

CIVIL AERONAUTICS BOARD

ACCIDENT INVESTIGATION REPORT

Adopted: July 14, 1952

Released: July 16, 1952

ROBIN AIRLINES, INC. - COBOURG, ONTARIO, CANADA, DECEMBER 20, 1951

The Accident

A C-46 aircraft, N-59487, owned by International Airports, Inc., while leased to and operated by Robin Airlines, Inc.,^{1/} Burbank, California, an irregular air carrier, made a wheels-up forced landing near Cobourg, Ontario, Canada, December 20, 1951, at about 0740.^{2/} All 48 of the occupants were uninjured. The aircraft was substantially damaged.

History of the Flight

N-59487 departed Burbank, California, on an IFR (Instrument Flight Rules) flight plan at 0329, December 19, 1951, for Albuquerque, New Mexico, with Las Vegas, New Mexico, as the alternate. The flight's ultimate destination was Newark, New Jersey, with additional intermediate stops planned at Kansas City, Kansas, and Chicago, Illinois. At 0401, thirty-one minutes after take-off from Burbank and when over Palmdale, California, the captain advised Palmdale radio that the aircraft cabin heaters were not operating, and that he was returning to Burbank for repairs. Weather conditions at Burbank did not permit this, so the flight landed at Palmdale at 0439. Mechanics were sent from Burbank to Palmdale to make the necessary repairs.

Following repair of the heaters, the aircraft departed Palmdale at 1353, on a DVFR (Defense Visual Flight Rules) flight plan for Albuquerque, a planned refueling stop. The flight was refueled there, departed and arrived at Kansas City at 2108. During the flight from Palmdale to Kansas City there was no reported malfunctioning of the aircraft, engines, radio, or other equipment.

A routine crew change was made at Kansas City and the new crew consisted of Captain Bruce L. Smelser, Copilot Edgar T. O'Leary, and Stewardess Sandy Daine. Copilot O'Leary who was making his first flight with the company and his first flight with Captain Smelser, had dead-headed on the same aircraft from Burbank. According to the Flight Plan and Log, the aircraft had at

^{1/} At the time of the accident Robin Airlines, Inc., was d/b/a (doing business as) North Continent Airlines.

^{2/} All times referred to herein are Eastern Standard and based on the 24-hour clock.

the time of take-off from Kansas City, 775 gallons of fuel.^{3/} Captain Smelser stated that approximately 40 minutes prior to departure he contacted the U. S. Weather Bureau by telephone and, having checked the weather and forecasts for the route involved, including a twelve-hour forecast for the Kansas City-Chicago-Newark routes, then filed (with Kansas City radio) a VFR flight plan for Chicago. The captain further stated that when he checked the en route weather, it was forecast to remain VFR to Chicago for a four-hour period. Departure from Kansas City was made at 2236, and when the aircraft was southwest of Burlington, Iowa, at 2341, the flight encountered instrument weather. Burlington radio was requested to change the flight plan from VFR to IFR with South Bend, Indiana, as the alternate. This was approved by ARTC (Air Route Traffic Control). Routine position reports were made over required reporting points. Upon arrival at Chicago the flight made a routine ILS approach monitored by GCA (Ground Control Approach), and landed at Midway Airport at 0100, December 20, 1951.

The aircraft was refueled at Chicago with 413 gallons of 100 octane fuel and, as shown on the Flight Plan and Log, there was then a total of 775 gallons of fuel on board. The following CAA flight plan was filed with ARTC, at 0155: N-59487, C-46, Smelser, Chicago, 9000 via Crib intersection, Red Airway #12, Red Airway #55, Green Airway #3, Amber Airway #7 to Newark, true air speed 196, proposed departure time 0215, estimated elapsed time en route 3 $\frac{1}{2}$ 30, alternate airport LaGuardia, fuel supply 4 $\frac{1}{2}$ 25, radio equipment standard plus VHF.

Approximately one hour later, at 0256, N-59487 requested from the Chicago Tower an airways clearance and taxi instructions for take-off. Taxi instructions were issued to proceed to Runway 13 Right; the clearance was approved as filed, with the take-off to be made five minutes after Capital Airlines' Flight 804. Because of the unknown position of another C-46 aircraft, N-3971B, in the Chicago area, outbound traffic movement was stopped for a short period of time and then proceeded on a delayed basis at the respective captain's discretion. Because of this delay N-59487 held with engines running near the end of Runway 13R for almost an hour and departed Chicago at 0354. At the time of departure the Chicago weather was reported: ceiling 600 feet, sky obscured, visibility 1-1/2 miles, variable, light snow. The flight departed Chicago with 45 passengers plus three crew members. According to the weight and balance form, the aircraft's total weight at time of take-off was 43,283 pounds, which was below the then allowable gross weight of 48,000 pounds; the load was properly distributed.

From take-off to the flight's reported time over South Bend, Indiana, at 0425, at cruising altitude, the average ground speed was 137 mph. Although the flight's estimate over Goshen, Indiana, was at 0434, indicating a planned ground speed of 194 mph, the flight reported over Goshen at 0429, which would have necessitated the highly improbable ground speed of 435 mph. Its next estimate for Toledo, Ohio, at 0502, indicated a planned ground speed of 223 mph.

^{3/} This aircraft originally had six fuel tanks, but prior to the flight, the two rear tanks had been removed and because of a leak in the right center tank, this tank was sealed by covering the filler cap opening with a metal plate. The three remaining tanks held a maximum of about 782 gallons of fuel.

At 0447, eighteen minutes after reporting passing Goshen, the pilot advised Goshen radio that the lost C-46 aircraft, N-3971B, was requesting Toledo radio to broadcast Toledo weather on 239 kilocycles, and further advised that N-59487 would relay any messages. At 0450, N-59487 reported to Toledo radio that it was encountering a 60-mile per hour wind from the east and revised its estimated arrival over Toledo to 0510. This revised estimate indicates that the crew expected to average a ground speed of only 180 miles per hour between Goshen and Toledo instead of 225 miles per hour. In the next eleven minutes N-59487 acted as a relay between Toledo and N-3971B three times. These messages apparently assisted the lost aircraft in establishing radio contact and in landing safely at Toledo.

The flight next reported that it was over Toledo at 0501, which was nine minutes ahead of its revised estimate and one minute ahead of its original estimate. This indicated an average ground speed from Goshen to Toledo of 230 miles per hour. The en route weather was given the flight at this time. It then estimated arrival over the Sandusky, Ohio, intersection at 0513 and Cleveland, Ohio, at 0527. To make good the above estimate the average ground speed would be 220 miles per hour to Sandusky and only 172 miles per hour from Sandusky to Cleveland. Position reports were not made after passing Toledo.

The captain said that shortly after passing Toledo a severe snowstorm was encountered in which there was a mixture of rime ice, clear ice, frozen snow, and rain. The crew stated that at this time the aircraft's ADF (Automatic Direction Finder) radio receiver failed to indicate properly and that soon thereafter static conditions made it impossible to obtain a readable signal for navigation purposes with either the range receiver, ADF receiver, or manual DF receiver. The crew said numerous efforts were made, using different combinations of the above equipment, to obtain range signals, bearings and fixes. According to the captain, this condition existed for approximately two hours. The captain also said that during this time he flew by dead reckoning at his last assigned altitude and, except when flying different easterly headings in an effort to obtain a series of wing tip null fixes, a magnetic heading of about 120 degrees was maintained. Although the crew said suitable signals for navigation were not received, the flight, by means of its VHF radio communications equipment, answered a call from Cleveland radio, made at 0536, requesting the time and altitude over Cleveland and the Youngstown, Ohio, estimate. The flight answered in this manner, "N-59487 having a little trouble getting orientated; will give check as soon as can get a check on it."

At 0544, Cleveland radio requested N-59487 to advise its heading and altitude, also whether the course had been reversed at any time and whether it was still on an eastbound heading. The flight replied: "Only workable equipment is manual loop. I am southeast of Cleveland along Lake Shore, west course Cleveland range. Unable give Cleveland estimate due to head winds which threw us off course. Unable determine estimate." At 0553, Cleveland radio transmitted the following message, "N-59487 request your altitude, also verify present position." Several calls to the aircraft were made before the flight replied that Cleveland's signal was very weak.

However, Cleveland was able to hear a 9,000-foot altitude report before the aircraft's radio signal faded. According to the Cleveland communicator the aircraft appeared to be very distant when the signal faded.

CAA communications stations along and adjacent to the aircraft's planned route were asked to contact the subject aircraft and numerous calls were made without response.

Since a shortage of fuel was bringing about a critical condition, the captain decided to descend from the 9,000-foot cruising altitude in an attempt to determine his position. He said that at that time he thought he had flown approximately four hours and should be over either Pennsylvania or New Jersey. The descent was made on a heading of 120 degrees and contact was established at about 3,000 feet MSL (mean sea level) over water. The captain said he thought at the time that he was over the Atlantic Ocean. He stated that during the descent security broadcasts were repeatedly made but that no reply was received until after establishing contact beneath the overcast. A heading of 60 degrees was taken after becoming contact and in a few minutes the left engine became rough and surged to such an extent it was necessary to feather its propeller. This surging apparently was due to a lack of fuel in the tank for this engine.

At 0726, Rochester radio called and the flight immediately replied, "N-59487 over water, 2,500 feet, one engine out, low on fuel, position unknown, heading 60 degrees." Six minutes later, at 0732, Cleveland Air Route Traffic Control, through Rochester radio, sent this message, "N-59487, request make right turn 180 degrees for identification, and heading will bring you into Rochester." The flight quickly answered, "Not enough fuel, heading 0 degrees, over land." The next and final message received by Rochester radio was at 0738, which said, "Sighted small town, both engines out, landing wheels up." At approximately 0740, N-59487 made a wheels-up landing in a farm field near Cobourg, Ontario, Canada. Passengers escaped through the main cabin door and the cabin emergency exits; no one was injured.

At 0742, Rochester radio gave all available information to the Toronto Air Route Traffic Control Center. That Center advised that Search and Rescue had been alerted at Trenton, Ontario, and that attempts were being made to locate the aircraft.

At 0750, Rochester communications station advised that the pilot of N-59487 had telephoned to report that the flight had made a forced landing near Cobourg, Ontario, Canada, with no injuries to the crew or the passengers. (See Appendix "A".)

Investigation

The Board was notified of this accident through the facilities of CAA Detroit Communications at 1130, December 20, 1951. An investigation was immediately initiated in accordance with the provisions of Section 702(a)(2) of the Civil Aeronautics Act of 1938, as amended. At the invitation of the Canadian Government and in accordance with provisions of the International

Civil Aviation Organization, a Board investigator acted as an official observer at the scene of the accident. A public hearing was subsequently ordered by the Board and was held at Burbank, California, on January 24 and 25, 1952.

Investigation disclosed that the aircraft came to rest in a snow-covered farm field approximately two miles west of Cobourg. Damage was confined to the propellers, nacelles, and the bottom of the fuselage. Two blades of the left propeller and all three blades of the right propeller were moderately bent. It was determined that, at the time of impact, the propeller of the left engine was feathered, and the propeller of the right engine was wind-milling. The three usable fuel tanks contained insufficient fuel to obtain a reading. The bottom of the fuselage was badly dented and had numerous holes.

N-59487, a Curtiss C-46E, Serial No. 2934, was owned by International Airports, Inc., and operated under lease by Robin Airlines, Inc. It had a total of 15,705 flying hours and was currently certificated by the Civil Aeronautics Administration. The aircraft was equipped with two Pratt and Whitney R-2800-75 engines and Hamilton Standard hydromatic propellers. The aircraft completed an 8,000 hour overhaul and a No. 2 engine check and service at Burbank, California, on December 13, 1951. During this overhaul, all radio equipment was removed, bench checked, repaired as necessary, re-installed in the aircraft, and signed off as operating in a normal manner. Examination of the aircraft's records indicated that it should have been in an airworthy condition when it departed Burbank on December 19, 1951.

Captain Smelser stated that throughout the flight from Kansas City until the landing was accomplished near Cobourg, there was no evidence of mechanical failure of the aircraft, the engines (other than fuel exhaustion), or any of the aircraft's equipment. He also said the radio equipment functioned normally except during periods of static and ice. A review of the Flight Plan and Log record which was prepared by the crew for the segments of the flight between Burbank and Kansas City indicated a properly planned flight. For the remainder of the flight this was not the case. The Flight Plan and Log for these segments of the flight was not prepared in accordance with the company's operations manual.^{4/} In fact, this document was practically devoid of all flight data such as estimated times of arrivals, estimated fuel consumptions, radio frequencies available, etc. Most of the other records pertaining to the flight were improperly and inaccurately prepared. The Passenger Manifest and the Weight and Balance Manifest out of Chicago were prepared in such a manner that it was impossible to determine accurately the correct number of passengers on board when the accident occurred. However, investigation disclosed that 45 passengers were on board at this time. As prescribed by the company's operations manual, duplicate copies of the flight's records were to be mailed to the principal office of

^{4/} The company's operations manual is required by Section 42.60 of the Civil Air Regulations. This regulation in part sets forth the requirements acceptable to the Civil Aeronautics Administration applicable to safe operation of the carrier's aircraft.

the company prior to departure from any point where a change in load, etc., was effected. The company was directed by Board subpoena to produce the duplicate copies but it did not do so. It stated such records could not be found and no logical reason was given for failure to produce them. The crew testified that the records were mailed as required.

A U. S. Air Force officer-pilot, who visited the scene shortly after the accident, stated that about one hour later he observed the crew in the office of the local provincial police attempting to complete a flight plan and other papers pertaining to the flight.

The synoptic weather map of December 19, 1951, shows a stationary cold front on which there was a wave and low center in southeastern Kansas. A low pressure trough and cold front which was moving slowly northeastward extended from this low center through northeastern Missouri, Iowa, and Wisconsin. A strong pressure gradient, together with precipitation, was advancing ahead of the system. Precipitation in the form of snow reached the Chicago area about 2128, December 19. The snow which was moving eastward did not reach the Toledo-Detroit area until after 0500, December 20. The weather reports from both north and south of Lake Erie and Lake Ontario showed that the precipitation area was still west of Cleveland when the accident occurred. No fronts were traversed during the flight.

The following weather information was available to the crew prior to departing Chicago: At a cruising altitude of 9,000 feet instrument weather conditions were forecast to Cleveland, with icing in the clouds, intermittent contact weather from Cleveland to Youngstown, and contact weather from Youngstown eastward. The winds at 9,000 feet were forecast to be from 230 degrees at 30 knots on the western end of the flight, changing to 260 degrees at 40 knots on the eastern end. Pilot reports received by the CAA or other agencies for the time and area covered by the subject flight did not indicate weather conditions as being other than forecast. Weather conditions reported by stations along the proposed route also confirmed the Chicago forecast.

Weather reports also showed that lower ceilings could be expected north of the Great Lakes than along the intended route. Reports from southern Ontario showed that at the cruising level of 9,000 feet instrument and icing conditions would have existed the entire distance to Cobourg. No precipitation occurred in this area until after 0800, December 20.

Captain Smelser stated that prior to departure, he and Copilot O'Leary went to the U. S. Weather Bureau's office on the airport and checked en route weather and Newark forecasts with Mr. E. S. Bennet, the chief forecaster on duty. Mr. Bennet, who was on duty, said that he knew Captain Smelser personally and that he did not brief him or to his knowledge any crew member of this aircraft on December 19 or 20, 1951. Captain Smelser also said that weather information he received indicated that the best cruising altitude at which to fly was 9,000 feet and that at this altitude the wind would be 40 knots from 260 degrees; also, that little or no icing would be encountered, even in the climb, and that they would be in clear weather approximately one hour after take-off.

The company's operating certificate had been reissued by the CAA only the day before this flight originated at Burbank and no flight or ground training had been given initially to Smelser or O'Leary, although it was required by the company's operations manual. The training program, which is also required by Section 42.45 of the Civil Air Regulations,⁵ includes in part simulated instrument (hood), contact emergency flight maneuvers, route checks, and pilot ground training. As hereinafter pointed out, Captain Smelser had received a six-month equipment check on C-46 aircraft which, according to the testimony of Charles A. Rector (Director of Flight Operations), included contact emergency flight maneuvers. Copilot O'Leary, on the other hand, was given only a questionable check on simulated instrument hood operations and no check whatever on emergency flight procedures. The company's operations specifications, approved by the CAA, require that prior to serving as a pilot, and each six months thereafter, each pilot not being utilized as a pilot-in-command shall demonstrate that he is competent to pilot an aircraft by instruments.

There were serious deficiencies on the part of Robin Airlines with respect to its responsibility for the ground training program. The operations manual indicates the establishment of an extensive ground training program covering both classroom instructions and ground training and that each captain be required to secure two hours of Link trainer time per month and each first officer one hour per month. This applies only to the pilots primarily employed by Robin Airlines, and any other pilots used by the carrier must secure equivalent training from the company by whom they are primarily employed. The Link training time is paid for by the airline involved.

The entire pilot training program of Robin Airlines is handled under contract by Fowler Aeronautical Service, which furnishes ground training and Link trainer instruction for many of the irregular carriers at Burbank, each carrier stipulating the terms and extent of the service desired. This program operates in the following manner: Fowler prepares mimeographed reviews covering source material on various subjects pertaining to the operation of commercial aircraft as well as a check sheet with multiple choice answers for use by the student pilot. Upon notification by the carrier of the number of participating pilots, Fowler submits sufficient copies of the reviews to the carrier. As the check sheets are completed by the pilots, they are submitted to the chief pilot who gives them to Fowler for correction. The papers are then returned and placed in the pilots' files in the carrier's office. Fowler keeps no record of the names of the pilots who receive the source material or submit the examination sheets except to the extent of helping the carrier maintain a check list in the office of the carrier. The only record

⁵/ CAR 42.45, Proficiency of crew members serving on large aircraft. The air carrier, by means of a training program or otherwise, shall insure that crew members are proficient in their duties and are kept currently informed of all techniques and new developments pertinent thereto. The program shall include instructions in emergency procedures and in crew co-ordination.

maintained by Fowler is a check list of the source material submitted to the carrier for distribution and a list of all pilots who take Link trainer instruction each month, presumably to facilitate the monthly billing to each carrier.

Fowler initiated pilot training for Robin Airlines on November 20, 1951. As of January 11, 1952, only two Robin Airlines' pilots had completed Link trainer instructions -- Mr. Laws on January 4, 1952, with one hour, and Mr. Draper on January 10, 1952, with two hours. The use of the source material and the completion of the check list is entirely up to the individual crewman. No definite time limit or check is made to complete the ground training program and that responsibility rests solely with the employee. From the beginning of the flight training program in November, 1951, until January 15, 1952, four source material reviews had been distributed to 10 Robin pilots, and while 13 out of a possible 40 check sheets had been returned, only four grades were recorded, two of which were for first officers on the on-call list whose services had been terminated by the carrier. Moreover, neither Smelser nor O'Leary had received any training from Fowler during the time they were employed by Robin Airlines. It can thus be seen from the foregoing that Robin Airlines failed to meet the requirements of Part 42.92 of the Civil Air Regulations.^{6/}

Charles A. Rector, Director of Flight Operations, Robin Airlines, was the only regularly employed pilot of the company. He held a currently effective airline transport rating and was designated by the CAA as an airline transport pilot examiner. All other pilots on the company's on-call list, including Chief Pilot Smelser, were paid only for mileage flown plus expenses on an hourly basis.

Robin Airlines apparently has no set recruitment policy or program for obtaining qualified pilots. The carrier has no established minimum requirements concerning age, flight experience, or other qualifications, but bases its hiring policy on a general knowledge of a pilot's capabilities. It requires only, based on the applicant's statement, that he hold the minimum CAA required certificates and ratings, and that a captain have a general knowledge of the route to be flown, while a copilot would be subject to route experience after being hired.^{7/} The Director of Flight Operations stated

^{6/} CAR 42.92 Airman records. An air carrier shall maintain at its principal operations base current records of every airman utilized as a member of a flight crew. These records shall contain such information concerning the qualifications of each airman as is necessary to show compliance with the appropriate requirements prescribed by the Civil Air Regulations. No air carrier shall utilize any airman as a flight crew member unless records are maintained for such airman as required herein.

^{7/} The application filed by Copilot O'Leary was incomplete and failed to show previous experience, flight time, ratings or references. The file disclosed one violation of the Civil Air Regulations and contains several discrepancies in regard to previous employment, flying experience, and the basis upon which Mr. O'Leary received his commercial certificate.

that he did not understand the emphasis placed on the operation and training requirements for copilots, as prescribed in the company manual, since the copilot would be flying with a competent captain. This kind of thinking was evidenced by the manner in which O'Leary, the copilot on this flight, was flight checked and assigned.

According to the Director of Flight Operations, Captain Smelser was given a required six-months equipment check on a C-46 aircraft on October 15, 1951. This was over two months prior to the time that Rector and Smelser were employed by Robin Airlines. Both of these persons testified at the hearing that Smelser was not given a flight check subsequent to his employment and prior to his assignment for the subject flight. In fact, at the time the CAA authorized the company to operate, which as previously stated was two days before the accident, Captain Smelser was in Indiana, and he joined the flight at Kansas City. It is therefore obvious that he could not have been flight checked. However, the director stated that he did not consider this necessary because Smelser had a currently effective airline transport rating and had received his instrument and equipment checks on C-46 aircraft; also, to Rector's knowledge Smelser had flown C-46 aircraft for three consecutive years and had flown the route between Burbank and Newark for more than one year.

Captain Smelser stated that he had been flying for a number of other irregular air carriers since 1948 and that he had flown for the company now known as Robin Airlines d/b/a North Continent Airlines prior to the time its original operating certificate was reissued. Although he was not regularly employed by the company on December 18, 1951, Captain Smelser, according to the company records, was designated as Chief Pilot and in this capacity was directly responsible to the Director of Flight Operations. His duties consisted of scheduling flight crews, determining if all crew members were current as to physical, instrument, equipment, and flight checks, and evaluating all other matters pertaining to operating procedures and training.

Copilot O'Leary was employed to make his first flight with the company about December 18, 1951. He stated that he had a currently effective certificate and that Rector asked if he had had any C-46 flying time. Since, according to O'Leary, he had not flown this type aircraft for a considerable time, he was given a C-46 equipment flight check on December 14, 1951, four days before the company's operating certificate was reissued, which happened to coincide with the necessary test flight of the aircraft after overhaul. On this check, O'Leary performed simple maneuvers such as straight and level flight, turns, etc., three landings and take-offs and brief simulated instrument flight. The Director of Flight Operations stated that he conducted this simulated instrument flight which consisted solely of straight flight and making timed turns. These were made with the check pilot holding a map in front of O'Leary so that he could not see ahead. From O'Leary's testimony regarding his flying background it appears extremely doubtful that he ever had any C-46 flying time as a pilot.

Analysis

Although Captain Smelser stated that he was briefed by the Weather Bureau forecaster on duty at Chicago, this was denied by the forecaster and it is doubtful that the captain had adequate weather information with which to plan

a safe instrument flight. However, at Kansas City, about six hours prior to take-off from Chicago, the crew apparently did obtain some weather information for the remainder of the route to Newark. It would appear, therefore, that this was the only weather information upon which the crew relied, and that no crew member went to the Chicago Weather Bureau office.

From an analysis of the flight's records, the estimated and actual times over required reporting points, and the general conduct of the flight from Chicago to the forced landing near Cobourg, it is evident that the crew was either indifferent to or ignorant of proper flight planning. The company flight plan and record sheet of this flight, which Smelser and O'Leary prepared after the accident and which was given to the Canadian officials, did not indicate the following: The CAA instrument flight plan filed at Chicago and approved by ARTC, winds aloft, current or forecast weather information, estimated true air speeds and ground speeds, estimated and actual point-to-point and total times, and the actual ground speeds made good. Also, no alternate airport was listed for the flight from Chicago to Newark.

The Flight Plan and Log record also showed that only 345 gallons of fuel would be consumed to Newark with 430 gallons of fuel remaining on arrival. This indicates an average fuel consumption of 99 gallons per hour, whereas normal fuel consumption for a C-46 is approximately 150 gallons per hour.

The actual flight plan filed with CAA at Chicago indicated a total elapsed time from Chicago to Newark of three hours and thirty minutes, with four hours and twenty-five minutes of available fuel. The captain stated he expected to average a ground speed of 240 miles per hour. This ground speed would require approximately three hours elapsed time to the destination instead of three hours and thirty minutes as specified.

Apparently, the fuel consumed during the fifty-eight minute delay at Chicago and the extra fuel which normally should be allowed for when planning instrument flight into icing conditions were not considered, and the aircraft was forced to land because of fuel exhaustion after three hours and forty-six minutes of flight. The fuel consumed during the delay at Chicago and in flight was at the rate of 164 gallons per hour. Therefore, if the crew had properly planned their flight at Chicago, they should have known that the fuel consumed during the holding delay and the fuel required en route, from Chicago, would have been insufficient for instrument flight to Newark.^{8/} Despite this, however, the flight departed into known instrument weather conditions, with 45 passengers aboard, without full realization of the weather conditions en route.

According to the Flight Plan and Log given to the Canadian officials, magnetic headings of 160 degrees to South Bend, 180 degrees to Goshen, and

^{8/} CAR 42.52 Fuel Supply. (a) ... (3) No flight in large or small aircraft under IFR shall be started unless, considering the factors set forth in subparagraph (1), sufficient fuel and oil are carried aboard the aircraft (i) to reach the point of intended landing, (ii) thereafter to fly to the alternate airport, and (iii) thereafter to fly for a period of 45 minutes at normal cruising consumption.

7 degrees to Toledo were to be flown. This indicates left drift angles of 60 degrees to South Bend and 50 degrees to Goshen, whereas the heading to Toledo indicates a right drift angle of 85 degrees.

Also, the estimated and actual times over South Bend, Goshen, and Toledo as shown on the aircraft's records, do not agree with the times that the flight reported to CAA as being over these points. This record actually shows that the aircraft arrived over Goshen four minutes before it arrived over South Bend; obviously this is impossible. It also shows a Toledo estimate of only four minutes after passing South Bend which would necessitate flying the 152 miles at the impossible speed of 2,280 miles per hour. Since some of these figures are clearly erroneous, it is concluded that they are merely rough estimates made by the crew at Cobourg. As the crew was seen preparing this Flight Plan and Log, it is apparent that they were attempting to conceal such inadequate flight planning.

Captain Smelser stated that after he encountered a loss of radio navigational signals because of ice and static he continued the flight by means of dead reckoning. Position reports transmitted by the flight to CAA indicate that the flight was on course until reaching Toledo at 0501. However, radio communication was maintained with Cleveland until 0553. From there on the flight was lost and was not flown in accordance with Part 60.49⁹ of the Civil Air Regulations.

Since the weather forecast available to the crew prior to departure from Chicago indicated that there would be intermittent visual contact weather between Cleveland and Youngstown, with better weather beyond this point, and since lower ceilings, ice, and static existed north of the course, it is evident that when the flight became lost it was to the north of the intended course. This is also evidenced by the fact that when visual contact was established the flight was over Lake Ontario at a point almost 200 miles north of its course. Therefore, if the flight crew had checked the weather information at Chicago, as they both testified, they should have suspected that the flight was north of its course. At no time did Captain Smelser request the assistance of FAWS (Flight Advisory Weather Services) although it was available to him.

Upon review of the company's passenger manifests for all segments of the flight from Burbank to the time of the forced landing at Cobourg, it was impossible to determine the number of passengers aboard. These documents were, in part, illegible and had been altered so much that no true deduction could be made from them. The only way of ascertaining the number of passengers aboard the aircraft was by actual count after they deplaned at Cobourg.

9/ 60.49, Radio Failure. If unable to maintain two-way radio communications, the pilot in command of the aircraft shall: "... Proceed according to the latest air traffic clearance to the radio facility serving the airport of intended landing, maintaining the minimum safe altitude or the last acknowledged assigned altitude whichever is higher. Descent shall start at the expected approach time last authorized or, if not received and acknowledged, at the estimated time of arrival indicated by the elapsed time specified in the flight plan."

The company's indifferent attitude toward passenger comfort and convenience was well demonstrated on this flight. Passengers stated that during the time they were in Canada they were poorly handled by the crew and subjected to long unnecessary delays before continuing to their destination. Some passengers stated that they were required to sign a statement releasing the company from any liability before they were permitted to continue their journey. The crew said that on orders from company headquarters the passengers were asked to sign such a release.

It is the responsibility of the company to conduct its operations with the highest degree of care and in compliance with its Operations Manual and the Civil Air Regulations. It is evident that such compliance and care were not exercised, as demonstrated by the subject flight. The company's manner of selecting and checking pilot personnel was not conducive to safe operations. Furthermore, the company is required to insure that its pilots are proficient in their duties by means of a training program and subsequent examinations, as specifically outlined in its operations manual. It is apparent that Captain Smelser was not proficient in such duties and that there was inadequate crew co-ordination. As Captain Smelser was also the company's chief pilot, his demonstrated incompetence can be presumed to be a criterion of the company's indifference to the appropriate safety standards.

In retrospect, the chain of events preceding the forced landing of this aircraft was of an operational nature and clearly shows the company's lack of safety consciousness, as well as its substandard operating practices. This situation is not limited to this particular accident but has prevailed almost continuously from the inception of this carrier's operations.

On February 8, 1949, shortly after Robin commenced operations, it received a letter of reprimand from the CAA for failure to file a proper flight plan. In August of 1949 a violation report was filed by the CAA with respect to the misuse of Robin's Air Carrier Operating Certificate. One month later a letter of reprimand was sent to Robin by the CAA for failure to keep proper airman records and flight manifests. In November of 1949 another violation report was filed by the CAA against Robin for landing an aircraft below minimums. In January 1950 a violation report was filed by the CAA charging Robin with inadequate airman records and improper manifests. On April 28, 1950, the CAA filed a violation report against Robin charging the carrier with overloading a plane by more than 1,500 pounds. In May 1950, a violation report cited Robin for failure to file a proper flight plan and to list passengers. Another violation report was filed by the CAA in June of 1950 accusing Robin of attempting an improper take-off. On February 7, 1951, a violation report was filed by the CAA setting forth twelve counts on ten flights involving overloading, excess crew time, insufficient safety belts, and improper documentation. It can thus be seen that Robin has been the subject of continuous violation reports filed by the CAA since the beginning of its operations. However, in only one case was enforcement action taken by the CAA and that was compromised by the payment of a civil penalty. Finally, on March 5, 1951, the CAA filed a complaint with the Board requesting the revocation of Robin's Air Carrier Operating Certificate.

In accordance with Amendment 42-5 of Section 42.6 of the Civil Air Regulations, Robin's Air Carrier Operating Certificate expired on June 30, 1951. The CAA then withdrew the complaint on file with the Board against Robin on August 10, 1951, asserting that further proceedings would serve no useful purpose in view of the fact that the carrier no longer held an Air Carrier Operating Certificate.^{10/} However, on December 18, 1951, the Air Carrier Operating Certificate of Robin Airlines, Inc., was reissued by the CAA which is alone responsible under the law for determining, pursuant to the standards prescribed in the Civil Air Regulations, whether or not to issue an Air Carrier Operating Certificate. In considering the past operating history of this carrier, which has been involved in continuous violations since the beginning of its operations, it is difficult to reconcile this action taken by the CAA. The complaint filed against Robin by the CAA on March 5, 1951, had never been adjudicated, and the allegations contained therein involved safety violations of a serious nature, as evidenced by the CAA's request for revocation of Robin's Air Carrier Operating Certificate.

Following the Board's investigation and public hearing in connection with this accident, Copilot O'Leary's commercial pilot certificate was revoked by the Board. The CAA requested Captain Snelser to surrender his airline transport rating which he did; he was then issued a commercial pilot rating.

Findings

On the basis of all available evidence the Board finds that:

1. On December 18, 1951¹, the CAA reissued the Air Carrier Operating Certificate to Robin Airlines, Inc., despite knowledge of the company's long history of questionable operating practices.

2. The crew and the aircraft were certificated by the CAA for the operation involved.

3. The captain of this flight was the company's chief pilot and had never been flight checked by the company.

4. The company did not effectively check crew competency or provide proper flight training for its crews.

5. The crew did not conduct the flight in compliance with the company's operations manual.

6. Prior to departing Chicago, the crew did not check the en route and forecast weather.

7. Instrument flight conditions were forecast prior to the flight's departure from Chicago, to prevail until reaching Cleveland, with intermittent visual contact weather from this point to the destination, and further indicated that weather conditions would be worse north of the intended course.

^{10/} See Appendix B.

8. The crew did not prepare, at Chicago, or maintain while in flight, an adequate Flight Plan and Log for a safe instrument flight; they attempted to prepare this at Cobourg.

9. The Weight and Balance Manifests, Passenger Manifests, and other flight forms, were improperly and inaccurately prepared; the crew attempted to correct this also at Cobourg.

10. A CAA instrument flight plan was filed, Chicago-Newark, with LaGuardia as the alternate airport.

11. Prior to take-off at Chicago, the aircraft remained near the end of the take-off runway with the engines running for a period of 58 minutes without being refueled, and the flight did not have sufficient fuel to proceed to its destination.

12. After passing Toledo, radio navigational signals were unreadable; the crew became lost and did not maintain appropriate dead reckoning headings.

13. Because of fuel exhaustion the captain made a wheels-up forced landing near Cobourg, approximately 200 miles north of the flight's intended course and at a point still 300 miles from its destination.

Probable Cause

The Board determines that the probable cause of this accident was the crew's incompetence in flight planning and navigation, fostered by failure of the company to check crew competency and provide proper flight training, which resulted in the crew becoming lost and making an off-course landing due to fuel exhaustion.

BY THE CIVIL AERONAUTICS BOARD:

/s/ DONALD W. NYROP

/s/ OSWALD RYAN

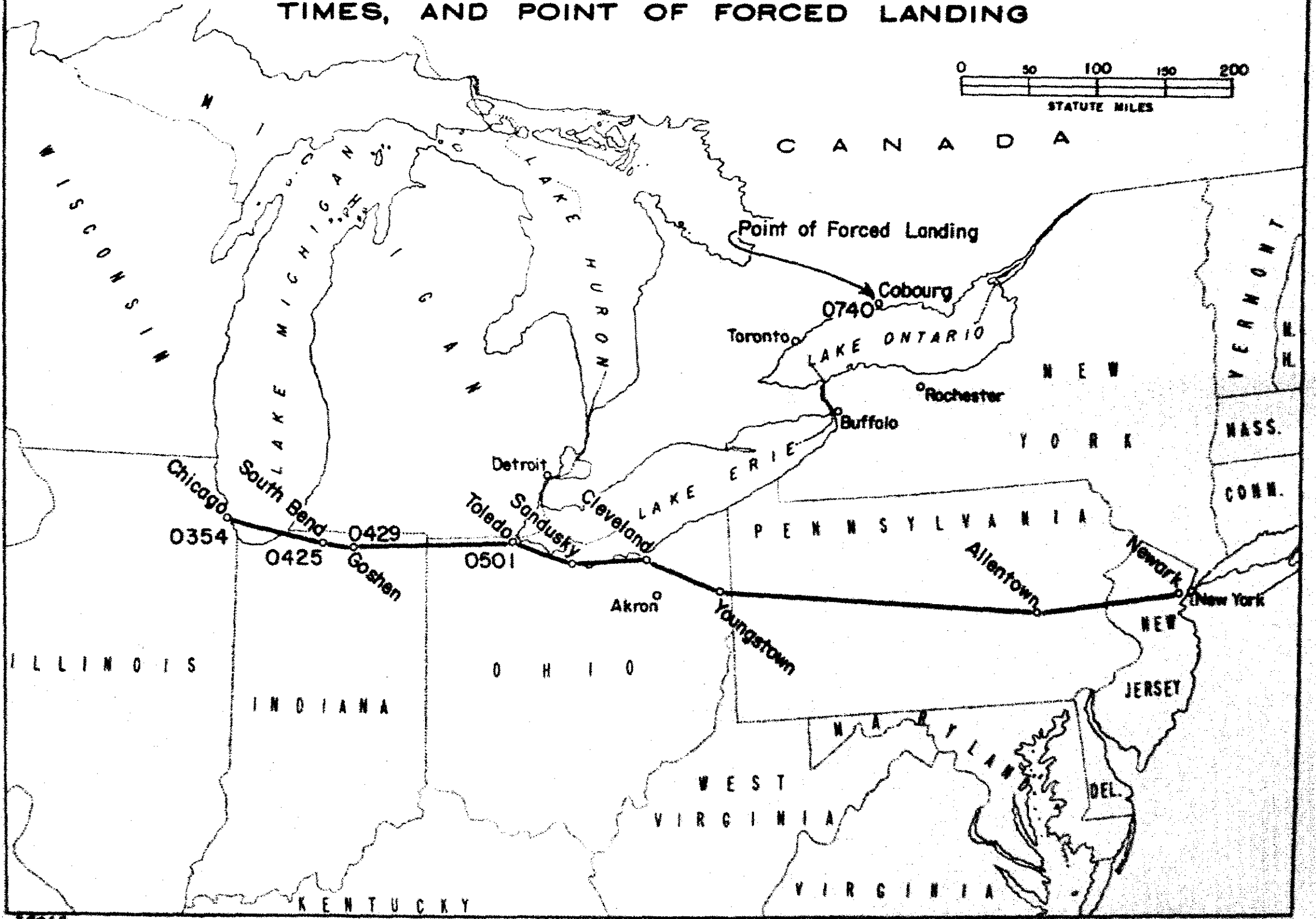
/s/ JOSH LEE

/s/ CHAN GURNEY

Joseph P. Adams, Member, did not participate in the adoption of this report.

APPENDIX "A"

MAP SHOWING INTENDED ROUTE, REPORTED TIMES, AND POINT OF FORCED LANDING



APPENDIX B

BEFORE THE CIVIL AERONAUTICS BOARD
WASHINGTON, D. C.

C. F. HORNE
Administrator of Civil Aeronautics
Complaint,

vs.

ROBIN AIRLINES, INC.
Respondent.

Docket No. SR-6-359

NOTICE OF WITHDRAWAL OF COMPLAINT

On March 5, 1951, a complaint was filed as Docket No. SR-6-359, against Respondent, citing certain violations of the Civil Air Regulations alleged to have been committed by Respondent in October and December, 1950, and January, 1951. On June 30, 1951, Respondent's Nonscheduled Air Carrier Operating Certificate expired.

In view of the fact that the Respondent is no longer the holder of a Nonscheduled Air Carrier Operating Certificate, and that further proceedings in this case would serve no useful purpose, notice is hereby given that the Complaint in this matter is withdrawn.

Dated this 10th Day of August, 1951.

Glen D. Woodmansee
Regional Attorney
Civil Aeronautics Administration