

CIVIL AERONAUTICS BOARD

ACCIDENT INVESTIGATION REPORT

W. 227

Adopted: February 11, 1955

Released: April 18, 1955

AIR FRANCE - PRESTON CITY, CONNECTICUT
AUGUST 3, 1954The Accident

At 1340 (0840 e. s. t.),^{1/} August 3, 1954, an Air France Lockheed 1049 Constellation, French registry FBGNA, crashed while attempting an emergency landing in a field at Preston City, Connecticut. The 29 passengers and crew of 8 evacuated the aircraft before fire consumed the cabin and cockpit; the pilot, flight engineer, and one passenger were seriously injured.

History of the Flight

Air France Flight 075 originated at Orly Field, Paris, August 2, 1954, with a crew consisting of Captain Jean Caboche, Copilot Jean Rousseau, Navigator Jacques Geffard, First Flight Engineer Albert Grandvaux, Second Flight Engineer Jean-Baptiste Ghilini, Stewardess Francine Dono, First Steward Michael Gallet, and Second Steward Jean Capron. The dispatch office had prepared two flight plans - one for a stop at Gander, Newfoundland, the other with a stop at Shannon, Ireland. Owing to marginal weather at Gander with the forecast indicating no improvement, the captain chose the latter plan.

The flight departed Paris at 2024 and arrived Shannon at 2247. Fuel tanks were filled and the pilots were briefed on weather for the nonstop flight to New York. Flight 075 departed Shannon at 0003 the next morning (August 3), estimating 11 hours 49 minutes en route, with fuel for nearly 14 hours. The gross weight at takeoff, 126,100 pounds, was less than the maximum allowable 133,000, and the load was correctly distributed relative to the center of gravity of the aircraft.

The Atlantic crossing was uneventful. Routine position reports were made en route and the flight periodically received weather reports for points along the route and at the destination. Stronger headwinds than had been anticipated were encountered near the North American continent, resulting in lower ground speed and somewhat higher fuel consumption per mile. The flight had approximately 600 gallons of fuel left at 1230 when it reported over Scotland Intersection (15 statute miles southwest of New York International Airport) and received clearance for an ILS approach. It was then 38 minutes behind its original flight plan estimate made at Shannon and had approximately 100 gallons less fuel than anticipated.

^{1/} All times referred to herein, except eastern standard time noted in parentheses, are Greenwich civil time and based on the 24-hour clock.

During the approach, which was being monitored by New York International Airport radar, the flight encountered unexpected heavy turbulence, heavy rain, and a low ceiling, and the captain discontinued the approach at 1237 (0737 e. s. t.) when near his minimum prescribed altitude of 200 feet. The heavy turbulence made control of the aircraft difficult and when the missed approach was made, the captain found himself left of the localizer and below the glide path. The tower, which was immediately advised of the missed approach, told the flight to turn right to 130 degrees (the missed approach course), proceed to Scotland Intersection, and climb to 2,500 feet. Approximately three minutes after the missed approach and while on the 130-degree course, the flight requested clearance to Boston. Such clearance was issued nine minutes later, as soon as possible consistent with other traffic. Meanwhile, the flight had reported being low on fuel but when asked if an emergency was being declared replied, "Negative, negative, not yet." At the approximate time clearance to Boston was received the flight engineer advised the captain that they had fuel for one more hour of flight.

Thirty-three minutes after being cleared to Boston, the flight, at that time in the vicinity of Providence, Rhode Island, called Providence Tower, declared an emergency, and requested weather information. Providence weather, which was marginal, was furnished and the flight was cleared for an approach. However, the pilots found that their navigation kit did not contain an approach plate for Providence Airport and they advised they were not landing there. The captain then descended through a break in the overcast, circled two or three times, and landed with the gear retracted in a field at Preston City, Connecticut.

Investigation

Investigation concerning details of the radio contacts with Flight 075 after it arrived in the New York area revealed that while on the missed approach the copilot (who was handling all radio contacts for the captain) requested Philadelphia weather and was told a moment later by the captain to obtain clearance to Boston. The captain later testified that his decision not to make a second approach to New York International Airport was predicated on his impression that the weather they encountered on the first approach was general over the New York area.

Before Philadelphia weather could be given the flight, the copilot requested Boston weather and shortly thereafter clearance to Boston. The flight was then directed to maintain 2,500 feet to the Idlewild range station and stand by for further clearance, whereupon the copilot advised that they were "very short on gas" and repeated his request for clearance to Boston. Boston weather was then given; the flight acknowledged this and again requested clearance. Approach Control advised that they could not issue the entire clearance at that time because of other traffic and again told the flight to proceed to Idlewild range.

About one minute from the range station Flight 075 again requested Boston clearance. Shortly thereafter Approach Control cleared them to proceed to Mitchel range station, cross Idlewild range station at 2,500 feet,

and climb to 3,500 feet. The flight then requested an airport nearer than Boston and asked if anything on Long Island was available. Approach Control asked if they were in difficulty or declaring an emergency and the copilot replied, "Negative, negative. Not yet." Approach Control then advised that they were obtaining the MacArthur Airport, Long Island, weather.

At this time, owing principally to congestion on Approach Control frequency, the flight was requested to change to emergency frequency - 121.5 mc. and contact New York International Airport radar. The copilot complied and repeated to New York International Airport radar his request for clearance to Boston. The radar operator told him they had a clearance to Boston but understood the flight had previously requested something closer and asked if they wished to go to Boston or to an airport on Long Island. The copilot replied, "OK, that is what we wish. We'd like to go to Boston, and if an airport with a runway is open we'll land there."

Control of the flight was passed to New York Air Route Traffic Control at 1246, with a switch to ARTC frequency - 120.7 mc. About one minute before Mitchel, the flight advised ARTC, "We divert to Boston, we are requesting a clearance." ARTC then cleared the flight to Boston, 3,000 feet, via Mitchel, Airways Green 5 and Green 2, and gave them MacArthur weather. Flight 075 reported over Mitchel range station at 1250; while over that point the flight engineer advised the captain that there was sufficient fuel for one more hour of flight. Flight 075 was cleared off ARTC frequency at 1253.

The copilot stated that immediately upon being cleared from ARTC frequency he switched to ARINC (Aeronautical Radio, Inc.) frequency but was asked to stand by as the station was temporarily busy with other traffic. After standing by about five minutes he switched back to ARTC but was unable to establish communications. He then again attempted to contact ARINC but was unable to do so. About 1301 ARINC forwarded a message from ARTC to the flight to contact ARTC immediately. The copilot acknowledged; however, his subsequent attempts to contact either ARTC or ARINC were unsuccessful.

No other stations were contacted for the next 20 minutes. At 1322 the flight contacted Providence Tower/INSAC, declared an emergency, and requested Providence Airport weather conditions. Providence weather, which was marginal, was furnished and the flight was cleared for an approach. However, at 1329 the flight advised that they were not landing at Providence. The pilots later stated that they did not have a Providence approach plate. Several of the VEF contacts with Providence were handled through relay by a United Air Lines flight which was at a higher altitude than Flight 075. After discontinuing contact with Providence, the flight returned to and descended through a break in the overcast near Preston City, Connecticut.

When the captain decided to make an emergency landing, he gave instructions to carry out prescribed company emergency procedures. On the flight deck the flight engineer cut off ventilation, turned off the generators, feathered the propellers on final approach on command of the captain, and closed the mixture controls and firewall cut-off valves.

Cabin attendants, advised that an emergency landing would be made, told the passengers and checked to assure that all had their safety belts fastened. One of the stewards removed the covers from emergency exits, told passengers how to pull the release, and tore the window curtains off so they could not interfere with release of the exit or evacuation. The copilot, navigator, and second flight engineer went to the cabin shortly before landing and assumed their emergency stations. When the aircraft stopped, several emergency exits and the main cabin door were immediately opened. The back of each passenger seat contained a pamphlet on emergency instructions printed in both French and English. The pamphlet contained illustrations showing precautions to take in case of emergency landing and instructions for evacuation of the aircraft.

The aircraft initially brushed through the tops of some trees and contacted the ground 1,159 feet beyond them. The landing gear was kept up and flaps had been extended to the "approach" position. The aircraft bounced twice as it skidded across the wet, grassy field, and a small ravine. It stopped when it struck two trees and a wooden garage, demolishing the garage and an automobile. The nose section struck one tree, and the fuselage broke on a diagonal line just to the rear of the navigator's station. The aircraft came to rest 1,153 feet from first contact with the ground. The outer section of the right wing broke off when it struck the other tree. No. 3 nacelle tore away as did both engines on the left side. Fire after impact consumed a major portion of the aircraft. The prompt arrival of local Civil Defense personnel, volunteer fire departments, and ambulances (in several cases almost at the time of landing) expedited rescue activities.

Investigation revealed that the dispatching, planning, and conduct of the flight to New York, including keeping of the records, met Air France standards, practices, and procedures. Fuel records and their application to progress of the flight were complete and accurate.

The French Government is a member of and one of the signatories to agreements developed by the International Civil Aviation Organization regarding suggested standards for air carrier operations. Air France abides by ICAO standards agreed to by the French Government. In addition to abiding by these standards, Air France operates in accordance with regulations and standards established by the French Government. It is these latter rules that regulate the company's overall operations. French regulations state that aircraft of French registry operating in a foreign state must comply with the regulations of that state except in those instances where the French regulations are more stringent. Part 114 of U. S. Civil Air Regulations governs foreign scheduled air carriers operating in the United States or its territories.

Based on records kept by the flight engineers, a recapitulation of the actual fuel consumption was made. This study showed that the 600 gallons of fuel over Scotland Intersection was sufficient for the aircraft to have reached Boston with 100 gallons of usable fuel remaining on arrival, or enough for approximately 17 minutes of flight. Bridgeport, Hartford, and several New York metropolitan airports would have fallen within a reasonable

radius of action for the flight to have reached any of these points with a comfortable fuel reserve. Boston would have been beyond safe range for consideration as an alternate as a minimum of 720 gallons over New York would have been necessary to leave a comfortable fuel reserve upon arriving Boston. However, the pilots testified that they did not plan to return to Boston, but planned to land at some available airport en route.

The New York dispatch office of Air France had been advised that the flight would have 700 gallons upon arrival and was not later told by Flight 075 that a lesser amount was anticipated. The dispatcher who was on duty until 1200 testified that as the flight came from Boston, he had chosen La Guardia as the alternate to which it could be diverted if a landing at New York International Airport could not be made. The relief dispatcher, on duty when the missed approach was made, knew of the La Guardia choice and when it became evident that the flight intended to divert toward Boston, attempted to get a message through suggesting that the flight go to Bridgeport or Hartford.

The first attempt to convey this to the flight was at approximately 1242, five minutes after the missed approach, when the dispatcher called New York International Airport Tower and requested that the pilot be advised Hartford was available. This message was immediately relayed to New York International Airport radar, but they had discontinued contact with the flight and passed control on to ARTC. The dispatcher then called ARTC at 1255, since he thought the flight was still on ARTC frequency, asking that the flight be contacted and told that if they could not reach Boston to land at either Bridgeport or Hartford; however, the flight had been cleared off ARTC frequency only two minutes earlier. The ARTC controller who spoke to the dispatcher was not the one handling the flight and so did not know that the flight was no longer on ARTC frequency. He did pass the message on to the appropriate controller and ARTC immediately contacted ARINC and La Guardia INSAC asking that the flight immediately contact ARTC. Neither station was able to contact the flight although all available frequencies were tried. At about 1301, ARINC established VHF communication with Flight 075 and requested them to contact New York ARTC; the copilot acknowledged and advised that he was changing frequency. This contact was terminated at 1302.

ARTC controllers testified that they heard no further communication from Flight 075 after it was cleared off ARTC frequency at 1253, nor did their records reflect any further contacts. Similarly, ARINC radio operators stated that they had no contacts with the flight after 1302.

After making the missed approach, the flight was routed as expeditiously as possible back to Scotland Intersection, Idlewild range station, and Mitchel range station by Approach Control. The missed approach was made at 1237, the initial request for clearance to Boston was directed to Approach Control at about 1240, and the clearance was issued by ARTC at 1249, about one minute before the flight reported over Mitchel range station. The approach controller testified that since no emergency was declared (although the flight was asked if it wished to declare one) there was no cause to believe that an emergency existed and the flight was handled like any other

missing an approach and requesting diversion to another airport. He also stated that considering other traffic at the time and that the request for diversion was a routine one, such routing was necessary in light of this other traffic. Investigation on the time element and the routing disclosed that the aircraft was not held at any point after the missed approach and the clearance to Boston was issued expeditiously.

The flight reported over Mitchel range station at 1250, was over St. James about 1257, and over Salem Intersection about 1318. St. James is 43 miles from Scotland Intersection, Salem 99 miles. At 1302, the flight was approximately 56 miles from Scotland Intersection. Assuming no intervening physical obstructions, VHF reception at 3,000 feet altitude would normally be effective for 80 statute miles, since such transmissions are line-of-sight. All stations which had contact with or attempted to contact the flight are in the immediate New York area. Near Providence the flight had difficulty maintaining contact with the tower, although well within VHF reception distance. These contacts were aided through relay by a United Air Lines flight which was holding at the Providence outer marker at a higher altitude. United's reception was therefore not affected by any of the obstructions that apparently interfered with communications between Flight 075 and the Providence Tower.

The Air France dispatch office in New York monitors communications with flights through receivers in the office but must rely on relays by ARINC or CAA communications facilities to transmit messages. The Communications Act of 1934, as amended, Section 303L, authorizes the Federal Communications Commission to issue licenses for radio stations only to U. S. citizens; thus, Air France, as a foreign carrier, cannot operate a radio station and communicate directly with its flights within the United States.

It was ascertained that all CAA radio facilities in the New York-Boston area functioned normally during the pertinent period.

Air France assigns two pilots to trans-Atlantic flights, and bunks are provided so that they may rest during the flight. During the 14 hours and 42 minutes in flight between Orly Field and the time of the emergency landing, Captain Caboche and Copilot Rousseau relieved one another for bunk rest of approximately five hours each and First Flight Engineer Grandvaux took a rest period of three hours and 50 minutes. These rest periods were taken while crossing the Atlantic. The captain and copilot both had a rest period in excess of 48 hours before going on duty in Paris.

Both pilots had been given English-language schooling under a company training program. In addition to furnishing formal language training, Air France has a policy that pilots must demonstrate proficiency in English before assignment to trans-Atlantic flights. This is accomplished through assignment over certain European routes, for a minimum period of three months, during which time radio communications are all in English. Check pilots assure that pilots understand and speak English sufficiently well to obviate possible language difficulties. Pilots must further demonstrate that they are conversant with U. S. control procedures, phraseology, and

regulations. Both the pilots of Flight 075 and the controllers with whom they talked stated that no language difficulties were encountered. This was also reflected in the two-way recording of contacts with the flight in the New York area.

Investigation showed that the pilots, before departure from Paris and Shannon, were properly briefed on en route weather conditions. Weather over the route was substantially as forecast. The larger headwind component experienced was within the accuracy of forecast winds over the trans-Atlantic route.

During the early morning of August 3 a front extended east-northeast from Tennessee into the Atlantic at about Cape May, New Jersey, with an occluded wave in Virginia and a small low center in West Virginia at the extremity of the occlusion. This system was moving eastward and during the forenoon a new low center formed at the apex of the wave, then located in Delaware. The warm frontal surface to the northeast of the wave which overlay New York and New England was being overrun by a flow of warm, moist, unstable air from the southwest. This resulted in a high overcast in New York State and southern New England which lowered as the occluded low moved eastward, followed by rain and occasional moderate to heavy showers. The southwesterly winds aloft strengthened in New York State and the New England area as the wave moved eastward.

Flight 075 began receiving weather information from Canadian stations, as well as TAFOTS (Terminal Airway Forecasts), when in the vicinity of Goose Bay. This information was first obtained from Gander radio and later through the regular half-hourly weather broadcasts of Station WSY in New York.

Terminal forecasts for La Guardia and New York International Airport, issued at 0400 for the period 1100-1400, were: ceiling 2,000, broken clouds, visibility 5 miles variable to 3 miles, fog, occasional light rain showers. The terminal forecasts for these two airports for the period 1000-1600 (issued at 1000) were: scattered clouds at 800 feet, ceiling 1,200 feet, overcast, visibility 3 miles, light rain, fog, wind east-northeast 12; ceiling occasionally becoming 700 feet, overcast, visibility 1 mile, moderate rain and fog.

The reported weather from New York International Airport showed deterioration of ceiling from 3,000 feet at 0823 to 900 feet at 1222, and visibility dropped from 5 miles to 2 miles with light to moderate rain and fog. Weather at La Guardia was similar, except for occasional heavy rain being reported. Up to 1200, ceiling at Boston remained 7,000 feet or better, with light rain showers.

In the vicinity of Boston when en route to New York, the flight entered the overcast during descent from 18,000 feet, and intermittent instrument conditions prevailed to New York. By that time general light rain was occurring in southern New Jersey, eastward through southern New York, and into Connecticut. Moderate to heavy local showers also developed within the general rain area in the New York area and these were moving from southwest to northeast. During the ILS approach to New York International Airport, the flight encountered one of these local storms. The flight therefore had considerably

different weather during the ILS approach - ceiling about 200 feet, heavy turbulence, heavy rain, and visibility about one-half mile.

Flight 075 encountered considerably worse conditions than the Weather Bureau was reporting, and worse than terminal forecasts indicated. Tower personnel watching the PAR (Precision Approach Radar) scope noted that Flight 075 entered an area of heavy precipitation and therefore was lost on the scope for a short time. The crew of Flight 075 did not see the ground during the approach until near their 200-foot minimum altitude.

When the missed approach was made at New York conditions were deteriorating between 1228 and 1328 as follows: Bridgeport 1,000 feet and 2 miles to 600 feet and 2 miles; Hartford 1,300 feet and 2 miles to 1,200 feet and 1-1/2 miles; Providence 6,000 feet and 5 miles to 700 feet and 1 mile. Boston was also deteriorating but did not go below 7,000 feet and 6 miles up to 1500. Between New York International Airport and the point of emergency landing at Preston City, overcast existed with variable ceilings; this ranged from very near the surface to about 1,000 feet, accompanied by moderate turbulence and light to possibly heavy rain showers.

During interviews with the captain and copilot, investigators inquired of them whether they considered landing at MacArthur after receiving the weather information for that airport. They replied, in effect, that the MacArthur weather was useful as an indication of weather at one of the Long Island airports but that they did not give active consideration to landing there.

Analysis

The forecasts given to the pilots in briefing at Paris and Shannon were reasonably accurate, taking into account the elapsed time for the flight and the fact that it is normal that revisions to weather data become necessary upon reaching the North American continent.

Development of the second low center on the apex of the wave east of the original center resulted in a more rapid northward movement of the warm front toward New York and the New England Coast. Consequent lowering of the frontal surface over the New York area caused the cool air to become shallow in that area. Coincident with this development of the new low center, southwesterly winds aloft increased in velocity and heavy convective showers developed in the upper unstable airmass sooner than anticipated by the forecasters.

The forecast for lowering ceilings, to as low as 700 feet in the New York area, is known to have been optimistic; however, reporting stations with measuring equipment were not reporting ceilings much lower than 700 feet. Consequently, the forecaster had no reason to believe that the forecasts for ceilings were inaccurate. Light to moderate rain was forecast, with thunderstorm activity starting after 1600, and moderate to heavy turbulence forecast in connection with the thunderstorm activity. No pilot reports of turbulence were received by the forecasters in time for a revised forecast to be issued.

On the other hand, heavy rain showers were being reported in the New York area as early as 1024. While not accompanied by thunder, they did indicate vigorous instability aloft in which turbulence and/or thunderstorms were likely. It would appear that this should have alerted the forecasters to the need of amending their forecast to indicate the earlier beginning of heavy turbulence.

It was one of these local convective buildups embedded in the general overcast that caused heavy local storms such as the one encountered during Flight 075's ILS approach to New York International Airport. Due to the fact that the cool air became shallow at the surface, the heavy turbulence produced in the storm penetrated to the surface. As these storms were local and moving from the southwest at about 35 miles per hour, they quickly passed a given point.

Flights which landed before and after Flight 075 were able to complete their approaches and land, although they did encounter heavier rain and turbulence than expected. Flight 075 encountered a vigorous local storm at the most critical time (in the ILS approach), while these other flights apparently did not. Under these conditions, the decision to make a missed approach was evidence of sound judgment.

Weather information possessed by the pilots before the ILS approach gave them no cause to believe that it would be other than a routine approach. However, the unexpected storm with its low ceiling, heavy turbulence, and heavy rain undoubtedly caused the pilot to believe that another approach at New York International Airport or another airport in the vicinity would not be feasible and he made his decision to obtain clearance to Boston with the intention of landing at one of the airports en route. However, it would appear that the captain should have sought information from New York International Airport Tower as to the feasibility of making a second approach; i. e., attempting to learn if the storm he encountered was an isolated one or whether it was representative of weather conditions over the area. Had he done so, he would in all probability have learned from New York International Airport radar that the storm was a local condition and a second approach could be made within a few minutes.

On the way down, from Boston to New York, there were numerous breaks in the overcast, and the pilots testified that they had expected to find the same condition going back toward Boston. Movement of the warm front by the time the flight diverted toward Boston resulted in an almost solid overcast below flight level which precluded the crew's sighting any available airports.

The Air France dispatch office at New York International Airport had current information on airports to which the flight might have been diverted and could have been of assistance while the flight was in the New York area. However, the flight did not request such assistance, and the several requests for clearance to Boston gave both ARTC and Air France dispatch the impression that the captain had selected Boston as his alternate. (It was later ascertained through the pilots' testimony that their intention was to land at any suitable intermediate airport.) The Air France dispatcher had analyzed the information available in his office and had selected Bridgeport or Hartford as alternates

within range of the remaining fuel supply. He recognized that the range was too great for diversion all the way to Boston and later attempted to get a message through suggesting the two closer airports. Had ARTC given ARINC the dispatcher's message verbatim, the flight would have known of his suggestion. Of course, it would not have been mandatory that the captain follow the suggestion had he known of it since final decision on any action rested with him. Shortly after the 1301 contact with ARINC the flight had progressed so far from New York that it was evidently out of range for VHF communications with New York stations.

After the flight left the New York area it could have but did not contact CAA communications stations other than Providence for information on weather at airports between New York and Boston. While these stations could have given the flight current weather reports only for the various stations, such reports might have been helpful to the captain.

Although the Board recognizes that deteriorating weather at both the destination and along the route back toward Boston created an unexpected situation with which the captain had to cope, it would seem that the exercise of a higher order of judgment would have resulted in a landing on one of the airports within range of his fuel supply. Had he been checking fuel consumption more closely he should have realized shortly after the missed approach that the amount of fuel remaining made it desirable to select an alternate rather close to New York or consider a second approach to New York International Airport. It will be recalled that the flight engineer advised the captain over Mitchel range station that there was only one hour of usable fuel remaining.^{3/} In view of this information all thought of continuing toward Boston for any considerable distance should have been dismissed since it should then have been apparent to the captain that his effective radius of action was less than he had anticipated. Subtracting a suitable reserve from the one hour of usable fuel indicates that an airport close to Mitchel should have been selected with the least possible delay.

The marginal weather at Providence, plus the fact that they did not have an approach plate and were also having difficulty in communicating with Providence Tower, decided the captain against trying to land there. When he made his decision to attempt an emergency landing he thought they had only 15 minutes of fuel, therefore not enough to reach Boston. The break in the overcast permitted descent and a contact approach while there was still fuel enough to maneuver and select an area in which to land. As the captain stated later, this was more desirable than continuing with the possibility of having to land at a place not of his own choosing. He showed considerable skill in landing in such a small area and good judgment in taking actions to reduce the possibility of fire.

Air France had on file with the CAA International Region several airports which could be selected for landing in the event a flight chose not to land

^{3/} The recapitulation of fuel consumption indicated that flight from Mitchel to Boston would have taken 62 minutes, with 100 gallons remaining upon arrival, or the equivalent of an additional 17 minutes of flight.

at New York International Airport. Although some of these airports were beyond reasonable range in this instance, considering the amount of fuel available, the flight could have proceeded to one of three or four airports in the approved group had the captain inquired about them, selected one, and requested clearance. It appears that the captain had not selected a possible alternate before making the missed approach, nor did he later make such selection or call upon his dispatch organization for assistance. Further, had he declared an emergency shortly after the missed approach, instead of waiting until he was in the Providence area, assistance would have been rendered which would have aided the flight in diverting to a suitable airport, with satisfactory weather conditions, well within its fuel range.

Findings

The Board finds that:

1. The carrier, the aircraft, and the crew were certificated by the French Government.
2. Air France possesses a foreign air carrier permit issued by the United States Civil Aeronautics Board for operations over the route Paris-New York.
3. The gross takeoff weight upon departure from both Paris and Shannon was less than the maximum allowable and the load was properly distributed in each case.
4. All fuel tanks were filled to capacity during the scheduled stop at Shannon.
5. Owing to headwinds the flight had approximately 100 gallons less fuel than anticipated when it arrived over Scotland Intersection, southwest of New York International Airport.
6. In the ILS approach to New York International Airport during instrument weather conditions, the flight encountered an unexpected severe local storm with greater turbulence, heavier rain, and a lower ceiling than weather reports had led them to anticipate, and the captain discontinued the approach at 1237.
7. The captain decided not to attempt another approach to New York International Airport and instead requested clearance to Boston at 1240 while climbing on the missed approach course.
8. The flight was asked by New York International Airport Approach Control if an emergency was being declared, but the copilot replied in the negative.
9. An IFR clearance to Boston was issued by New York ARTC at approximately 1249, the flight in the interim having been routed toward Boston via Mitchel range station.

10. When the flight reported over Mitchel range station at 1250, the flight engineer advised the captain, upon the latter's request, that there was fuel for one more hour of flight.

11. Difficulties with communications after being cleared from ARTC frequency prevented the flight from receiving the dispatcher's suggestion to proceed to Bridgeport or Hartford.

12. Testimony of the pilots indicated that the captain intended to land at an intermediate airport between New York and Boston if he could find one with sufficiently good weather conditions.

13. There were no language difficulties in conversations with the flight.

14. There was sufficient fuel available to fly to Boston or any intermediate airport, but the fuel remaining over Boston, had the flight continued to that point, would have allowed only about 17 minutes of flight thereafter.

15. Flight 075 declared an emergency at 1322 (0822 e. s. t.) in its first contact with Providence Tower/INSAC, indicated intention to land at Providence, was cleared for an approach, and then, at 1329, advised that they were not landing there.

16. The flight descended through a break in the overcast and made an emergency landing at about 1340 (0840 e. s. t.) in a field and without loss of life.

Probable Cause

The Board determines that the probable cause of this accident was inadequate inflight planning, in that the captain did not make a firm selection of a suitable airport within range of the fuel remaining at the time of the missed approach, necessitating an off-airport landing.

BY THE CIVIL AERONAUTICS BOARD:

/s/ CHAN GURNEY

/s/ HARMAR D. DENNY

/s/ JOSH LEE

/s/ JOSEPH P. ADAMS

S U P P L E M E N T A L D A T A

Special Investigation

The Civil Aeronautics Board was notified of the accident at approximately 0900 e. s. t., August 3, 1954. An investigation was immediately initiated in accordance with the provisions of Section 702 (a) (2) of the Civil Aeronautics Act of 1938, as amended. A Special Investigation was ordered and depositions were taken at Preston City, Connecticut, (August 5, 1954); Jamaica, New York, (August 31 through September 3, 1954, and September 28, 1954); Washington, D. C., (September 10, 1954); and Paris, France, (October 21, 1954). Amputation of Captain Caboche's left leg became necessary, and Mr. Grandvaux suffered several crushed vertebrae, thus preventing the taking of their depositions before October 21.

Air Carrier

Compagnie Nationale Air France, commonly known as Air France, is the national air line and was organized in 1933 under the laws of France. The principal offices of the company are located in Paris and the headquarters of the North American, Central American, and Caribbean Division is in New York, New York. Under the United States-France Air Transport Agreement of 1946, France was granted five air routes to the United States. These routes, including the one over the North Atlantic, are operated by Air France under a foreign air carrier permit issued by the Civil Aeronautics Board and air carrier operating specifications issued by the Civil Aeronautics Administration.

Flight Personnel

Captain Jean Caboche, age 41, had been employed by Air France for 17 years, and had been a captain for 16 years. He was certificated by the French Government as qualified to pilot this type aircraft and possessed a navigator's license. Captain Caboche had 11,959 pilot hours as of June 30, 1954, and 453 hours in Lockheed Constellations during the period January 1 - June 6, 1954; he flew approximately 104 hours in July. Captain Caboche had made about 130 Atlantic crossings in Constellation equipment.

Copilot Jean Rousseau, age 34, was employed by Air France in 1938. In addition to possessing a pilot's certificate reflecting that he was qualified in Lockheed 1049 equipment, he was a licensed radio operator. Mr. Rousseau had 10,679 flying hours as of June 30, 1954, and 453 hours in Lockheed Constellations during the period January 1 - June 30, 1954; he flew approximately 104 hours during the month of July. Mr. Rousseau had been regularly flying as copilot with Captain Caboche for about one and one-half years, and had been flying the North Atlantic route since 1947.

Navigator Jacques Geffard, age 23, had been employed by Air France since January 1954. He possessed a navigator's certificate issued by the French Government and had 2,065 flying hours as of June 30, 1954. He had a total of 441 hours in Lockheed Constellation equipment.

First Flight Engineer Albert Grandvaux, age 44, had been employed by Air France for 17 years. He was properly certificated by the French Government and had accumulated 7,029 flying hours to June 30, 1954. He had flown 177 hours in Lockheed 749 equipment and 136 hours in Lockheed 1049's during the period January 1 - June 30, 1954, and flew approximately 105 hours during the month of July. He had made 118 Atlantic crossings in Constellation aircraft.

Second Flight Engineer Jean-Baptiste Ghilini, age 29, had been employed by Air France since 1949, had nearly 4,617 flying hours as of June 30, 1954, flew 319 hours in Lockheed 1049 equipment during the period January 1 - June 30, 1954, and flew approximately 97 hours during the month of July. He was certificated by the French Government for flight engineer duties.

Stewardess Francine Dono had been employed by Air France for slightly over two years and had 2,034 flying hours on June 30, 1954.

First Steward Michael Gallet, age 29, had over 4,930 flying hours on June 30, 1954.

Second Steward Jean Capron, age 35, had been employed by Air France since 1946 and had over 4,930 flying hours as of June 30, 1954.

The Aircraft

Lockheed model 1049C Constellation, serial number 4510, French registry FBGNA, was owned and operated by Air France. The aircraft had a total flying time of 2,479 hours, with 485 hours since the last major inspection. A number 2 check was conducted on July 6, 1954, and records indicated that all maintenance on the aircraft was current. Air France uses a system of progressive maintenance checks. The aircraft was equipped with Wright Turbo-Compound engines, type 972-TC-18-DA1, and Hamilton Standard Hydromatic Constant Speed, full feathering and reversing propellers, type 43E60-305P9/6903B-O.

CIVIL AERONAUTICS BOARD
Washington

August 3, 1954

TO: Messrs. Gurney, Denny, Ryan, Lee, Adams,
The Executive Director

FROM: Director, Bureau of Safety Investigation

SUBJECT: Preliminary Aircraft Accident Notification:
Air France Flight 075, Identification FBGNA,
Preston, Connecticut, August 3, 1954, ap-
proximately 0832 EST

Air France Flight 075, a Lockheed Super Constellation, was en route from Gander, Newfoundland, and scheduled to land at New York International Airport at 0715 EST. It made one instrument approach at 0736 EST, executed a missed-approach and returned to Scotland Intersection southwest of the airport. It then requested weather and clearance to Boston, which was granted. At 0822 EST the flight contacted Providence tower, reported it was in vicinity of Providence, altitude 2000 feet, and was cleared to Providence. However, it advised the tower at 0829 that it would not land at Providence. No definite position report could be obtained.

At 0831 EST a UAL flight, holding in the vicinity of Providence, relayed a message to the Providence tower that the Air France flight advised it was at 1000 feet. At 0832 EST Air France flight requested Quonset weather from Providence tower and was given the Quonset radar frequency. This was the last contact with the flight. At approximately 0832 EST the aircraft crashed and reportedly burned at Preston, Connecticut (about six miles east of Norwich).

On board were Captain Ceboch with 7 crew members and 29 passengers, including 2 children. There were no fatalities; however, approximately 12 to 15 persons were hospitalized.

The weather in the New York-Boston area was as follows:

0730 EST Reports

Idlewild 700 scattered, measured 500, broken 17,000, overcast 2 miles, light rain, fog, wind NE 14.

Boston 6000 scattered estimated 10,000, overcast 15 miles, light rain showers, wind E 10.

Providence 1000 scattered, estimated 6,000, overcast 5 miles, light rain, fog, wind ENE 11.

0830 EST Reports

Idlewild 400 scattered measured 600 variable, overcast 2 miles, light rain, fog, wind NNE 10.

Boston Estimated 700 broken 12,000, overcast 12 miles, light rain showers, wind NE 9.

Providence Estimated 600 overcast one mile, moderate rain, fog, wind NE

Investigator-in-Charge Joseph J. Fluet and his assistants George A. Van Epps and William J. Bitter are at the New York office are at the phone

Joseph J. Fluet
George A. Van Epps
William J. Bitter