| 1. DATE - TIME GROUP | 2. LOCATION |
|---|---|
| 23 March 53 24/0412Z | Pasadena, Texas |
| **3. SOURCE**<br>Varied | **10. CONCLUSION**<br>BALLOON |
| **4. NUMBER OF OBJECTS**<br>One - Four | Object meets the description of a Radiosonde Weather Balloon. |
| **5. LENGTH OF OBSERVATION**<br>30 Minutes | **11. BRIEF SUMMARY AND ANALYSIS**<br>At 0412 a blip appeared on radar scope for a period of approx 25 sec. At 0415 object was sighted visually appearing to be a reddish colored light circling ground (5 times) Pasadena then disappearing to the NNW. |
| **6. TYPE OF OBSERVATION**<br>Radar<br>Ground-Visual - Ground | |
| **7. COURSE**<br>Circling | |
| **8. PHOTOS**<br>☐ Yes<br>☒ No | |
| **9. PHYSICAL EVIDENCE**<br>☐ Yes<br>☒ No | |

FORM
FTD SEP 63 0-329 (TDE) Previous editions of this form may be used.

AF FORM 112—PART I
APPROVED 1 JUNE 1948

[redacted] (CLASSIFICATION) UNCLASSIFIED / S

| COUNTRY | REPORT NO. | (LEAVE BLANK) |
|---|---|---|
| USA | | |

# AIR INTELLIGENCE INFORMATION REPORT

| SUBJECT | | |
|---|---|---|
| FLYOBRPT | | |
| AREA REPORTED ON | FROM (Agency) | |
| Pasadena, Texas | 747th AC & W Sq | |
| DATE OF REPORT | DATE OF INFORMATION | EVALUATION |
| 31st March 1953 | 23 March 1953 | C-1 |
| PREPARED BY (Officer) | SOURCE | |
| CHESTER L CURVEY; Captain, USAF | See Item 1 thru 7 | |

REFERENCES (Control number, directive, previous report, etc., as applicable)
CADF Reg 200-5, AFL 200-5

SUMMARY: (Enter concise summary of report. Give significance in final one-sentence paragraph. List inclosures at lower left. Begin text of report on AF Form 113—Part II.)

Report of FLYOBRPT as seen by the following named persons;

1. T/Sgt Patrick D Liggett ) Radar Scope Presentation
2. A/1c C A Craves ) Visual Sighting -
3. A/1c C W Olden ) " "
4. A/3c Leonard Duresea Jr ) " "
5. Mrs [redacted] ) " "
6. Mrs [redacted] ) " "
7. 2nd Lt Robert K Smith ) Shooting of Stars with Sextant

The following weather prevailed for 23rd March 1953.

AP around our station for 50 miles also extending to 100 miles in a northeastern and southwestern direction.

Ground clutter around station didnot permit continuous tracking.

Aircraft at this station: The director on duty notified Ellington AFB, Texas, but was informed no Aircraft or Pilots were available to become Airborne for Identification purpose.

**There was no Aircraft at the time of observation**

Chester L. Curvey
CHESTER L CURVEY
Captain, USAF
Direction Center Chief

16 INCLS.
Statement's of T/Sgt Liggett — WAC NO 468 (Weather)
A/1c Graves — WAC NO 468 (Flyobrpt)
A/1c Olden — Photo (Weather day)
Mrs [redacted]
Mrs [redacted]
2nd Lt Smith

DISTRIBUTION BY ORIGINATOR

DOWNGRADED AT 3 YEAR INTERVALS;
DECLASSIFIED AFTER 12 YEARS.
DOD DIR [illegible].10

THIS DOCUMENT CONTAINS INFORMATION AFFECTING THE NATIONAL DEFENSE OF THE UNITED STATES WITHIN THE MEANING OF THE ESPIONAGE ACT, 50 U. S. C.— AND 32, AS AMENDED. ITS TRANSMISSION OR THE REVELATION OF ITS CONTENTS IN ANY MANNER TO AN UNAUTHORIZED PERSON IS PROHIBITED BY LAW. MAY NOT BE REPRODUCED IN WHOLE OR IN PART, BY OTHER THAN UNITED STATES AIR FORCE AGENCIES, EXCEPT BY PERMISSION OF THE DIRECTOR OF INTELLIGENCE, USAF.

Incl 1

[redacted] (CLASSIFICATION) UNCLASSIFIED

16—25509-1 U. S. GOVERNMENT PRINTING OFFICE

[redacted]

AF FORM 112—PART II
APPROVED 1 JUNE 1948

# AIR INTELLIGENCE INFORMATION REPORT

| FROM (Agency) | REPORT NO. | PAGE 2 OF 7 PAGES |
|---|---|---|
| 747th AC & W Sq | | |

At 0355 Z, Lt R K Smith called Base Operations and reported seeing a flying object over Pasadena, Texas. (See inclosures for Lt R K Smith's statement). Base Operations pas ed Lt Smith's information to the 747th AC & W Sq. T/Sgt Liggett , A/1c Graves, and A/1c Olden of the 747th AC & W Sq observed the object reported and made the following statement.

"We immediately Radar scanned the area and could not locate the object electronically. We went out side and sighted the object in a sector believed to be over Pasadena, Texas. The object showed a steady reddish light, which was not observed to change in color. The object was on a heading of approximately 355° to 040° degrees from this base ranging from 12 to 35 miles. The object made five circles over Pasadena, then went off in a NNW direction. The object was sighted visually at 0415 Z, 24th March 1953. At 0412 Z the object was sighted on the radar screen at this station. It was present for about 25 seconds which did not provide time to take a picture of the blip. At 0435 Z, 24 March 1953, this station notified 745th AC & W Sq that the object was headed in their direction."

Release of weather balloons at approximately the time of the sighting from Ellington AFB, Texas.

One weather balloon was released from Ellington AFB, Texas at 0815 Z, 23 March 1953, Climbed at a rate of a 1000 ft per min and rose to approximately 52,000 ft. At 0845 Z the second balloon was released and climbed at the rate of 1000 ft per min.

This is the track of the two Weather balloons

From surface to 5,000 ft track was SW due to NE wind at 10 Knots.
From 5,000 to 10,000 ft track was NW due to SW wind at 40 Knots.
From 10,000 ft to 18,000 ft track was NW due to SE wind at 50 Knots
From 18000 ft to 23,000 ft track was NW due to SE wind at 80 Knots.

Weather balloons released after dark carry a 6 volt battery, which powers a small while light. This cannot be seen with the naked eye above approximately 12,000 feet. A picture inclosed which shows a weather balloon shortly after release. There are no facilities at this station to take photographs after dark.

Visual observation of weather balloons ascensions has disclosed that the suspended radiosonde osciletes considerably in rough air. Since the radiosonde is lighted at night it is considered possible that this oscilation might be misconstrued as the orbited movement of an unknown aerial object.

DOWNGRADED AT 3 YEAR INTERVALS;
DECLASSIFIED AFTER 12 YEARS.
DOD DIR 5200.10

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[redacted]



16—66870-1 ★ U. S. GOVERNMENT PRINTING OFFICE : 1950—O-916332

# AIR INTELLIGENCE INFORMATION REPORT

| FROM (Agency) | REPORT NO. | |
|---|---|---|
| 747th AC & W Sq | | PAGE 3 OF 7 PAGES |

The statement of T/Sgt. Patrick D. Liggett, AF 17096050, Ac & W Supervisor, at this station , is as follows:

On the night of march 23,1953 at approximatley 0410Z, I observed a strange object which was over Pasadena,Texas at the time of the sighting it was a constant light moving in a large cirele over the city. The object seemed to be the same dull red color at all time's and didnot change. The estimated speed was 300 to 350 knots at 45,000ft, The object seemed to move left and then to the right. We at this station picked-up object on our scope, the object was on on the scope for three (3) sweeps at 6 RPM. with the antenna tilt at 20o it was about the same size as any slip at that range, The Object was heading north at 12 miles.

Patrick D. Liggett
PATRICK D. LIGGETT
T/SGT USAF
AF. 170960050
AC &W Supervisor.

Statement of Leonard Duresea, A/3c, Air Police Section, 747th AC & W Squadron.

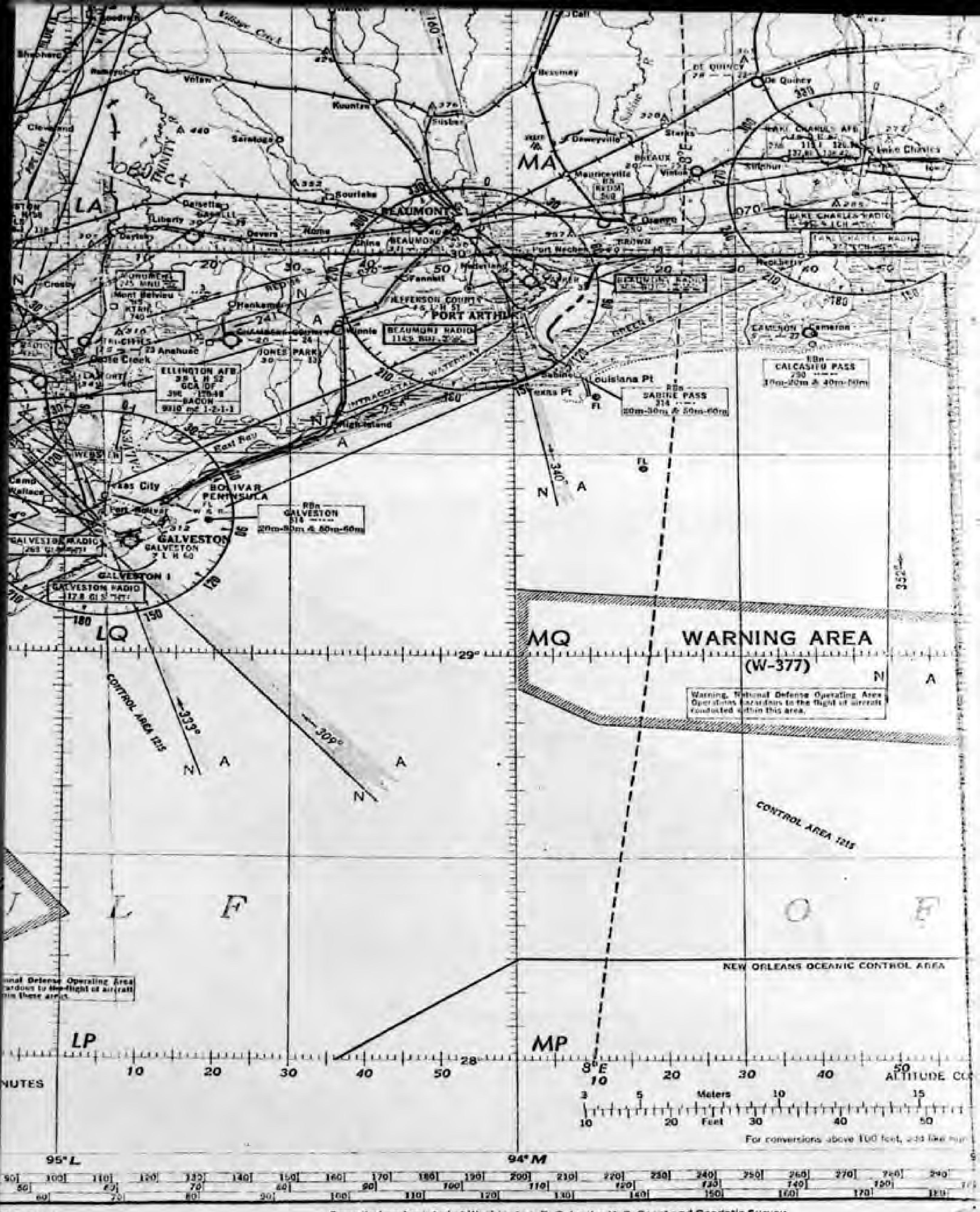
On the 23 March 1953 between the hours of 2030 and 2200 while on duty at the Gate House, I noticed in the sky Northwest of the site, an object oval in shape that gave off light the color of a star. I could not identify the object, but it resembled somewhat a happening that occured approximately five nights before; however on the first night the object possessed more characteristics. The object traveled at an unstable rate of speed and the light flashed on and off. It seemed to stop at scattered intervals and it could not be traced after entering a path of light given off by a search light.

The happenings that occured on the first night I could not a-credit to any source. The happenings that occured on the 23 March I supposed to be the result of the weather station behind the site.

Leonard Duresea Jr.
LEONARD DURESEA JR
A/3c ; AF-18 419 404
Air Policeman

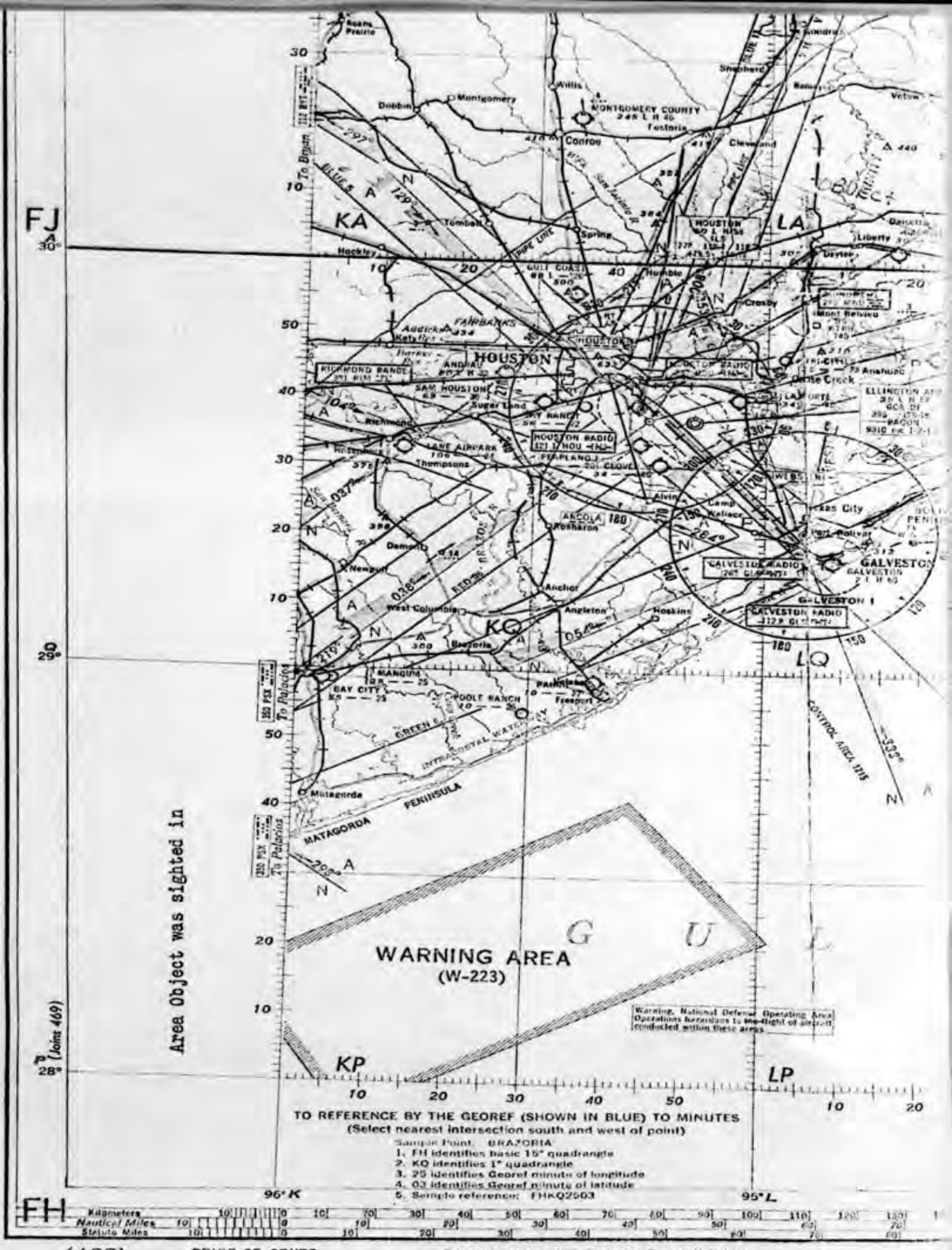
DOWNGRADED AT 3 YEAR INTERVALS;
DECLASSIFIED AFTER 12 YEARS.
DOD DIR 5200.10

NOTE: THIS DOCUMENT CONTAINS INFORMATION AFFECTING THE NATIONAL DEFENSE OF THE UNITED STATES WITHIN THE MEANING OF THE ESPIONAGE ACT, 50 U. S. C.—31 AND 32, AS AMENDED. ITS TRANSMISSION OR THE REVELATION OF ITS CONTENTS IN ANY MANNER TO AN UNAUTHORIZED PERSON IS PROHIBITED BY LAW. IT MAY NOT BE REPRODUCED IN WHOLE OR IN PART, BY OTHER THAN UNITED STATES AIR FORCE AGENCIES, EXCEPT BY PERMISSION OF THE DIRECTOR OF INTELLIGENCE, USAF.




Compiled and printed at Washington, D. C. by the U. S. Coast and Geodetic Survey
under authority of the Secretary of Commerce
JANUARY 1945 Revised JULY 1951 BASE NO 2 R 9
BLUE TINT INDICATES AIR TRAFFIC CONTROLLED AREAS
Victor airway designations are shown along the radials of the omni range stations. Limits of these airways which are not indicated on this chart are 5 miles on either side of the radials.

U. S. Army
Agriculture, Civil
Geodetic Survey.




(468) PRICE 25 CENTS

Principal Sources: U.S. Geological Survey, U.S. Army Corps of Engineers, U.S. Air Force, U.S. Dept. of Agriculture, Civil Aeronautics Administration, and the U.S. Coast and Geodetic Survey.

# AERONAUTICAL CHART SUPPLY

To insure that the airman has the latest information available, U. S. World Aeronautical Charts are revised at six-month periods and the Alaskan World Aeronautical Charts are revised at twelve-month periods. The time of the next scheduled printing is shown on the face of the chart below the date of the aeronautical information.

Chart users are advised to check the list Dates of Latest Prints on display with authorized agents.

## CIVIL CHART SUPPLY

Authorized agents for the sale of aeronautical charts have been appointed at certain airports and principal cities throughout the United States. The charts may also be obtained from the Director, U. S. Coast and Geodetic Survey, Washington 25, D. C.

## MILITARY CHART SUPPLY

(Ref: AF Reg. 67-3)

1. Aeronautical charts, maps and publications distributed by the USAF Aeronautical Chart and Information Service are indexed or listed in the current edition of the USAF "Catalog of Aeronautical Charts and Related Publications."

2. Requisitioning.

a. Outside Continental United States:

(1) USAF activities are to submit requisitions thru the supply channels designated by the Theater Commander for maintenance and distribution of aeronautical charts and maps.

(2) Theater supply facilities are to submit requisitions for replenishment of stocks of aeronautical charts and maps thru channels to USAF Aeronautical Chart and Information Service, Washington 25, D.C.

b. Within Continental United States: Requisitions from USAF activities within Continental United States are to be submitted to Commanding Officer, Aeronautical Chart Plant, Attn: Distribution Division, 2nd and Arsenal Sts., St. Louis 18, Mo. Except when emanating from an Air Force, Wing, or Command Headquarters, requisitions are to bear the signature or approval by indorsement of the Base or Station Operations Officer. Quantities of charts and maps requested are to be such as to assure the maintenance of a 30-day supply at all times but not to exceed a 60-day supply.

3. Requirements for Special Purpose Maps and Charts.

a. Maps and charts for special purposes, specific missions, and also those maps and charts published by other government agencies, which are not listed in the principal types of aeronautical charts in the current edition of the USAF "Catalog of Aeronautical Charts and Related Publications," should be requisitioned from USAF Aeronautical Chart and Information Service, Washington 25, D.C. Charts will be furnished, if available, when sufficiently identified in requisitions as to name or number, scale, projection and publisher.

b. Information regarding cloth reproduction of certain selected aeronautical charts and maps may be obtained, on request, from: USAF Aeronautical Chart and Information Service, Washington 25, D. C.

4. Obsolete Charts.

Aeronautical charts rendered obsolete-for-air by a new edition, when not practicable to correct for conformity with new edition, are to be salvaged if feasible, or else destroyed. Disposition by salvage or destruction is to be made in accordance with provisions of AFR 205-1. New editions of charts available are announced in the USAF Aeronautical Chart and Information Service Bulletin published semimonthly.

# CORRECTION INSTRUCTIONS

1. The Coast and Geodetic Survey is making every effort to furnish the user with accurate charts. The user will materially assist in this effort by marking corrections of aeronautical information, drainage, relief and cultural features (roads, canals, power lines, etc.) on the face of the chart, on an overlay of the area, or under "Remarks" below. In reporting elevation corrections, state method used by observer in making the determination.

a. Mark correction on face of chart or under "Remarks" below.
b. Fold chart along regular fold lines, but with back out.
c. Make an extra fold along dotted line and staple at points so marked.
d. Fill in the return address and drop the chart in any U.S. mail box. Postage is not required.

Remarks: .....

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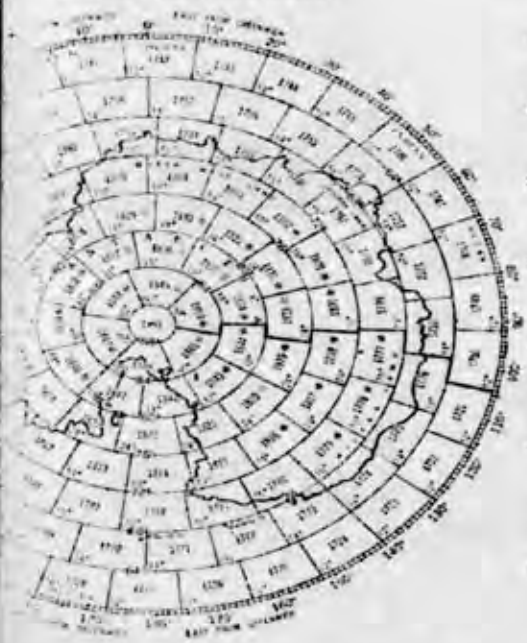
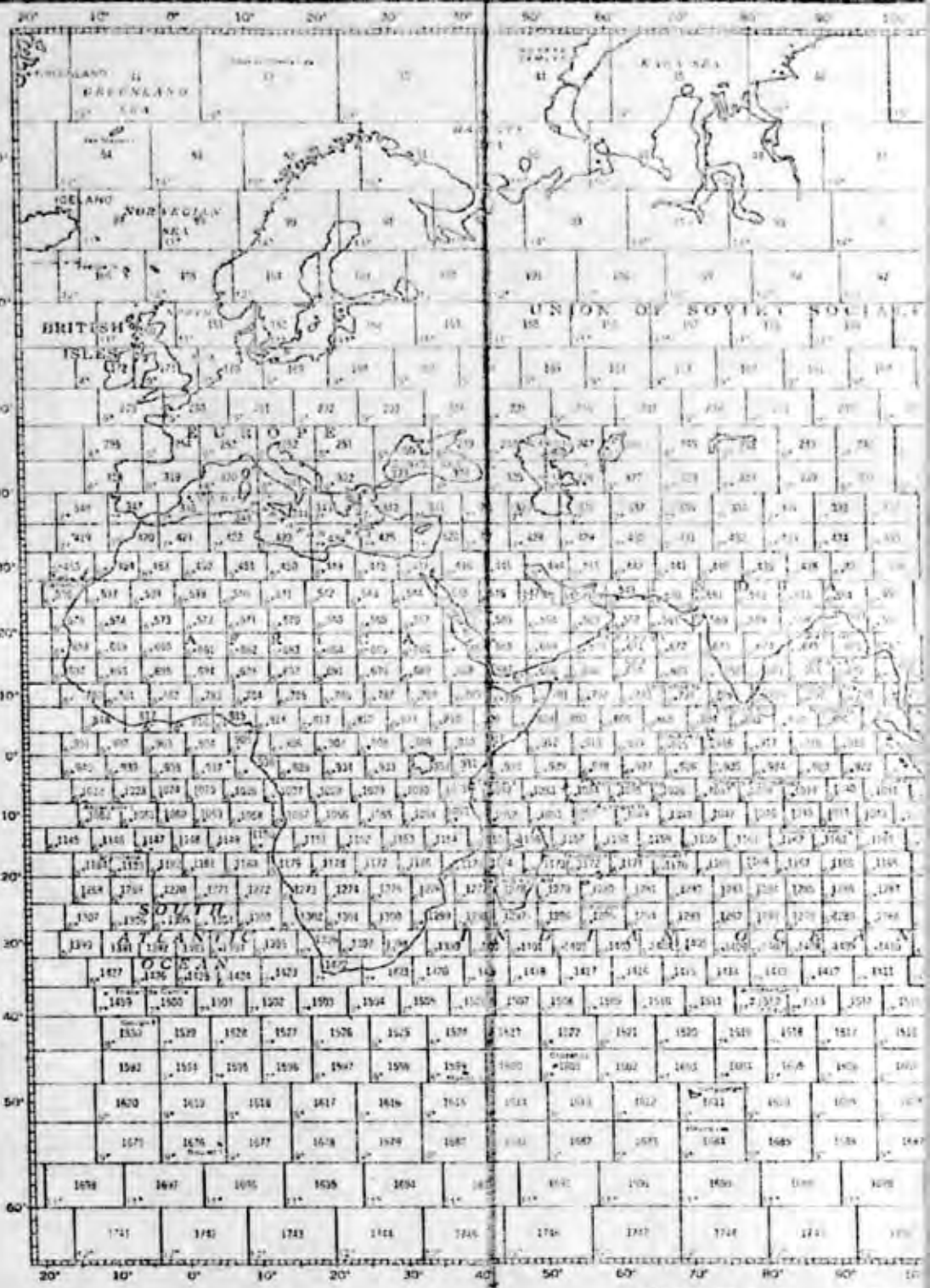
PERMIT NO. 1009

*Indicates
charts in t
charts wil

## TH POLAR AREA

## TH POLAR AREA






...is not sufficient information available to compile ...at a scale of 1:1,000,000. Requisitions for these ...with the appropriate Universal Water Chart.

# WORLD AER

Sc

## AERONAUTICAL SYMBOLS

### AERODROMES

...with facilities

WATER

- Civil
- Joint Civil and Military
- Military

Aerodromes with emergency or no facilities

LAND WATER

- Landing Area
- Sheltered Anchorage

### AERODROME DATA AND LANDING FACILITIES INFORMATION

LAND WATER

Elevation in feet ... Elevation in feet

## AI

All radio facility data ... as tower frequencies, ...

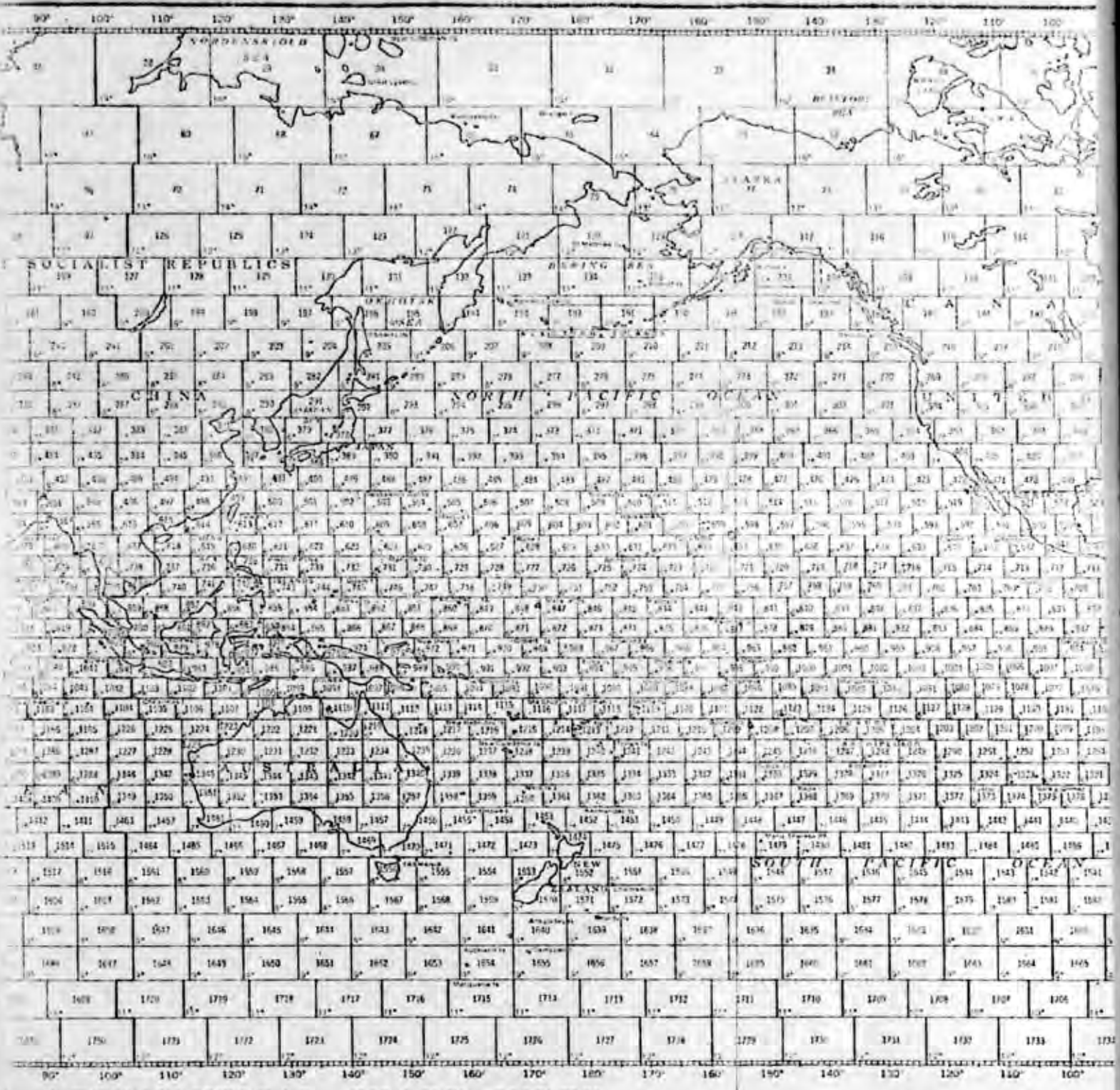
Methods of indicating specific voice and CW ...

Radio Range (With voice)

Radio Range (Without voice)

Nondirectional Radiobeacon (With voice)

Nondirectional Radiobeacon (Without voice)




# AERONAUTICAL CHART INDEX

**Scale of Series 1:1,000,000**

Charts published

Charts not published

## AERONAUTICAL SYMBOLS

### RADIO FACILITIES

...facility data are printed in blue with the exception of certain LF/MF facilities such ... frequencies, radio ranges and associated airways, which are printed in magenta. ... and CW ... are shown below.

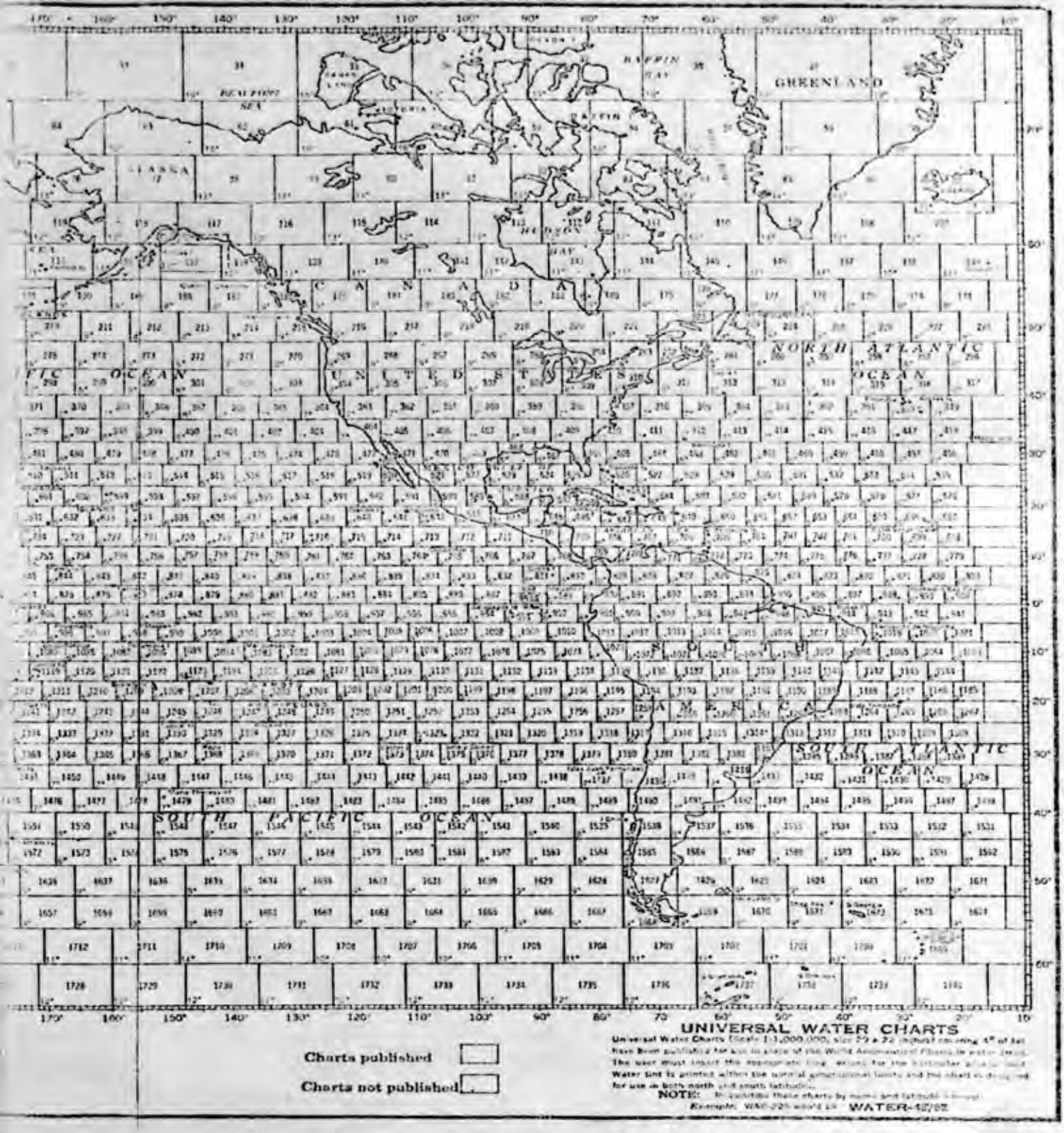
Use of the word "Radio" within the box indicates voice facilities.

| | |
|---|---|
| BALTIMORE RADIO 257 BAL | Radio Communication Station (With voice) |
| [illegible] | Radio Communication Station (Without voice) |
| [illegible] | Radio Broadcasting Station |
| [illegible] | Radar Beacon (Racon) |

## TOPOG

### CITIES AND TOWNS

| | |
|---|---|
| Metropolitan Areas | NEW YORI |
| Large Cities | RICHMON |
| Cities | ARLINGT |
| Small Cities | [illegible] |
| Large Towns | [illegible] |
| Towns & Villages | |




## TOPOGRAPHICAL SYMBOLS

### CITIES AND TOWNS

Metropolitan Areas — NEW YORK

Large Cities — RICHMOND

Cities — ARLINGTON

Small Cities — Freehold

Large Towns — Corvilla

Towns & Villages — Arcola

### HIGHWAYS AND ROADS

Dual Lane and Super Highways

Primary Roads

Secondary Roads

Trails

U. S. Road Markers — 66

National, State or Provincial Road Markers — 37

Road Names — ALASKA HIGHWAY

### RELIEF FEATURES

b. Fold chart along regular fold lines, but with back out.
c. Make an extra fold along dotted line and staple at points so marked.
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**U.S. Coast and Geodetic Survey**
**Washington, 25, D.C.**

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MAKE EXTRA FOLD HERE TO RETURN TO DIRECTOR, USC&GS

## U. S. DANGER AREAS ON WORLD AERONAUTICAL CHART 468

| NO. | NAME | ACTIVITY | USING AGENCY | ALTITUDE | TIME |
|---|---|---|---|---|---|
| W-92 | New Orleans | Gunnery, Bombing, Rocket Firing | NAS New Orleans, La. | To 20,000 | Until. |
| C-147 | New Orleans | Acrobatics | NAS New Orleans, La. | 4,000-20,000 | 0800-1630 |
| D-158 | Pearl River | Strafing, Rocket Firing, Glide and Dive Bombing | NAS New Orleans, La. | Until. | 0800-1630 |
| W-253 | Matagorda Island | Aerial Gunnery | 8th Air Force, Carswell AFB, Tex. | To 30,000 | Days |
| D-229 | Camp Polk | Field Artillery Firing | 4th Army, Camp Polk, La. | To 50,000 | Until. |
| D-230 | Camp Polk | Field Artillery Firing | 4th Army, Camp Polk, La. | To 50,000 | Until. |
| W-377 | Gulf of Mexico | Air-to-Air Gunnery by Jet Aircraft | Tactical Air Command | To 40,000 | Days |

Altitude given in feet. AR - Airspace Reservation (Prohibited) C - Caution D - Danger W - Warning

No person shall operate an aircraft within an Airspace Reservation or Danger Area unless permission for such operation has been issued by appropriate authority.

Aircraft are not restricted from flying through Caution Areas, however, extreme caution should be exercised by pilots flying through such areas.

*Indicates that there is not sufficient information available to compile charts in this area at a scale of 1:1,000,000. Requisitions for these charts will be filled with the appropriate Universal Water Chart.

# AERONAUTICAL SYMBOLS

## AERODROMES

Aerodromes with facilities

| LAND | WATER | |
|---|---|---|
| ◇ | ◈ | Civil |
| ◈ | ◈ | Joint Civil and Military |
| ◎ | ◎ | Military |

Aerodromes with emergency or no facilities

| LAND | WATER | |
|---|---|---|
| ○ | | Landing Area |
| | ⚓ | Sheltered Anchorage |

## AERODROME DATA AND LANDING FACILITIES INFORMATION

| LAND | | WATER | |
|---|---|---|---|
| 908 | Elevation in feet | 00 | Elevation in feet |
| L | Minimum lighting | L | Minimum lighting |
| H | Hard surfaced runway | S | Normal sheltered take-off area |
| 41 | Length of longest runway in hundreds of feet | 62 | Length of longest runway in hundreds of feet |

BARGERSVILLE
908 L H 41
Airport of entry
GCA SYSTEM
278 126.18

NAS ANACOSTIA
00 L S 62
2870

The facility code character is replaced by a dash if specific information is not available or if the facility itself is not available.

GCA SYSTEM - Ground Control Approach System. Other controlled approach systems by appropriate abbreviation.

278 126.18 2870 - Control tower transmitting frequencies

## AIR NAVIGATION LIGHTS

Rotating Light ★

Rotating Light (With flashing code lights) ...★

Rotating Light (With course lights and site number) 12 ★

Flashing Light Fl ★

Flashing Light (With code) Fl

Lightship

Marine Light Occ

F—Fixed Fl—Flashing Qk Fl—Quick Flashing I Qk Fl—Interrupted Quick Flashing Occ—Occulting Alt—Alternating Gp—Group R—Red W—White G—Green B—Blue (U)—Unwatched SEC—Sector

Marine lights are white unless colors are indicated; alternating lights are red and white unless otherwise indicated

## MISCELLANEOUS

Obstruction 1108 A
(Numerals in italics indicate elevation above sea level of obstruction top.)

Group Obstruction

Prominent Transmission Line

Mooring Mast

Isogonic Line 4°E Values for 1950

Reporting Point (Compulsory)

Reporting Point (Non-compulsory)

Ocean Station Vessel (Normal position)

International Boundary
(Closed to passage of aircraft except through air corridor)

Restricted areas are numbered, and are indicated on the charts as follows:

PROHIBITED AREA (P-73)

Prohibited Area — Flight of aircraft prohibited except by specific authority of

PARALLEL RESTRICTED OR DANGEROUS AREA (R-623 OR D-5)

Danger, Restricted or Warning Area — Invisible hazards to air navigation

CAUTION AREA (C-34)

Caution Area — Visible hazards to air navigation

PRIVATE USE TO AVOID ... OF POSTAGE, $300

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| ALTITUDE | TIME |
|---|---|
| To 20,000 | Unltd. |
| 4,000-20,000 | 0900-1630 |
| Unltd. | 0900-1630 |
| To 50,000 | Days |
| To 50,000 | Unltd. |
| To 50,000 | Unltd. |
| To 40,000 | Days |

W - Warning ...
has been issued by
... through such areas.

# WORLD AERONAUTICAL CHART INDEX

**Scale of Series 1:1,000,000**

## AERONAUTICAL SYMBOLS

### RADIO FACILITIES

All radio facility data are printed in blue with the exception of certain LF/MF facilities such as tower frequencies, radio ranges and associated airways, which are printed in magenta.

Methods of indicating specific voice and CW calls are shown below

Use of the word "Radio" within the box indicates voice facility

**Radio Range** (With voice)

**Radio Range** (Without voice)

**Nondirectional Radiobeacon** (With voice)

**Nondirectional Radiobeacon** (Without voice)

**Marine Radiobeacon**

**Radio Direction Finder** (Without voice)

**Radio Direction Finder** (With voice)

**Radio Communication Station** (With voice)

**Radio Communication Station** (Without voice)

**Radio Broadcasting Station**

**Radar Beacon** (Racon)

**Radio Fan Marker Beacons**

100 watts

5 watts

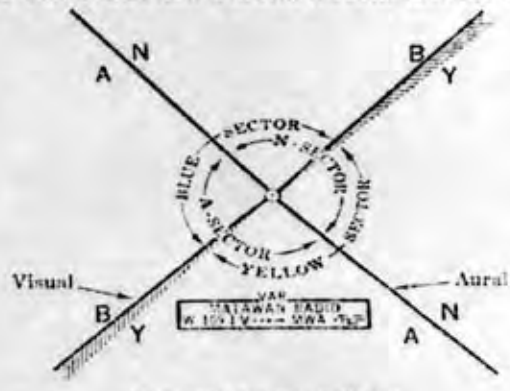
### AURAL RANGE

The heavy line indicates the "N" quadrant. The bearings shown are magnetic and the magnetic variation at the position of the ground station is used for computing them.

### VHF OMNI-DIRECTIONAL RANGE (VOR)

Bearings are magnetic from the station.
Radius of circle is 15 nautical miles.

### VHF FOUR COURSE VISUAL-AURAL RANGE




Letter preceding frequency in box indicates aural range identification.

### AIR TRAFFIC CONTROL

Control Zone

Controlled Civil Airway

Uncontrolled Civil Airway

Blue tint where shown indicates air traffic controlled areas

DEX

Charts published

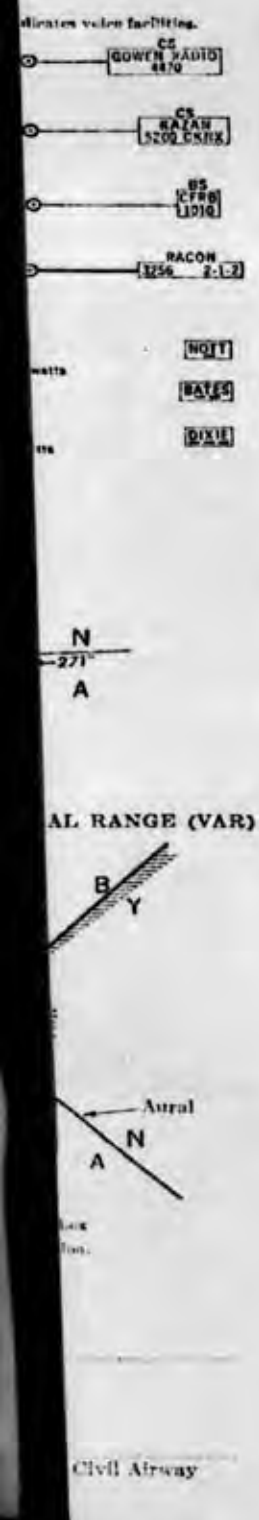
Charts not published

## UNIVERSAL WATER CHARTS

Universal Water Charts (Scale 1:1,000,000, [illegible]) have been published for use in place of the World Aeronautical Charts in water areas. The user must insert the appropriate long. values for the particular area [illegible]. Water tint is printed within the normal geographical limits and the chart is designed for use in both north and south latitudes.

NOTE: Requisition these charts by name and latitude (interval).

Example: WAC-225 would be WATER-48/52




# TOPOGRAPHICAL SYMBOLS

## CITIES AND TOWNS

Metropolitan Areas ..... NEW YORK

Large Cities ..... RICHMOND

Cities ..... ARLINGTON

Small Cities ..... Freehold

Large Towns ..... Corville

Towns & Villages ..... Arcola

## HIGHWAYS AND ROADS

Dual Lane and Super Highways

Primary Roads

Secondary Roads

Trails

U. S. Road Markers ..... 60

National, State or Provincial Road Markers ..... 37

Road Names ..... ALASKA HIGHWAY

## RELIEF FEATURES

Contours { Reliable, Approximate, Depression

Levees or Eskers

Hachures

Bluffs, Cliffs & Escarpments

Sand { Dunes, Areas, Ridges

Lava Flow

## HYDROGRAPHIC FEATURES

Swamps & Marshes

Tidal Flats (Exposed at low tide)

Danger Line

Rocks Awash

Shoals (Exposed at low tide)

Springs

Wells & Water Holes

Reefs, Coral & Rocky Ledges (Awash at low tide)

Streams & Rivers { Perennial, Intermittent, Probable or Unsurveyed, Braided

Intermittent Lakes (blue stipple)

Drainage Ditches

Canals { In use, Abandoned

Dry Lake Beds (brown stipple)

Sand Deposits in river bed

Dry Washes (brown stipple)

Glaciers and Ice Caps

## CULTURAL AND MISCELLANEOUS

Landmarks (with appropriate note) (Numerals indicate elevation above sea level of top) ..... Factory, Stack 8x6

Oil Tanks

Oil Fields

Dams

Elevations (In feet) { Highest on chart (Highest on chart is devoid of tint), Highest in a general area, Spot ..... 1115, 1085, 950

Mines and Quarries

Mountain Passes

Lookout Stations (Elevation is base of tower) ..... 75 (Site) 1025 (Tint)

Coast Guard Stations ..... CG 75

Pipe Lines ..... PIPE LINE

Race Tracks or Stadiums ..... RT

Stranded Wrecks

Boundaries { International, State & Provincial

Railroads { Abandoned or Under Construction, Single Track, Multiple Track, Sidings & Spurs, Overpass, Underpass

Bridges { Railroad, Highway

Tunnels { Railroad, Highway