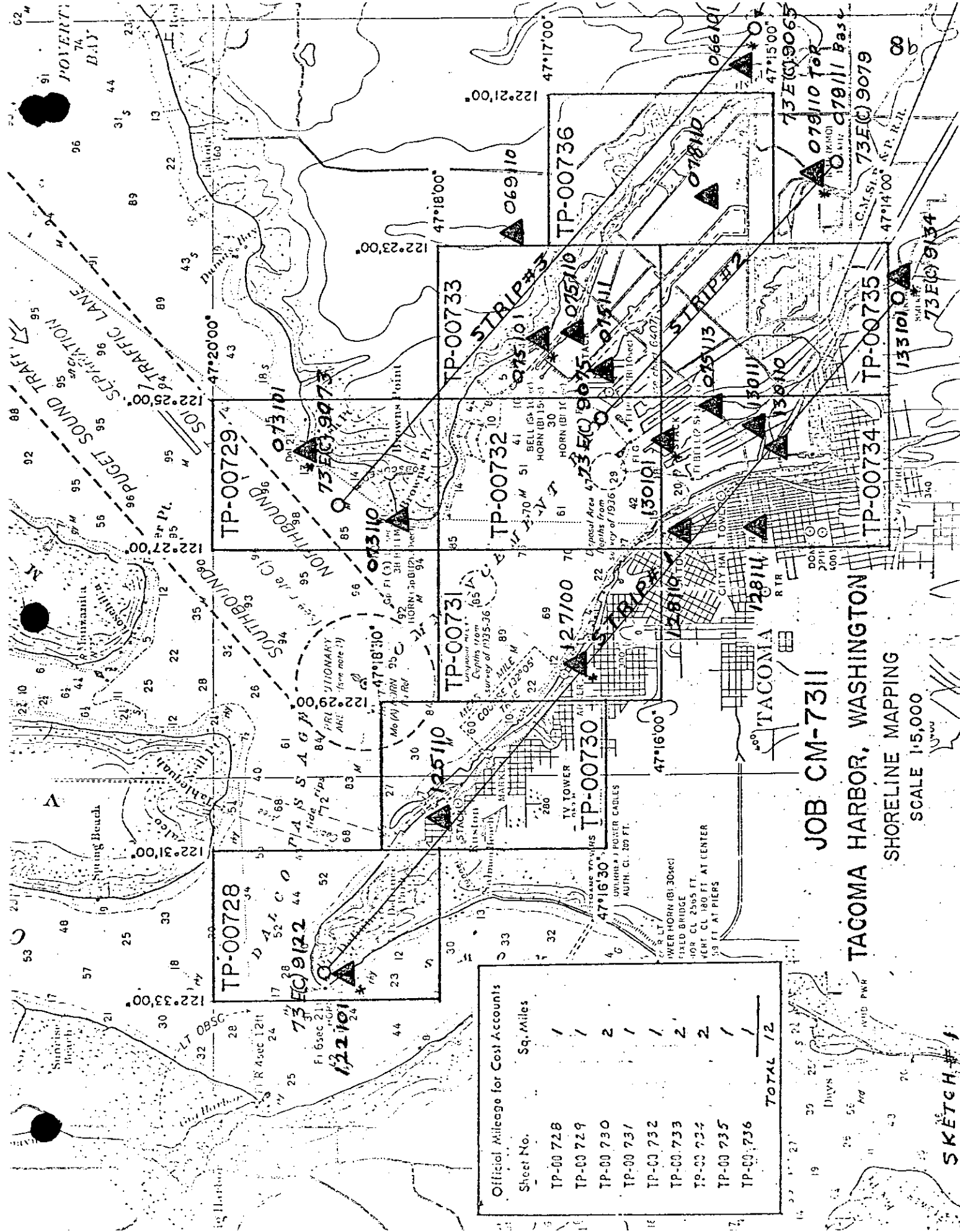
The photography was adequate.

Respectfully submitted,

Ivey O. Raborn
Ivey O. Raborn

Approved and Forwarded:

John D. Perrow Jr.
John D. Perrow, Jr.
Chief, Aerotriangulation Section



JOB CM-7311
TACOMA HARBOR, WASHINGTON
 SHORELINE MAPPING
 SCALE 1:5,000

| Official Mileage for Cost Accounts | | |
|------------------------------------|-----------|-----------|
| Sheet No. | Sq. Miles | |
| TP-00 728 | 1 | |
| TP-00 729 | 1 | |
| TP-00 730 | 2 | |
| TP-00 731 | 1 | |
| TP-00 732 | 1 | |
| TP-00 733 | 2 | |
| TP-00 734 | 2 | |
| TP-00 735 | 1 | |
| TP-00 736 | 1 | |
| TOTAL | | 12 |

SKETCH # 1

DESCRIPTIVE REPORT CONTROL RECORD

| MAP NO. | JOB NO. | CM-7311 | GEODEIC DATUM | | 1927 | ORIGINATING ACTIVITY | |
|---------------------------------|----------------------------------|---|--------------------------|------|-------------------------|----------------------------------|-----------------|
| | | | NA | 1927 | | Division, AMC, Norfolk, Virginia | Coastal Mapping |
| STATION NAME | SOURCE OF INFORMATION (Index) | AEROTRI- ANGULATION POINT NUMBER | COORDINATES IN FEET | | GEOGRAPHIC POSITION | | REMARKS |
| | | | STATE | ZONE | ϕ LATITUDE | λ LONGITUDE | |
| DASH 3, 1935 | G.P. Vol I P. 210 | | X= | | ϕ 47 19 10.762 | 332.4 | (1520.5) |
| | | | Y= | | λ 122 25 41.477 | 871.1 | (388.9) |
| BROWN, 1921 | G.P. Vol I P. 004 | | X= | | ϕ 47 18 21.526 | 664.8 | (1188.1) |
| | | | Y= | | λ 122 26 35.044 | 736.2 | (524.2) |
| BROWN POINT LIGHTHOUSE, 1935 | G.P. Vol I P. 213 | | X= | | ϕ 47 18 21.917 | 676.8 | (1176.1) |
| | | | Y= | | λ 122 26 34.915 | 733.4 | (527.0) |
| | | | X= | | ϕ | | |
| | | | Y= | | λ | | |
| | | | X= | | ϕ | | |
| | | | Y= | | λ | | |
| | | | X= | | ϕ | | |
| | | | Y= | | λ | | |
| | | | X= | | ϕ | | |
| | | | Y= | | λ | | |
| | | | X= | | ϕ | | |
| | | | Y= | | λ | | |
| | | | X= | | ϕ | | |
| | | | Y= | | λ | | |
| | | | X= | | ϕ | | |
| | | | Y= | | λ | | |
| | | | X= | | ϕ | | |
| | | | Y= | | λ | | |
| COMPUTED BY | A. C. Rauck, Jr. | DATE | COMPUTATION CHECKED BY | | F. R. Gustafson | DATE | 2/01/74 |
| LISTED BY | | DATE | LISTING CHECKED BY | | | DATE | |
| HAND PLOTTING BY | | DATE | HAND PLOTTING CHECKED BY | | | DATE | |

COMPILATION REPORT

TP-00729

31. DELINEATION:

Delineation was by the Wild B-8 stereoplotter, using the 1:15,000 scale color photography. The photography was adequate.

32. CONTROL:

See the attached Photogrammetric Plot Report dated January 1974.

33. SUPPLEMENTAL DATA:

None.

34. CONTOURS AND DRAINAGE:

Contours are not applicable to the project. There was no drainage shown.

35. SHORELINE AND ALONGSHORE DETAILS:

Alongshore details were delineated by the Wild B-8 stereoplotter and by office interpretation of the photographs.

The mean high water line was delineated from the photographs.

36. OFFSHORE DETAILS:

None.

37. LANDMARKS AND AIDS:

Compilation office prepared work copies of Forms 76-40 were forwarded to the field editor for verification, location and/or deletion.

38. CONTROL FOR FUTURE SURVEYS:

None.

39. JUNCTIONS:

See the attached Form 76-36B, Item #5 of the Descriptive Report concerning junctions.

40. HORIZONTAL AND VERTICAL ACCURACY:

No statement.

46. COMPARISON WITH EXISTING MAPS:

A comparison has been made with the following USGS Quadrangle: TACOMA NORTH, WASHINGTON, scale 1:24,000, dated 1961, photorevised in 1968.

47. COMPARISON WITH NAUTICAL CHARTS:

A comparison has been made with the following USC&GS Chart: No. 6407, scale 1:15,000, 12th edition, dated January 27, 1973.

ITEMS TO BE APPLIED TO NAUTICAL CHARTS IMMEDIATELY:

None.

ITEMS TO BE CARRIED FORWARD:

None.

Submitted by:

Richard R. White

Richard R. White
Cartographic Technician
February 20, 1974

Approved for forwarding:

Albert C. Rauck, Jr.

Albert C. Rauck, Jr.
Chief, Coastal Mapping Section, AMC

January 11, 1978

GEOGRAPHIC NAMES

FINAL NAME SHEET

CM-7311 (Tacoma Harbor, Washington)

TP-00729

Browns Point

Browns Point (locality)


Commencement Bay

Dash Point

Dash Point (locality)

Puget Sound

Approved by:


Charles E. Harrington
Staff Geographer - C51x2

NOAA FORM 75-74
(7-75)U.S. DEPARTMENT OF COMMERCE
NOAA
NATIONAL OCEAN SURVEY

PHOTOGRAMMETRIC OFFICE REVIEW

TP - 00729

| | | | |
|---|--|---|---|
| 1. PROJECTION AND GRIDS ALS | 2. TITLE ALS | 3. MANUSCRIPT NUMBERS ALS | 4. MANUSCRIPT SIZE ALS |
| CONTROL STATIONS | | | |
| 5. HORIZONTAL CONTROL STATIONS OF THIRD-ORDER OR HIGHER ACCURACY ALS | 6. RECOVERABLE HORIZONTAL STATIONS OF LESS THAN THIRD-ORDER ACCURACY (Topographic stations) NA | | 7. PHOTO HYDRO STATIONS NA |
| 8. BENCH MARKS ALS | 9. PLOTTING OF SEXTANT FIXES ALS | 10. PHOTOGRAMMETRIC PLOT REPORT ALS | 11. DETAIL POINTS ALS |
| ALONGSHORE AREAS (Nautical Chart Data) | | | |
| 12. SHORELINE ALS | 13. LOW-WATER LINE ALS | 14. ROCKS, SHOALS, ETC. ALS | 15. BRIDGES ALS |
| 16. AIDS TO NAVIGATION ALS | 17. LANDMARKS ALS | 18. OTHER ALONGSHORE PHYSICAL FEATURES ALS | 19. OTHER ALONGSHORE CULTURAL FEATURES ALS |
| PHYSICAL FEATURES | | | |
| 20. WATER FEATURES ALS | | 21. NATURAL GROUND COVER NA | 22. PLANETABLE CONTOURS NA |
| 23. STEREOSCOPIC INSTRUMENT CONTOURS NA | 24. CONTOURS IN GENERAL NA | 25. SPOT ELEVATIONS NA | 26. OTHER PHYSICAL FEATURES ALS |
| CULTURAL FEATURES | | | |
| 27. ROADS ALS | 28. BUILDINGS ALS | 29. RAILROADS ALS | 30. OTHER CULTURAL FEATURES ALS |
| BOUNDARIES | | | |
| 31. BOUNDARY LINES NA | | 32. PUBLIC LAND LINES NA | |
| MISCELLANEOUS | | | |
| 33. GEOGRAPHIC NAMES ALS | | 34. JUNCTIONS ALS | 35. LEGIBILITY OF THE MANUSCRIPT ALS |
| 36. DISCREPANCY OVERLAY ALS | 37. DESCRIPTIVE REPORT ALS | 38. FIELD INSPECTION PHOTOGRAPHS ALS | 39. FORMS ALS |
| 40. REVIEWER A. L. Shands | | SUPERVISOR, REVIEW SECTION OR UNIT <i>Albert C. Rauck, Jr.</i> Albert C. Rauck, Jr. | |
| 41. 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 <i>J. R. Minton</i> 3/75 | SUPERVISOR <i>Albert C. Rauck, Jr.</i> Albert C. Rauck, Jr. | | |
| Reviewer A. L. Shands 5/75 | | | |
| 43. REMARKS <i>A. L. Shands</i> See Form 76-36C, Item 8. | | | |

FIELD EDIT REPORT

COMMENCEMENT BAY

TACOMA, WASHINGTON

OPR-412

MARCH - APRIL 1974

INTRODUCTION

Field edit reports are attached for the following maps: TP-00728, TP-00729, TP-00730, TP-00731, TP-00732, TP-00733, TP-00734, TP-00735, and TP-00736. Copies of the Field Edit Ozalids and extra ozalids were compared in the field with actual shore features. The field edit was done before signals were built in many areas, so positions of many items were estimated relative to nearby features. In many instances these positions fell on one or more natural ranges. Some sextant fixes were possible and were recorded for future reference. Height data for all features were noted as referenced to MLLW or MHW or simply by time and date. Unless followed by a "Z" for GMT, all times are in Zone +7 (105° meridian).

All notes have been made in violet ink on the Field Edit Ozalids with the exception of TP-00733 for which another sheet was used and labeled "Smooth Ozalid." All deletions are noted or underlined with green ink.

During our work in the survey area, a great deal of new construction was observed. Shoreline construction sites were noted - as fully as possible - on the ozalids. It is suggested that any questions about new piers, etc. under construction be directed to the Property Manager, Port of Tacoma (address below).

Hugh Wild
Property Manager
Port of Tacoma
P.O. Box 1837
Tacoma, WA 98401

Compilation of the maps agreed well with actual shore features; any discrepancies are noted on the ozalids. Field edit of these manuscripts is not complete, especially for the inland. It is felt that all shore features of importance to the mariner have been adequately covered and noted.

Submitted by,

R. W. Mercer

R.W. Mercer
ENS, NOAA

Approved by,

Michael H. Fleming

M.H. Fleming
CDR, NOAA
Commanding Officer
NOAA SHIP DAVIDSON

FIELD EDIT REPORT

MAP TP-00729

TACOMA, WASHINGTON

APRIL, 1974

Field edit of map TP-00729 was done by Ens. R.W. Mercer and Ens. John L. Oswald during the month of April, 1974. Inspection was done from small boats and on foot when required.

METHOD

A copy of the Field Edit Ozalid was examined in the field. Mean High Water Line verification was done by visual comparison with the manuscript. Sextant fixes were taken on a few rocks and piles. Height data were noted on the Field Edit Ozalid.

All times are based on the 105° meridian (zone +7). Some positions of rocks were estimated by close comparison with nearby features; these rocks are small boulders (1'- 2' diameter) that are partly buried in the surrounding beach material.

ADEQUACY OF COMPARISON

Compilation of this map seems good.

RECOMMENDATIONS

It is recommended that this map be revised in accordance with the notes on the Field Edit Ozalid and then accepted as an advanced manuscript.

Respectfully submitted,

Roger W. Mercer

Roger W Mercer
ENS, NOAA

TP-00729 DP's

Single Pile on mud flat 1/2 mile E of Dash Pt. (approx)

Control

| | |
|---|-------------------|
| Left - #200 | Left A - 107° 17' |
| Center - NE Corner of Bkhd S of Pile | Right A - 98° 48' |
| Right - #202 | Check A - 67° 43' |
| Check - NE Corner of Bkhd 100 Meters W of #201 | |

Rock Awash Approx. 330 Meters S of Dash Pt.
Position estimated 30 meters from Bkhd on range with NE edge of Bkhd

Rock Awash 500 Meters S of Dash Pt.

| | |
|--------------|-------------------|
| Left - 205 | Left A - 26° 31' |
| Center - 207 | |
| Right - 209 | Right A - 20° 32' |
| Check - 015 | Check A - 32° 50' |

Rock Awash 1050 Meters S of Dash Pt.

| | |
|--------------|-------------------|
| Left - 207 | Left A - 16° 26' |
| Center - 208 | |
| Right - 015 | Right A - 29° 22' |
| Check - 209 | Check A - 17° 34' |

Two Rocks Awash Approx. 450 Meters E of Brown Pt. Lt.
Positions estimated referenced to Bkhd's either side.

ADDENDA FIELD EDIT REPORT

Commencement Bay, Washington
Dec 1974 - Jan 1975
OPR-412
Project CM-7311

This report is a follow-up and completion of the original field edit accomplished in this area in March and April of 1974. Certain deficiencies were noted in the original field edit; and this report is being submitted to correct, clarify, or alleviate any errors or misconceptions that may have been conveyed in the original report.

Although this report was not intended to be a complete re-field edit of the area, certain items from the previous report were checked to verify positions and resolve suspect features. It is suspected the original field editors did not use the photographs to their full advantage as the majority of items in question could be located by photogrammetric methods.

The majority of the landmarks were verified by computing the inverse for intersection stations and occupying marked triangulation stations and observing theodolite cuts.

The field edit copies of the manuscripts were used for the field corrections (in blue and dated) and the photographs were cross-referenced to the field edit copies.

Adequacy: The extent and accuracy of this field edit with amended items of the original field edit and completed forms 76-40 now appears complete.

Pertinent information for each individual discrepancy sheet is listed under that specific sheet.

TP-00728

Re-field edited 12/11/74. Agreed with the original field edit except the bluff in question is considered of landmark value. It is of significant height, and distinct boundaries are clear as plotted.

For verification of Pt. Defiance Light see attached NOAA Form 76-40.

TP-00729

Re-field edited 12/11/74. Original field edit complete. Brown Point Lighthouse recovered. See attached form 76-40.

TP-00730

Re-field edited on 12/12/74, 12/13/74, and 1/10/75. All landmarks were recovered. Lighted aids to navigation were located by photogrammetric methods on photograph 73E9100. The triangulation station TARGET, 1952, in question was reported destroyed in 1965 by H.J.S. (page 41 of book 392) and no attempt was made to recover it.

The position of the Commencement Bay Measured Nautical Mile northwest range front marker was determined by an angle distance from reference mark of the triangulation station TARGET. The position of the northwest range rear marker was determined by an angle and distance from the reference mark of triangulation station BLUFF, 1935. Both positions are less than third order. See the enclosed computations and form 76-40.

TP-00731

Re-field edited on 12/12/74. The positions of the Commencement Bay Measured Nautical Mile southeast markers, both front and rear, were determined by an angle and distance from RUSTON, RM N02. Both positions are less than third order. See the enclosed computations and form 76-40.

TP-00732

Re-field edited on 12/10/74. Nonfloating aids to navigation were triangulation stations that were recovered. The new stack considered of landmark value was located photogrammetrically.

The Grain Export Facility under construction in April, 1974, is nearing completion. The pier faces are complete with work on the tower continuing. Port authorities expect to have the facility in operation in June, 1975. The plans for this facility were obtained and are enclosed.

TP-00733

This sheet was re-field edited on 12/10/74, 1/6/75, and 1/10/75. Two charted tanks are gone and should be deleted from the charts. See enclosed form 76-40.

Three landmarks (triangulation stations) were recovered and recovery notes submitted. The twin chimneys were located photogrammetrically on photograph 73E9091. The charted stack mentioned in the April, 1974, field edit as being of no landmark value is considered of landmark value in this report. Although poorly visible from Commencement Bay, it is quite distinguishable in the Hylebos Waterway. See photograph 73E9091.

Two large dome-shaped storage elevators depicted on the charts, but not compiled on the ozalid, should be left on the charts, as they are salient features and visible from offshore in Commencement Bay. See photograph

73E9113. Two navigation lights were recovered, and the fog signals were located photogrammetrically on photograph 73E9114.

TP-00734

The three items not previously investigated were field edited 12/12/74 and noted on the ozalid. One nonfloating aid to navigation was recovered. One tank, as noted on form 76-40, should be deleted from the chart, as it no longer exists.

Fourteen landmarks were located. Twelve were triangulation and were recovered. Two were located photogrammetrically on photograph 73E9104.

TP-00736

Re-field edited 12/12/74. The new boat^{ramp} was located on photograph 73E9090 by planetable methods. It is a private boat ramp and not maintained by the port authorities. The two stacks considered of landmark value by this field edit were located photogrammetrically on photograph 73E9089 and 73E9088.

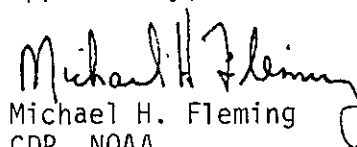
There is new construction of a barge-loading facility in the Blair Waterway turning basin. The plans for this facility were obtained from the Port authorities and are enclosed.

Respectfully submitted,



D.S. Eilers
LTJG, NOAA

Approved by,



Michael H. Fleming
CDR, NOAA
Commanding Officer

| RESPONSIBLE PERSONNEL | |
|---|---|
| TYPE OF ACTION | NAME |
| OBJECTS INSPECTED FROM SEAWARD | |
| POSITIONS DETERMINED AND/OR VERIFIED | L. L. Riggers, PMC; D. S. Eilers, Lt. (jg), NOAA J.R. Minto |
| FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES | <input type="checkbox"/> PHOTO FIELD PARTY <input checked="" type="checkbox"/> HYDROGRAPHIC PARTY <input type="checkbox"/> GEODETIC PARTY <input type="checkbox"/> OTHER (Specify) |
| INSTRUCTIONS FOR ENTRIES UNDER 'METHOD AND DATE OF LOCATION' (Consult Photogrammetric Instructions No. 64.) | |
| OFFICE I. OFFICE IDENTIFIED AND LOCATED OBJECTS Enter the number and date (including month, day, and year) of the photograph used to identify and locate the object. EXAMPLE: 75E(C)6042 8-12-75 | FIELD (Cont'd) B. Photogrammetric field positions** require entry of method of location or verification, date of field work and number of the photograph used to locate or identify the object. EXAMPLE: P-8-V 8-12-75 74L(C)2982 |
| FIELD I. NEW POSITION DETERMINED OR VERIFIED Enter the applicable data by symbols as follows: F - Field P - Photogrammetric L - Located Vis - Visually V - Verified 1 - Triangulation 5 - Field identified 2 - Traverse 6 - Theodolite 3 - Intersection 7 - Planetable 4 - Resection 8 - Sextant A. Field positions* require entry of method of location and date of field work. EXAMPLE: F-2-6-L 8-12-75 | II. TRIANGULATION STATION RECOVERED When a landmark or aid which is also a triangulation station is recovered, enter 'Triang. Rec.' with date of recovery. EXAMPLE: Triang. Rec. 8-12-75 III. POSITION VERIFIED VISUALLY ON PHOTOGRAPH Enter 'V-Vis.' and date. EXAMPLE: V-Vis. 8-12-75 **PHOTOGRAMMETRIC FIELD POSITIONS are dependent entirely, or in part, upon control established by photogrammetric methods. |
| *FIELD POSITIONS are determined by field observations based entirely upon ground survey methods. | |

REVIEW REPORT

TP-00729

SHORELINE

January 27, 1978

61. GENERAL STATEMENT:

The field editor indicated the existence of several rocks. In each case, however, he estimated their positions by spotting them on the field edit ozalid. This method of location does not meet accuracy standards. The photographs were thoroughly examined by office personnel in those areas where the field editor indicated the existence of rocks. Except for one area, 400 meters east of Brown Point, the indicated rocks, were identified and positioned using the photographs. The estimated positions given on the field edit ozalid are shown for the two rocks which could not be identified on the photographs. They are labeled "(PA)" for position approximate.

See Summary, page 6 of this descriptive report.

62. COMPARISON WITH REGISTERED TOPOGRAPHIC SURVEYS:

Not applicable.

63. COMPARISON WITH MAPS OF OTHER AGENCIES:

Not applicable.

64. COMPARISON WITH CONTEMPORARY HYDROGRAPHIC SURVEYS:

The map was compared with a copy of Final Verified Smoothsheet H-9411 (DA-5-2-74). There are no significant differences.

65. COMPARISON WITH NAUTICAL CHARTS:

Comparison was made with chart 18453, 1:15,000 scale, 14th edition dated May 29, 1976. Three piles and a platform are charted just east of Browns Point. None of these features are visible on the photographs.

Piles shown on the map at lat. $47^{\circ} 18.5'$, long. $122^{\circ} 26.1'$ coincide with and are considered to be remnants of pier ruins shown on the chart in that location.

66. ADEQUACY OF RESULTS AND FUTURE SURVEYS:

This map complies with the project instructions and meets the requirements for Bureau Standards and the National Standards of Map Accuracy.

Submitted by:

A. L. Shands

A. L. Shands
Final Reviewer

Approved for forwarding:

Alfred C. Penick Jr. FOR

Jeffrey G. Carlen, CDR
Chief, Coastal Mapping Division, AMC

Approved:

John D. Perrow Jr.
Chief, Photogrammetric Branch

James Collier
Chief, Coastal Mapping Division

