



# National Transportation Safety Board Aviation Accident Final Report

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<b>Location:</b>	SAINT MARY'S, AK	<b>Accident Number:</b>	ANC99FA028
<b>Date &amp; Time:</b>	02/11/1999, 2345 AST	<b>Registration:</b>	N31240
<b>Aircraft:</b>	Beech 1900C	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	1 Serious
<b>Flight Conducted Under:</b>	Part 135: Air Taxi & Commuter - Non-scheduled		

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## Analysis

The airline transport pilot was cleared for the localizer approach. The airplane impacted the ground 3.2 nautical miles from the runway threshold. The minimum descent altitude (MDA) for the approach was 560 feet msl, which is 263 feet above touchdown. Night, instrument meteorological conditions prevailed at the time of the accident. The surrounding terrain was flat, snow-covered, and featureless. The reported weather was 200 feet overcast, 1 1/2 miles visibility in snow, and winds of 12 knots, gusting to 32 knots. The pilot reported he was established on the final approach course, descending to the MDA, and then woke up in the snow. He said he did not remember any problems with the airplane. No preaccident mechanical anomalies were discovered with the airplane during the investigation. The airport has high intensity runway lights, sequenced flashing lead-in lights, and visual approach slope indicator lights. All airport lights and navigation aids were functioning. The airplane was not equipped with an autopilot. Captains have the option of requesting a copilot, but, the captain's pay is reduced by a portion equal to one-half the copilot's pay. The pilot had returned from the previous nights trip at 0725. He had three rest periods, four hours, two hours, and five hours 15 minutes, since his previous nights flight. Each rest period was interrupted by contact with the company. The company indicated that it is the pilot's responsibility to tell the company if duty times are being exceeded. 14 CFR 135.267 states, in part: '(d) Each assignment ... must provide for at least 10 consecutive hours of rest during the 24 hours that precedes the planned completion of the assignment.'

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's descent below the minimum descent altitude on the instrument approach. Factors were pilot fatigue resulting from the pilot's rest period being interrupted by scheduling discussions and the night weather conditions of low ceilings and whiteout.

## Findings

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Occurrence #1: IN FLIGHT COLLISION WITH TERRAIN/WATER

Phase of Operation: APPROACH - FAF/OUTER MARKER TO THRESHOLD (IFR)

### Findings

1. (F) WEATHER CONDITION - LOW CEILING
2. (F) WEATHER CONDITION - WHITEOUT
3. (F) LIGHT CONDITION - NIGHT
4. MINIMUM DESCENT ALTITUDE - EXCEEDED - PILOT IN COMMAND
5. (F) FATIGUE(FLIGHT AND GROUND SCHEDULE) - PILOT IN COMMAND

## Factual Information

### HISTORY OF FLIGHT

On February 11, 1999, at 2345 Alaska standard time, a Beech 1900C airplane, N31240, was destroyed when it collided with terrain 3.2 nautical miles north of the Saint Mary's Airport, Saint Mary's, Alaska. The solo airline transport pilot sustained serious injuries. The on-demand cargo flight was operated under 14 CFR Part 135 by Alaska Central Express, Inc., of Anchorage, Alaska, from Anchorage to Saint Mary's. The flight departed Anchorage at 2145. Night instrument meteorological conditions prevailed at the time of the accident, and an instrument flight rules (IFR) flight plan was filed.

The flight was cleared for the LOC/DME 16 instrument approach at 2325. The last radar contact with the airplane was at 2340. The radar controller observed the airplane about 10 miles north of the airport, executing the procedure turn for the approach. The flight was reported overdue at 2355. An emergency locator transmitter (ELT) signal was received by satellite about 0100. The wreckage and pilot were located about 0400 by searchers on snow machines. The airplane had broken into three sections, and both pilot seats were found about 200 feet from the cockpit. The airplane came to rest about 1/4 mile east of the localizer course centerline, about the same elevation as the airport.

The pilot told the NTSB investigator-in-charge (IIC) during an interview on February 16, and wrote in his NTSB Pilot / Operator report, that he did not recall any discrepancies with the airplane. He said that he was established on the final approach course, inside the final approach fix, and then woke up face down in the snow.

### PERSONNEL INFORMATION

The pilot holds an airline transport pilot certificate for multi-engine airplanes. He holds airplane type ratings in the Beech 1900, and the Boeing 747. His most recent first class medical certificate was issued on December 30, 1998, with no restrictions.

The pilot had accrued 12,187 hours of total flight experience at the time of the accident; 1,587 hours were in the Beech 1900C. In the previous 30 and 90 days, he had flown 91, and 206 hours, respectively. All flights were in the Beech 1900C. In the previous 30 days, the pilot had flown all flights without a copilot.

A review of the pilot's flight records revealed he had accrued 96.8 hours in the accident airplane since it was put into revenue service with the company.

The pilot was hired by the company in March 1997. He completed initial training on March 10, 1997. He completed pilot training, to include a type rating in the Beech 1900, at Flight Safety International, LaGuardia Airport, New York, on May 19, 1997.

On May 29, 1997, the pilot was administered a second-in-command, 14 CFR 135.293 and 135.299 proficiency and line check by a company check airman. He was assigned and flew as a second-in-command until he was administered a 14 CFR 135.297 instrument proficiency check on July 31, 1997. At that time, he was assigned as a pilot-in-command in the Beech 1900C.

The pilot's most recent flight check was in the Beech 1900C, on September 27, 1998, and met the requirements of 14 CFR 135.293, 297, and 299. The flight check was conducted by a company check airman.

According to company records, the pilot had flown to Saint Mary's on five occasions prior to the accident flight. On all of these flights, the airport was reporting weather greater than 1000 feet ceilings and visibility greater than 3 miles. The first three were with a two pilot crew. The last two were single pilot.

#### Flight and Duty Time

The pilot was based, and lived, in Fairbanks. He normally flew his trips from there.

The pilot flew as a pilot-in-command the night prior to the accident. According to company flight records, the pilot completed his flights at 0604 on February 11. According to the company mail records, he completed unloading the mail at 0725 on February 11, in Fairbanks.

The company scheduler / flight follower from Anchorage, contacted the cargo supervisor in Fairbanks about 1130, and asked him to send the pilot to Anchorage on the company's flight leaving Fairbanks at 1425, so he could fly the accident flight. According to the cargo supervisor, he responded that he would not call the pilot because he had just got in and was tired.

About 1130, the pilot was called at home by the company scheduler / flight follower from Anchorage, and asked if he would fly the accident flight to Saint Mary's. At 1330 the pilot arrived at the company's base in Fairbanks. The cargo supervisor told an FAA inspector that when the accident pilot arrived for the flight to Anchorage he looked "awfully tired." The flight to Anchorage arrived at 1519. According to the pilot, he went to his brother's home and slept. At 2045, he returned to the company base in Anchorage to begin preparation for the accident flight.

When questioned by an FAA inspector about assigning the pilot to the accident flight, both the Director of Operations, and the Anchorage crew scheduler / flight follower replied that they don't assign extra flights. Rather, the company offers them to pilots. The PIC, and the crew scheduler, share responsibility to tell the company if the pilot is exceeding flight or duty times. The Director of Operations also stated that he did not consider the jumpseat flight an assignment, but rather, the same as an airline pilot commuting from his home to an assigned domicile. According to the FAA inspector, he was told by the Fairbanks cargo supervisor that the accident pilot stated "if you turn down flights, you will not be called for flights in the future." The Director of Operations wrote to the NTSB IIC that when company officials asked both the pilot, and cargo supervisor if they had said this, they both denied having made such a statement.

The NTSB IIC discussed the pilot's assignment to the flight with the Director of Operations on June 28. The Director of Operations told the IIC that the company did not contact the pilot. He provided copies of the company telephone records which showed no calls from the Anchorage scheduler's number to the pilot's home. Three telephone calls were placed to the Fairbanks freight company number; at 0707, at 1104, and at 1433. He further provided a record showing a call placed from the pilot's home, to the Anchorage scheduler's "1-800" number at 1253. The Director of Operations stated that the pilot called the company asking for a flight, because he wanted the extra flight time. He indicated that there were crews available in Anchorage to fly the accident flight, but the accident pilot was allowed to take the flight because he asked for it. He further said that jumpseating to Anchorage was the pilot's choice.

The NTSB IIC attempted between June 29, and July 14, to hold a telephone interview with the pilot to clarify how he was assigned to the accident flight. The IIC was unable to reach the

pilot, or the pilot's brother, who told the IIC he was acting as the pilot's legal representative and requested that any interview be conducted from the brother's law offices in Fairbanks. Telephone calls by the NTSB IIC were not returned, and a series of written questions was sent to the pilot via certified mail. The questions were received by the pilot on July 16. No response to these questions was received by the IIC as of August 30, 1999.

In the 24 hours prior to the accident, the pilot had flown 5 hours 54 minutes, and been on duty for 12 hours 30 minutes. During this 24 hours, he had three interrupted rest periods. One of four hours, between 0730 and 1130. Two hours rest from 1130 to 1330, after which he traveled via jumpseat on a company airplane to Anchorage. He then had another rest period of five hours 10 minutes, after which he arrived at the company base in Anchorage for the accident flight.

#### AIRCRAFT INFORMATION

The airplane was a Beech 1900C, and was used in an all cargo configuration. The airplane was certified as a single pilot airplane. The minimum crew required by the limitations section of the Pilot Operating Handbook was one pilot.

The airplane was maintained on a Beech periodic maintenance schedule, under an Approved Aircraft Inspection Program (AAIP). This was authorized on the company's Operating Specifications in paragraph D73. This program contains inspections performed approximately every 100 hours.

#### METEOROLOGICAL INFORMATION

The pilot was provided current and forecast weather by the company prior to departing Anchorage. The company weather packages are compiled by the dispatchers, who obtain National Weather Service observations and forecasts. They also access weather through the internet service "PILOTbrief." The weather package recovered from the pilot's flight bag included the Saint Mary's 2000 observation which stated, in part: winds 120 degrees at 19 knots gusting to 29 knots, 9 miles visibility, and 300 feet overcast ceilings. The general outlook provided by "PILOTbrief" said: "Tonight...snow showers. Areas of blowing snow this evening. Winds 15 to 30 mph this evening...diminishing a bit."

The pilot told the NTSB IIC, and the last Air Route Traffic Control Center (ARTCC) controller who spoke with him, that he had obtained the most recent Saint Mary's weather from the automated surface observing system (ASOS) broadcast.

The ASOS at Saint Mary's, taken at 2255, was a 200 feet overcast ceiling, 3 miles visibility, winds from 110 degrees at 23 knots gusting to 31 knots, altimeter 29.57, and a temperature of -15 degrees Centigrade.

The ASOS at Saint Mary's, taken at 2335, was a 200 feet overcast ceiling, 1 1/2 miles visibility, winds from 130 degrees at 12 knots gusting to 32 knots, altimeter 29.59, and a temperature of -14 degrees Centigrade.

The ASOS at Saint Mary's, taken at 2355, was a 200 feet overcast ceiling, 2 1/2 miles visibility, winds from 150 degrees at 14 knots gusting to 27 knots, altimeter 29.58, and a temperature of -15 degrees Centigrade.

#### AIDS TO NAVIGATION

The FAA performed a postaccident flight inspection of the non-directional beacon (NDB),

Localizer, and distance measuring equipment (DME) on February 13. According to the Flight Inspection Report-FAA Form 8240-19 (attached), all nav aids and lighting systems tested "satisfactory." After the flight inspection was completed, FAA ground technicians checked the calibration of the transmitting equipment, and these were within specified parameters.

The Localizer-DME Runway 16 approach has a final approach course of 164 degrees magnetic. This approach has a minimum descent altitude (MDA) of 560 feet msl. The height above touchdown at this altitude is 263 feet. The weather minima published in the instrument approach procedure to successfully complete the approach is a ceiling of 300 feet, and flight visibility of 1 mile.

14 CFR 91.175 ( c ) states, in part: "no pilot may operate an aircraft...below the authorized MDA...unless...the flight visibility is not less than the visibility prescribed in the standard instrument approach procedure being used..."

14 CFR 135.225 ( a ) states, in part: "No pilot may begin an instrument approach procedure to an airport unless- (2) The latest weather report issued by that weather reporting facility indicates that weather conditions are at or above the authorized IFR landing minimums for that airport."

The FAA Terminal Approach Procedures (TERPS) paragraph 310 states, in part: "The weather minimums shall include the visibility required by the procedure, and may include a ceiling value which is equal to or greater than the height of the MDA or DH above airport elevation."

#### COMMUNICATIONS

The pilot's last radio contact was with the ARTCC at 2325, when the flight was cleared for the Localizer/DME Runway 16 approach. The pilot reported he had received the Saint Mary's weather, and was descending out of 20,000 feet.

The ARTCC provided the NTSB IIC with a plot of radar tracking data from the accident airplane. The plot depicted the airplane approaching the NDB at St. Mary's from the east, at 4,100 feet msl, and then turning northbound at 2337. At 2340, the track reversed course, and descended to 2,300 feet msl. The last altitude recorded from the airplane was 2,100 feet msl at 2341:56, with the airplane tracking 145 degrees. No altitude was received from the airplane for the final one minute of radar positions.

The last radar contact was at 2342:56, with the airplane tracking 145 degrees at a position of 62 degrees 11 minutes 51 seconds North latitude, 163 degrees 13 minutes 22 seconds West longitude. This position is about seven miles north of the airport, and about three miles north of the accident site.

On April 19, 1999, the NTSB IIC installed the VHF communications, and VHF navigation, control heads from the accident airplane into another company Beech 1900C. The radios were then turned on and the following stored frequencies were read from the radio displays:

Active	Standby COM 1:	122.3 MHz (CTAF)
124.0 MHz (Anchorage Center)	COM 2:	unreadable NAV 1: 109.1 MHz
(KSM Localizer) 117.2 MHz (Sparrevohn)	NAV 2:	114.3 MHz (Anchorage)
117.2 MHz (Sparrevohn) ADF:	unreadable DME:	unreadable

#### AERODROME INFORMATION

The airport is located in an area of gently sloping hills, characterized by tundra and flat terrain.

There are two runways, oriented 160 / 340 degrees magnetic, and 060 / 240 degrees magnetic. Only runway 16 / 34 is serviced by an instrument approach. The airport elevation is 311 feet above sea level (msl).

Runway 16 / 34 is a 6,003 feet long by 150 feet wide gravel surface.

Runway 16 is equipped with visual approach slope indicator (VASI) lights, omnidirectional approach lights (ODALS), runway end identifier lights (REIL), pilot-controlled medium or high intensity runway edge lights, and a rotating beacon. The ODALS incorporate runway threshold lights, and a 1,500 feet long set of sequenced flashing lead-in lights to the threshold. All the lights were operational at the time of the accident.

The communications available at the airport are a common traffic advisory frequency (CTAF), and an ASOS. The ASOS was operating at the time of the accident. The pilot told the NTSB IIC that he had received the observation.

#### WRECKAGE AND IMPACT INFORMATION

The NTSB IIC began his on-site investigation about 1100 on February 15. The director of operations and chief pilot for the company, and a representative from Raytheon Aircraft Company (Beech).

No evidence of preimpact anomalies were found.

The airplane came to rest on a bearing of 345 degrees magnetic, at 3.2 nautical miles from the runway threshold. The wreckage site was at 4.2 DME from the DME transmitter. The runway threshold is at 1.0 DME. The site was 1 degree to the left (east) of the inbound final approach course. The NTSB IIC flew over the wreckage site while monitoring the localizer course in a chartered airplane. The wreckage was located 1.3 dots to the left of the localizer course. The wreckage path groundtrack was converging with the final approach course at a two degree angle.

The terrain conditions along the wreckage path consisted of essentially level tundra, covered by wind-blown, packed snow. The elevation of the wreckage path was about 300 feet msl, and appeared level with the runway VASI lights, which could be seen from the location of the initial ground scars.

The wreckage path was oriented along an axis of 170 degrees magnetic, and extended about 1,100 feet. Three parallel furrows spaced six feet, and 13 feet apart, were the first contact marks visible. The nose wheel assembly was located at the end of the center furrow, 60 feet from the first visible mark.

Seven of the eight composite propeller blades were found in a fragmented condition, within the first 180 feet of the wreckage path. The entire vertical and horizontal stabilizer assembly, and both the left and right elevator tips, were located between 270 and 300 feet along the wreckage path.

The outboard nine feet of the right wing, and the right aileron, were located 400 feet along the wreckage path. The nose mounted radome was located at 450 feet. The left main landing gear assembly was at 530 feet, and the right main landing gear was at 630 feet.

A debris field, containing general cargo material and soft drinks, was spread across an area 250 feet wide, between 720 and 830 feet along the wreckage path.

The observer jump seat, the copilot seat, and the pilot seat were found between 880 and 940 feet.

The main fuselage, with both wings and engines attached, came to rest 1,100 feet from the initial furrows, on a magnetic heading of 070 degrees. The fuselage was split circumferentially, six inches forward of the forward passenger door. The cockpit section separated from the fuselage structure, with the flight control cables remaining attached. These two major fuselage sections remained in close proximity to each other. The cockpit was rotated 90 degrees to the left side of the main fuselage.

The main fuselage retained its tubular shape. The forward airstair door, aft cargo door, and emergency exit hatch, could be opened and closed normally.

Both engine power turbine section cases were torsionally twisted. All four composite propeller blades, on both engines, were shattered at the blade hubs. The remaining blade roots were at a fine pitch (high rpm) setting.

The cockpit was filled with drifted snow which was solidly packed around all the gauges and switches. The NTSB IIC brushed snow from the instrument panel, and then examined the switch positions and instruments.

The altimeter setting selected on the pilot's altimeter was 29.59 inches Hg. The altimeter setting selected on the copilot's altimeter was 29.49 inches Hg.

The pilot's heading indicator pointed to 145 degrees. The course needle was set to 168 degrees. The heading "bug" was set to 120 degrees. The pilot's radio magnetic indicator (RMI) indicated 232 degrees. The number one needle was selected to "ADF" and pointed to 185 degrees. The number two needle was selected to "NAV" and pointed 224 degrees.

The left pitot heat and right pitot heat switches were both found in the "OFF" position. The left engine anti-ice switch was "ON" and the right engine anti-ice switch was "OFF." The pilot's windshield anti-ice was "ON" and the copilot's windshield anti-ice was "OFF."

The rotating beacon, the strobe lights, and the left landing light switches were "ON." The right landing light switch was "OFF."

The radio altimeter was "ON" with the altitude "bug" set to 250 feet. The altitude alert was "ON" with the altitude selected at 2,500 feet.

The landing gear handle was selected "down." The trailing edge flap control was set to the 20 degree position. The trailing edge flaps were extended 20 degrees.

The cargo nets located at the forward end of the cargo compartment remained intact and contained the majority of the cargo within the interior of the fuselage. The fuselage was visibly dimpled inward at the attachment points for the cargo nets. There was an approximately one foot area around the edges of the net, past which small items could pass. The cargo which remained inside the fuselage was weighed, and totaled 4,692 pounds.

#### MEDICAL AND PATHOLOGICAL INFORMATION

The pilot sustained a fractured left knee, and bruises and contusions to both shoulders and pelvic areas. According to rescuers, the pilot appeared hypothermic, but did not sustain frostbite injuries.

#### SURVIVAL ASPECTS

The pilot and his seat were ejected from the airplane during the crash sequence. The seat and seat rails separated from the floor structure, and came to rest 200 feet from the fuselage. The cockpit rotated about the left side of the fuselage structure as it separated, creating an opening forward and right of the pilot's seat position.

The pilot reported he regained consciousness laying in the snow, and does not remember getting out of his seat. The pilot's four-point seat belt and shoulder harness assembly were not damaged, and the buckle assembly operated normally when tested by the NTSB IIC. The pilot sustained bruises to his hips, collar bone, and chest, in the area of the restraints.

The pilot told the NTSB IIC that after regaining consciousness, he was unable to stand, and crawled back to the airplane. He said that his hands were too cold to open the nose compartment where the survival kit was stored. He crawled into the fuselage through the opening in the cockpit, and sought shelter among the cargo. The pilot indicated that after warming his hands on his abdomen sufficiently for them to begin to hurt, he crawled back to the nose, opened the nose compartment, and retrieved the survival kit containing space blankets. He then used these to attempt to stay warm while inside the fuselage.

After four hours, searchers on snow machines from Saint Mary's located the airplane, and transported him to town.

#### TESTS AND RESEARCH

The Bendix/King KLN-90B Global Positioning System (GPS) transceiver was removed and tested at the manufacturer's facility in Olathe, Kansas on April 20, 1999. The testing was supervised by an FAA avionics inspector from the Kansas City, Missouri, FSDO. Retrieval of nonvolatile memory information revealed there was no active flight plan entered into the GPS. The unit was providing navigation information "Direct-To" the Saint Mary's Non-Directional Beacon (NDB) at the time that power was removed from the receiver. The NDB is located at the airport.

On March 1, the NTSB IIC installed the receiver-transmitters from the accident airplane's navigation radios in an operable company Beech 1900C. The number 2 VHF-NAV radio, the ADF, and the DME receivers operated and self-tested (BITE) normally. The number 1 VHF-NAV receiver did not self-test normal, but did receive the local Anchorage VOR station, and the associated RMI needle and course bar displayed proper information in the cockpit. The case of the number 1 VHF-NAV radio was visibly damaged.

The NTSB IIC applied power with no antenna attached to the KLN-90B GPS. The test page had a barometric altimeter setting of 29.44 set in, and an altitude of 600 feet.

The KAS-297A altitude selector displayed 2,500 feet.

A bench test of the "NAV/GPS" light capsules revealed that the "NAV" capsule was illuminated. Calibration tests of the captain's altimeter and vertical speed indicator were normal.

#### ADDITIONAL INFORMATION

##### Company information

At the time of the accident, the company operated a fleet of five Beech 1900C, and three Cessna 207 airplanes. Four of the Beech 1900Cs were in operation in Alaska, and one was outside the state undergoing modifications. The five Beech 1900Cs did not have standardized cockpit

configurations. All were equipped with radar altimeters, and none with autopilots.

The company was authorized to conduct on-demand cargo only operations under 14 CFR Part 135.

The company General Operations Manual (GOM), chapter 2, states, in part: "Pilots must report ready for duty at least one hour before departure. A weather briefing must be received as soon as possible after arrival for duty." The company dispatchers provide the pilots with weather information, load manifests, and weight and balance calculations. All company dispatchers are FAA certificated dispatchers.

Chapter 2 also states: "Captain...1. Specific duties are as follows:... C. Verifies that the crew is certified and within the limitations of flight and duty time."

The GOM, chapter 3, Flight Operations, states, in part: "Flight Release. The responsibility for flight release is shared jointly by the pilot in command and those persons exercising operational control. Both parties will bring about flight release only if they both believe the flight can be made safely."

Chapter 3 also states: "Approaches cannot be commenced when the prevailing weather reported is below the weather minimums for the airport."

#### Pay method

Pilots for the company are paid by the flight hour. According to the company Director of Operations, at the time of the accident, the captains had a choice of flying single pilot, or they could request a copilot. If the captain chose to fly with a copilot, the captain's per hour flight pay was reduced by one-half the amount the copilot was paid. According to the accident pilot's flight and duty records, he was paid \$55.00 per hour if he flew single pilot, and \$40.00 per hour if he chose to fly with a copilot.

#### Flight and Duty time regulations

14 CFR Part 135.267, Flight time limitations and rest requirements: Unscheduled one- and two-pilot crews, states, in part: "(d) Each assignment ... must provide for at least 10 consecutive hours of rest during the 24-hour period that precedes the planned completion of the assignment."

#### FAA Oversight

The Anchorage Flight Standards District Office (FSDO) is the Certificate Holding District Office (CHDO) for the company. The Principal Operations Inspector (POI) for the company had been assigned since September 16, 1998. The previous POI had been assigned from May 1, 1997 to September 16, 1998. The company's original POI was assigned from January 1996, when the company was initially certificated, until May 1, 1997.

The company's Operations Specifications, paragraph A004(b), stated: "The certificate holder is not authorized and shall not: Use an autopilot in lieu of a second-in-command."

The company was not specifically authorized to conduct IFR single pilot operations without a copilot or autopilot in their Operations Specifications. According to the POI, and the company Director of Operations, this was acceptable because the company did not carry passengers, and the airplane was certified for single pilot operations.

#### Wreckage release

The retained components were released to the owner's representative on February 15, February 19, and March 17, 1999.

## Pilot Information

<b>Certificate:</b>	Airline Transport; Commercial; Flight Engineer	<b>Age:</b>	45, Male
<b>Airplane Rating(s):</b>	Multi-engine Land; Single-engine Land; Single-engine Sea	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	Seatbelt, Shoulder harness
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 1 Valid Medical--no waivers/lim.	<b>Last Medical Exam:</b>	12/30/1998
<b>Occupational Pilot:</b>		<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	12326 hours (Total, all aircraft), 1587 hours (Total, this make and model), 266 hours (Last 90 days, all aircraft), 91 hours (Last 30 days, all aircraft), 7 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Manufacturer:</b>	Beech	<b>Registration:</b>	N31240
<b>Model/Series:</b>	1900C 1900C	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	No
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	UC-28
<b>Landing Gear Type:</b>	Retractable - Tricycle	<b>Seats:</b>	3
<b>Date/Type of Last Inspection:</b>	02/01/1999, AAIP	<b>Certified Max Gross Wt.:</b>	17600 lbs
<b>Time Since Last Inspection:</b>	132 Hours	<b>Engines:</b>	2 Turbo Prop
<b>Airframe Total Time:</b>	19588 Hours	<b>Engine Manufacturer:</b>	P&W
<b>ELT:</b>	Installed, activated, aided in locating accident	<b>Engine Model/Series:</b>	PT6A-65B
<b>Registered Owner:</b>	RAYTHEON AIRCRAFT CREDIT CORP.	<b>Rated Power:</b>	1100 hp
<b>Operator:</b>	ALASKA CENTRAL EXPRESS, INC.	<b>Air Carrier Operating Certificate:</b>	Air Cargo
<b>Operator Does Business As:</b>	ACE	<b>Operator Designator Code:</b>	YADA

## Meteorological Information and Flight Plan

Conditions at Accident Site:	Instrument Conditions	Condition of Light:	Night/Dark
Observation Facility, Elevation:	KSM, 311 ft msl	Observation Time:	2355 AST
Distance from Accident Site:	4 Nautical Miles	Direction from Accident Site:	165°
Lowest Cloud Condition:	Unknown / 0 ft agl	Temperature/Dew Point:	-15° C / -16° C
Lowest Ceiling:	Overcast / 200 ft agl	Visibility	2 Miles
Wind Speed/Gusts, Direction:	14 knots/ 27 knots, 150°	Visibility (RVR):	0 ft
Altimeter Setting:	29 inches Hg	Visibility (RVV):	0 Miles
Precipitation and Obscuration:			
Departure Point:	ANCHORAGE, AK (ANC)	Type of Flight Plan Filed:	IFR
Destination:	(KSM)	Type of Clearance:	IFR
Departure Time:	2145 AST	Type of Airspace:	Class G

## Airport Information

Airport:	SAINT MARY'S (KSM)	Runway Surface Type:	Gravel
Airport Elevation:	311 ft	Runway Surface Condition:	Snow--dry
Runway Used:	16	IFR Approach:	Localizer Only
Runway Length/Width:	6003 ft / 150 ft	VFR Approach/Landing:	None

## Wreckage and Impact Information

Crew Injuries:	1 Serious	Aircraft Damage:	Substantial
Passenger Injuries:	N/A	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Serious	Latitude, Longitude:	

## Administrative Information

Investigator In Charge (IIC):	MATTHEW L THOMAS	Adopted Date:	06/21/2000
Additional Participating Persons:	DAVID MCGLOTHLEN(FAA); ANCHORAGE, AK DONALD KNUITSEN (RAYTHEON); WICHITA, KS MICHAEL MURPHY(DIR OPS-ACE); ANCHORAGE, AK CRAIG STRAUSS(CHIEF PLT-ACE); ANCHORAGE, AK		
Publish Date:			
Investigation Docket:	NTSB accident and incident dockets serve as permanent archival information for the NTSB's investigations. Dockets released prior to June 1, 2009 are publicly available from the NTSB's Record Management Division at <a href="mailto:pubinq@ntsb.gov">pubinq@ntsb.gov</a> , or at 800-877-6799. Dockets released after this date are available at <a href="http://dms.nts.gov/pubdms/">http://dms.nts.gov/pubdms/</a> .		

The National Transportation Safety Board (NTSB), established in 1967, is an independent federal agency mandated by Congress through the Independent Safety Board Act of 1974 to investigate transportation accidents, determine the probable causes of the accidents, issue safety recommendations, study transportation safety issues, and evaluate the safety effectiveness of government agencies involved in transportation. The NTSB makes public its actions and decisions through accident reports, safety studies, special investigation reports, safety recommendations, and statistical reviews.

The Independent Safety Board Act, as codified at 49 U.S.C. Section 1154(b), precludes the admission into evidence or use of any part of an NTSB report related to an incident or accident in a civil action for damages resulting from a matter mentioned in the report.