<table>
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<th>Type of Survey</th>
<th>SPECIAL TOPIC &amp; SHORELINE</th>
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<td>Field No.</td>
<td>P-28, 1971</td>
</tr>
<tr>
<td>Office No.</td>
<td>3281-3282</td>
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**LOCALITY**

- **State**: CALIFORNIA
- **General locality**: WILLOW BAY
- **Locality**: TEHAMA AND JASPER, CALIFORNIA

---

**CHIEF OF PARTY**

- C. W. Clark

**DATE**

- August 29, 1951
DATA RECORD

T-8960 to T-8965 Inclusive

- Project No. (II): Ph-25(47) Quadrangle Name (IV):
- Field Office (II): Bureka, California (Field Unit) Chief of Party: R.A. Earle
- Photogrammetric Office (III): Portland, Oregon Officer-In-Charge: W. H. Bainbridge
- Certification: Charles W. Clark
- Copy filed in Division of Photogrammetry (IV)

Instructions dated (II) (III): 27 February 1948

Method of Compilation (III): Graphic

Manuscript Scale (III): 1:10,000 Stereoscopic Plotting Instrument Scale (III):

Scale Factor (III): None

Date received in Washington Office (IV): 11-22-19 Date reported to Nautical Chart Branch (IV):

Applied to Chart No. Date:

Publication Scale (IV): 1:10,000 Date registered (IV): 7-9-51

Publication date (IV): End of June 1951

Geographic Datum (III): N.A. 1927

Vertical Datum (III): Mean Sea Level

Mean sea level except as follows:
- Elevations shown as (25) 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): See reverse side.

Lat.: Long.: Adjusted

Plane Coordinates (IV): State: California, Zone: 1

X=

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.
Reference Stations

T-3960  SAMOA, 2, 1941
Lat.  40° 40' 21.35°  653.6m (1192.2m) \( y = 550,067.76 \)
Long.  124° 11' 10.02"  236.3m (1169.8m) \( x = 1,395,913.55 \)

T-3961  ARCATA, 1941
Lat.  40° 42' 56.43"  1740.8m (110.0m) \( y = 371,541.53 \)
Long.  124° 06' 09.78"  229.2m (1175.6m) \( x = 1,416,643.37 \)

T-3962  ZAHNER, 1941
Lat.  40° 45' 33.02°  1018.7m (832.1m) \( y = 524,976.79 \)
Long.  124° 10' 47.71°  112.3m (295.1m) \( x = 1,394,216.01 \)

T-3963  MEADOW, 1928
Lat.  40° 28' 49.68°  1532.5m (318.3m) \( y = 594,335.87 \)
Long.  124° 06' 29.63°  694.6m (711.6m) \( x = 1,414,524.55 \)

T-3964  RICKS, 1941
Lat.  40° 40' 39.59°  1221.3m (629.4m) \( y = 497,999.00 \)
Long.  124° 17' 11.22°  263.7m (1145.4m) \( x = 1,365,917.33 \)

T-3965  SISSON, 1919
Lat.  40° 42' 33.39°  1647.1m (203.6m) \( y = 579,927.21 \)
Long.  124° 12' 04.44°  103.6m (1304.7m) \( x = 1,387,707.41 \)

All recovered in 1948.

Adjusted Positions.
Areas contoured by various personnel
(Show name within area)
(II) (III)

*No contours*
DATA RECORD

Field Inspection by (II): Charles Hanavich, J. H. Winniford, J. L. Harris, E. H. Taylor, and R. E. Nelby
Date: 3/15/48 to 4/28/48

Planetable contouring by (II): 
Date: 

Completion Surveys by (II): None
Date: 

Mean High Water Location (III) (State date and method of location): Located by field inspection between 3/18/43 and 4/28/48. Field data transferred to office photographs with the aid of the stereoscope and then compiled on map manuscripts.

Projection and Grids ruled by (IV): 
Date:

Projection and Grids checked by (IV): 
Date:

Control plotted by (III): John C. Lajoye & Roy A. Davidson (all sheets) Date: March 1949

Control checked by (III): Ree Barron & Frank H. Elrod (all sheets) Date: March 1949

Radial Plot or Stereoscopic Control extension by (III):

Ree Barron, John C. Lajoye & J.E. Deal Date: April 15, 1949

Stereoscopic Instrument compilation (III):

Planimetry

Contours

Date:

Manuscript delineated by (III): See reverse side.
Date:

Photogrammetric Office Review by (III): Ree H. Barron (all sheets) Date: 6/15/49 to 7/29/49

Elevations on Manuscript checked by (II) (III):

Ree H. Barron (Tidal Bench Marks)
Date: 6/15/49 to 7/29/49
Manuscript delineated by:

T-3960 John H. Winniford
T-3961 Carita C. Wiebe
T-3962 Helen L. Laube
T-3963 Carita C. Wiebe
T-3964 John C. Lajoie
T-3965 Helen L. Laube

Date
4/12/49 to 6/6/49
4/12/49 to 5/31/49
4/19/49 to 6/29/49
6/7/49 to 7/11/49
4/19/49 to 5/31/49
6/29/49 to 7/26/49

Field Inspection Photographs

T-3960: 47-D-310 to 314; 333-4; 368-9.
T-3961: 47-D-4124, 37, 302 & 396.
T-3962: 47-D-3148, 317; 330; 3314, 335; 363; 365.
T-3963: 47-D-364-5; 488 & 488.
T-3964: 47-D-3174, 322; 325 & 326; 352 & 357.
T-3965: 47-D-337; 352 & 356

LTS.
PHOTOGRAPHS (III)

<table>
<thead>
<tr>
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<td>13:51 to 13:54</td>
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<td>11/22/47</td>
<td>13:39 to 13:41</td>
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<td>11/21/48</td>
<td>12:14 to 12:20</td>
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<td>11/21/48</td>
<td>13:10 to 13:40</td>
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See layout (p. 31) for photographs used in the compilation of each map.

Tide (III)

Reference Station: Humboldt Bay, California
Subordinate Station: None
Subordinate Station:

Washington Office Review by (IV):

Final Drafting by (IV):

Drafting verified for reproduction by (IV):

Proof Edit by (IV):

Land Area (Sq. Statute Miles) (III):

Shoreline (More than 200 meters to opposite shore) (III):

Shoreline (Less than 200 meters to opposite shore) (III):

Control Leveling - Miles (II):

Number of Triangulation Stations searched for (II):

Number of BMs searched for (II):

Number of Recoverable Photo Stations established (III):

Number of Temporary Photo Hydro Stations established (III):

Remarks:

In addition 19 triangulation stations were established. Above statistics are for the entire project.
Summary to Accompany
Descriptive Report for T-8960 to T-8965

Project Ph-25(47) covers the area Latitude 40°40' to 54', Longitude 124°02' to 19', and consists of 34 planimetric maps, T-8960 to T-8965, at a scale of 1:10,000.

None of the maps in this project has been delineated to the full extent of their respective geographic limits. This is in accord with the project instructions which state that the mapping shall extend "generally back to where the mountainous or hilly areas begin."

Field inspection work for the project was completed in the spring of 1948. The compilations were made from the field inspection photographs taken in November 1947 plus high-water photographs taken in November 1948.

Data pertaining to Project Ph-25(47) are filed as follows:

A. Division of Photogrammetry General Files

1. Acetate map manuscripts
2. 48 Forms 524
3. Field inspection photographs

B. Bureau Archives

1. One volume Form 250 (Horizontal Angles)
2. Special Report, Third-order triangulation
3. 190 Forms 526
   16 Form 525
4. Registered lithographic print of the reviewed manuscript at compilation scale
5. Registered original descriptive report

C. Geographic Names Section

1. Investigation of Geographic Names Ph-25(47).

Lena T. Stevens
1 May 1950
1. Description of the Area:

Humboldt Bay, which is the largest and most suitable harbor between San Francisco and the Columbia River, is situated in the northwestern part of California along the Pacific Ocean. A narrow strip of beach and sand separates the bay from the ocean. It is bordered on the north by the Arcata flatlands which comprise the delta of the Mad River. On the east and southeast, smaller bodies of low alluvial lands are found with laterals extending up Jacoby and Freshwater Creeks, The Elk River, and Salmon Creek. Terraces of old marine or coastal plane deposits are found north and east of these lowlands. On the south is Table Bluff; a prominent terrace, it extends westward to the ocean. South of Table Bluff is the extensive delta of the Eel River.

The bench lands or river terraces are in the main from 100 to 500 feet high. On the whole, they are a marine deposition but in some areas have been modified by the rivers and larger creeks.

The lowlands of the area are either tidal flats or river flood plains that lie only a few feet above tide water. The tidal flats are found north of and around Humboldt Bay and southwest of Table Bluff. These tidal flats, however, have been reclaimed for the most part. Along the bay and the various creeks, numerous tide gates have been installed and the low lands crisscrossed with drainage ditches so that the tide does not reach them except for a certain amount of underground seepage. The river flood plain is associated with the Mad River in the northern part.

Tidal marsh land is found close to the bay. It is traversed by numerous tidal sloughs and channels, and is covered by a salt-marsh vegetation. At one time it was extensive but most of it has been reclaimed by the construction of dikes and is utilized chiefly for grazing purposes. At one time Gunther Island was reclaimed, but the dikes are broken in many places and the land has reverted to its original state.

Along the beaches - the South Spit and the North Spit areas - are wind-blown sand dunes loosely held in place by a sparse growth of grass. Inland along the North Spit, some of the dunes attain a height of 60 to 70 feet, with a vegetal growth of trees, brush, or grass.
South Bay and North Bay in the south and north parts of Humboldt Bay, respectively, become extensive mud flats at low tide and are traversed by tidal channels.

East of the agricultural lowlands or valleys, the land is rough, mountainous, and wooded. The forests consist of redwood, Douglas fir, white fir, and other lesser growths. Much of the land has been cut over but it is now springing up with second growth timber. The land has little value except for forestry.

The drainage of the entire area is mainly toward the west and northwest. In the mountainous and hilly areas, the drainage is well established. Drainage is poor in the plains of the streams emptying into Humboldt Bay. The low lying lands on the deltas of the Mad and Eel Rivers are also poorly drained. The northern part of the area is drained by Mad River Slough and Mad River. The Eel River drains the southern part. Salmon Creek, Elk River, Freshwater Creek and Jacoby Creek drain the eastern side of the Humboldt Bay area and enter the bay.

The close proximity of the ocean is responsible for a mild, moist, and even climate the year round. The climate is characterized by a rainy season that lasts from October to May and a dry season from June to September. Prevailing winds, which are moderate, are from the north during the summer and from the southeast during the winter.

In addition to being a great lumbering center, the Humboldt area is noted for its dairy industry. Another important mainstay is the fish industry. Vegetables, berries, fruit, and other products are raised chiefly for local consumption.

Eureka, the county seat of Humboldt County and the largest town, is an important agricultural trading center and shipping point. The main concentration of docks and wharfs, and a variety of industrial buildings, railroad yards, and other commercial sites are found along the city's waterfront. Next in importance is the City of Arcata. It is a trading and shipping center for lumber, dairy products, and other minor agricultural commodities. The smaller communities of Samoa and Fields Landing are important for their large lumber mills.

One major highway, U.S. 101 (Redwood Highway), traverses the area north and south along the east side of Humboldt Bay. Another major highway, U.S. 299, extends into the area from the east and junctions with U.S. Highway 101 north of Arcata. In addition to these highways, there are numerous connecting county roads which are kept in good condition in the settled sections.
Transportation by rail is more rapid and regular than by boats. As a result the railroad carries the bulk of outgoing and incoming freight. The principal railroads are the Northwestern Pacific and the Humboldt Northern. The former provides the towns of Arcata and Eureka rail connection with San Francisco and other points south, while the latter leads northerly up the coast from Arcata for a short distance. At the present time there are no rail connections with any of the states or large towns to the north.

Humboldt Bay was discovered in 1849, and shortly thereafter the area was settled by pioneers. It is isolated by rugged mountain ranges to the north, east, and south, and for many years practically the only way of communicating with the outside world was by boat. In spite of this, the influx of population was rapid, especially during the last two wars, so that in the cleared and settled parts the population is quite dense.

2. Completeness of Field Inspection:

The field inspection for the clarification of details on the photographs, and for the classification and identification of features such as roads, buildings, wooded areas, drainage, etc., has been completed in accordance with the instructions for this Project. In general, the detail limits indicated on the index map by the Washington Office were adhered to.

Various maps have been obtained to supplement the field inspection work. (See 33. Compilation Report, pp 43-44)

3. Interpretation of the Photographs:

Each type of vegetation such as woodland, grassland, cultivated areas, marsh, swamp, and other characteristics have been classified a sufficient number of times on the field photographs to enable the office personnel to interpret the photographic detail correctly.

Softwoods are recognized by a darker tone of color as well as by the spire-like shadows. Hardwoods are light grey in color and, in general, show a more rounded outline. The lowland areas range in shading from a light grey to a dark grey and have a mottled appearance. In the bay area the mud flats, which bare at low water, range from light grey to dark grey, the darker shading is eel grass on the mud flats. (The eel grass areas are further recognized by the crisscrossed tidal sloughs and rills.) Sand areas are light, and the dunes are recognized by the dark shadows visible on the photographs.
4. **Horizontal Control:**

The subject of supplemental control established in this area is discussed in a "Special Report, Third-order Triangulation, Project Ph-25(47)", which has been submitted.

A thorough search has been made for all USGS stations established during prior surveys in this area as well as for control stations established by other agencies (USE and USGS). Most of these stations originally established by the other agencies have been occupied by our Bureau in later years. Many of the old stations have been lost or destroyed; however, the majority of the more recently described and established stations were recovered.

Recovery notes on Form 526 have been prepared for all stations for which a search was made. It is believed that about 30% more stations were identified on the field photographs than were necessary to adequately control the radial plots for this project. This additional control was identified to offset the possible loss of any of the stations when this project is re-photographed because of insufficienct overlap in the field photographs taken in November, 1947. In addition, the field recovery units were instructed that stations identified by the substitute station method should be selected with care to prevent their immediate future loss. For additional information refer to paragraph 7 of the instructions for this project.

5. **Vertical Control:**

The instructions for this project did not request the recovery of vertical control, however, Photogrammetry Instructions No. 17, dated 9/15/47, under side heading 23d, page 9, specify that tidal bench marks shall be shown on planimetric and shoreline manuscripts, and in accordance therewith a search was made for them. The descriptions for the tidal bench marks were obtained from the horizontal and vertical control data for the Eureka, Fortuna, and Ferndale quadrangles issued by the Office of the Chief of Engineers, Washington, D.C. Recovery notes on Form 685 have been prepared for all tidal bench marks in the area which were listed in the control data mentioned above.

Geodetic bench marks were not searched for except where they were recovered and identified on the field photographs to satisfy the topographic requirements for control along the waterfront areas. In such cases, recovery notes on Form 685 were prepared as well as on Form 524.

6. **Contours and Drainage:**

No contouring is involved in the area.
All drainage, except for minor ditches, was located and classified in the field. Drainage features, which were indistinguishable on the photographs were located by pacing or taping. In addition, the drainage defined in the field was rechecked under the stereoscope by the field inspector; but in some instances this was not possible because of insufficient end lap in the field photographs.

In cases where it was doubtful whether drainage was perennial or intermittent, the classification was verified by local inquiry.

In the low alluvial areas around the bay, many of the tidal creeks or channels have been diked along the sides and tide gates installed. With these artificial restrictions, these creeks and channels are not affected by tidal changes except for the unavoidable seepage in a few areas where the dikes and tide gates are in disrepair.

Certain portions of the lowland areas adjoining the bay become flooded during heavy run-offs and rains with the result that the streams and channels spill over when the overload becomes too great for the tide gates to handle. The flow is aggravated still more during periods of high tide when the force of the incoming tides closes the gates.

7. Mean High-Water Line:

The mean high-water line was identified in the field on the photographs in accordance with the supplemental instructions dated 18 March 1944 and 20 June 1938, and with Photogrammetry Instructions No. 17, dated 9-15-47. The entire shoreline was inspected visually in the field either by walking along the shoreline or by examination from a boat. No difficulty was encountered in ascertaining the mean high-water line on the field photographs except in the vicinity of the bluffs at Buhne Point and Southport Landing, because of the shadows from the bluff cast along the shoreline. However, since the mean high-water is at the foot of these bluffs, the shoreline can be readily delineated by the use of a stereoscope.

The northwest face of Buhne Point is subject to additional erosion and receding from the strong impinging action of the flood tides surging through the entrance to Humboldt Bay.

Changes are to be expected in the small cove just south of Buhne Point where dredging operations are now in effect as well as at the extreme southwest corner of South Bay just north of Table Bluff where future dredging operations are contemplated.
Along the seaward side, the mean high-water line is distinguishable by a visible line on the photographs. The storm high-water is irregular and parallels the west side of the foot of the sand dunes or else the west side of the debris line (logs, trees, stumps, and other refuse).

Inside the bay, the mean high-water either follows closely the limits of vegetation or a visible line on the photographs along the sandy beaches. Frequently, the shoreline follows the offshore edge of dikes where they are found. Where marsh areas are found, the shoreline is the edge of the marsh; and along the channels and sloughs, it is marked by a bank line, vegetation line, or the offshore edges of dikes.

8. Lower Low-Water Line:

Where practical and possible the lower low-water line was identified and noted on the photographs. In other areas the lower low-water line was noted by an approximate symbol on the field photographs.

At low tide extensive portions of Humboldt Bay, especially in Arcata Bay and South Bay, are mud flats. It should be noted that some of the areas indicated on chart 5632 as shoal areas are mud flats (or mud flats covered with eel grass) at low tide.

On the seaward side, the prominent berm at the water's edge on the photographs, can be readily delineated as an approximate low-water line. It has not been noted on the field photographs as it is readily distinguishable. The definite lower low-water line can not be delineated along the coast as several field measurements taken in the field at low-water indicate that the photographs used for field inspection were not taken at the time of low water.

9. Wharves and Shoreline Structures:

The waterfront areas were carefully investigated during the shoreline inspection. All wharves, piers, bulkheads, retaining walls, jetties, marine railways, and other shoreline features were inspected and identified on the photographs. All essential and less well-defined detail has been clarified by appropriate notations and markings. All anchored floats were either deleted or noted as such on the photographs.

10. Details Offshore from the High-water Line:

Dolphins, piling, remains of old wharves and piers, foul and debris areas, cable areas, wreckage, and other offshore obstructions
or details were inspected, identified, and clarified on the photographs by appropriate notations and markings during shoreline inspection operations.

Numerous log booms are to be found in the vicinity of Samoa, Fields Landing, and along Eureka Slough.

At the head of Arcata Bay are several old trestles and wharves in ruins. A line of old and broken piling, which are the remains of a previous trestle, are found in the bay south of Jacoby Creek.

A large ship-wreck along the coast line and southwest of Samoa, which is noted on chart 5832, was not seen when the shoreline was inspected in that area. The wreck is believed to be still in the vicinity.

11. Landmarks and Aids to Navigation:

All charted landmarks have been investigated and verified as to their value when seen from offshore. In addition, a selection was made of other prominent objects along the shore which are definite landmarks, and these were recommended for charting.

A complete investigation of all fixed aids to navigation was made in the field. Where an aid to navigation was a triangulation station, its location was verified and reported in accordance with the instructions. They were either identified on the photographs if visible or located by triangulation methods. Their correct names, distinctive markings, etcetera, were verified from the latest edition of the Light List - Pacific Coast. Several discrepancies were found; they are:

1. Arcata Channel Lights 1, 2, 3, and 4, which are noted on chart 5832 just northwest of Gunther Island and are listed in the 1948 Light List, were found upon field investigation to have been removed in January of 1946. The Director was notified about this error in a letter from it, Comdr. R.A. Earle dated 26 May 1948.

2. The light located just south of the south tip of Gunther Island is listed in the 1948 Light List as "Indian Island Spit Light". This name is in disagreement with the approved name for the geographic feature - Gunther Island - which is a decision of the Board on Geographical Names, and is also the approved name in the special report on geographic names submitted for this project. This light

*The name "Gunther Island Spit" first appears in the 1950 Light List.*
was located by triangulation methods on April 28, 1948. Later it was ascertained from the Commanding Officer of the Humboldt Bay Coast Guard Station that this light would be moved about 20 feet SW from its present position in the near future. The triangulation name of the station is Gunther Island Spit Light.

3. Triangulation station "Humboldt Bay, Green Blinker, at Fog Signal Station, 1941", which was established by D. H.K., is misnamed and confusing. This station is a light and is listed in the 1943 Light List as the North Jetty Light. This Light List name is recommended in order to avoid confusing it with the name Humboldt Bay Jetty Light. This Light List name is described as being a siren on a white frame building. It was listed "North Jetty" in 1950 Light List. It is now on Humboldt Bay Approach List as a siren on a white frame building.

In accordance with Photogrammetry Instructions No. 6, dated 12-30-48, Mr. Heck of the Division of Charts was notified of the data contained in item 2 and Mr. Sutcliffe of the Division of Geodesy on the subject matter listed in item 3.

All charted landmarks as well as those recommended for charting and fixed aids to navigation have been reported on Form 567 as well as on either Forms 524, 525, or 526.

12. Hydrographic Control:

No photo-hydro stations were established; this is in accordance with the instructions for the project.

Where a sufficient number of existing control stations, nautical and aeronautical landmarks, and fixed aids to navigation, were not available to comply with the requirements for topographic control, additional ones were selected and identified in accordance with subject 235 of the Hydrographic Manual.

All topographic stations have been reported on Form 524. For additional information refer to side heading 5, last paragraph, and attached list (p. 5).

13. Landing Fields and Aeronautical Aids:

The following landing fields were inspected in the area:

1. Eureka Airport located on the North Spit. This airport was established by the Navy during the last war; it is now leased by a private party.
2. Humboldt County Airport located east of the City of Eureka on the SE side of U.S. Highway 101.

All aeronautical aids in the area have been investigated and reported on Form 567 as well as on either Forms 524, 525, or 526. A high frequency beam station has been established by the U.S. Civil Aeronautics Authority on Table Bluff since the field photographs had been taken. It was located on a photograph by reference measurements and reported on Forms 567 and 524.

14. Road Classification:

All roads have been traversed and classified in accordance with Photogrammetry Instructions No. 10, and amendment thereto, dated 4-14-47, and 10-24-47, respectively.

Route numbers and names were verified from road signs and other local sources, and shown on the photographs. Names, if any, of all roads in rural areas were noted on the photographs. In urban areas with a pattern of many streets, a sufficient number of street names, usually the more prominent ones, were labeled on the photographs to provide an adequate orientation whereby the remaining street names could be easily identified by the compiler from city maps of the area. These official maps, showing streets and street names, were obtained from local authorities.

15. Bridges: Entered in Bridge Book

All bridges for the area covered by this report as listed in the U.S. Engineers "List of Bridges Over Navigable Waters in the U.S." dated July 1, 1941, were inspected in the field; all clearances were carefully measured with a steel tape in accordance with Photogrammetry Instructions No. 13. Since the latest edition of the bridge book is not available, a complete listing of the bridges is made below with all necessary data to be compared with the latest edition of the bridge book for any discrepancies. The local District Engineer should be notified of any discrepancies. The bridge clearances, type of bridge, and the time of the field measurements have been noted on the photographs. A list of the bridges investigated follows:

Miles above Mouth: 0.5
Name: None
Location: Eureka Slough, California
Owner: Northwestern Pacific Railway
Kind: Although a swing type bridge, it has been discontinued as such and is now fixed.
Number of Spans: 1
Channel Span: Hor. Cl. - 78 feet left and right spans
Vert. Cl. to WL - 9.0 feet; to MLW - 11.4 feet
MLW figure - Diurnal Range figure = MLW clearance

Note: These figures are approximate and subject to change with seasonal variations.
Purpose of Bridge: Railroad
Date of Field Measurements: 4/29/48, PST 1450
Remarks: The navigable channel is under the right span in proceeding upstream.

2. Miles above Mouth: .5
Name: None
Location: Eureka Slough, California
Owner: California State Highway Commission
Kind: Fixed
Number of Spans: 1
Channel Span: Hor. Cl. - 75 feet
         Vert. Cl. to WL - 20.0 feet; to MLLW - 22.5 feet
Purpose of Bridge: Highway
Date of Field Measurements: 4/29/48, PST 1500
Remarks: This highway bridge was rebuilt around 1941.

3. Miles above Mouth: 2.3
Name: None
Location: Eureka Slough, California
Owner: The Pacific Lumber Company
Kind: See remarks
Number of Spans: See remarks
Channel Span: Hor. Cl. - 10.0 feet; see remarks
         Vert. Cl. - unlimited; see remarks
Purpose of Bridge: None
Date of Field Measurements: 4/29/48
Remarks: Railroad bridge gone; bridge piling in place with 10.0-foot Hor. Cl. Overhead crossbeams and rails removed with vert. Cl. unlimited.

4. Miles above Mouth: 2.9
Name: None
Location: Eureka Slough, California
Owner: N.M. Deroy
Remarks: This bridge has been removed.

5. Miles above Mouth: 3
Name: None
Location: Eureka Slough, California
Owner: Humboldt County
Remarks: This bridge has been removed.

6. Miles above Mouth: 2.0
Name: None
Location: Eureka Slough, California
Owner: The Pacific Lumber Co.
Kind: Fixed  
Number of Spans: 1  
Channel Span: Hor. Cl. - 10.0 feet  
Vert. Cl. to WL - 7.0 feet; to MLLW - 10.0 feet  

Purpose of Bridge: Abandoned railroad trestle  
Date of Field Measurements: 4/29/48, PST 1530  
Remarks: Not listed in 1941 bridge book. Overhead rails have been removed but some of the crossbeams, including the bridge piling, remain.

Miles above Mouth: .5  
Name: None  
Location: Freshwater Slough, California  
Owner: Peter H. Christensen  
Kind: Fixed Arch  
Number of Spans: 1  
Channel Span: Hor. Cl. - 35.6 feet  
Vert. Cl. to WL - 15.0 feet; to MLLW - 15.9 feet  

Purpose of Bridge: Private (road)  
Date of Field Measurements: 4/29/48, PST 1320  
Remarks: None

Miles above Mouth: 1.66  
Name: None  
Location: Freshwater Slough, California  
Owner: M. Brazil  
Kind: Fixed Arch  
Number of Spans: 1  
Channel Span: Hor. Cl. - 35.6 feet  
Vert. Cl. to WL - 17.0 feet; to MLLW - 17.8 feet  

Purpose of Bridge: Cattle crossing  
Date of Field Measurements: 4/29/48, PST 1310  
Remarks: None

Miles above Mouth: 1.85  
Name: None  
Location: Freshwater Slough, California  
Owner: Humboldt County  
Kind: Fixed  
Number of Spans: 1  
Channel Span: Hor. Cl. - 13.0 feet  
Vert. Cl. to WL - 13.8 feet; to MLLW - 14.5 feet  

Purpose of Bridge: Highway  
Date of Field Measurements: 4/29/48, PST 1300  
Remarks: None
-12-

10 Miles above Mouth: 3.5
Name: None
Location: Freshwater Slough, California (Ryan Slough branch)
Owner: Humboldt County
Remarks: No clearances were obtained for this fixed highway bridge listed in the 1941 bridge book as the slough is not navigable upstream from the bridge.

11 Miles above Mouth: .5
Name: None
Location: Elk River, California
Owner: N.W. Pacific Railway Co.
Kind: Fixed
Number of Spans: 1
Channel Span: Hor. Cl. - 35.0 feet
Vert. Cl. to WL - 9.5 feet; to MLLW - 9.8 feet
Purpose of Bridge: Railroad
Date of Field Measurements: 4/29/48, PST 1200
Remarks: This bridge may have been rebuilt; the vertical clearance does not agree with the 1941 bridge book.

12 Miles above Mouth: .75
Name: None
Location: Elk River, California
Owner: California State Highway Commission
Kind: Fixed
Number of Spans: 1
Channel Span: Hor. Cl. - 32.0 feet
Vert. Cl. to WL - 9.7 feet; to MLLW - 10.0 feet
Date of Field Measurements: 4/29/48, PST 1210
Remarks: This highway bridge was rebuilt in 1937

13 Miles above Mouth: .8
Name: None
Location: Elk River, California
Owner: Dolbeer and Carlson Lumber Co.
Kind: Fixed
Number of Spans: 1
Channel Span: Hor. Cl. 10.0 feet
Vert. Cl. to WL - 7.0 feet; to MLLW - 7.4 feet
Purpose of Bridge: Railroad; see remarks
Date of Field Measurements: 4/29/48, PST 1215
Remarks: This is a railroad not a highway bridge as listed in the 1941 bridge book; it is possible that this bridge was rebuilt into a railroad bridge.

14 Miles above Mouth: .85
Name: None
Location: Elk River, California
Owner: Humboldt County
Kind: Fixed
Number of Spans: 1
Channel Span: Hor. Cl. - 18.6 feet
Vert. Cl. to WL - 8.6 feet; to MLLW - 9.1 feet
Purpose of Bridge: Highway
Date of Field Measurements: 4/29/48, PST 1220
Remarks: This highway bridge was rebuilt in August, 1942.

Miles above Mouth: .25
Name: None
Location: Mad River Slough, California
Owner: Northwestern Pacific Railway
Kind: Fixed
Number of Spans: 1
Channel Span: Hor. Cl. - 12.0 feet
Vert. Cl. to WL - 11.3 feet; to MLLW - 11.5 feet
Purpose of Bridge: Railroad
Date of Field Measurements: 4/28/48, PST 1130
Remarks: This railroad bridge was rebuilt around 1942.

Miles above Mouth: 1.5
Name: None
Location: Mad River Slough, California
Owner: Humboldt County
Kind: Fixed
Number of Spans: 1
Channel Span: Hor. Cl. - 18.0 feet
Vert. Cl. to WL - 10.3 feet; to MLLW - 10.6 feet
Purpose of Bridge: Highway
Date of Field Measurements: 4/28/48, PST 1135
Remarks: This highway bridge was rebuilt around 1941 or 1942.

Miles above Mouth: 1.5
Name: None
Location: Mad River Slough, California
Owner: Humboldt Northern RR
Kind: Fixed
Number of Spans: 1
Channel Span: Hor. Cl. - 7.2 feet
Vert. Cl. to WL - 13.0 feet; to MLLW - 13.1 feet
Purpose of Bridge: Railroad
Date of Field Measurements: 4/28/48, PST 1058
Remarks: The above data applies to two bridges, one on the east channel and the other on the west channel; either channel may be used in navigating. These railroad bridges were rebuilt around 1942. One of these bridges was not listed in the 1941 bridge book.
16. Buildings and Structures:

A complete field investigation was made of all buildings and structures within the approximate detail limits indicated on the index map by the Washington Office.

In rural areas all buildings to be shown have been circled or adequately indicated on the field photographs. In many instances, buildings have been deleted in green ink or referenced so that the office compiler would have no doubt concerning the field investigation. Obscured buildings have been shaped with ink.

In urban areas only public and landmark buildings have been circled, outlined, or appropriately noted. Public parks, college grounds, and similar places within the urban limits were inspected as rural areas.

Along waterfront areas all the buildings have been circled, outlined, or adequately noted, and large buildings and structures were named.

In both rural and urban areas all public and important buildings have been classified and named.

For additional information refer to side heading 2.

17. Boundary Monuments and Lines:

With the exception of public land lines and political boundaries, the investigation of boundary monuments and lines was accomplished. This is in accordance with the instructions for the project.

Except for the boundary limits of small areas such as cemeteries, parks, schools, landing fields, etc., which were obtained by the various field inspection parties, this phase of the work was done by a special 2-man field party.
The city limits of Eureka and Arcata have been indicated on the field photographs. All of the boundary monuments that were recovered have been reported on Form 524. City maps have been obtained to supplement the delineation of the corporate limits. The corporate limits of Arcata were extended only to the detail limits; however, the necessary information has been noted in ink on a map of the City of Arcata to enable the compiler to delineate the complete limits, if need be. This map is to be filed in the Geographic Section, Division of Charts.

A photostatic copy (in two pieces) showing the boundary limits in red ink was obtained of Humboldt State College from the school authorities. The limits of the college grounds have not been indicated on any of the field photographs.

No legal descriptions were available for the city limits of Eureka or Arcata.

18. Geographic Names:

The investigation of geographic names was accomplished by a special 1-man field party and is the subject of a special report "Investigation of Geographic Names, Project Ph-25(47)", which has been submitted. 

The local names of roads and highways, small parks and cemeteries, railroad stations, et cetera, were obtained by the various field inspection parties. Various maps showing street and other local names were obtained from the local authorities to supplement the field work.

19. Power Transmission, Telephone and Telegraph Lines:

The field inspection of this phase of the work was done in accordance with the Field Edit Instructions - Supplement 1, dated 4 February 1946.

Submarine and overhead cable crossings across navigable waterways have been indicated on the field photographs. The vertical clearances of the overhead cable crossings indicated on the photographs are to the estimated mean high-water level (MHW along the bank or shore).

Three submerged cable crossings were noted; they are:

1. A Pacific Gas and Electric Co. cable crossing from South Eureka to the Wilson Lumber Co. yards (Fairhaven).

2. A Pacific Telephone and Telegraph cable crosses the bay in the vicinity of item 1 above.

3. A Coast Guard telephone cable crossing from the South
Spit to the North Spit.

No evidence in the field was found of any submerged cable crossings in the vicinity of Buckspirt as indicated on Chart 5832. It was ascertained locally that the Corps of Engineers of the San Francisco District had issued a permit for a cable crossing in the vicinity but to whom the permit had been issued and whether the cable had ever been installed could not be established by local inquiry. See also Review Report, Heading 43, T-562.

20. Field Photographs:

To avoid duplication of work among the various field units, the approximate limits of each sheet were indicated on a selected number of field photographs in purple ink; however, the field work was not limited to these photographs when others were available in the area. The sheet limits on the photographs are not the true limits; they follow natural boundaries such as highways, creeks, or in such a way as to provide photograph coverage in adjacent sheets.

The urban limits were indicated in white pigment ink on a selected number of photographs and follow natural boundaries (streets).

The junctions between field photographs have been checked by the field inspectors. For the field photographs used in any one sheet refer to the Data Record, Form N. T-1.

20. Symbols, Color Scheme, and Station Names:

SYMBOLS (standard symbols used)

1. Ground and Photogrammetric Points - Refer to Photogrammetry Instructions No. 5, No. 6, and No. 12.

2. Shoreline Inspection - Refer to Supplemental Instructions, Shoreline Inspection, 3-18-44; Field Memorandum No. 1, 6-20-38 and Photogrammetry Instructions No. 17.
   a. Inshore and approximate offshore (indefinite) limits of marsh, swamp, etcetera, at mean high-water indicated by short dashes. Approximate offshore limits, in addition, noted as "Flooded at MHW", et cetera.

3. Interior Field Inspection - Refer to:
   a. Road Classification - Photogrammetry Instructions
No. 10 (and Amendment thereto) and No. 17.

b. Bridge Classification - Photogrammetry Instructions No. 13 (and supplement thereto in the Acting Director's letter dated 12-16-47) and No. 17.

c. Woodland Classification - Photogrammetry Instructions No. 15 and No. 17.

d. Field Edit Instructions, 8-24-45, and Field Edit Instructions - Supplement 1, 2-4-46.

3. Shoreline, culture, drainage, vegetation and swamp features, and boundaries and abbreviations - Photogrammetry Instructions No. 17.

COLOR SCHEME

1. Horizontal Points (direct identification and substitute point or reference measurement methods).

   a. Horizontal control point, azimuth point and topographic point - Red

2. Photogrammetric Points (direct identification and substitute point or reference measurement methods)

   a. Photo point - Red (horizontal points) or purple (other points such as section corner and boundary monument).

   b. Photo-hydro point (hydrographic signal point) - Blue

3. Vertical Points

   a. Bench point - Blue

   b. Spot point - Blue

4. Other points

   a. Recovered and unrecovered section corners, boundary monument, etc. - Purple

5. Mean High-water Line - Red
6. Approx. Mean High-Water Line – Red and labeled

7. Indefinite Shoreline (definite and approximate offshore limits as well as inshore limits of marsh, swamp, etc.) – Blue

8. Low-Water Line (MLW on East Coast and MLLW on West Coast) – Red

9. Approx. Low-Water Line (MLLW on East Coast and MLW on West Coast) – Red

10. Shoal or reef line – Red and labeled

11. Drainage
   a. Streams, sloughs, ditches, etc., if single lined – Blue
   b. Ponds, streams, canals, sloughs, etc., if double lined – Red

Note: No streams, ditches, canals, etc., have been double lined unless its actual width could be shown on the photo.

12. Cultural features – Red

13. Boundaries – Purple

14. Deletions – Green

15. Tick Mark (to denote change in stream or shoreline identification, etc.) – Red

16. Notes on Photographs – All notes in red unless noted otherwise

STATION NAMES (examples)

Triangulation and Traverse

Landmark Stations ––––– TANK, ELEV (Eureka Tank, 1948)
(Naut., Aero., or Int. Ldmk, 90 feet high)

Fixed Aids to Navigation –– Reeder Lt. (Reed Lt., 1935)
Light List name (unused) –
if abandoned
Front Daybn 4 (Beacon 4, 1946)
- Light List Name
Shoreline Control for Ship

Hydrography -------Eureka, 1946 - first 4 letters underlined or all if less than 4

Topographic

Landmark Stations ------CUPOLA (Humboldt Club), 1946 (Naut., Aero., or Int. Land)

Fixed Aids to Navigation--Reeder Lt. - Light List name
Reeder Lt. (unused) - if abandoned
Front Daybn 4 - Light List name

N.B.: Any permanent (steel or masonry) abandoned light structure recommended as nautical landmark. The correct names for all fixed aids to navigation have been obtained from the latest edition of the Light List and their distinctive markings and descriptions checked in the field.

Shoreline Control for Ship

Hydrography -------Flagpole, 1948 - a descriptive name of natural object
Jacoby (Tidal BM 4), 1948
Buck (BM 53, USGS), 1948

Interior Marked Stations ---Eureka Az Mk, 1946
PTS 14 (USGS, 1910), 1948 - control less than 3-order

Hydrographic Station

Shoreline Control -------6001 (lone fir tree) - first signal site in T-3960; described in sketchbook

Bench Mark

Spotted ---------------BM L 104, 1947
N.B.: New triangulation stations are given names of 5 or more letters; topographic stations - 4 letters; however descriptive, geographic, or personal names were preferred to arbitrary ones.

Approved: R.A. Earle

by: Charles W. Clark

Respectfully submitted: Charles Hanavich
Topographic Engineer

W.H. Bainbridge
Comdr.-USCG Survey
Chief of Party
PHOTOGRAMMETRIC PLOT REPORT
Map Manuscripts No's. T-8960 to T-8965, Incl.
Project Ph-25(47)

21: AREA COVERED:

This radial plot comprises Map Manuscripts No's. T-8960 to T-8965, inclusive. The area covered is in the State of California and includes Humboldt Bay, Arcata Bay, the cities of Eureka and Arcata, and the lowlands adjacent thereto.

22: METHOD:

It was not necessary to use base grid sheets and the radial plot was run directly on the six map manuscripts which had been joined together with clear cellulose tape.

The photographs were taken with Camera "D" in 1947 and 1948 and ratio prints at a scale of 1:10,000 were furnished for the project. These ratio prints did not contain special fiducial marks for use in correcting for paper distortion and no attempt was made to correct for paper distortion by other methods.

Radials were drawn on templates made of pieces of .005" clear acetate, 18" X 18" square, which were cut from a roll 36" X 100'. Craftint Red Plastic Ink #All was used to draw all the radials.

In all but a few instances the radials to horizontal control stations passed directly through the points of their plotted positions on the map manuscripts. In no case was any radial held more than 0.1 mm off the plotted point. The closure was excellent and about 90% of the intersections of radials to pass points were practically perfect.

After all the templates were oriented and securely fastened with masking tape to the joined six map manuscripts, the radial plot was turned face down on the radial plot table.

This office has constructed a glass top table, with lights, at the same height as the radial plot table. This table can be conveniently moved about and can be abutted to any portion of each side of the radial plot table.

In its face down position the radial plot was placed over the glass top table, a portion at a time, and the photograph centers and intersection of radials to pass points, for that portion of the plot, were pricked and circled directly on the reverse side of the map manuscripts. Craftint Blue Ink #234 was used for this purpose. This process was repeated until the entire radial plot was covered and all photograph centers and pass points had been pricked and circled on the reverse side of the joined map manuscripts.
The radial plot was then turned face up and the templets and
map manuscripts dismantled.

The transferring of photograph centers and pass points from
within the projection limits of one map manuscript to the margin of
an adjoining map manuscript was done by matching meridians and parallel
columns common to each sheet.

23: ADEQUACY OF CONTROL:

The field unit identified an ample number of horizontal control
stations for this radial plot.

Several stations, which were not marked and not described, were
tentatively identified by the field unit, subject to how well they
could be held to in the radial plot. They are:

WEST HOUSE WITH WHITE DOOR ON S. SIDE, WEST GABLE, 1919 in T-8960
FEN (USE), 1911 in T-8961
JIM (USE), 1911 in T-8962
PRICE (USE), 1911 in T-8962
HOBIE, 1919 in T-8962

These stations could not be held to along with numerous other
well-identified stations and this fact has been noted on their respective
recovery notes.

Facts concerning station "CUPOLA, BAYSIDE COMMUNITY PRESBYTERIAN
CHURCH, 1948" are contained in a copy of a letter to The Director,
which is attached. (p. 60)

24: SUPPLEMENTAL DATA:

There were no graphic control surveys or other supplemental
control data furnished for the area of this project.

25: PHOTOGRAPHY:

The photographs taken in 1948 furnished adequate coverage and
overlap except as follows:

In T-8965 in the vicinity of Fields Landing.
In T-8965 in the vicinity of Salmon Creek.
In T-8960 between Eureka and Arcata.
In T-8962 along the west limits of the map manuscript.
For the mean high-water line along the Pacific Ocean shoreline.

In the above listed areas the photographs taken in 1947 were
used to supplement the 1948 photography.
A sketch is attached showing the location of photograph centers and horizontal control stations in the area.

Approved:

Charles W. Clark
Chief of Party

Respectfully submitted:

J. Edward Deal, Jr.
Cartographer
<table>
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<th>STATION</th>
<th>SOURCE OF INFORMATION (INDEX)</th>
<th>DATUM</th>
<th>LATITUDE OR $\gamma$-COORDINATE</th>
<th>LONGITUDE OR $\lambda$-COORDINATE</th>
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<th>N.A. 1927-DATUM DISTANCE FROM GRID OR PROJECTION LINE IN METERS FORWARD (BACK)</th>
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CHECKED BY: James L. Harris  DATE: 9/21/48
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In poor condition

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COMPUTED BY: F. H. Elrod
DATE 9/20/48

CHECKED BY: J. L. Harris
DATE 9/21/48
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1 FT = 304.8006 METER

COMPUTED BY: J. L. Harris
DATE: 9/22/48

CHECKED BY: F. H. Elrod
DATE: 9/23/48
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1 FT. = .3048006 METER
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DATE: 9/21/48
CHECKED BY: J. H. Winniford
DATE: 10/7/48
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1 ft. = 0.3048006 meter

Computation by F. H. Elrod

Date 9/23/48

Checked by J. L. Harris

Date 10/4/48
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1 ft = 304.8006 meters

COMPUTED BY: J. L. Harris

DATE: 9/24/48

CHECKED BY: J. H. Winniford

DATE: 10/7/48
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<td>BARN, NORTH GARL-BARN (USE) 1929</td>
<td>G-6168*</td>
<td>N.A.</td>
<td>40° 48' 27.62&quot;</td>
<td>1376.3 (30.0)</td>
<td>1376.3 (30.0)</td>
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<td>MEADOW, 1928</td>
<td>Page 1927</td>
<td></td>
<td>40° 48' 49.682&quot;</td>
<td>1532.5 (318.3)</td>
<td>1532.5 (318.3)</td>
</tr>
<tr>
<td>RAM (USE) 1911</td>
<td>G-6168*</td>
<td>N.A.</td>
<td>40° 47' 37.262&quot;</td>
<td>1149.4 (701.4)</td>
<td>1149.4 (701.4)</td>
</tr>
<tr>
<td>BRICK (USE) 1919 r. 1929</td>
<td>G-6168*</td>
<td>N.A.</td>
<td>40° 48' 22.482&quot;</td>
<td>693.5 (1157.3)</td>
<td>693.5 (1157.3)</td>
</tr>
<tr>
<td>ROAD (USE) 1911</td>
<td>G-6168*</td>
<td>N.A.</td>
<td>40° 48' 12.034&quot;</td>
<td>371.2 (1479.6)</td>
<td>371.2 (1479.6)</td>
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1 FT. = 0.040005 METER

COMPUTED BY: J.L. Harris
DATE: 9/22/48
CHECKED BY: G. Richter
DATE: 9/30/48
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<th>LATITUDE OR $\nu$-COORDINATE</th>
<th>LONGITUDE OR $\chi$-COORDINATE</th>
<th>DISTANCE FROM GRID IN FEET. OR PROJECTION LINE IN METERS</th>
<th>DATUM CORRECTION</th>
<th>N.A. 1927 - DATUM DISTANCE FROM GRID OR PROJECTION LINE IN METERS</th>
<th>FACTOR DISTANCE FROM GRID OR PROJECTION LINE IN METERS</th>
</tr>
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<tbody>
<tr>
<td>TABLE BLUFF LIGHT STATION RADIO TOWER (USN) 1941</td>
<td>Page 301</td>
<td>1927</td>
<td>40° 41'</td>
<td>46.654&quot;</td>
<td>Removed from map</td>
<td>1439.1 (411.7)</td>
<td>Tower destroyed</td>
<td>s. of limits</td>
</tr>
<tr>
<td>TABLE BLUFF LIGHT HOUSE, 1941</td>
<td>Page 301</td>
<td>1927</td>
<td>40° 41'</td>
<td>43.903&quot;</td>
<td>640.0 (768.7)</td>
<td>1354.2 (496.5)</td>
<td>Base intact</td>
<td></td>
</tr>
<tr>
<td>HOOKTON (USE) 1941</td>
<td>Page 289</td>
<td>1927</td>
<td>40° 41'</td>
<td>24.826&quot;</td>
<td>765.8 (1085.0)</td>
<td>1187.4 (221.5)</td>
<td>908.9 (921.8)</td>
<td></td>
</tr>
<tr>
<td>FILL 2, 1941</td>
<td>Page 289</td>
<td>1927</td>
<td>40° 40'</td>
<td>29.467&quot;</td>
<td>213.7 (1195.5)</td>
<td>754.7 (1096.1)</td>
<td>596.4 (811.4)</td>
<td></td>
</tr>
<tr>
<td>MOUND (USE) 1919 r. 1941</td>
<td>Page 289</td>
<td>1927</td>
<td>40° 44'</td>
<td>24.467&quot;</td>
<td>596.4 (811.4)</td>
<td>754.7 (1096.1)</td>
<td>908.9 (921.8)</td>
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</tr>
<tr>
<td>SHEEP (USE) 1941</td>
<td>Page 288</td>
<td>1927</td>
<td>40° 41'</td>
<td>59.023&quot;</td>
<td>451.9 (956.7)</td>
<td>1820.6 (30.1)</td>
<td>1221.3 (629.4)</td>
<td></td>
</tr>
<tr>
<td>RICKS, 1941</td>
<td>Page 288</td>
<td>1927</td>
<td>40° 40'</td>
<td>39.595&quot;</td>
<td>263.7 (1145.4)</td>
<td>973.9 (876.9)</td>
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</tr>
<tr>
<td>CANNIBAL, 1941</td>
<td>Page 284</td>
<td>1927</td>
<td>40° 38'</td>
<td>31.572&quot;</td>
<td>973.9 (876.9)</td>
<td>1820.6 (30.1)</td>
<td>1221.3 (629.4)</td>
<td></td>
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<tr>
<td>TABLE (USE) 1911 r. 1940</td>
<td>Page 284</td>
<td>1927</td>
<td>40° 42'</td>
<td>08.243&quot;</td>
<td>1388.5 (20.1)</td>
<td>254.3 (1596.4)</td>
<td>1221.3 (629.4)</td>
<td></td>
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<tr>
<td>SALT RIVER RM #2 Office 1937</td>
<td>Comp. G-6168</td>
<td>1927</td>
<td>40° 40'</td>
<td>03.585&quot;</td>
<td>110.6 (1740.1)</td>
<td>110.6 (1740.1)</td>
<td>903.9 (505.5)</td>
<td></td>
</tr>
<tr>
<td>FILL (USE) 1911 r. 1941</td>
<td>Page 92</td>
<td>1927</td>
<td>40° 40'</td>
<td>30.184&quot;</td>
<td>931.1 (919.7)</td>
<td>196.6 (1212.5)</td>
<td>903.9 (505.5)</td>
<td></td>
</tr>
<tr>
<td>GUARD, 1941</td>
<td>Page 284</td>
<td>1927</td>
<td>40° 41'</td>
<td>51.591&quot;</td>
<td>1591.4 (259.4)</td>
<td>367.1 (1041.6)</td>
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</table>

1 FT = 3048000 METER

COMPUTED BY: J. L. Harris
DATE: 9/23/48

CHECKED BY: J. H. Winniford
DATE: 10/7/48
<table>
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<tr>
<th>STATION</th>
<th>SOURCE OF INFORMATION (INDEX)</th>
<th>DATUM</th>
<th>LATITUDE OR y-COORDINATE</th>
<th>LONGITUDE OR x-COORDINATE</th>
<th>DISTANCE FROM GRID IN FEET, OR PROJECTION LINE IN METERS</th>
<th>DATUM CORRECTION</th>
<th>N.A. 1927 - DATUM DISTANCE FROM GRID OR PROJECTION LINE IN METERS</th>
<th>FACTOR DISTANCE FROM GRID OR PROJECTION LINE IN METERS</th>
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<tbody>
<tr>
<td>RUSS, NEW BARN, WEST GABLE, 1919</td>
<td>G-6168</td>
<td>N.A.</td>
<td>40° 41'</td>
<td>124° 12'</td>
<td>24.26&quot;</td>
<td>371.4 (1479.4)</td>
<td>569.7 (899.2)</td>
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</tr>
<tr>
<td>Sisson 2, 1919 r. 1941</td>
<td>Page</td>
<td>N.A.</td>
<td>40° 42'</td>
<td>124° 12'</td>
<td>04.414&quot;</td>
<td>1647.1 (203.6)</td>
<td>103.6 (1304.7)</td>
<td></td>
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<tr>
<td>Fields Landing, Red Tank, 1919</td>
<td>G-6168</td>
<td>N.A.</td>
<td>40° 43'</td>
<td>124° 12'</td>
<td>46.26&quot;</td>
<td>1426.9 (423.8)</td>
<td>1061.4 (346.6)</td>
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</tr>
<tr>
<td>Field 2 (USE) 1939</td>
<td>XI 62</td>
<td>N.A.</td>
<td>40° 42'</td>
<td>124° 12'</td>
<td>48.508&quot;</td>
<td>1804.3 (46.4)</td>
<td>1138.5 (2694.7)</td>
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</tr>
<tr>
<td>Sisson West (Sisson 2-2) 1927 r. 1941</td>
<td>G-6119</td>
<td>N.A.</td>
<td>40° 42'</td>
<td>124° 12'</td>
<td>53.437&quot;</td>
<td>1648.3 (202.4)</td>
<td>112.5 (1295.8)</td>
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<tr>
<td>Humboldt Temporary Station 1948</td>
<td>Field</td>
<td>N.A.</td>
<td>40° 44'</td>
<td>124° 11'</td>
<td>13.104&quot;</td>
<td>404.2 (1464.6)</td>
<td>1682.7 (168.0)</td>
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<tr>
<td>Elk River School Field 1948</td>
<td>Comp.</td>
<td>1927</td>
<td>124° 11'</td>
<td>16.375&quot;</td>
<td>1486.9 (363.8)</td>
<td>382.8 (1025.2)</td>
<td>1098.3 (310.8)</td>
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<tr>
<td>Field 1948</td>
<td>Comp.</td>
<td>1927</td>
<td>124° 11'</td>
<td>16.375&quot;</td>
<td>1486.9 (363.8)</td>
<td>382.8 (1025.2)</td>
<td>1098.3 (310.8)</td>
<td></td>
</tr>
</tbody>
</table>

1 FT. = 0.3048006 METER
COMPUTED BY: J. L. Harris
DATE: 9/23/48
CHECKED BY: G. E. Richter
DATE: 9/30/48
31: **DELINEATION:**

The compilation was accomplished entirely by graphic methods.

The 1948 photography was taken during a high stage of tide and on these photographs the mean high-water line along the shoreline of the Pacific Ocean was obscured by breakers. This mean high-water line was clearly visible on the 1947 photographs, which were taken when the tide was at a low stage. This office had not foreseen this difficulty and had not requested office photographs of the 1947 photographs in this area. The 1947 photographs, however, had been used for the field inspection work and these were utilized to supplement the 1948 photography when compiling the high-water line. Detail points were first selected along the beach, which were common to each set of photographs. These were radially plotted from the 1948 photographs and the line was detailed from the 1947 field photographs.

Refer to side heading 25: "Photography" of the Photogrammetric Plot Report for additional facts pertaining to photographs in this project.

32: **CONTROL:**

The placement and density of identified control stations were satisfactory.

Refer to side heading 23: "Adequacy of Control" of the Photogrammetric Plot Report for additional facts.

33: **SUPPLEMENTAL DATA:**

The following plans and maps, which were used to supplement the photographs are being forwarded with the map manuscripts.

1. City of Eureka, California, Eureka Chamber of Commerce
   Scale 1" = 400'

2. Land Use Map of the City of Eureka
   Scale 1" = 800'

3. City of Eureka, California
   Scale 1" = 1,400'

4. Diagram of the south limits of Eureka
   Scale Unknown
35: **SHORELINE AND ALONGSHORE DETAILS:**

The mean high-water line was located by the field inspection party on the 1947 photographs. The photographs were examined, with the aid of the stereoscope and the field location was refined to agree with the definite line visible on the photographs. Refer to side heading 31: "Delineation" of this Compilation Report.

The lower low-water lines in Humboldt Bay could be readily determined on the 1947 photographs and these were compiled as delineated on the field photographs by the field unit. The areas between the mean high-water and lower low-water lines in Humboldt Bay either bare at low-water or are very shoal.

No attempt was made to determine the foreshore and approximate shoal areas in the Pacific Ocean either by field inspection or office examination of the photographs.

All alongshore details appearing on the photographs, except those deleted by the field unit, were compiled.

36: **OFFSHORE DETAILS:**

There were no offshore details indicated by field inspection in this part of the Pacific Ocean and none were discernable by office inspection of the photographs. All offshore details in Humboldt Bay have been compiled.

37: **LANDMARKS AND AIDS:**

Forms 567 are being submitted with this descriptive report for all Landmarks and Aids in the area of these map manuscripts.
CONTROL FOR FUTURE SURVEYS:

Fifty-one recoverable topographic stations were radially plotted and Forms 524 are being forwarded with this descriptive report for forty-eight of these stations. The three stations for which Forms 524 are not being submitted are Azimuth Marks.

A list of recoverable topographic stations by map manuscripts has been prepared and included as part of paragraph 49. (P. 64)

There were no photo-hydro stations radially plotted in this project.

JUNCTIONS:

Satisfactory junctions have been made between all map manuscripts in this project.

HORIZONTAL AND VERTICAL ACCURACY:

There are no areas considered to be subnormal in horizontal accuracy. Vertical accuracy is not applicable to this project.

COMPARISON WITH EXISTING MAPS:

A visual comparison was made between these map manuscripts and the Eureka, FERNDALE, and FORTUNA, California 15 min. quadrangles Scale 1:62,500, Edition of 1942, 1943 and 1944 respectively. The cultural and physical features of the map manuscripts should supersede those of the quadrangles.

Comparison was made with all maps listed under side heading 33: and in general it is believed that only approximate distances can be scaled from these maps. For the most part these maps were used to obtain the names of streets in Eureka, and Arcata, California.

COMPARISON WITH NAUTICAL CHARTS:

Comparison was made, by use of the vertical projector, with nautical chart 5832, Scale 1:30,000 dated December 1944. Changes that are believed of importance to warrant immediate application to the chart are:

The numerous new wharves, piers and other structures along the waterfront of the City of Eureka which have been built since the chart was made.
Numerous deletions and new shoreline structures along the remaining shoreline of Humboldt Bay. The building up of a spit in Humboldt Bay at Lat. 40° 46' 15" and Long. 124° 12' 00". The deletion from the chart of a portion of the Humboldt Northern Railroad on North Spit between Lat. 40° 45' 40" and Lat. 40° 47' 25". The addition to the chart of Eureka Airport on North Spit and Humboldt County Airport near Freshwater Junction.

The correction of the mean lower low-water lines shown on the chart in upper Humboldt Bay to agree with those shown for the area on Map Manuscript T-8960.

48: **GEOGRAPHIC NAME LIST:**

Geographic names, shown on the attached sheets, except those otherwise noted, were listed in Special Report, "Investigation of Geographic Names", Project Ph-25(47) and on Final Name Sheets 7/3/48 Project Ph-25(47) furnished by the Washington Office.

Names listed in the above report and not shown on the map manuscripts were either disputed names or they fall outside the detail limits of the map manuscripts.

The street names, cemetery names, parks, public buildings, etc. in the cities of Arcata and Eureka were obtained from field inspection notes and the maps of Arcata and Eureka listed under side heading 33: "Supplemental Data".

49: **NOTES FOR HYDROGRAPHER:**

The recoverable topographic stations have been listed on an attached sheet. (page 49)

Approved:

Charles W. Clark
Chief of Party

Respectfully submitted:

J. Edward Deal Jr.
Cartographer
PHOTOGRAMMETRIC OFFICE REVIEW

1. Projection and grids
2. Title
3. Manuscript numbers
4. Manuscript size

CONTROL STATIONS
5. Horizontal control stations of third-order or higher accuracy
6. Recoverable horizontal stations of less than third-order accuracy (topographic stations)
7. Photo hydro stations
8. Bench marks
9. Plotting of sextant fixes
10. Photogrammetric plot report
11. Detail points

ALONGSHORE AREAS
(Nautical Chart Data)
12. Shoreline
13. Low water line
14. Rocks, shoals, etc.
15. Bridges
16. Aids to navigation
17. Landmarks
18. Other alongshore physical features
19. Other alongshore cultural features

PHYSICAL FEATURES
20. Water features
21. Natural ground cover
22. Plotable contours
23. Stereoscopic instrument contours
24. Contours in general
25. Spot elevations
26. Other physical features

CULTURAL FEATURES
27. Roads
28. Buildings
29. Railroads
30. Other cultural features

BOUNDARIES
31. Boundary lines
32. Public land lines

MISCELLANEOUS
33. Geographic names
34. Junctions
35. Legibility of the manuscript
36. Discrepancy overlay
37. Descriptive Report
38. Field inspection photographs
39. Forms

Reviewer

Supervisor, Review Section or Unit

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

Supervisor

43. Remarks:
PHOTOGRAMMETRIC OFFICE REVIEW

T: 8961

1. Projection and grids  
2. Title  
3. Manuscript numbers  
4. Manuscript size  

CONTROL STATIONS

5. Horizontal control stations of third-order or higher accuracy  
6. Recoverable horizontal stations of less than third-order accuracy (topographic stations)  
7. Photo-hydro stations  
8. Bench marks  
9. Plotting of control fixes  
10. Photogrammetric plot report  
11. Detail points  

ALONGSHORE AREAS

(Nautical Chart Data)

12. Shoreline  
13. Low-water line  
14. Rocks, shoals, etc.  
15. Bridges  
16. Aids to navigation  
17. Landmarks  
18. Other alongshore physical features  
19. Other alongshore cultural features  

PHYSICAL FEATURES

20. Water features  
21. Natural ground cover  
22. Planimeter contours  
23. Stereoscopic instrument contours  
24. Contours in general  
25. Spot elevations  
26. Other physical features  

CULTURAL FEATURES

27. Roads  
28. Buildings  
29. Railroads  
30. Other cultural features  

BOUNDARIES

31. Boundary lines  
32. Public land lines  

MISCELLANEOUS

33. Geographic names  
34. Junctions  
35. Legibility of the manuscript  
36. Discrepancy overlay  
37. Descriptive Report  
38. Field inspection photographs  
39. Forms  

40. [Signature] [Name]
Reviewer

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  
Supervisor

43. Remarks:
PHOTOGRAMMETRIC OFFICE REVIEW

T. 8962

1. Projection and grids
2. Title
3. Manuscript numbers
4. Manuscript size

CONTROL STATIONS
5. Horizontal control stations of third-order or higher accuracy
6. Recoverable horizontal stations of less than third-order accuracy (topographic stations)
7. Photo-hydro-stations
8. Bench marks
9. Plotting of extended lines
10. Photogrammetric plot report
11. Detail points

ALONGSHORE AREAS
(Nautical Chart Data)
12. Shoreline
13. Low-water line
14. Rocks, shoals, etc.
15. Bridges
16. Aids to navigation
17. Landmarks
18. Other alongshore physical features
19. Other alongshore cultural features

PHYSICAL FEATURES
20. Water features
21. Natural ground cover
22. Pleistocene contours
23. Stereoscopic instrument contours
24. Contours in general
25. Spot elevations
26. Other physical features

CULTURAL FEATURES
27. Roads
28. Buildings
29. Railroads
30. Other cultural features

BOUNDARIES
31. Boundary lines
32. Public land lines

MISCELLANEOUS
33. Geographic names
34. Junctions
35. Legibility of the manuscript
36. Discrepancy overlay
37. Descriptive Report
38. Field inspection photographs
39. Forms

Reviewer

Supervisor, Review Section or Unit

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

Supervisor

43. Remarks:
PHOTOGRAMMETRIC OFFICE REVIEW
T. 8963

1. Projection and grids  
2. Title  
3. Manuscript numbers  
4. Manuscript size  

CONTROL STATIONS
5. Horizontal control stations of third-order or higher accuracy  
6. Recoverable horizontal stations of less than third-order accuracy (topographic stations)  
7. Photo hydro stations  
8. Beach marks  
9. Plotting of extant fixes  
10. Photogrammetric plot report  
11. Detail points  

ALONGSHORE AREAS (Nautical Chart Data)
12. Shoreline  
13. Low-water line  
14. Rocks, shoals, etc.  
15. Bridges  
16. Aids to navigation  
17. Landmarks  
18. Other alongshore physical features  
19. Other alongshore cultural features  

PHYSICAL FEATURES
20. Water features  
21. Natural ground cover  
22. Planetary contours  
23. Stereo- 
24. Contours in general  
25. Spot elevations  
26. Other physical features  

CULTURAL FEATURES
27. Roads  
28. Buildings  
29. Railroads  
30. Other cultural features  

BOUNDARIES
31. Boundary lines  
32. Public land lines  

MISCELLANEOUS
33. Geographic names  
34. Junctions  
35. Legibility of the manuscript  
36. Discrepancy overlay  
37. Descriptive Report  
38. Field inspection photographs  
39. Forms  

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  
Supervisor

43. Remarks:
PHOTOGRAMMETRIC OFFICE REVIEW

T- 8964


CONTROL STATIONS


ALONGSHORE AREAS (Nautical Chart Data)


PHYSICAL FEATURES


CULTURAL FEATURES


BOUNDARIES

31. Boundary lines   32. Public land lines

MISCELLANEOUS


40. [Signature]  [Title]  [Reviewer]

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                               Supervisor

43. Remarks:
PHOTOGRAMMETRIC OFFICE REVIEW
T. 8965

1. Projection and grids  
2. Title  
3. Manuscript numbers  
4. Manuscript size

CONTROL STATIONS
5. Horizontal control stations of third-order or higher accuracy  
6. Recoverable horizontal stations of less than third-order accuracy (topographic stations)  
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8. Bench marks  
9. Plotting of sextant fixes  
10. Photogrammetric plot report  
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(Nautical Chart Data)
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23. Stereoscopic instrument contours  
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26. Other physical features

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29. Railroads  
30. Other cultural features

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31. Boundary lines  
32. Public land lines

MISCELLANEOUS
33. Geographic names  
34. Junctions  
35. Legibility of the manuscript  
36. Discrepancy overlay  
37. Descriptive Report  
38. Field inspection photographs  
39. Forms

Review: [Signature]
Supervisor, Review Section or Unit

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  
Supervisor

43. Remarks:
I recommend that the following objects which have been inspected from seaward to determine their value as landmarks be charted on the charts indicated.

The positions given have been checked after listing by

<table>
<thead>
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<th>STATE</th>
<th>CHARTING NAME</th>
<th>DESCRIPTION</th>
<th>SIGNAL NAME</th>
<th>LATITUDE</th>
<th>LONGITUDE</th>
<th>DATUM</th>
<th>METHOD OF LOCATION AND SURVEY NO.</th>
<th>DATE OF LOCATION</th>
<th>HARBOR CHART</th>
<th>ISLAND CHART</th>
<th>OFFSHORE CHART</th>
<th>CHARTS AFFECTED</th>
</tr>
</thead>
<tbody>
<tr>
<td>California</td>
<td>Indian Island Spit Light</td>
<td>This light is not listed in 1949 Light List. Eureka Channel 2, Lt.</td>
<td></td>
<td>40°48'</td>
<td>124°10'</td>
<td>N.A.</td>
<td>Radial Plot</td>
<td>1949</td>
<td>X</td>
<td>**</td>
<td>5232</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Union Oil Wharf Light</td>
<td></td>
<td></td>
<td>40°47'</td>
<td>124°11'</td>
<td>1927</td>
<td>**</td>
<td>**</td>
<td>X</td>
<td>**</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Humboldt Bay Fog Signal Station</td>
<td>North Jetty Light (Humboldt Bay, Green Blinder at Fog Signal Station)</td>
<td></td>
<td>40°45'</td>
<td>124°13'</td>
<td>282°5</td>
<td>Triangulation</td>
<td>1941</td>
<td>X</td>
<td>**</td>
<td>**</td>
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<tr>
<td></td>
<td></td>
<td>Lifeboat Station Pier, North End Lt. (Eureka Navy Base Pier, North End Lt.)</td>
<td></td>
<td>40°46'</td>
<td>124°12'</td>
<td>114°9</td>
<td>Radial Plot</td>
<td>1942</td>
<td>X</td>
<td>**</td>
<td>**</td>
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<tr>
<td></td>
<td></td>
<td>Lifeboat Station Pier, South End Lt. (Eureka Navy Base Pier South End Lt.)</td>
<td></td>
<td>40°46'</td>
<td>124°12'</td>
<td>217°2</td>
<td>Triangulation</td>
<td>1941</td>
<td>X</td>
<td>**</td>
<td>**</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Humboldt Bay Entrance Lt. (Humboldt Bay Red Lt. W. End of South Jetty)</td>
<td></td>
<td>40°45'</td>
<td>124°14'</td>
<td>740°2</td>
<td>Radial Plot</td>
<td>1949</td>
<td>X</td>
<td>**</td>
<td>**</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Standard Oil Wharf Lt.</td>
<td>Table Bluff Light</td>
<td></td>
<td>40°46'</td>
<td>124°11'</td>
<td>985°3</td>
<td>Triangulation</td>
<td>1941</td>
<td>X</td>
<td>**</td>
<td>**</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hookton Channel 6 Lt.</td>
<td>(△ South Bay Channel 2A Lt.)</td>
<td></td>
<td>40°44'</td>
<td>124°13'</td>
<td>734°4</td>
<td>**</td>
<td>1943</td>
<td>X</td>
<td>**</td>
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<tr>
<td></td>
<td>Burne Spit Shoal 9 Lt.</td>
<td>(△ Hookton Channel 1, Lt., 1948)</td>
<td></td>
<td>40°44'</td>
<td>124°13'</td>
<td>555°0</td>
<td>**</td>
<td>**</td>
<td>X</td>
<td>**</td>
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<tr>
<td></td>
<td>Hookton Channel 10 Lt.</td>
<td>(Hookton Channel 2 Lt., 1948)</td>
<td></td>
<td>40°44'</td>
<td>124°13'</td>
<td>232°6</td>
<td>**</td>
<td>**</td>
<td>X</td>
<td>**</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hookton Channel 12 Lt.</td>
<td>(Hookton Channel 4 Lt., 1948)</td>
<td></td>
<td>40°43'</td>
<td>124°13'</td>
<td>262°9</td>
<td>**</td>
<td>**</td>
<td>X</td>
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<tr>
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<th>LONGITUDE</th>
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<th>CHARTS AFFECTED</th>
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<tr>
<td></td>
<td>Hookton Channel Daybeacon 11</td>
<td>(Hookton Channel Daybeacon 3)</td>
<td>40 44 147.2 124 13 108.5</td>
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<td>Triang.</td>
<td>1927 8964</td>
<td>1943</td>
<td>X 5832</td>
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<td></td>
<td>Hookton Channel Daybeacon 14</td>
<td>(Hookton Channel Daybeacon 6)</td>
<td>40 43 627.4 124 13 702.6</td>
<td>N.A.</td>
<td>Triang.</td>
<td>1927 8964</td>
<td>1943</td>
<td>X 5832</td>
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<thead>
<tr>
<th>STATE</th>
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</thead>
<tbody>
<tr>
<td>CHARTING NAME</td>
<td>DESCRIPTION</td>
</tr>
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<td>STACK</td>
<td>Samoa White Concrete Stack, Hammond Redwood Co., (316' high)</td>
</tr>
<tr>
<td>SPIRE</td>
<td>Arcata, Gold Cross, Catholic Church (76' high)</td>
</tr>
<tr>
<td>DOME</td>
<td>Arcata, Cupola, State Teachers College</td>
</tr>
<tr>
<td>TANK</td>
<td>Elevated water tank, (60' high)</td>
</tr>
<tr>
<td>TOWER</td>
<td>Wooden Signal Tower over LOST 3 (USE) 1948 (50' high)</td>
</tr>
<tr>
<td>ELEV</td>
<td>Wooden Signal Tower over MOUNT (USE) 1919</td>
</tr>
<tr>
<td>CUPOLA</td>
<td>Barn Cupola, circular Barn</td>
</tr>
</tbody>
</table>

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# Landmarks for Charts

**Project Ph-25(47)**

Eureka, California

April 1948

I recommend that the following objects which have been inspected from seaward to determine their value as landmarks be charted on the charts indicated.

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<tr>
<th>State</th>
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<th>Description</th>
<th>Signal Name</th>
<th>Latitude</th>
<th>Longitude</th>
<th>Datum</th>
<th>Method of Location and Survey No.</th>
<th>Date of Location</th>
<th>Charts Affected</th>
</tr>
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<tbody>
<tr>
<td>California</td>
<td>Eureka, Humboldt County Court</td>
<td>House, Globe at top (150' high).</td>
<td>40 48 337.8 124 09 935.0</td>
<td>N.A.</td>
<td>8962</td>
<td>1927 Triang.</td>
<td>1941</td>
<td>X 5032</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Eureka, Water Tank, Black, Dolbear</td>
<td>&amp; Carson Lumber Co. (75' high)</td>
<td>40 48 891.5 124 09 211.9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Carson Residence, Eureka, Cupola</td>
<td>(95' high)</td>
<td>40 48 930.9 124 09 612.8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>So. Eureka, Stack Concrete, White</td>
<td>Hammond Redwood Co. Plant #2 (200' high)</td>
<td>40 47 1205.6 124 11 88.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>So. Eureka Holmes - Eureka Lumber</td>
<td>Co. Brick Stack (150' high)</td>
<td>40 46 1426.3 124 11 772.1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>So. Eureka, Holmes Eureka Lumber Co.</td>
<td>Black Tank (80' high)</td>
<td>40 46 1434.9 124 11 808.9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>RADIO</td>
<td>K.H.U.M, Radio Tower (203' high)</td>
<td>40 47 781.7 124 10 1317.9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>RADIO</td>
<td>Eureka, Radio Station KIEM Tower</td>
<td>40 48 346.2 124 08 413.3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>RADIO</td>
<td>Red Light at Top. (184' high)</td>
<td>40 48 314.2 124 08 358.7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>RADIO</td>
<td>KIEM Radio Tower - Taller of Two</td>
<td>(384' high)</td>
<td>40 48 1394.4 124 11 375.5</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>TANK</td>
<td>City Water Tank (100' high)</td>
<td>40 46 1601.3 124 09 520.2</td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>TANK</td>
<td>Samoa, Lone Tank (91' high)</td>
<td>40 48 1394.4 124 11 375.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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<thead>
<tr>
<th>State</th>
<th>Charting Name</th>
<th>Description</th>
<th>Signal Name</th>
<th>Latitude (D.M. Meters)</th>
<th>Longitude (D.F. Meters)</th>
<th>Datum</th>
<th>Method of Location and Survey No.</th>
<th>Date of Location</th>
<th>Chart Affected</th>
</tr>
</thead>
<tbody>
<tr>
<td>California</td>
<td>TANK</td>
<td>Rolph Shipyard South Tank (85' high)</td>
<td>40 47</td>
<td>561.4</td>
<td>124 11</td>
<td>1229.5</td>
<td>N.A.</td>
<td>8962</td>
<td>1927 Triang.</td>
</tr>
<tr>
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<td>TOWER</td>
<td>Flag No. 1 (IEE) (50' high)</td>
<td>40 46</td>
<td>373.3</td>
<td>124 13</td>
<td>280.8</td>
<td>1941</td>
<td>X</td>
<td>1949</td>
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<td></td>
<td>CUPOLA</td>
<td>Humboldt Bay Coast Guard Barracks Cupola (50' high)</td>
<td>40 46</td>
<td>26.2</td>
<td>124 13</td>
<td>26.5</td>
<td>1949</td>
<td>X</td>
<td>8962</td>
</tr>
<tr>
<td></td>
<td>LOOKOUT TOWER</td>
<td>Humboldt Bay Coast Guard Lookout Tower, 1948 (50' high)</td>
<td>INTO</td>
<td>1716.0</td>
<td>124 13</td>
<td>1238.0</td>
<td>1949</td>
<td>X</td>
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<tr>
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<td>MAST</td>
<td>Wrack, Tallest Mast (84' high)</td>
<td>40 46</td>
<td>1642.4</td>
<td>124 13</td>
<td>1225.5</td>
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<td>TOWER</td>
<td>U.S. Coast Guard Observation Tower near Barracks (92' high)</td>
<td>LOOK</td>
<td>363.1</td>
<td>124 13</td>
<td>46.6</td>
<td>1949</td>
<td>X</td>
<td>8962</td>
</tr>
<tr>
<td></td>
<td>TOWER</td>
<td>Wooden Signal Tower over LCG (USE) (50' high)</td>
<td>40 45</td>
<td>15.7</td>
<td>124 14</td>
<td>164.8</td>
<td>Triang.</td>
<td>1949</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>TANK</td>
<td>Samoa, Hammond Redwood Company Wooden Water Tank (115' high)</td>
<td>40 48</td>
<td>1842.8</td>
<td>124 11</td>
<td>272.3</td>
<td>1949</td>
<td>X</td>
<td>8965</td>
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<tr>
<td></td>
<td>TANK</td>
<td>Black Tank, Pacific Lumber Co. (45' high)</td>
<td>ROSE</td>
<td>116.0</td>
<td>124 12</td>
<td>1366.1</td>
<td>Radial Plot</td>
<td>1949</td>
<td>X</td>
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<td>TANK</td>
<td>Fields Landing Red Tank (25' high)</td>
<td>40 43</td>
<td>1426.9</td>
<td>124 12</td>
<td>1061.4</td>
<td>Triang.</td>
<td>1949</td>
<td>X</td>
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<tr>
<td></td>
<td>TOWER</td>
<td>Wooden Signal Tower over SPT #2 (IEE) 1948 (50' high)</td>
<td>40 44</td>
<td>802.9</td>
<td>124 13</td>
<td>27.2</td>
<td>Triang.</td>
<td>1948</td>
<td>X</td>
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<td></td>
<td>STANDPIPE</td>
<td>Silver Standpipe (60' high)</td>
<td>QUIL</td>
<td>1439.3</td>
<td>1-4 11</td>
<td>1342.9</td>
<td>Radial Plot</td>
<td>1949</td>
<td>X</td>
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</tbody>
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10-01500-3 U.S. Government Printing Office
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<th>Longitude</th>
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<th>Date of Location</th>
<th>Charts Affected</th>
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<tbody>
<tr>
<td>California</td>
<td>Stack</td>
<td>Sammy Wh., Concrete Stack Hammond Redwood Co. (316' High)</td>
<td>40 49 237.2 124 10 1103.1</td>
<td>N.A. 8960</td>
<td>1927 Triang. 1928</td>
<td>Mt. Shasta 5832</td>
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<td>Stack</td>
<td>Stack</td>
<td>South Eureka, Stack Concrete White Hammond Redwood Co., Plant #2 (200' high)</td>
<td>40 47 1205.6 124 11 88.0</td>
<td># 8962</td>
<td>1941</td>
<td>#</td>
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<td></td>
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</tr>
<tr>
<td>Radio Mast</td>
<td>Mast</td>
<td>K.H.U.H., Radio Tower (203' high)</td>
<td>40 47 781.7 124 10 1317.9</td>
<td>#</td>
<td>1948</td>
<td>#</td>
<td></td>
<td></td>
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<tr>
<td>Dome</td>
<td>Mast</td>
<td>Eureka, Humboldt Co., Court House Globe at top (150' high)</td>
<td>40 48 337.3 124 09 935.0</td>
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<tr>
<td>Radio Mast</td>
<td>Mast</td>
<td>Eureka, Radio Station KIEM Tower Red Light at top (184' high)</td>
<td>40 48 348.2 124 08 413.3</td>
<td>#</td>
<td>1948</td>
<td>#</td>
<td></td>
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</tr>
<tr>
<td>Radio Mast</td>
<td>Mast</td>
<td>KIEM Radio Tower, Taller of Two (384' high)</td>
<td>40 48 314.2 124 08 358.7</td>
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<td>1948</td>
<td>Radial Plot</td>
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</tr>
<tr>
<td>Beam</td>
<td>Beam Station</td>
<td>CAA High Frequency Beam Station NOON</td>
<td>40 40 574.7 124 14 31.6</td>
<td># 8964</td>
<td>1949</td>
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<th>SIGNAL NAME</th>
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<th>LONGITUDE</th>
<th>DATUM</th>
<th>METHOD OF LOCATION AND SURVEY NO.</th>
<th>DATE OF LOCATION</th>
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<th>OFFICIAL CHART</th>
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<td></td>
<td>Arcata Channel 2 Light</td>
<td>40 49 08</td>
<td>124 10 12</td>
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<tr>
<td></td>
<td>Arcata Channel 3 Light</td>
<td>40 49 23</td>
<td>124 10 02</td>
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<tr>
<td></td>
<td>Arcata Channel 4 Light</td>
<td>40 49 16</td>
<td>124 09 55</td>
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<th>SIGNAL NAME</th>
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<th>LONGITUDE</th>
<th>METHOD OF LOCATION AND SURVEY NO.</th>
<th>DATE OF LOCATION</th>
<th>CHARTS AFFECTED</th>
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<td>Lookout</td>
<td></td>
<td>40 15</td>
<td>1715.8</td>
<td>124 13 1249.3 # Triang. 8962</td>
<td>1941 X</td>
<td># # #</td>
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<tr>
<td></td>
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<td>Tower</td>
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This form shall be prepared in accordance with Hydrographic Manual, pages 800 to 804. Positions of charted landmarks and nonfloating aids to navigation, if redetermined, shall be reported on this form. The data should be considered for the charts of the area and not by individual field survey sheets. Information under each column heading should be given.
8 September 1949

To: The Director
U.S. Coast and Geodetic Survey
Washington 25, D.C.

Subject: Intersection station "CUPOLA, BAYSIDE COMMUNITY PRESBYTERIAN CHURCH, 1948"

The intersection station "CUPOLA, BAYSIDE COMMUNITY PRESBYTERIAN CHURCH, 1948" could not be held during the running of the radial plot for Project Ph-25(47). This station is located about 1.5 miles southeast of Arcata, California, in the village of Bayside.

It is believed that an error in identification was made, when observing this station and that the geographic position submitted for this station on June 11, 1948, is not correct.

Charles W. Clark
Lieut. Comdr., USCGG Survey
Chief of Party

CWC/cw
16 September 1949

To: Lt. Comdr. Charles W. Clark
U.S. Coast and Geodetic Survey
c/o Swan Island Postal Station
Portland 18, Oregon

Subject: Intersection Station "CUPOLA, BAYSIDE COMMUNITY PRESBYTERIAN CHURCH, 1948"
Project Ph-25(47)

This is in reply to your letter informing this office that Intersection Station "CUPOLA, BAYSIDE COMMUNITY PRESBYTERIAN CHURCH 1948" could not be held in the radial plot of Project Ph-25.

It is noted that you believe an error in identification was made when observing this station, however, it is not clear in this office whether or not one direction was observed to an erroneous object or the object observed upon was erroneously named and described.

The geographic position computation for the no check position of this station has been verified as correct in this office.

It is requested that you determine from the radial plot and field inspection photographs whether or not the geographic position should be rejected or a new name given to the station. You are to report your findings, both in the radial plot report and by letter to this office.

/S/ J. H. Hawley
Acting Director
COPT

c/o Swan Island Postal Station
Portland 18, Oregon

22 September 1949

To: The Director
U.S. Coast and Geodetic Survey
Washington 25, D.C.

Subject: Intersection Station "CUPOLA, BAYSIDE COMMUNITY PRESBYTERIAN CHURCH, 1948", Project Ph-25(47).


The error of identification of the subject station as referred to in my letter dated 8 September 1949 was believed to be an erroneous identification of the object on one of the triangulation cuts and that the two cuts were not on the same object.

A further study of the situation indicated the above may not be a correct assumption.

One cut on this station was from station PEN (U.S.E.), 1911. This station was identified but would not hold in the radial plot. The recovery card (not yet submitted) indicated some doubt about the recovery of station PEN. No description of PEN was available to the field party. A pipe was found in the vicinity of the geographic position and was assumed to be the station but apparently it was not the correct station.

The radial plot position of PEN is about 50 meters northwest of the geographic position. The radial plot position of CUPOLA, BAYSIDE COMMUNITY PRESBYTERIAN CHURCH is about 10 meters southwest of the computed geographic position.

The conclusion reached at this office is that both cuts were on the same object but the cut recorded as being from PEN (U.S.E.), 1911 was from an unknown point. It is thought that the computed geographic position of CUPOLA, BAYSIDE COMMUNITY PRESBYTERIAN CHURCH is incorrect and should not be listed in the list of geographic positions.

The field observations in question were made by Mr. Charles Hanavich who is now in the Washington Office. He may be able to give further information on the subject.

Charles W. Clark
Lt. Comdr., USCG Survey
Chief of Party

CNC/gw
7 October 1949

To: Lt. Comdr. Charles W. Clark
U. S. Coast and Geodetic Survey
c/o Swan Island Postal Station
Portland 18, Oregon

Subject: Intersection Station "CUPOLA, BAYSIDE COMMUNITY PRESBYTERIAN CHURCH, 1948", Project Ph-25(47)

This is in reply to your letter dated 22 September 1949, recommending that the geographic position of CUPOLA, BAYSIDE COMMUNITY PRESBYTERIAN CHURCH be rejected. Your investigation appears to have been satisfactory, and this office is rejecting the position of the station.

The information furnished in your letter was corroborated by Mr. Charles Hanavich, and it has been concluded that Station PEN (U.S.E.) 1911 was both erroneously recovered and identified, making the observations from PEN to CUPOLA of no value.

It is requested that you include a statement on the recovery card for station PEN, adding emphasis to the fact that recovery was very doubtful.

[Signature] K. T. Adams

Acting Director.
GEORGRAPHIC NAME LIST:

T-8960

✓ Arcata Bay (shift name)
✓ Arcata Channel
✓ Bird Island
✓ Gunther Island
✓ Humboldt Bay
✓ Humboldt Meridian
✓ Humboldt Northern RR.

✓ Liscom Slough
✓ Mad River Slough
✓ Mad River Slough Channel
✓ Northwestern Pacific RR
✓ Pacific Ocean
✓ Samoa
✓ Samoa School (Elem.)

*Note: Not shown in Geographic Names Report
but the name is shown on field inspection photograph 47-D-335 and the
building is indicated on USGS Eureka, Calif. 15 min. quadrangle.

T-8961

✓ Alliance
✓ Arcata
✓ Arcata Bay
✓ Bay School
✓ Bayside
✓ Brainard
✓ Gannon Slough
✓ Humboldt Northern RR
✓ Humboldt State College

✓ Jacoby Creek
✓ James Creek
✓ James School
✓ Jolly Giant Creek
✓ Liscom Slough
✓ McDaniel Slough
✓ Northwestern Pacific RR
✓ Redwood Highway (U.S. 101)
✓ Humboldt Bay

✓ Bloomfield Acres
✓ Fickle Hill
✓ Feekle Hill Road
✓ Greenwood Cemetery
✓ Grotzman Creek

* Bay School is shown on the USGS Eureka, Calif. 15 min. quadrangle and on field inspection photograph 47-D-181. It was not considered in the geographic names investigation.

Grotzman Creek is not shown on the map manuscript because an examination of the photographs does not reveal the creek to be as extensive as shown on the USGS Eureka, Calif., 15 min. quadrangle. The creek is believed to terminate west of the detail limits of the map manuscript.

T-8962

✓ Arcata Bay
✓ Bayview
✓ Bucksport
✓ Coast Guard Lookout
✓ Daby Island
✓ Elk River Corner
✓ Eureka
✓ Humboldt Bay
✓ Humboldt Bay Lifeboat Station USCG
✓ Humboldt Bay Fog Signal Station
✓ Humboldt Northern RR
✓ North Spit

✓ U.S.C.G. No. 316

(This spelling is new; older USGS field and 1941 Names Report both have Groetzman as approved above)
Additional approved names on T-8962:

On sheet:
- Clark Slough
- Elk River
- Franklin School (Elem.)
- Myrtle Grove Cemetery
- Eureka Junior High School
- Eureka Senior High School
- Marshall Grammar School
- St. Joseph Hospital
- St. Bernard School
- Carson Park
- Humboldt County Hospital
- Parkston Addition (City Park)
- Sequoia Park
- General Hospital
- Lincoln School (Grammar)
- Community Hall and Grammar School
- Oceanview Cemetery
- St. Bernard Cemetery
- Sunset Memorial Park Cemetery
- Albee Stadium
- Ed Ross Memorial Playground
- Jefferson School (Grade)

Added:
- Eureka Channel

Names approved
Humboldt Co. 11-21-50
A. J. W.
*Eureka Airport* was not considered during geographic names investigation. It is shown as a geographic name on the "Mt. Shasta" sectional aeronautical chart and on field photograph 47-D-316.

**T-3963**

- Arcata Bay
- Eureka Slough
- Fay Slough
- Freshwater Corners
- Freshwater Creek
- Freshwater Junction
- Freshwater Slough
- Redwood Acres State Fair Grounds

**Humboldt County Airport** was not considered during the geographic names investigation. It is shown as a geographic name on the "Mt. Shasta" sectional aeronautical chart and on field photograph 47-D-487.

9-18-54: Checked with AVO charts: present official name is Eureka County Airport.

**T-3964**

- Buene Point
- Clark School
- Fields Landing
- Hookton
- Hookton Channel
- Humboldt Bay
- Indianola (1)
- McNulty Slough
- Northwestern Pacific RR
- Pacific Ocean

- South Bay
- South Bay Station
- South Spit
- Southport Channel
- Southport Landing
- Table Bluff (bluff)
- Table Bluff Light Station
- Table Bluff Rancheria

**T-3965**

- Beatrice
- Bucksport School
- Buene Spuit Shoal
- Elk River

- Northwestern Pacific RR
- Orton Creek
- Red Bluff
- Redwood Highway (U.S. No. 101)
Elk River School
Fields Landing
Hookton Slough
Humboldt Bay
Humboldt Hill
Humboldt Grange

P.O. Box 81, Clam Gulch, HI 96701

Salmon Creek
South Bay
South Bay Station (suggested mission)
Spruce Point (Road Fork) - settlement
Willow Brook

Number P.O. (Purely descriptive) = Pacific Lumber Co. P.O.
Swain Slough
Salmon Creek School
Fields Landing Elementary School

Harrison Avenue
West Ave.
2nd Ave.
3rd Ave.
Railroad Ave.
B St.
C St.

Names preceded by a are approved 5-2-50.
L. Hackett
## Notes for the Hydrographer

(See also heading 38, page 95)

List of Recoverable Topographic Stations
Map Manuscripts T-8960 to T-8965 Inclusive
Project Ph-25(47)

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Humboldt Bay Fog-Signal, 1948

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61. **Bridges:**

Vertical clearances in the bridge list are for MHHB.

Clearances on the map manuscript were adjusted to MHHB.

(Listed in the Field Inspection Report).

62. **Comparison with Registered Topographic Surveys:**

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The maps in this project supersede the older surveys for charting purposes for all detail except contours.

63. **Comparison with Maps of Other Agencies:**

**USGS**
Bureka 1:62,500 ed. 1942 rep. 1943 T-8960,61,62,63
Fortuna 1:62,00 ed. 1944 T-8964
Ferndale 1:62,500 ed. 1944 T-8964,65

The Arcata city boundary line on T-8961 differs considerably from that shown on the quadrangles. The boundary limits drawn on T-8961 were authenticated, as of the date of field inspection. It supersedes the line shown on the quadrangles.

64. **Comparison with Contemporary Hydrographic Surveys:** None

65. **Comparison with Nautical Charts:**

Discrepancies

T-8960

1. Humboldt Northern RR has been relocated.
2. A breached dike has made a mud flat of the fast land area south of Mad River Slough entrance.
3. The pier north of Samoa no longer exists.
4. A lone pile at 40° 49' 27"/124° 08' 20" is not on the chart.
5. A lone pile at 40° 50' 03"/124° 07' 22" on the chart is absent on T-8960. It is not visible on the photographs and not noted by field inspection.

T-8961

A charted dolphin opposite the wharf ruins by Arcata Channel is not on the manuscript, because it is not visible on the photographs and was not labeled by field inspection.

T-8962

A charted cable crossing from Eureka to Gunther Island Spit Light is not on the manuscript. It was not located by field inspection.

Six visible aids were plotted during review.

Humboldt Bay Lighted Buoys "3" and "6"
Nun Buoys "8" and "10"
Samoa Channel, Lighted Buoy "1"
Eureka Entrance Channel Lighted Buoy

Because T-8962 was compiled from 1948 field inspection, the following items appear on T-8962 but are not on the chart revised to January 1950:

(1) Lookout Tower at Coast Guard Station
(2) Fog Signal
(3) Eureka Channel Light 2

Two lights, built in 1949 and listed in the 1950 Light List, are not on T-8962:

(1) Humboldt Bay Approach, Range Front. This light is on the tower built to replace the old "Lookout Tower", (1) above, and has a diaphone to replace the "Fog Signal", (2) above.
(2) Humboldt Bay Approach Range Rear.

The "Tank" on the chart northwest of Coast Guard Cupola is an observation tower and should be labeled "Tower" on future reprints of Chart 5832.

The peninsula-shaped strip of land extending southward from Samoa to Humboldt Bay entrance, and a similar strip south of the entrance (on T-8964), are dune areas.

The strip on T-8962 differs from the other in that there is a considerable amount of shrub growth which prevents a shifting of the sand except along the Pacific Ocean side of the area.

Because this condition is peculiarly characteristic of the northern strip, the shrub-covered areas have been delineated as "brush", even though the present mapping practice is to ignore the category "brush".
T-3964

The cable area Buhne Point - South Spit and the "obstruction" off shore from Fields Landing are not entered on T-3964, because no field information was given to indicate their existence.

T-3965

1. The dike system in Hockton Slough area, with consequent land reclamation.
2. Lumber RR east of Elk Creek.

66. Adequacy of Results:

These compilations comply with project instructions; meet the National Standards of Accuracy and are adequate for chart publication and maintenance.

Reviewed by:

Lena T. Stevens

Approved by:

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# Nautical Charts Branch

**Survey No.:** T8960-1-2-3-4-5

## Record of Application to Charts

<table>
<thead>
<tr>
<th>Date</th>
<th>Chart</th>
<th>Cartographer</th>
<th>Remarks</th>
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<td>5832</td>
<td>Norfolk Office</td>
<td>Before After Verification and Review; <em>Complete</em></td>
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Before After Verification and Review

Before After Verification and Review

Before After Verification and Review

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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.