

February 18, 1939.

A I R S A F E T Y B O A R D

Civil Aeronautics Authority

WASHINGTON, D.C.

The Air Safety Board submitted a report to the Civil Aeronautics Authority today on the loss of a United Air Lines Douglas transport off Point Reyes, California on November 29 during a scheduled flight from Medford, Oregon to Oakland. The plane carried four passengers and a crew of three, all of whom survived a forced landing on the open sea after the ship's gasoline supply had been exhausted, though only the first pilot and one passenger subsequently were rescued. The bodies of the second pilot and one passenger were recovered from the waves while the stewardess of the plane and two passengers are officially listed as "missing", though their death is generally assumed.

Basic responsibility for the accident is placed by the Air Safety Board's report on the bad judgment both of the first pilot, Captain Charles B. Stead, and two Oakland dispatchers (Thos. P. Van Sceiver and Philip Stever Showalter) who cleared the ill-fated ship on its last flight and were responsible for the conduct of the trip until it terminated.

The operating company, itself, is blamed for not having in effect "established procedures adequate to meet the emergencies encountered on this flight". The report charges that prior to clearing the flight from Medford, the first pilot and the Oakland dispatcher failed "to give proper consideration to possible fuel requirements of the trip in view of adverse weather conditions as forecast by both Company and U. S. Weather Bureau meteorologists". It also says that the plane's fuel supply was not conserved in accordance with sound practice when the plane became overdue at its destination and conditions indicated that a state of emergency existed.

The report takes cognizance of testimony during the investigation that an airplane was heard over Crescent City, California, which is on the Pacific

Coast and far off the course which Captain Stead was scheduled to fly, at a time when his ship was still in the air, but dismisses this evidence as lacking positive confirmation and as having no fundamental bearing on the flight's eventual outcome. It also discounts reports widely prevalent at the time of the accident that radio interference was a contributing factor to the disaster by showing that while Captain Stead encountered some difficulty on this score before he reached the vicinity of Oakland, he actually succeeded in establishing good contact with the Oakland radio range.

In summarizing its investigation of the accident, the Air Safety Board gives the probable cause as "failure of the pilot to definitely establish the position of the aircraft through standard orientation procedures within a reasonable time after intersecting a leg of the Oakland radio range at 3:17 a.m., and of Company flight dispatchers, charged with the responsibilities of directing the operation of the trip, to properly safeguard the flight, resulting in forced landing of the aircraft at sea due to exhausted fuel supply."

The report then lists the following as "contributing factors":

1. Failure of the pilot and Oakland dispatcher involved in clearing the trip from Medford, Oregon, to give proper consideration to possible fuel requirements of the trip, in view of adverse weather conditions as forecast by both Company and U. S. Weather Bureau meteorologists.

2. Failure of the pilot and dispatcher, after the aircraft was reported on a leg of the Oakland radio range, thought by the pilot to be the northeast leg, to recognize the inconsistency of the compass headings of the aircraft with the heading required to fly the on-course signal of the northeast leg.

3. Continuation of the flight in a westerly direction for an excessive period of time beyond that which would have been required to reach Oakland from the pilot's estimated position on the northeast leg of the Oakland radio range.

4. Failure of the pilot to conserve fuel by reducing power, when the trip

did not arrive at Oakland within a reasonable period of time after reaching the estimated position on the northeast leg of the Oakland radio range.

5. Failure of the Oakland dispatcher, after the passage of a period of time excessive of that required to reach Oakland from the pilot's previously estimated position on the northeast leg of the Oakland radio range, to advise the pilot to establish his position by working standard orientation procedures, and to conserve fuel by reducing power.

6. Failure of the Oakland dispatcher to notify the superintendent of flight operations of the western division of United Air Lines, of the status of the trip, within a reasonable period of time after radio communications with the aircraft failed at 2:09 a.m., and also within a reasonable period of time after the aircraft was reported as being on the northeast leg of the Oakland radio range. Also his failure to promptly utilize such emergency facilities as were available, and to demonstrate a reasonable degree of initiative and judgment in the presence of an obvious emergency.

7. Inadequacy of procedures established by United Air Lines on its western division for aiding aircraft under such conditions of emergency.

"It is recommended", the report concludes, "that the airline competency ratings of the pilot and both dispatchers involved in the accident be revoked. Further recommendations, which will tend to prevent similar accidents in the future, will be transmitted forthwith."

Those who perished in the Point Reyes accident and whose bodies subsequently were recovered were the co-pilot of the airplane, Lloyd E. Jones and S. L. Shonts, a passenger. Those not recovered from the sea, either alive or dead, were Miss Frona B. Clay, Stewardess, Phillip Hart and Ivan B. Heflebower.

Attached is a full copy of the report.

AIR SAFETY BOARD

File No. 97

REPORT

TO THE CIVIL AERONAUTICS AUTHORITY

AS A RESULT OF AN INVESTIGATION OF AN ACCIDENT INVOLVING AIRCRAFT

Accident involving aircraft NC-16066
of United Air Lines, off Point Reyes,
California, on November 29, 1938.

An accident involving aircraft of United States Registry, NC-16066, while operating as Trip 6 of November 28, 1938, of United Air Lines, having occurred off Point Reyes, California, at approximately 5:30 o'clock A.M., on the twenty-ninth day of November, 1938; the Air Safety Board having investigated such accident, and having considered the evidence adduced therefrom, reports the following facts, conditions, and circumstances relating to the said accident, its findings, and its conclusions as to the probable cause thereof:

FACTS, CONDITIONS, AND CIRCUMSTANCES:

United Air Lines Corporation, an air carrier, as authorized under currently effective Air Carrier Operating Certificate issued by the Civil Aeronautics Authority, dispatched aircraft of United States Registry NC-16066 from Seattle, Washington to Portland, Oregon at 8:30 P. M., November 28, 1938, operating as Trip 6 of United Air Lines between Seattle, Washington and San Diego, California, carrying passengers, express and mail.

AIRCRAFT:

Aircraft NC-16066 was manufactured by the Douglas Aircraft Corporation, Model DC 3-A-SB-3-G-14 Passenger, ATC No. 619,

and was placed in service by United Air Lines January 26, 1937. The aircraft was powered by two Pratt & Whitney engines, Type B-3G, Nos. 126 and 135, ATC No. 158, and Hamilton Standard Constant speed propellers. The plane was equipped with all instruments and radio equipment required by the company's Air Carrier Operating Certificate. All available records indicate that the aircraft, engines, propellers, radio, instruments and accessories involved in the flight were maintained, inspected and certificated in accordance with the company's Air Carrier Operating Certificate and existent Civil Air Regulations.

AIRMAN:

The crew consisted of Captain Charles B. Stead, First Officer Lloyd E. Jones and Stewardess Frona B. Clay. Captain Stead, at the time of the take-off in Seattle, had accumulated a total of 8649:46 hours flying time, 442:28 hours of which were in DC-3 aircraft, while First Officer Jones had accumulated a total of 3284:16 flying time, 291:56 hours of which were in DC-3 aircraft. Both pilots were possessed of required ratings and Certificates of Competency for the flight and equipment involved. Stewardess Clay was a registered nurse, a graduate of Emmanuel Hospital, Portland, Oregon, and had been in the employ of United Airlines as a stewardess since January 8, 1936.

WEATHER:

Weather forecasts made available to all concerned by United Air Lines meteorologist prior to the clearance of the flight from Seattle, were as quoted.

"Winds at Normal Cruising Levels:-

Seattle - Portland: 200° 25 miles per hour
Portland - Medford: 200° 45 miles per hour

"Cloud Types and Layers:-

High overcast.

Seattle-Oakland; Broken clouds to overcast 6000-4000' except low across Siskiyou Mountains. Tops above flying altitudes.

"Precipitation:-

Snow at flying altitudes. Rain at terminals.

"Thunderstorms:-

Orographic - frontal, Medford to Williams.

"Ice:

Portland-Oakland at flying altitudes, rime, heavy at times.

"Remarks:

Air slightly rough to very rough. Heavy static in clouds across Siskiyou Mountains.

"Expected Terminal Conditions on Arrival:

Seattle - Ceiling 7000'; trend-lowering; visibility 2-1/2 miles; trend-steady; sky-broken clouds; weather and obstruction to visibility, smoky. Miscellaneous - intermittent light rain.

Portland - Ceiling 7000'; trend-lowering; visibility 6 miles; trend-steady; sky-overcast; weather and obstruction to visibility, light smoke. Miscellaneous - intermittent light rain.

Medford - Ceiling 5000'; trend-lowering; visibility 10 miles; trend-lowering; sky-overcast; weather and obstruction to vision, lower scud. Miscellaneous - rain, squally.

Sacramento - Ceiling 6000'; trend-lowering, visibility 2 miles; trend-steady; sky-overcast; weather and obstruction to visibility, low scud. Miscellaneous - squally.

Oakland - Ceiling 5000'; trend-lowering, visibility 8 miles; trend-lowering; sky-overcast; weather and obstruction to visibility, low scud. Miscellaneous - squally.

"Regional Forecast - U. S. Weather Bureau at Seattle, 7:30 P.M. November 28 to 3:30 A.M. November 29, 1938:

"Oakland to Medford, Oakland to Salt Lake City, Oakland to Burbank, and Bakersfield to Daggett. Occluded front will reach California Coast vicinity came* Mendocino about midnight and advance to Brookings-Williams-Bay Region line by end of period stop Front will be preceded by overcast with rain, with ceilings lowering one to two thousand along Coast Bay Region northward, and two to four thousand over interior of California Modesto northward, except one to two thousand extreme northern Sacramento Valley. Scattered clouds along western slope of Sierra Nevada Mountains will increase to overcast at one to two thousand with occasional rain latter half of period and overcast with rain will continue over Siskiyou Mountains with ceilings very low to zero stop Clear skies or high scattered clouds will prevail elsewhere in district except for lower scattered to broken clouds latter half of period south of Bay region to Tehachapi Mountains and over northwestern Nevada.

* Board note: This word in original.

"Terminal Forecasts:

Oakland and San Francisco: Broken to overcast at 4 to 6 thousand but with ceilings lowering with rain after midnight to 1 thousand to 25 hundred near close of period with approach of occluded front. Visibility 10 or more except 3 to 6 in rain.

Sacramento: Overcast with occasional light rain. Ceiling 5 to 7 thousand lowering to 2 to 4 thousand latter half of period.

Redding: Overcast with occasional light rain. Ceiling three to five thousand lowering after midnight to 1 to 2 thousand. Visibility 10 or more."

The following quoted flight plan for Trip 6-28 from Seattle to Oakland, based on the above-quoted forecast and other available weather information, was prepared in Seattle, in accordance with company procedure, prior to departure of the trip, by Captain Charles B. Stead, the First Officer and the Seattle dispatcher on duty:

"Weather Analysis: High broken clouds with lower broken Seattle Siskiyou. Overcast south good but light to moderate rain Medford south.

"Fronts: Location - Off coast
Type - Warm
Movement - Slow
Intensity- Strong

"Static: Location - High clouds
Intensity- Light to moderate

"Thunderstorm: None

"Fog: None

"Ice: Location - Medford south
Type - Rime
Intensity- Light

"Flight Procedure: Expect trip to be flown as follows:

"From Seattle to Portland:

Procedure: Contact
Altitude: 6000'
Estimated Wind Direction and Velocity: S-SE moderate
Flight Time: 1 hour
Air Condition: Smooth

"From Portland to Medford:

Procedure: Instruments
Altitude: 8000'
Estimated Wind Direction and Velocity: S-SW moderate
Flight Time: 1 hour 35 minutes
Air Condition: Smooth

"From Medford to Red Bluff:

Procedure: Instruments
Altitude: 5000'
Estimated Wind Direction and Velocity: S-SW moderate
Flight Time: 1 hour 10 minutes
Air Condition: Smooth

"From Red Bluff to Sacramento:

Procedure: Instruments
Altitude: Descending
Estimated Wind Direction and Velocity: S-SW moderate
Flight Time: 1 hour
Air Condition: Smooth

"From Sacramento to Oakland:

Procedure: Contact
Altitude: 4000'
Estimated Wind Direction and Velocity: S-SW moderate
Flight Time: 35 minutes
Air Condition: Smooth

"Total Fuel on Board: 620 Gallons

"Estimated Time to Destination: 6 Hours

"A. T. C. Information: Williams, 6500'

"Alternate Fields:

Oakland for Sacramento
Portland for Medford
Sacramento for Oakland

"Alternate Procedure:

From Medford to Oakland may delay pending weather."

The trip reached Portland, Oregon at 9:30 P.M., after a sixty minute flight from Seattle. After refueling with 93 gallons of gasoline, making a total of 620 gallons of gasoline and 168 quarts of oil aboard, the trip departed at 9:46 P.M., dispatched to Medford, Oregon with the same crew personnel, and the following passengers aboard:

Mr. Ivan B. Heflebower, residence given as 1298 Sacramento St., San Francisco, Calif.;

Mr. Phillip Hart, residence given as 354 Southwest Edge-cliff Road, Portland, Oregon;

Mr. S. L. Shonts, residence given as 685 Palmhaven, San Jose, Calif.; and

Mr. Isadore R. Edelstein, no permanent address given.

The trip from Seattle to Medford was without incident, except that headwinds of greater velocity than had been anticipated were encountered between Portland and Medford. The trip arrived at Medford at 11:34 P.M.

Prior to the arrival of the trip in Medford, the Oakland company dispatcher, charged, in accordance with company procedure, with the responsibility of dispatching the trip south of Medford, contacted the forecaster on duty at the Oakland Municipal Airport Office of the U. S. Weather Bureau, and, after a conversation concerning the weather, concurred with the forecaster in the opinion that the trip should not be cleared from Medford. At 11:34 P.M. the following radiogram was dispatched to the company's Medford, Oregon, office by the Oakland dispatcher:

"With frontal system off coast and strong south wind and heavy rain reported at Farralone Islands and Oakland conditions decreasing suggest holding Trip 6-28 for weather improvement at Oakland probable daylight."

After receipt, however, of the following quoted sequence weather reports at 11:41 P.M., and a forecast from the Oakland Municipal Airport Office of the U. S. Weather Bureau that ceilings at Sacramento would remain above 3500 feet, the Oakland dispatcher, Medford station manager and Captain Stead agreed in a three-way telephone conversation that the trip be cleared and dispatched to Sacramento:

- "Medford - Ceiling 7000'; high overcast with lower broken clouds; visibility 30 miles; temperature 53°, dew point 35; wind SE-15, barometer 29.73, few lower clouds.
- "Siskiyou - Ceiling 2500'; broken overcast with lower scattered clouds at 900'; visibility 25 miles; temperature 35°, dew point 31; wind S-SW-26 plus, conditions changeable.
- "Montague - Ceiling estimated 3500'; high broken with lower broken clouds; visibility 20 miles; temperature 44°, dew point 34; wind S-19; barometer 29.82, occasional very light sprinkle.
- "Mt. Shasta - Ceiling estimated 600'; overcast; visibility 5 miles; rain and fog; temperature 35°, dew point 35; wind SE-18 estimated.
- "Redding - Ceiling 3000'; overcast; visibility 15 miles; rain; temperature 46°, dew point 41; wind NW-10; barometer 29.89.
- "Williams - Ceiling 6000'; overcast; visibility 8 miles;

"Sacramento - Ceiling 6500'; overcast, 8 miles visibility; temperature 47°, dew point 43, wind NW-4; barometer 29.87, occasional breaks.

"Oakland - Ceiling 1800'; overcast, lowering broken clouds, visibility 8 miles; rain; temperature 55°, dew point 44; wind SE-25; barometer 29.86, overcast 4000'."

The trip departed Medford at 12:03 A.M. November 29th, after having delayed 24 minutes in excess of the scheduled five-minute stop, with no change in either crew or passenger personnel, and with no additional gasoline or oil. Although no check of the gasoline and oil aboard was made at Medford, it is estimated that, at the time of take-off, the fuel aboard the aircraft consisted of approximately 450 gallons of gasoline and 150 quarts of oil. No variation was made in the original flight plan on which clearance was based.

According to sworn testimony of Captain Stead, and radio contacts during the period of the flight as recorded on the radio logs of Medford, Oakland, Sacramento, Red Bluff and Portland radio stations, the flight south of Medford progressed in the following manner:

The take-off was made to the south and the aircraft assumed level flight at cruising altitude of 12,000 feet while passing over the City of Medford at 12:24 A.M. after one 180° turn to the north and a second to the south had been made during the climb, in accordance with company procedure.

The flight proceeded without incident along the south leg of the Medford radio range and the north leg of the Fort Jones radio range to a point south of the Fort Jones radio range station, where, as the result of an icing condition causing severe static, flight level was changed to 14,000 feet

In answer to requests for information as to passage of the trip over the regular Mt. Shasta radio range fix, First Officer Jones radioed at 1:34 A.M.:

"West of Shasta City estimated 1:15 A.M. 14,000 feet. We are now going on top at 15,000 feet. Fly on south leg of Fort Jones range on course, compass course 190°, light rime ice, estimate Red Bluff 1:50 A.M."

The aircraft's radio was tuned to the Fort Jones radio range station and flight proceeded along the south leg of this range until 1:55 A.M., when an attempt was made to tune in the Williams station. Failing to read the station, Captain Stead requested information as to its operating condition and was informed by Oakland at 2:08 A.M. that the monitoring of such station by both Oakland and Blue Canyon indicated it was operating in a satisfactory manner with no interference. The aircraft, however, failed to receive the Williams signals throughout the trip and, though signals were received from the Sacramento and Fresno radio range stations, such reception was inadequate for navigational purposes, due to interference from other radio range stations.

No radio contacts were made between the aircraft and ground stations after 2:09 A. M., until 3:03 A.M., when Captain Stead reported an estimated position between Williams and Potrero flying a compass heading of 150°, and that the Oakland radio range signals were coming in "strong" and that he was "getting an 'A' on Fresno". The trip was subsequently cleared to Oakland at 3:20 A.M. after Captain Stead reported the aircraft as definitely on the northeast leg of the Oakland radio

range, flying at 6000 feet in a westerly direction at 3:27 A.M.

Oxygen, an item of standard equipment aboard this aircraft, was used intermittently at high altitudes, during the flight to this point, by both Captain Stead and First Officer Jones.

A light, believed by Captain Stead to have been an airway beacon light, was sighted shortly after intersecting a leg of the Oakland radio range, and between 3:49 A.M. and 3:54 A.M., although ostensibly flying a 199° radio range course, it was found necessary to fly a compass heading of approximately 225° to stay on the beam. Flight was continued in this manner until 4:08 A.M., when, with gasoline estimated at 60 gallons, Captain Stead expressed doubt as to his exact position, and, after a 180° turn, began descent to an altitude of 300 feet, where the landing lights showed the aircraft to be over water. Subsequent to a request from Oakland at 4:15 A.M. that a bearing be taken, the position of the aircraft was reported at 4.16 A.M. as being west of Oakland on the west leg of the Oakland radio range. At 4:39 A.M. Captain Stead reported a bearing on Oakland of 75° and on Fresno of 85°.

After ascending to 1800 feet, the aircraft continued along this leg in an easterly direction, with motors throttled for the purpose of fuel conservation, until the Point Reyes, California lighthouse was sighted at 5:03 A.M. In approaching the shore, the aircraft passed over a lumber schooner, "The Lumberton", and circled the lighthouse in two wide circles, dropping a flare upon each occasion, close to the shore off Point Reyes. The gasoline supply was completely

exhausted shortly after the aircraft passed the Point Reyes lighthouse flying in a southeasterly direction on the second circle, and the aircraft was landed in the water, wheels up, about three-quarters of a mile off shore, at approximately 5:25 A.M. At this time the aircraft had flown a total of two hours and eight minutes since intersecting a leg of the Oakland radio range, believed by Captain Stead to have been the northeast leg. Passengers and crew immediately climbed to the top of the aircraft, through the emergency hatch in the pilot's cockpit. The aircraft rode the swells easily until the surf carried it shoreward, where it was severely battered and subsequently destroyed by the waves and rocks. The deaths of S. L. Shonts and First Officer Lloyd E. Jones, and the disappearances of Phillip Hart, Ivan B. Heflebower, and Stewardess Frona B. Clay occurred. Passenger Isadore R. Edelstein and Captain Charles B. Stead survived. Mail, radio equipment and certain flight records were recovered, while other records, including the flight log and barograph, were lost with the aircraft.

Evidence was adduced establishing the flight of an aircraft, thought to have been multi-motored, over and in the vicinity of Crescent City, California, which is located on the coast of the Pacific Ocean in a southwesterly direction and approximately 80 miles distant from Medford, Oregon, between 12:45 A.M. and 1:15 A. M. on November 29, 1938. The testimony indicated that the aircraft approached Crescent City at a low altitude from a north-easterly direction, and, after passing over the city, departed

in a southwesterly direction over the Pacific Ocean. The testimony indicates that definite statements, concerning the presence of the aircraft, were made by witnesses to other persons prior to the time NC-16066 was reported to be in distress. Although inquiry failed to reveal the flight of any aircraft, other than United Air Lines' Trip 6, in the northwestern part of the State of California during the times mentioned, no positive identification of the aircraft was made. In any event this evidence involves an incident that occurred prior to the hour of 3:17 A.M., when Captain Stead reported his position on the Northeast leg of the Oakland radio range.

Emergency activities of the United Air Lines Oakland dispatching office during the flight of Trip 6-28 consisted of: repeated unsuccessful attempts, utilizing both company and Sacramento Civil Aeronautics Authority radio facilities, to contact the aircraft between the hours of 2:09 A.M. and 3:03 A.M., suspension of all radio traffic north, south, and east of Oakland at 2:58 A.M.; notification by telephone to the Superintendent of Flight Operations of the Western Division of United Air Lines of the status of the flight, at approximately 3:00 A.M., (during which conversation Captain Stead reported the position of the aircraft); a further telephone notification to this company official at approximately 4:05 A.M., that the aircraft was overdue in Oakland; solicitation of the assistance of the United States Navy Radio Station NPG and of the United States Coast Guard at San Francisco, between 4:16 and 4:30 A.M., in notifying sea traffic

of the presence of the aircraft over the ocean, west of Oakland; and, according to the statement of the Oakland dispatcher on duty, an unsuccessful attempt, after 4:30 A.M., to contact the Alameda, California base of Pan-American Airways for the purpose of enlisting their services in utilizing the direction finder of the latter company in ascertaining the exact position of the aircraft. It may be stated parenthetically that United Air Lines operating procedures in effect on the Western division at the time of the accident were inadequate to meet the requirements of such an emergency.

A sketch of the area involved in this report is attached hereto, marked "Exhibit A", and is, by reference, made a part hereof.

RADIO CONTACTS:

A transcription of the log entries of the Seattle, Portland, Medford and Oakland ground radio stations, pertaining to United Air Lines Trip 6-28, is attached hereto, marked "Exhibit B", and is, by reference, made a part hereof.

FINDINGS:

1. United Air Lines Trip 6 of November 28, 1938 between Seattle, Washington and San Diego, California, with Portland and Medford, Oregon, Sacramento, Oakland, San Francisco, Fresno, Bakersfield, and Los Angeles, California, as intermediate points, was authorized by the company's currently effective Air Carrier Operating Certificate, issued by the Civil Aeronautics Authority.
2. The aircraft, aircraft engines, propellers, radio, instruments, and accessories involved in the flight were maintained, inspected and certificated in accordance with the

company's currently effective Air Carrier Operating Certificate and existent Civil Air Regulations; and functioned normally during the entire flight.

3. Both Captain Stead and First Officer Jones were possessed of required ratings and certificates of competency for the flight and equipment involved, and were authorized, in the currently effective Air Carrier Operating Certificate, for service over the route of United Air Lines Trip 6 of November 28, 1938.

4. United Air Lines Trip 6 of November 28, 1938 was properly dispatched from Seattle, Washington to Portland, Oregon and from Portland, Oregon to Medford, Oregon.

5. Prior to clearing the trip from Medford, Oregon, company personnel involved failed to give proper consideration to the fuel supply on board or to the amount of fuel that might be required for the trip, in view of adverse weather and wind conditions forecast over the course to be flown.

6. The pilot failed to work an orientation problem and to definitely establish the position of the aircraft, either at the time of intersecting a leg of the Oakland radio range at 3:17 A.M., or during such additional period of time as to be able to either remain within range of or to return to a safe landing area.

7. At the time of intersecting a leg of the Oakland radio range at 3:17 A.M. the trip was an hour and three minutes overdue in Sacramento, according to the flight plan. The

estimated position of the aircraft at this time was a maximum of thirty-five miles from Oakland, and there were approximately 150 gallons of gasoline aboard.

8. Subsequent to intersecting a leg of the Oakland radio range, the flight was continued in a westerly direction, flying on compass headings inconsistent with that required to follow the northeast leg of the Oakland radio range, for a period of time longer than could reasonably have been required to reach Oakland from the pilot's previously estimated position.

9. No effort was made by the pilot to conserve fuel, within a reasonable period of time after the trip failed to arrive in Oakland subsequent to intersecting a leg of the Oakland radio range at 3:17 A.M.

10. Trip 6-28 was cleared from Medford by an Oakland dispatcher who went off duty at 12:00 o'clock midnight, being relieved by another dispatcher who actually handled the flight from take-off in Medford until the accident occurred. The Oakland dispatcher on duty during the course of the flight failed to advise the pilot, either that he verify his position by working an orientation problem, or that he conserve fuel by reducing power, after the passage of a greater period of time than was required to reach Oakland from the pilot's previously estimated position on the northeast leg of the Oakland radio range.

11. The Medford, Fort Jones, Williams, Sacramento, Oakland, Red Bluff and Fresno radio ranges functioned normally during the period of the flight of United Air Lines' Trip 6 of November 28.

12. The trip forecast, made by the company meteorologist at Seattle, Washington, prior to departure of the trip, indicated that static conditions would be encountered south of Medford. Radio reception was actually impaired during the course of the flight prior to intersecting a leg of the Oakland radio range.

13. United Air Lines did not have in effect on its western division established procedures adequate to meet the emergencies encountered on this flight. The dispatcher on duty not only failed to promptly utilize such emergency facilities as were available, but also failed to demonstrate a reasonable degree of initiative and judgment in attempting to cope with the obvious emergencies.

PROBABLE CAUSE

Failure of the pilot to definitely establish the position of the aircraft through standard orientation procedures within a reasonable time after intersecting a leg of the Oakland radio range at 3:17 A.M., and of company flight dispatchers, charged with the responsibilities of directing the operation of the trip, to properly safeguard the flight, resulting in forced landing of the aircraft at sea due to exhausted fuel supply.

CONTRIBUTING FACTORS

1. Failure of the pilot and Oakland dispatcher involved in clearing the trip from Medford, Oregon, to give proper consideration to possible fuel requirements of the trip, in view of adverse weather conditions as forecast by both company and U. S. Weather Bureau meteorologists.

2. Failure of the pilot and dispatcher, after the aircraft was reported on a leg of the Oakland radio range, thought by the

fly the on-course signal of the northeast leg.

3. Continuation of the flight in a westerly direction for an excessive period of time beyond that which would have been required to reach Oakland from the pilot's estimated position on the northeast leg of the Oakland radio range.

4. Failure of the pilot to conserve fuel by reducing power, when the trip did not arrive at Oakland within a reasonable period of time after reaching the estimated position on the northeast leg of the Oakland radio range.

5. Failure of the Oakland dispatcher, after the passage of a period of time excessive of that required to reach Oakland from the pilot's previously estimated position on the northeast leg of the Oakland radio range, to advise the pilot to establish his position by working standard orientation procedures, and to conserve fuel by reducing power.

6. Failure of the Oakland dispatcher to notify the superintendent of flight operations of the western division of United Air Lines, of the status of the trip, within a reasonable period of time after radio communications with the aircraft failed at 2:09 a.m., and also within a reasonable period of time after the aircraft was reported as being on the northeast leg of the Oakland radio range. Also his failure to promptly utilize such emergency facilities as were available, and to demonstrate a reasonable degree of initiative and judgment in the presence of an obvious emergency.

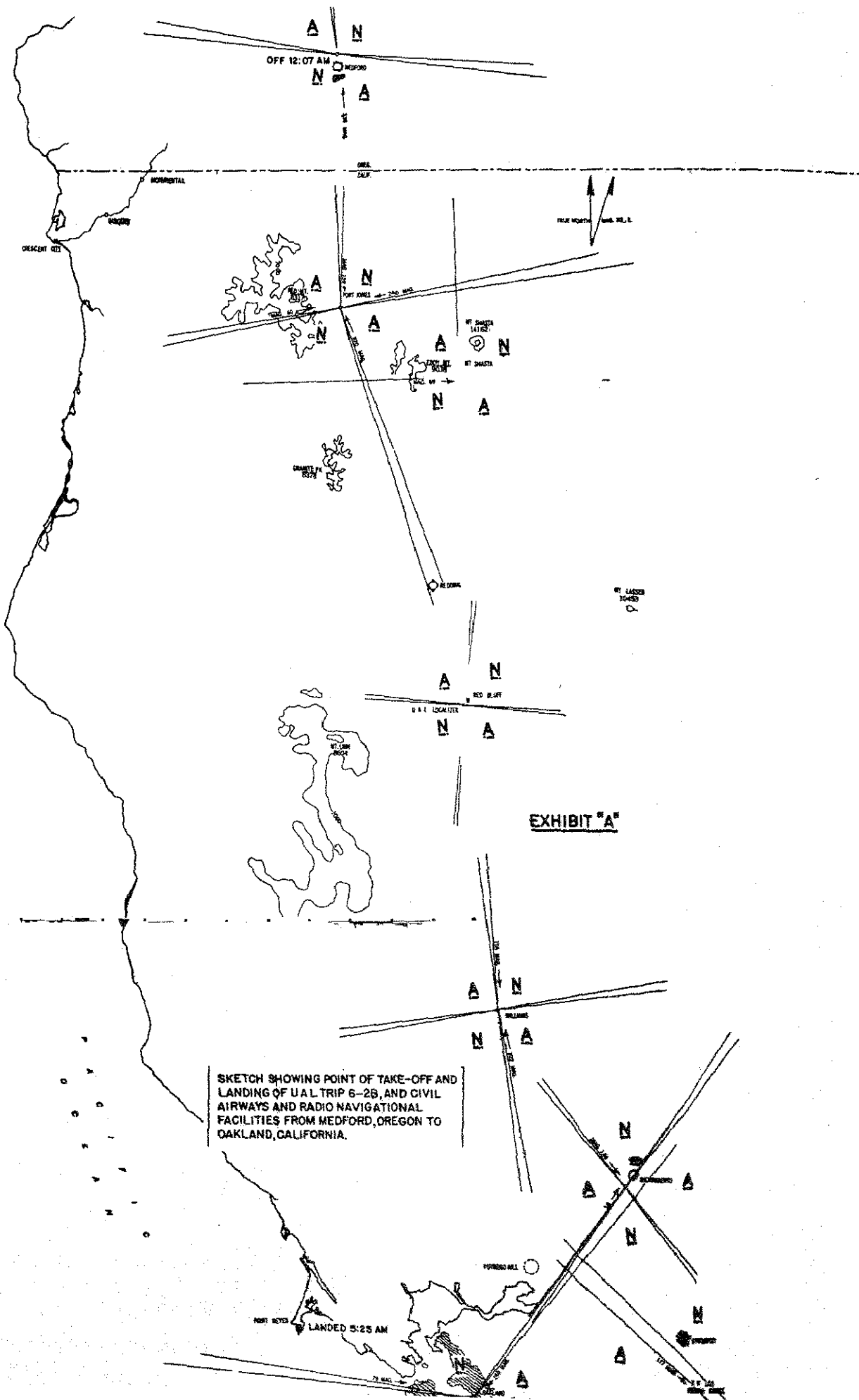
7. Inadequacy of procedures established by United Air Lines

on its western division for aiding aircraft under such conditions of emergency.

RECOMMENDATIONS

It is recommended that the airline competency ratings of the pilot and both dispatchers involved in this accident be revoked.

Further recommendations, which will tend to prevent similar accidents in the future, will be transmitted in due course.



SKETCH SHOWING POINT OF TAKE-OFF AND LANDING OF U.A.L. TRIP 6-25, AND CIVIL AIRWAYS AND RADIO NAVIGATIONAL FACILITIES FROM MEDFORD, OREGON TO OAKLAND, CALIFORNIA.

"Exhibit B"

- 7:46 P.M. Mechanic Green to Seattle: Test for trip 6-28 on frequencies (3147.5 kilocycles) (5) and (5122.5 kilocycles) (6) stop time 59.0.
Seattle to Mechanic Green: OK Call KKCA
Mechanic Green to Seattle: OK (Seattle Log)
- 8:25 P.M. Jobson trip 6 to Seattle: Plane 66 testing on frequencies (3147.5 kilocycles) (5) (5122.5 kilocycles) (6)
Seattle to Jobson trip 6: OK the correct time is 8:25 P.M. The Seattle barometer is 29.83. United proceeds only with safety (Seattle Log)
- 8:36 P.M. Jobson trip 6 to Seattle: Off the Seattle field at 8:36 OK to clear Northwest Airways (to KKCA) and changing to night frequency.
Seattle to Jobson trip 6: OK
Jobson trip 6 to Seattle: On night frequency.
Seattle to Jobson trip 6: OK on night frequency. (Seattle Log)
- 8:31 P.M. Seattle to Portland and stations South: Trip 6-28 Stead Jobson Clay plane 66 estimated departure on schedule. Cleared to Portland contact 6,000; instruments Medford 8,000; Red Bluff 12,000; Sacramento descending; Oakland contact 4,000; crossing Williams 6,500; time six hours. Alternate fields Portland for Medford; Oakland for Sacramento; Sacramento for Oakland. Alternate plan hold Medford for weather improvement. 620 gallons of gas. Stop time 59-0. (8.32 P.M.) (Portland, Medford, Oakland Logs)
- 8:41 P.M. Seattle to Portland and stations South: Trip 6-28 departed Seattle 8:30 P.M. off the Seattle field 8:36 P.M. 266 pounds of mail, 16 pounds express, passengers - 1 Portland no cab; 2 San Francisco cab 2; total 3. Pickups - 1 Portland Los Angeles. Releasing 2 Portland San Francisco, 2 Portland San Diego, 1 Portland Salt Lake, 1 Portland Chicago, 1 Portland Denver trip 16-29, 1 Portland New York. 266 pounds South, 300 pounds forward, 123 pounds rear. 1 San Francisco bag in Number 4 pit.
(8:42 P.M.) Forwarded Sacramento. (Portland Log)
- 8:50 P.M. Jobson trip 6: Over Tacoma 5,500 climbing to 6,000 at 8:48 P.M. Scattered to lower broken, above unlimited. Temperature 49. Estimate Castle Rock 9:13 P.M. Portland to Jobson trip 6: OK and Portland barometer 29.86. (Seattle also ack.) Stead trip 6 to Portland: OK (Seattle and Portland Logs)
- 9:20 P.M. Trip 6 over Castle Rock 9:14 P.M. 6,000. Overcast above, estimated 9,000 unlimited, temperature 45, occasionally slightly rough, wind estimated 205.19. Estimate over the Portland field 9:32 P.M. Portland to trip 6: Portland barometer 29.86 wind East Southeast about 5. Jobson Trip 6 to Portland: OK (Portland Log)
- 9:28 P.M. Trip 6 over Vancouver Lake and changing frequency.
Portland to trip 6: OK to day frequency. Portland wind now South about 6. Jobson trip 6 to Portland: OK. (Portland Log)
- 9:30 P.M. (Edwards on remote) Portland to trip 6: Portland wind Southeast about 10. Field is clear.
Jobson trip 6 to Portland: OK. (Portland Log)
- 9:49 P.M. Trip 6 called Portland for field clearance.
Portland to trip 6: OK to clear.

- 9:55 P.M. Jones trip 6 to Portland: Off the Portland field 9:54 P.M. changing frequency.
Portland to Jones trip 6: OK on night frequency. (Portland Log)
- 10:01 P.M. Portland to stations North and South: Trip 6-28 arrived Portland 9:30 P.M. First Officer L. Jones out 9:46 P.M. Cleared to Medford 620 gallons of gas, 496 pounds of cargo South of Oakland, 286 pounds of mail, 19 pounds of express for Oakland, San Francisco and Los Angeles. 80 pounds of Company for Medford. Passengers - 3 San Francisco cab 3, 1 Los Angeles no cab. Total 4. Pickups 1 Sacramento Los Angeles. Releasing 2 San Francisco Los Angeles, 2 Seattle San Diego. Total 4. (Portland Log)
- 10:50 P.M. Trip 6: Over Eugene at 10:43 P.M. 8,000 temperature 38, wind estimated 190-35, overcast 8,000, visibility variable 5 to 10 miles, occasionally slightly rough, occasional light rain, estimate over Medford 11:33 P.M. Medford to Jones trip 6: OK. The Medford barometer 29.74. (Portland and Medford Logs).
- 11:02 P.M. Oakland to Medford: Trip 6-28 is cleared to Sacramento, cruise 12,000 to Red Bluff, crossing Williams 6,500 descending to Sacramento, no traffic reported.
Medford to Oakland: OK. (Medford and Oakland Logs)
- 11:22 P.M. Medford to Oakland: Advise recommendation for clearing trip 6-28 per flight plan to Oakland.
Oakland to Medford: OK. (Medford and Oakland Logs)
- 11:29 P.M. Medford to Stead trip 6: It's broken over the field 15 miles visibility, wind is dying down South Southeast 15 to 20, and it is very well broken.
(Medford Log)
- 11:30 P.M. Stead trip 6 to Medford: OK. Over Table Rock and can see the field and am changing frequency.
Medford to Stead trip 6: OK to change to day frequency.
Trip 6: OK on night and day frequency.
Medford to trip 6: OK. Field is clear to land.
Stead trip 6 to Medford: OK. (Medford Log)
- 11:32 P.M. Medford to Oakland: Any answer on clearance? (Medford Log)
- 11:41 P.M. Abstract from Medford Log: (Clearance secured via telephone)
- 11:34 P.M. Oakland to Medford: With frontal system off coast and strong south wind and heavy rain reported at Farralon Islands and Oakland conditions decreasing suggest holding trip 6-28 for weather improvement at Oakland.
Probably daylight. Oakland Van Sciever. (Medford and Portland Logs)
- 11:35 P.M. Trip 6-28 arrived Medford (Portland Log)

- 11:35 P.M. Trip 6-28 arrived Medford. (Medford Log)
- 11:36 P.M. Trip 6-28 still in Medford, no entries
- 11:37 P.M. Trip 6-28 still in Medford, no entries
- 11:38 P.M. Trip 6-28 still in Medford, no entries
- 11:39 P.M. Trip 6-28 still in Medford, no entries
- 10:40 P.M. Trip 6-28 still in Medford, no entries
- 11:41 P.M. Oakland to Medford: With frontal system off coast, and strong South
- 11:42 P.M. Wind and heavy rain reported at Farralon Islands, and Oakland con-
- 11:43 P.M. ditions suggest holding Trip 6-28 for weather improvement, probably morning, signed Oakland Van Sciever. (Portland Log)
- 11:44 P.M. Trip 6-28 still in Medford, no entries.
- 11:45 P.M. Trip 6-28 still in Medford, no entries.
- 11:46 P.M. Trip 6-28 still in Medford, no entries.
- 11:47 P.M. Trip 6-28 still in Medford, no entries
- 11:48 P.M. Trip 6-28 still in Medford, no entries.
- 11:49 P.M. Trip 6-28 still in Medford, no entries.
- 11:50 P.M. Trip 6-28 still in Medford, no entries.
- 10:51 P.M. Trip 6-28 still in Medford, no entries.
- 11:52 P.M. Sacramento to Medford: Is Trip 6-28 holding at Medford?
Medford to Sacramento: We are holding, but don't know how long.
Sacramento to Medford: OK (Medford Log)
- 11:53 P.M. Trip 6-28 still in Medford, no entries.
- 11:54 P.M. Trip 6-28 still in Medford, no entries.
- 11:55 P.M. Trip 6-28 still in Medford, no entries.
- 11:56 P.M. Trip 6-28 still in Medford, no entries.
- 11:57 P.M. Trip 6-28 still in Medford, no entries.
- 11:58 P.M. Trip 6-28 still in Medford, no entries.
- 11:59 P.M. Trip 6-28 still in Medford, no entries.

12:00 A.M. Trip 6-28 still in Medford, no entries.
12:01 A.M. Trip 6-28 still in Medford, no entries.
12:02 A.M. Trip 6-28 still in Medford, no entries.

12:03 A.M. Trip 6-28 departed from Blocks at Medford. (Medford Log)
12:04 A.M. Trip 6-28 taxiing out to runway for take-off.

12:05 A.M. Stead, Trip 6 to Medford: Is the field clear to take off?
Medford to Stead, Trip 6: OK, field is clear to take off. (Medford Log)
12:06 A.M. No entries.

12:07 A.M. Trip 6-28 off the Medford field. (Medford Log)

12:08 A.M. No entries.
12:09 A.M. No entries.

12:10 A.M. Stead, Trip 6-28 to Medford: Off the Medford field at 12:07 A.M.
Am changing frequency.
Medford to Stead, Trip 6-28: OK, change to night frequency.
Stead, Trip 6-28 to Medford: OK on frequencies 5 and 6 (Medford Log)

12:11 A.M. Medford to Stations North and South: Trip 6-28 arrived Medford
11:35 P.M. departed Medford 12:03 A.M., off the Medford field 12:07
A.M. Delay checking weather. Clear to Sacramento per original
flight plan. 29 lbs. mail, no express, same passenger load.
(Medford Log)

12:12 A.M. No entries.
12:13 A.M. No entries.
12:14 A.M. No entries.
12:15 A.M. No entries.
12:16 A.M. No entries.
12:17 A.M. No entries.
12:18 A.M. No entries.
12:19 A.M. No entries.
12:20 A.M. No entries.
12:21 A.M. No entries.
12:22 A.M. No entries.
12:23 A.M. No entries.
12:24 A.M. No entries.
12:25 A.M. No entries.
12:26 A.M. No entries.

12:27 A.M. Jones, Trip 6-28 to Medford: Reached cruising altitude, twelve
thousand at 12:24 A.M.
Medford to Jones, Trip 6-28: OK (Medford Log)

12:28 A.M. No entries.
12:29 A.M. No entries.
12:30 A.M. No entries.
12:31 A.M. No entries.
12:32 A.M. No entries.
12:33 A.M. No entries.
12:34 A.M. No entries.
12:35 A.M. No entries.
12:36 A.M. No entries.

12:39 A.M. No entries.
12:40 A.M. No entries.
12:41 A.M. No entries.
12:42 A.M. No entries.
12:43 A.M. No entries.
12:44 A.M. No entries.
12:45 A.M. No entries.
12:46 A.M. No entries.
12:47 A.M. No entries.
12:48 A.M. No entries.
12:49 A.M. No entries.
12:50 A.M. No entries.
12:51 A.M. No entries.
12:52 A.M. No entries.
12:53 A.M. No entries.
12:54 A.M. No entries.
12:55 A.M. No entries.
12:56 A.M. No entries.
12:57 A.M. No entries.
12:58 A.M. No entries.
12:59 A.M. No entries.
1:00 A.M. No entries.
1:01 A.M. No entries.
1:02 A.M. No entries.

1:03 A.M. Medford to Trip 6-28: No Shasta City report.
Trip 6-28 not heard. (Medford Log)

1:04 A.M. Red Bluff to Pacific 6-28: No Shasta City report. Go ahead.
Trip 6-28 not heard. (Seattle and Red Bluff logs)

1:05 A.M. No entries.
1:06 A.M. No entries.
1:07 A.M. No entries.
1:08 A.M. No entries.
1:09 A.M. No entries.

1:10 A.M. Jones, Trip 6-28: Changing flight plan to fourteen thousand to
get on top.
(Sent to Airways Traffic Control) Airways said OK to change
flight plan to fourteen thousand.
Oakland to Trip 6-28: OK to change flight plan to fourteen
thousand to get on top. Signed, Oakland. Showalter. (Oakland L

1:11 A.M. Jones Trip 6-28 to Oakland: OK (Medford Log)
1:12 A.M. Red Bluff to Medford and Jones, Trip 6-28: Red Bluff repeated
1:11 A.M. Oakland's OK to change flight plan.
Medford to Red Bluff: Trip 6-28 has it. (Red Bluff Log)
1:13 A.M. Red Bluff to Medford: OK I'm unable to read Trip 6-28 (Red Bluff
Log)
1:14 A.M. No entries.
1:15 A.M. No entries.
1:16 A.M. No entries.
1:17 A.M. No entries.
1:18 A.M. No entries.
1:19 A.M. No entries.

- 1:20 A.M. No entries.
1:21 A.M. No entries.
1:22 A.M. No entries.
1:23 A.M. No entries.
1:24 A.M. No entries.
1:25 A.M. No entries.
1:26 A.M. No entries.
1:27 A.M. No entries.
1:28 A.M. No entries.
1:29 A.M. No entries.
1:30 A.M. No entries.
1:31 A.M. No entries.
1:32 A.M. No entries.
- 1:33 A.M. Red Bluff to United Pacific 6-28: Have you passed the Shasta City Range yet? Red Bluff Log)
- 1:34 A.M. Jones, Trip 6-28: West of Shasta City, estimated at 1:15 A.M. Fourteen thousand. We are now going on top at fifteen thousand. Fly on South leg Ft. Jones Range, on course, compass course 190, light rime ice, estimate Ft. Jones 1:50 A.M.
Portland to Jones, Trip 6-28: OK. (Portland Log)
- 1:35 A.M. Portland transmitted 1:34 A.M. report to Oakland and Red Bluff.
- 1:36 A.M. No entries.
- 1:37 A.M. Red Bluff to Trip 6: The Red Bluff Range and localizer is on. Trip 6-28 not heard.
- 1:38 A.M. No entries.
1:39 A.M. No entries.
1:40 A.M. No entries.
- 1:41 A.M. Oakland to Trip 6-28 and Portland: Fresno weather: high thin over-cast, visibility 10 miles, temperature 52, dew point 29, wind South 4, barometer 29.98.
Livermore weather: estimated three thousand, over cast, lower broken 8 miles visibility, rain, temperature 51, dew point 48, wind South-Southwest 20, barometer 29.98. (Portland Log)
- 1:42 A.M. Oakland to Trip 6-28: Oakland weather: 1900, over-cast, broken clouds, 5 miles visibility. light rain, temperature 51, dew point 50, wind Southeast 8, barometer 29.97. (Portland Log)
- 1:43 A.M. Oakland to Trip 6-28: Williams 1:41 A.M. weather, 6000, over-cast visibility 8 miles, sprinkling, temperature 46, dew point 45, wind East Southeast 9, barometer 29.85.
Reno 1:41 A.M. weather: High thin broken clouds, lower scattered at 8000, visibility 20 miles, temperature 30, dew point 21, wind West, Northwest 9, barometer 29.92.
Trip 6 not heard. (Portland Log)
- 1:44 A.M. This is station KRBP, Red Bluff, operating on 278 kilocycles (Red Bluff's localizer) (Red Bluff's Log)
- 1:45 A.M. No entries.
1:46 A.M. No entries.
1:47 A.M. No entries.

- 1:50 A.M. No entries
- 1:51 A.M. Sacramento to Red Bluff: Have you any information on Trip 6?
Red Bluff to Sacramento: Trip 6-28 estimates over Red Bluff
1:50 A.M. He hasn't gone over yet.
Sacramento to Red Bluff: OK (Red Bluff Log)
- 1:52 A.M. Oakland to Red Bluff: Potrero facilities (were) off due to power
failure at 1:20 A.M. (Red Bluff Log) (Conflicts with Portland)
- 1:53 A.M. Oakland to Red Bluff: Potrero Hills facilities (are) off due to
power failure. (Portland Log) Conflicts with Red Bluff)
- 1:54 A.M. Stead Trip 6-28: Is Williams Range working all right? Working down
through twelve thousand five hundred ????.
Oakland did not get it all. (Oakland Log)
- 1:55 A.M. Stead Trip 6-28: Is the Williams Range working? At twelve thousand
five hundred, dropping down now to ten thousand contact. We can hear
the Sacramento and the ??? Range. They seem to be drowning out the
Williams range. Is it operating OK?
Oakland to Trip 6-28: OK, we will get a check on the Williams Range.
(Portland log)
- 1:56 A.M. Oakland to Sacramento: Did you get what Trip 6-28 said, and is your
Range on? (Oakland Log)
- 1:57 A.M. Portland to Oakland: He says Sacramento or some other Range is
drowning out the Williams Range. (Oakland Log)
- 1:58 A.M. Oakland to Teletype Station (by inter-phone) Will you have the Wil-
liams Range monitored right away?
Teletype Station to Oakland: OK (Oakland Log)
- 1:59 A.M. Portland to Oakland: Are you checking to see if the Williams Range
is operating OK.
Oakland to Portland: We are monitoring it now. (Portland Log)
- 2:00 A.M. No entries.
- 2:01 A.M. No entries.
- 2:02 A.M. No entries
- 2:03 A.M. No entries.
- 2:04 A.M. No entries.
- 2:05 A.M. No entries.
- 2:06 A.M. Oakland to Trip 6-28: Trip 6 not heard. (Medford Log)
- 2:07 A.M. Stead Trip 6-28 to Red Bluff: Did you find any trouble with the
Williams Range? (Portland Log)
- 2:08 A.M. Oakland to Trip 6-28: We monitored the Williams Range at Oakland a
Blue Canyon, and it is operating OK with no interference. (Portlan
Log)
- 2:09 A.M. Stead, Trip 6-28: We are having excellent reception, but cannot
receive the Williams Range on account of some interference. Now f
ing at twelve thousand over broken cumulus and can't give a very
report now. Will report in a few minutes. (Seattle Log)

- 2:10 A.M. Oakland to Portland: What altitude did he say?
Portland to Oakland: At twelve thousand. (Medford Log)
- 2:11 A.M. Portland to Sacramento: Any ships on the Sacramento Range?
Sacramento to Portland: (Portland unable to read Sacramento on account of interference. (Medford Log)
- 2:12 A.M. Portland to Sacramento: Have you any ships on the Sacramento Range?
Sacramento to Portland: There are no ships on the Sacramento Range. (Portland Log)
- 2:13 A.M. Portland to Trip 6-28: Trip 6-28 not heard. (Medford Log)
- 2:14 A.M. Portland to Stead Trip 6-28: Do you want them to cut the Sacramento Range for a few minutes to see if that helps on the interference.
Trip 6-28 not heard. (Portland Log)
- 2:15 A.M. No entries.
- 2:16 A.M. Oakland to Sacramento: Ceiling at Oakland is expected to remain one thousand to fifteen hundred with light to moderate rain,
2:17 A.M. conditions squally, Oakland to Sacramento with air slightly rough. The wind is South-West to West - Southwest 30 to 40. (Sacramento Log)
- 2:18 A.M. No entries.
2:19 A.M. No entries.
2:20 A.M. No entries.
2:21 A.M. No entries.
2:22 A.M. Oakland to Teletype Station: (interphone): Have Williams PX Stead, Trip 6-28, over their Station. Teletype OK'd.
2:23 A.M. No entries.
- 2:24 A.M. Oakland to Stead Trip 6-28, copy Portland: Oakland sent Fresno, Liver
2:25 A.M. more, Oakland, Williams and Reno 1:41 A.M. sequence weather, and
2:26 A.M. advised Sacramento to give Trip 6-28 the Sacramento local weather.
2:27 A.M. Trip 6-28 not heard. (Oakland Log)
- 2:28 A.M. No entries.
2:29 A.M. No entries.
- 2:30 A.M. Oakland to Sacramento: Have your local weather for Trip 6-28. Give
2:31 A.M. it to him, as I do not believe he can hear Oakland. (Oakland Log)
Sacramento to Oakland: OK. Just a minute.
- 2:32 A.M. No entries.
2:33 A.M. No entries.
- 2:34 A.M. Sacramento to Stead, Trip 6-28: Trip 6-28 not heard. (Oakland Log)
2:35 A.M. Sacramento to Stead, Trip 6-28: Trip 6-28 not heard. (Oakland Log)
2:36 A.M. Sacramento to Stead, Trip 6-28: Sacramento weather: overcast, 4000 lower scattered twelve hundred, visibility 5 miles, wind southeast 15 to 18. Sacramento barometer 29.98. Trip 6 not heard. (Oakland Log)
- 2:37 A.M. No entries.
- 2:38 A.M. Oakland to Portland: Did you get the Fresno and Livermore weather OK?
Portland to Oakland: Yes

- 2:39 A.M. Portland to Stead Trip 6-28: Trip 6-28 not heard.
- 2:40 A.M. No entries.
- 2:41 A.M. No entries
- 2:42 A.M. Portland to Stead or Jones, Trip 6-28. Trip 6-28 not heard. (Medford Log)
Elko to Trip 6-28: Do you read Elko? Trip 6-28 not heard. (Medford Log)
- 2:43 A.M. Sacramento to Trip 6-28: Trip 6-28 not heard. (Elko Log)
- 2:44 A.M. Oakland to Trip 6-28 and Portland: Fresno 2:41 weather: Seventy-
- 2:45 A.M. Five hundred, overcast, visibility 10 miles, temperature 57, dew
- 2:46 A.M. point 25, wind Southeast 11, barometer 30.00, thin spots.
Livermore weather: Estimated three thousand, overcast, visibility 8 miles, light rain, temperature 59, dew point 48, wind South, Southwest 8, barometer 29.99.
Oakland weather: Nineteen hundred, overcast, lower broken, visibility 5 miles, light rain, temperature 51, dew point 50, wind Southeast 12, barometer 29.99.
Reno weather: High thin scattered, lower scattered at eight thousand, visibility 20, temperature 32, dew point 16, wind West, Northwest 5, barometer 29.84.
Donner Summit weather: High thin overcast, temperature 30, dew point 19, wind West 18. (Portland Log).
- 2:47 A.M. Portland to Stead Trip 6-28. Trip 6-28 not heard.
Oakland to Portland: Add the Williams weather on to that, and give him Medford - Oakland weather.
Portland to Oakland OK.
- 2:48 A.M. Portland to Stead Trip 6-28: Gave Fresno, Livermore, Oakland, Donner
- 2:49 A.M. Summit, Reno, Medford and Williams 2:41 A.M. sequence weather.
- 2:50 A.M. (Oakland Log)
- 2:51 A.M. Trip 6-28 not heard.
- 2:52 A.M. Sacramento to Stead Trip 6-28: Sacramento weather; overcast four thousand, lower scattered twelve hundred, visibility 5 miles, light
- 2:53 A.M. rain, wind South 16, Sacramento barometer 29.98. (Red Bluff Log)
Trip 6-28 not heard.
- 2:54 A.M. No entries.
- 2:55 A.M. No entries.
- 2:56 A.M. Burbank to all Stations: Burbank standing by on Mountain Night Frequencies, reception OK. Can read Oakland to Salt Lake, also Oakland to Portland. (Burbank Log)
- 2:57 A.M. Oakland to Burbank: Stand by on Mountain Frequency for Trip 6-28
- 2:58 A.M. and suspend all traffic until further advised.
Oakland East and North: Suspend all traffic except ship to ground until advised.
- 2:59 A.M. Portland to Oakland: Can you check with Meteorologist and find out about wind shift, and the winds aloft.
Oakland to Portland: Will see if I can. (Portland Log)

- 3:01 A.M. No entries.
- 3:02 A.M. No entries.
- 3:03 A.M. Stead Trip 6-28 to Oakland: We have not been able to get Ranges. Have continued on compass course 150 degrees. Receiving Oakland strong and get an A on Fresno Range. Estimated position between Williams and Potrero. Can you tell me where the North leg of the
- 3:04 A.M. Fresno Range intercepts the Oakland Range? Where does the North-east leg of the Oakland Range intersect the North leg of the Fresno Range. The Oakland Range is building up. (Portland Log) (Conflicts with Oakland Log)
- 3:05 A.M. Stead Trip 6-28: ???? now receiving a very distinct signal on ??? Range. Get Fresno Range, estimated between Williams and Potrero. ??? Tell me where the Northeast leg of the Oakland Range intersects the Fresno North leg Range ???
- 3:06 A.M. Oakland to Trip 6-28: One minute.
- Oakland to Stead, Trip 6-28: The northeast leg of the Oakland Range intersects the North Leg of the Fresno Range vicinity of Fairfield or Clarksburgh, and the Potrero facilities are out due to power
- 3:07 A.M. failure. Oakland barometer is 30.03.
- Stead, Trip 6-28 to Oakland: OK
- Oakland to Trip 6-28: What is your altitude and position?
- Stead, Trip 6-28 to Oakland: At ten thousand five hundred, up and down five hundred. See break ahead.
- Oakland to Trip 6-28: OK and there are no United ships flying.
- Jones, Trip 6-28 to Oakland: OK and ???? (interference from North west Trip 6)
- Oakland to Trip 6: Repeat, go ahead.
- Portland to Oakland: He wants to know if any lightning and rain at Oakland? Oakland to Portland: OK.
- Oakland to Stead Trip 6-28: No lightning can be seen from here.
- Jones, Trip 6-28: OK. (Oakland Log) (Conflicts with Portland Log)
- 3:08 A.M. Stead Trip 6-28: We are at ten thousand five hundred in the clear between layers with a big break ahead. Believe we will drop down through it. What is the Oakland weather?
- 3:09 A.M. Oakland to Trip 6-28: Oakland weather nineteen hundred, over cast, lower broken, visibility 4 miles light rain.
- Trip 6 to Oakland: Any lightning or showers around Oakland?
- 3:10 A.M. Oakland to Trip 6: There is no lightning, but some light rain.
- Trip 6-28: OK. (Portland Log)
- 3:11 A.M. No entries.
- 3:12 A.M. No entries.
- 3:13 A.M. No entries.
- 3:14 A.M. No entries.
- 3:15 A.M. Oakland to Stead Trip 6-28: Special Hamilton weather at 3:05 A.M. Estimated twelve thousand, over-cast, lower broken, visibility 8 miles, light mist, wind South 6. (Red Bluff Log)
- Jones, Trip 6-28: OK (Oakland Log)
- 3:16 A.M. Oakland to Stead Trip 6-28: Oakland weather, over-cast, ceiling twenty two hundred, visibility good, 15 to 20 miles. First course

- 3:17 A.M. Stead, Trip 6-28 to Oakland: Definitely on Northeast leg of the Oakland Range ??????
Oakland to Trip 6-28: OK, and repeat all after "Oakland Range".
Trip 6-28: Not heard. (Oakland Log)
- 3:18 A.M. Oakland to Medford: How much fuel on United Trip 6-28 out of your Station.
Medford to Oakland: OK.
- 3:19 A.M. Medford to Oakland: No fuel on at Medford.
Oakland to Medford: OK (Red Bluff Log)
- 3:20 A.M. Oakland to Stead, Trip 6-28: You are cleared to the Oakland Range and no Airways Traffic reported. Showalter is on the roof, and it is OK to come direct to Oakland.
Stead, Trip 6 to Oakland: OK (Oakland Log)
- 3:21 A.M. No entries.
- 3:22 A.M. No entries.
- 3:23 A.M. No entries.
- 3:24 A.M. No entries.
- 3:25 A.M. No entries.
- 3:26 A.M. No entries.
- 3:27 A.M. No entries.
- 3:28 A.M. No entries.
- 3:29 A.M. No entries.
- 3:30 A.M. No entries.
- 3:31 A.M. No entries.
- 3:32 A.M. No entries.
- 3:33 A.M. No entries.
- 3:34 A.M. No entries.
- 3:35 A.M. Salt Lake to Portland: Has Oakland cleared the circuit yet?
Portland to Salt Lake: Not yet. (Medford Log)
- 3:36 A.M. No entries.
- 3:37 A.M. No entries.
- 3:38 A.M. No entries.
- 3:39 A.M. No entries.
- 3:40 A.M. Oakland to Stead, Trip 6-28: The Bay weather.
Jones, Trip 6 to Oakland: Go ahead.
Oakland to Trip 6-28: The Oakland ceiling remains about the same, and San Francisco is eighteen hundred broken clouds.
Jones, Trip 6-28 to Oakland: What was that ceiling?
Oakland to Trip 6-28: Oakland ceiling twenty two hundred, San Francisco, eighteen hundred, broken clouds, visibility 20 miles.
Jones Trip 6 to Oakland: OK.
- 3:41 A.M. Oakland to Trip 6: The Oakland barometer is 30.02.
Jones, Trip 6 to Oakland: OK. (Oakland Log)
- 3:42 A.M. Oakland to Stead, Trip 6: The Livermore 3:41 A.M. weather: estimated three thousand, overcast, visibility 10 miles.
Stead, Trip 6-28: OK. (Red Bluff and Medford Logs)
- 3:43 A.M. Oakland to Stead, Trip 6-28: Correction on Livermore weather. It's broken with ten miles visibility.
Stead, Trip 6-28 to Oakland: OK (Red Bluff and Medford Logs)

3:46 A.M. No entries
3:47 A.M. No entries
3:48 A.M. No entries.

3:49 A.M. Oakland to Stead, Trip 6-28: What is your position now?
Stead, Trip 6-28 to Oakland: Still on the Northeast leg of the Oakland Range. Wind???? about 25 degrees to right and proceeding towards Oakland, and that is all I can tell you.
Oakland to Trip 6-28: OK (Oakland Log) Conflicts with Portland)

Stead Trip 6-28: Still on Northeast leg Oakland Range. Have to deflect 20 to 25 to the right to stay on beam. (Portland Log) (Conflicts with Oakland Log above)

Stead Trip 6-28: We are still following the Northeast leg of the Oakland Range, and there is a 20 to 25 degree drift to the right of the leg. We have definitely checked the Northeast leg of the Oakland Range and proceeding towards Oakland. (Red Bluff Log) (Conflicts with above Oakland and Portland Logs).

Stead, Trip 6-28 to Oakland: We are still on the Northeast leg of the Oakland Range. It is necessary to correct 20 to 25 degrees to the right in order to stay on beam. We have positively located the Northeast leg of the Oakland Range. (Seattle Log) (Conflicts with above logs)

3:50 A.M. No entries.
3:51 A.M. No entries.
3:52 A.M. No entries.

3:53 A.M. Oakland to Stead, Trip 6-28: Reno 3:41 A.M. weather: Scattered clouds eight thousand, visibility???
Williams weather; five thousand, overcast, lower scattered, seventeen thousand, visibility 5 miles.
Stead, Trip 6-28: OK, what do you have there?
Oakland sent 3:41 A.M. sequence weather
Trip 6-28 to Oakland: OK (Red Bluff Log)

3:54 A.M. Portland to Oakland: Was that 20 degree correction right or left?
Stead, Trip 6-28: Takes about 25 degrees to right to stay on course flying about 225 degree course. We have a North wind here to stay on course. (Medford and Portland Logs)

3:55 A.M. Portland to Trip 6-28: OK

3:56 A.M. No entries.
3:57 A.M. No entries.
3:58 A.M. No entries.
3:59 A.M. No entries.

4:00 A.M. (Log Entry, Medford) Time signal out OK. Conditions poor. Oakland and stations south fading considerably. Moderate to heavy static at times. (Medford Log)

Oakland to Sacramento: Ask Captain Williams the drift on the Sacramento Range.

4:01 A.M. Sacramento to Oakland: The drift was to the right (Oakland Log)

- 4:03 A.M. Portland to Stead Trip 6-28: Westbound between Donner Summit and Sacramento reported 20 to 25 degrees to the right, ninety miles per wind. Trip 6-28 not heard. (Oakland Log)
- 4:04 A.M. Oakland to Stead Trip 6-28: Did you get that, Stead. Trip 6 not heard. (Medford Log)
- 4:05 A.M. No entries.
- 4:06 A.M. Oakland to Stead Trip 6-28: Oakland repeated Cap't Williams information of 4:00 A.M.
Sacramento to Oakland: (Cap't Williams) That was compass course 200 Westbound, ordinarily, and corrected to 175.
Oakland to Stead Trip 6: Did you get that Stead? Trip 6, not heard (Oakland Log)
- 4:07 A.M. No entries.
- 4:08 A.M. Stead, Trip 6-28 to Oakland: What time did I give you my location on North Leg Oakland Range?
Oakland to Trip 6-28: At 3:17 A.M. Northeast leg Oakland Range.
- 4:09 A.M. Stead Trip 6-28: On Northeast leg Oakland Range, course below nine thousand, best of it at six thousand. Been out fifty minutes.
Course now 225 N. to left A to right. Now takes 270 degrees to stay on course. If had been correct should be over Oakland. Am dropping down to see what is below. Have sixty gallons of gas, reduced throttle. There is something wrong with this course. (Portland Log)
- 4:10 A.M. Log) (Conflicts Oakland)

Trip 6-28 to Oakland: What time over did I give that information? (Now definitely on the Northeast leg of the Oakland Range)
Oakland to Trip 6-28: One minute.
Oakland to Stead Trip 6: At 3:17 A.M. you reported definitely on Northeast leg of Oakland Range.
Stead Trip 6-28 to Oakland: OK, I have been over 50 minutes from there, left of range???? (static) am 30 degrees off in my computations. There must be something wrong with the range. I have 60 gallons of gas, and I am (descending). Don't know exactly where I am???? (static terrible). I figure I should be over now. There must be something wrong with the range. I am going to come down slowly.
Oakland to Trip 6-28: OK. (Oakland Log) conflicts with Portland)
- 4:11 A.M. No entries.
- 4:12 A.M. No entries.
- 4:13 A.M. No entries.
- 4:14 A.M. Oakland to Trip 6-28: What is your altitude now.
Stead, Trip 6-28: Can't tell, I am descending now.
Oakland to Trip 6-28: OK. (Oakland Log)
- 4:15 A.M. Oakland to Trip 6-28: Take a bearing on the Oakland Range with your loop. (Portland Log)

Stead, Trip 6-28: Just a minute. (Oakland Log)

- 4:16 A.M. Jones Trip 6-28: West of Oakland on Northwest leg of Oakland Range. What is the best manifold pressure.
- 4:17 A.M. Oakland to Trip 6-28: One minute.
- 4:18 A.M. Oakland to Stead Trip 6-28: Decrease revolutions per minute to seventeen hundred, and increase the manifold pressure.
- 4:19 A.M. Trip 6-28 to Oakland: OK, increase it to what? (Oakland Log)
- 4:20 A.M. Oakland to Trip 6-28: Increase it till you get seventeen hundred.
- 4:21 A.M. Trip 6-28 to Oakland: OK (Oakland Log)
- 4:22 A.M. Oakland to Trip 6-28: Decrease the revolutions per minute to seventeen hundred and increase the manifold pressure. Put your props to cruise at seventeen hundred and then increase the pressure with your throttle.
- 4:23 A.M. Trip 6-28 Oakland: What pressure?
Oakland to Trip 6-28: The manifold pressure. In other words, use your props.
- 4:24 A.M. You have to get about 22 inches on your manifold pressure.
- 4:25 A.M. Stead Trip 6-28 to Oakland: OK. (Oakland Log)
- 4:26 A.M. No entries
- 4:27 A.M. No entries.
- 4:28 A.M. No entries.
- 4:29 A.M. No entries.
- 4:30 A.M. Oakland to Stead, Trip 6-28: What is your compass course heading now? Stead, Trip 6-28: Now flying at 95 degrees exactly.
- 4:31 A.M. Oakland to Trip 6-28: OK. (Oakland Log)
- 4:32 A.M. No entries.
- 4:33 A.M. Sacramento (Cap't Williams) to Trip 6-28: Fly at 50 degrees and continue to take bearings on Oakland and Sacramento. Trip 6 not heard. (Oakland Log)
- 4:34 A.M. No entries.
- 4:35 A.M. Stead Trip 6-28: Have lightning static and can't read. Will try again in few minutes. (Portland Log)
Oakland acknowledged. (Portland Log)
- Seattle to Trip 6-28: Fly at 50 degrees compass course and continually take bearings on Oakland and Sacramento Ranges. (Seattle Log)
- 4:36 A.M. Oakland to Stead, Trip 6-28: What quadrant are you listening to on the Oakland Range? Trip 6-28 not heard. (Oakland Log)
- Oakland to Stead, Trip 6-28: Few thin clouds at Oakland, appears to be a few low clouds over the hills at Oakland. (Showalter)
- 4:37 A.M. Trip 6-28 not heard. (Oakland Log)
- 4:38 A.M. No entries.
- 4:39 A.M. Stead Trip 6-28: I have a check on Oakland and Fresno Ranges.

- 4:42 A.M. Stead Trip 6-28: We are light A quadrant and on course and think on the Northwest leg of Oakland Range.
Oakland to Stead Trip 6-28: OK. (Oakland Log)
- 4:43 A.M. Oakland to Stead, Trip 6-28: See if you can get a bearing on Sacramento. Trip 6-28 Not heard. (Oakland Log)
- 4:44 A.M. Portland to Trip 6-28: Is that Magentic or true?
Jones, Trip 6-28: All bearings are magnetic.
Portland to Oakland: All bearings magnetic. (Portland log)
- 4:45 A.M. Oakland to Stead Trip 6-28: Were you getting an A on the Fresno Range when you checked it. Trip 6 not heard. (Oakland Log)
- 4:46 A.M. Oakland to Stead Trip 6-28: Go ahead.
Stead, Trip 6-28: Receiving bearing on 350 kilocycles, 35 degrees and identification signal, dash dot dot dot space dot.
Oakland to Trip 6-28: OK. (Oakland Log)
- 4:47 A.M. Portland to Trip 6-28: That is Boise. (Portland Log)
- 4:48 A.M. No entries.
- 4:49 A.M. No entries.
- 4:50 A.M. Oakland to Stead, Trip 6-28: Try to get a bearing on Sacramento.
Stead, Trip 6-28. Unable to get bearing on Sacramento.
Oakland to Stead, Trip 6-28: OK, Now try to get another bearing on Oakland and Fresno again. Trip 6-28 not heard. (Oakland Log)
- 4:51 A.M. Oakland to Stead, Trip 6-28: Repeated above sent at 4:50 A.M.
Trip 6-28 Not heard. (Oakland Log)
- 4:52 A.M. Portland to Oakland: Don't believe he acknowledged the message from Sacramento about the 50 degrees. (Oakland Log)
Oakland to Stead, Trip 6-28: Get a bearing on Williams (326 kilocycles
- 4:53 A.M. and one on Fresno and Oakland. Trip 6 not heard. (Oakland Log)
Stead Trip 6-28: I cannot get a bearing on Oakland account of this lightning and static. (Red Bluff Log)
Stead Trip 6-28: Am on the (Northwest??) (Southwest??) leg of Oakland Range. Cannot get anything on 326 kilocycles.
- 4:54 A.M. Oakland to Trip 6-28: Try and get one on Oakland Fresno. (Oakland Log)
- 4:55 A.M. Stead Trip 6-28: Could not get bearing, flying at 40 to stay on course. Almost on course on Oakland Range, slight A and getting a strong A on the Fresno Range. (Portland Log)

Oakland, Stead Trip 6-28: When you gave us your bearings, of Oakland and Fresno, what quadrant were you in?
- 4:56 A.M. Stead, Trip 6-28: I was almost on course, Oakland Range and (Strong) A Fresno Range.
Oakland to Stead, Trip 6-28: OK you are coming this way then. Do you see any lights. (Oakland Log)
- 4:57 A.M. Oakland to Stead Trip 6-28: What is your altitude, and do you see any lights?
Stead Trip 6-28: About eighteen hundred, and I don't see any lights. (Oakland Log)

- 4:58 A.M. Oakland to Stead, Trip 6-28: Have you any visibility at all?
Stead, Trip 6-28: No clouds below and few scattered clouds above. (Oakland Log)
- Stead, Trip 6-28: Visibility excellent, few scattered clouds. We are out over the water. (Portland Log)
- Oakland to Stead, Trip 6-28: Are you out over the water?
Stead, Trip 6-28: That is OK.
Oakland to Trip 6-28: Your signals are getting stronger all the time. (Oakland Log)
- 4:59 A.M. Oakland to Stead, Trip 6-28: The Oakland field wind is southeast 15 to 20, and throttle as much as possible.
Trip 6-28 not heard. (Oakland Log)
Portland to Trip 6-28: Portland repeated 4:59 A.M. information.
Trip 6-28 not heard. (Oakland Log)
- 5:00 A.M. Oakland to Stead, Trip 6-28: The Oakland field wind is Southeast 15 to 20, and throttle as much as possible.
Trip 6-28 not heard.
- 5:01 A.M. Trip 6-28: At 65 degrees, can see a beacon light. Will you get the wind at Farrolon Islands. That is the first light I have seen. (Portland Log)
- 5:02 A.M. Oakland to Trip 6-28: Will get the wind at Farrolon Islands right away, and will tell them to listen for you.
Stead, Trip 6-28: OK. (Oakland Log)
- 5:03 A.M. Oakland to Stead, Trip 6-28: Will you give us another gas check?
Stead, Trip 6-28: About 20 gallons, and can not see a light straight ahead of me at compass course 65 degrees.
Oakland to Trip 6-28: OK, and get up near the light you see. (Oakland Log)
Portland to Trip 6-28: Was the light on the left or the right side of the Oakland beam?
- 5:04 A.M. Stead, Trip 6-28: Light is straight ahead and in the N quadrant.
Oakland to Trip 6-28: OK. (Portland Log)
- 5:05 A.M. Portland to Oakland: Light is possibly Point Reyes.
Oakland to Portland: OK. (Oakland Log)
- 5:06 A.M. Oakland to Trip 6-28: If a light ten miles south of on course it is Farrolons, and if it is Point Reyes it will be on the North side of Range.
Stead, Trip 6-28: OK. Am getting N twilight signal. There is a light on my right at 70 degrees. My compass course is 90 degrees. How far from shore am I?
- 5:07 A.M. Oakland, to Trip 6-28: One minute. (Oakland Log)
- 5:08 A.M. Portland to Oakland: The light he is heading for is Point Reyes Light. (Portland Log)
Trip 6-28: Which is Farrolon's, the one straight ahead of me or the one to the right? (Oakland Log)

- 5:09 A.M. Stead, Trip 6-28: Is that eight miles straight ahead?
Portland to Trip 6-28: That is OK. (Oakland Log)
- 5:10 A.M. Oakland to United Trip 6-28: How far is that light from the shore?
United Trip 6-28 to Oakland: What is the tide and the wind?
(Portland Log)
- 5:11 A.M. Portland to Oakland: We estimate his position 8 miles from Point
Reyes. The Point Reyes seem to have Peninsula. Seems 3 or 4 miles
beyond light. (Portland Log)
- 5:12 A.M. Portland to Trip 6-28: The Peninsula is 3 or 4 miles long, inland
side is rough ??? It is semi-circular (point) (Oakland Log)
- 5:13 A.M. Oakland to Trip 6-28: Do not land on the beach. Land on the bench,
on shore side of light. (Portland Log)
Oakland to Trip 6-28: Land up back of light on a bench. It is
level and it is rough along the shore. Turn your lights on and
we are getting the wind for you now.
Stead, Trip 6-28: OK, the lights are on and will land to (right
of beacon). (Oakland Log)
- 5:14 A.M. Oakland Trip 6-28: If you land on water, wheels up. If you land
on bench, wheels down.
Trip 6-28: Compass course bearing now 50 degrees on Oakland Range.
(Portland Log)
Cannot raise Point Reyes on telephone, still trying. Give us
another check on the Oakland Range. (Oakland Log)
- 5:15 A.M. Trip 6-28: As near on Oakland Range (50 degrees). What is the
wind at Farrolons? (Oakland Log)
- 5:16 A.M. Oakland to Stead, Trip 6-28: Still no wind from Farrolons.
Portland to Trip 6-28: Are you still N twilight? (Oakland Log)
- 5:17 A.M. Stead, Trip 6-28 to Portland: Strong N now, advise if tide is in
or out. (Portland Log)
Portland to Trip 6-28: OK.
- 5:18 A.M. Oakland to Stead, Trip 6-28: If you get to Point Reyes and have
enough fuel after you pass the (light), you will find a sandy beach
on the East side of the (Drakes Inlet). Follow the shore and there
is a big wide beach there.
Stead, Trip 6-28: North or South of Point Reyes?
(Oakland Log)
- 5:19 A.M. Oakland to Trip 6-28: Just a minute.
Trip 6-28: Ready to land now. We turned at the lights, and there
are two lights. One looks like a ship. We are still over the
water. (Oakland Log)
Stead Trip 6-28: We are right now turning South to a Point to some
lights. Looks like a ship. We are practically out of gas. We
are over water, right on the shore. (Portland Log)
- 5:20 A.M. Oakland to Stead, Trip 6-28: Follow the shore line, and if it is
Point Reyes light you will find a sandy beach on South side of
Drakes Inlet. Trip 6-28 not heard. (Oakland Log)
- 5:21 A.M. Oakland to Trip 6-28: We are trying to contact the boat

- 5:22 A.M. Stead, Trip 6-28: We pulled a flare and the shore is too rough for landing. Give us the wind.
Oakland to Trip 6-28: The wind is Southeast 12 at Point Reyes, and generally southeast 12 in that vicinity. Trip 6 not heard. (Oakland Log)
- 5:23 A.M. Trip 6-28 to Oakland: OK. (Red Bluff Log, also Burbank Log)
- 5:24 A.M. Portland to Trip 6-28: After you passed the light, was there about 2 miles of shore line running east and west?
Stead, Trip 6-28: We can't tell for sure. (Red Bluff Log)
- 5:25 A.M. to 5:25.50 A.M. (Some carrier on) (Red Bluff Log)
- 5:26 A.M. Oakland to Stead Trip 6-28: We are trying to get ahold of all the boats in that territory, and locate the one you saw.
Trip 6-28 not heard. (Red Bluff Log)
- 5:27 A.M. Portland to Trip 6-28: Portland repeated 5:26 A.M. remarks, and said: Do you see lights now.
Trip 6-28 not heard. (Red Bluff Log)

(All of the above contacts were made on Mountain Frequency (5) 3147.5 kilocycles)