



Aviation Investigation Final Report

Location:	TELLER, Alaska	Accident Number:	ANC93FA027
Date & Time:	January 18, 1993, 08:50 Local	Registration:	N1776G
Aircraft:	CESSNA 310	Aircraft Damage:	Destroyed
Defining Event:		Injuries:	1 Fatal
Flight Conducted Under:	Part 91: General aviation		

Analysis

THE AIRPLANE COLLIDED WITH NEARLY LEVEL TERRAIN ABOUT 3 MI SE OF THE DESTINATION AIRPORT. THE TERRAIN WAS SNOW COVERED, FEATURELESS, UNILLUMINATED, AND THE NIGHT SKY WAS VERY DARK. THE AIRPORT IS NOT SERVED BY ANY NAVIGATION AIDS. NAVIGATION IN THE AREA IS DONE BY 'PILOTAGE.' WITNESS REPORTS INDICATED THE VISIBILITY OF GROUND REFERENCE OBJECTS WAS NOT POSSIBLE DUE TO THE TOTAL DARKNESS AND LACK OF CONTRAST WITH COMPLETE SNOW COVERED TERRAIN. THE ACCIDENT OCCURRED PRIOR TO THE ONSET OF CIVIL TWILIGHT. NO RECORD OF PRE-DAWN COMPANY FLIGHTS BY THE PILOT DURING THE PAST 90 DAYS WERE FOUND. CESSNA AIRCRAFT COMPANY PROVIDES A WARNING 'FEATURELESS TERRAIN ILLUSION, AN ABSENCE OF GROUND FEATURES, AS WHEN LANDING OVER WATER, DARKENED AREAS AND TERRAIN MADE 'FEATURELESS BY SNOW' CAN CREATE THE ILLUSION THAT THE AIRPLANE IS AT A HIGHER ALTITUDE THAN IT ACTUALLY IS. THE PILOT WHO DOES NOT RECOGNIZE THIS ILLUSION WILL TEND TO FLY A LOWER APPROACH.'

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: THE PILOT-IN-COMMAND'S FAILURE TO MAINTAIN AN ADEQUATE TERRAIN AVOIDANCE ALTITUDE. FACTORS WHICH CONTRIBUTED TO THE ACCIDENT WERE THE DARK NIGHT AND FEATURELESS SNOW COVERED TERRAIN, BOTH WHICH CREATED A 'FEATURELESS TERRAIN ILLUSION' WHICH PROBABLY LED THE PILOT TO VISUALLY OVERESTIMATE HIS ALTITUDE.

Findings

Occurrence #1: IN FLIGHT COLLISION WITH TERRAIN/WATER

Phase of Operation: DESCENT - NORMAL

Findings

1. (F) LIGHT CONDITION - DARK NIGHT
2. (F) TERRAIN CONDITION - SNOW COVERED
3. (C) PROPER ALTITUDE - NOT MAINTAINED - PILOT IN COMMAND
4. (F) VISUAL/AURAL DETECTION - PILOT IN COMMAND

Factual Information

Pilot Information

Certificate:	Airline transport	Age:	37, Male
Airplane Rating(s):	Single-engine land; Single-engine sea; Multi-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	Glider; Helicopter	Restraint Used:	
Instrument Rating(s):	Airplane	Second Pilot Present:	
Instructor Rating(s):	Airplane single-engine; Instrument airplane	Toxicology Performed:	Yes
Medical Certification:	Class 1 Valid Medical-w/ waivers/lim	Last FAA Medical Exam:	December 2, 1992
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	
Flight Time:	12368 hours (Total, all aircraft), 1127 hours (Total, this make and model), 11768 hours (Pilot In Command, all aircraft), 192 hours (Last 90 days, all aircraft), 39 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	CESSNA	Registration:	N1776G
Model/Series:	310 310	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	310R0043
Landing Gear Type:	Retractable - Tricycle	Seats:	6
Date/Type of Last Inspection:	January 11, 1993 100 hour	Certified Max Gross Wt.:	5500 lbs
Time Since Last Inspection:	12 Hrs	Engines:	2 Reciprocating
Airframe Total Time:	4914 Hrs	Engine Manufacturer:	CONTINENTAL
ELT:	Installed, activated, aided in locating accident	Engine Model/Series:	IO-520-M
Registered Owner:	OLSON AIR SERVICE, INC	Rated Power:	300 Horsepower
Operator:	OLSON AIR SERVICE, INC	Operating Certificate(s) Held:	On-demand air taxi (135)
Operator Does Business As:	OLSON AIR SERVICE	Operator Designator Code:	FWWA

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Night/dark
Observation Facility, Elevation:		Distance from Accident Site:	
Observation Time:		Direction from Accident Site:	
Lowest Cloud Condition:	Unknown	Visibility	
Lowest Ceiling:	None	Visibility (RVR):	
Wind Speed/Gusts:	/	Turbulence Type Forecast/Actual:	/
Wind Direction:	0°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29 inches Hg	Temperature/Dew Point:	-36°C / -18°C
Precipitation and Obscuration:			
Departure Point:	NOME , AK (OME)	Type of Flight Plan Filed:	Company VFR
Destination:		Type of Clearance:	None
Departure Time:	08:25 Local	Type of Airspace:	Class D

Airport Information

Airport:		Runway Surface Type:	
Airport Elevation:		Runway Surface Condition:	
Runway Used:	0	IFR Approach:	None
Runway Length/Width:		VFR Approach/Landing:	

Wreckage and Impact Information

Crew Injuries:	1 Fatal	Aircraft Damage:	Destroyed
Passenger Injuries:		Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Fatal	Latitude, Longitude:	65.249252,-166.359237(est)

Administrative Information

Investigator In Charge (IIC):	Herlihy, Douglas
Additional Participating Persons:	DAVID A SMITH; FAIRBANKS , AK JEFFRY F WHEELER; NOME , AK HUGH A KEITH; FAIRBANKS , AK DENNIS DELO; FAIRBANKS , AK
Original Publish Date:	February 28, 1994
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=5834

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