



Bell 206L-3 Strikes Water While Maneuvering To Land on Offshore Platform in IMC

The U.S. National Transportation Safety Board said that the 18,913-hour commercial pilot was unable to control the helicopter after weather conditions deteriorated during a flight over the Gulf of Mexico.

FSF Editorial Staff

About 1049 local time Oct. 10, 2003, a Bell 206L-3 LongRanger struck the water in the Gulf of Mexico off the coast of the United States after the pilot's loss of control while maneuvering for landing near an offshore natural-gas-production platform. The helicopter was destroyed, and the pilot and both passengers were killed.

The U.S. National Transportation Safety Board (NTSB) said, in its final report, that the probable cause of the accident was "the pilot's loss of control following an inadvertent encounter with adverse weather conditions." Contributing factors were "the prevailing thunderstorms, the low ceilings and the miscommunication between the pilot and the company's communication center in obtaining in-flight weather advisories, including aircraft location."

The pilot had been employed by Petroleum Helicopters Inc. (PHI) of Lafayette, Louisiana, U.S., since 1980 and had 18,913 flight hours, including 12,416 flight hours in Bell 206 helicopters and 67 flight hours during the previous 30 days in the accident make and model. He had been involved in no prior accidents, incidents or violations. His initial helicopter training was in the armed forces of South Vietnam in 1966. He had a commercial helicopter license, with no additional ratings, and a



second-class medical certificate, issued Feb. 11, 2003, with the restriction "holder shall possess glasses for near [vision] and intermediate vision."

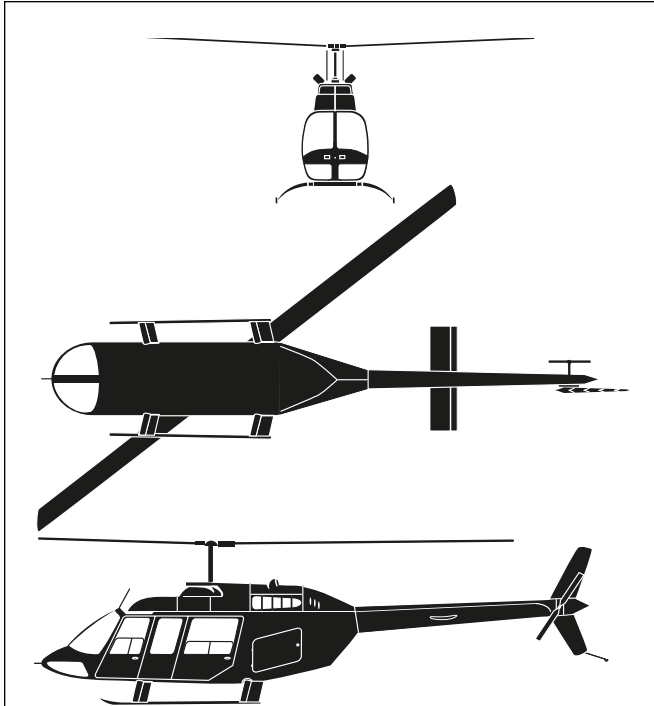
On April 4–5, 2003, the pilot had satisfactorily completed visual flight rules (VFR) recurrent training requirements in accordance with U.S. Federal Aviation Regulations Part 135 (*Commuter and On-demand Operations*), including flight training device sessions on normal procedures and emergency procedures, including weather minimums, passenger briefings and heliport requirements; recognizing and avoiding severe weather situations; inadvertent entry into and escape

from instrument meteorological conditions (IMC); emergency egress; and ditching procedures.

The pilot had been assigned on Aug. 8, 2002, to offshore platform West Cameron 509 (WC 509), about 80 nautical miles (148 kilometers) south of Cameron, Louisiana, in the Gulf of Mexico. He commuted from the PHI base near Sabine Pass, Texas, and had begun a 14-day work schedule Oct. 2, 2003. On Oct. 9, he reported for duty at Sabine Pass at 0630; he ended his duty day on WC 509 at 1700, after about three hours of flight time. The morning of the accident, he reported for duty on WC 509 at 0630.

The accident helicopter was manufactured in 1989. Maintenance records revealed no anomalies and no open discrepancies, and there were no deferred maintenance items. (The last two days of log sheets were in the helicopter and were not recovered.)

A 12-month/1,200-hour airframe inspection was completed Jan. 11, 2003, at 12,902 flight hours. A 300-hour maintenance



Bell 206L LongRanger

The Bell 206L LongRanger first was flown in 1974. Developed from the Bell 206B JetRanger II, the 206L has a fuselage that is about 2.0 feet (0.6 meter) longer than that of the 206B and a more powerful engine. The engine in the 206L-3 LongRanger III is a 650-shaft-horsepower (485-kilowatt) Rolls-Royce Allison 250-C30P turboshaft engine, with a maximum continuous rating of 557 shaft horsepower (415 kilowatts).

The 206L-3 has a fuel capacity of 110 U.S. gallons (416 liters) and a range at sea level of 320 nautical miles (592 kilometers); range at 5,000 feet is 360 nautical miles (666 kilometers).

Maximum takeoff weight is 4,150 pounds (1,882 kilograms), and standard empty weight is 2,200 pounds (998 kilograms).

The 206L-3 has a cabin volume of 83 cubic feet (2.4 cubic meters) and can be configured to seat a two-member crew and five passengers. When the helicopter is used for emergency medical services operations, it can accommodate as many as two patients on litters and two ambulatory patients or two medical personnel.

The 206L-3's maximum level speed at sea level is 130 knots, and cruising speed at sea level is 110 knots. Service ceiling at maximum cruise power is 20,000 feet; hovering ceiling in ground effect is 16,500 feet, and hovering ceiling out of ground effect is 5,400 feet. ♦

Source: *Jane's All the World's Aircraft*

inspection and a 150-hour maintenance inspection were completed Oct. 5, 2003, at 13,669 flight hours. On Oct. 9, 2003, flight time totaled 13,692 hours.

A 400-hour inspection and a 150-hour inspection of the engine were completed Sept. 26, 2003, when the engine had 10,902 flight hours. On Oct. 9, 2003, total time on the engine was 19,961 hours.

Weight and balance were within limits.

The helicopter did not have a cockpit voice recorder or a flight data recorder; neither was required.

Two Helidecks Installed on Offshore Platform

Helicopter Association International data show that more than 5,500 offshore oil- and natural-gas-production platforms are located in the Gulf of Mexico off the coastline of the southern United States, the report said. For oil/gas production identification, the Gulf of Mexico is divided into block areas, three statute miles (five kilometers) long and three statute miles wide.

WC 509 is a large natural-gas-production platform within block area West Cameron 509. WC 509 has two helidecks — one atop the living quarters platform and the other atop the production platform. Both helidecks are about 50 feet (15 meters) long and 50 feet wide; the platforms on which the two helidecks are located are about 300 feet (92 meters) apart and are connected by a walkway.

The accident helicopter usually was secured to a helideck on WC 509 at night and was flown during the day by a pilot who typically worked for 14 days, then had 14 days off. About every three days, the helicopter was flown to the Sabine Pass base for a general maintenance inspection and scheduled maintenance. During the days on WC 509, the pilot conducted daily inspections of the helicopter.

Intense Thunderstorms Reported Near Accident Site

The PHI Communications Center (COMCTR) was equipped with weather radar graphics that showed oil platforms with near-real-time radar echoes on the display. The center also had satellite radar data that were displayed every 12 minutes. The center provided a weather briefing for all PHI pilots at the beginning of the workday and received pilot reports on weather.

The U.S. National Weather Service said that on the morning of the accident, a trough of low pressure had moved over the area; the trough — accompanied by scattered very heavy thunderstorms to intense thunderstorms, with tops at about 48,000 feet — was near WC 509 when the accident occurred.

Weather observations at the West Cameron 560 platform, about 16 nautical miles (30 kilometers) southwest of the accident site, at 1119 included wind from 160 degrees at 14 knots, visibility of three statute miles with rain and a 600-foot overcast. Weather observations at other platforms in the area at about the time of the accident included visibilities ranging from 0.3 statute mile (0.5 kilometer) to six statute miles (10 kilometers) and ceilings as low as 100 feet.

The morning of the accident, the pilot flew the helicopter from WC 509 at 0832 and arrived at platform High Island 330 at 0854. The accident occurred on the second flight, which began at High Island 330 at 1006; the estimated arrival time at WC 509 was 1030. Soon after departure, the pilot said that the helicopter had “one hour and 35 minutes of fuel.”

At 1035, the pilot told COMCTR that he had “run into the rain now, and [I’m] just trying to get out.”

COMCTR said, “OK. Do you want me to add about 10 more minutes to your ETA [estimated time of arrival]?”

The pilot replied, “OK, you can show me landing now.”

A witness on WC 509 said that the helicopter was “coming down at a very steep angle from the southeast, on the southwest side of the platform. The helicopter started to ascend on a northwestern heading”; the report said that the witness “lost sight of the helicopter very quickly due to the heavy rain.”

At 1046, the pilot asked COMCTR for information and help in avoiding adverse weather.

Because of the 1035 communication, COMCTR believed that the helicopter already had landed at WC 509.

“I ... had you landing at WC 509,” the COMCTR employee said.

The pilot responded, “Not yet. I thought I [would] fly over there and we [would] try to land, and couldn’t get there.”

At 1047, the pilot said he would be “happy to get out of the weather right now.”

COMCTR said, “Where would you like to go ... from West Cameron 509?”

The pilot said, “Yea, anywhere we can get out of the weather.”

At 1048, COMCTR said, “OK ... after carefully looking at the radar and the map, your only alternative would be to go south, but if you go south, it will hit you again because it’s moving in that direction. What I suggest is you just tie down for a few minutes and let it pass you over, pass you over, and then you take off again.”

There was no response from the pilot, and neither the COMCTR nor personnel on the WC 509 platform received any further communications from the helicopter.

The pilot of another PHI helicopter overheard the radio communication between the accident pilot and COMCTR and said that COMCTR should call WC 509 to verify that the accident helicopter had landed on the helideck. After determining that the helicopter was not on the helideck, a search began in the surrounding area. At 1717, personnel on a search boat heard an underwater emergency position (pinger) signal, which was confirmed at 2100 as coming from the East Cameron 264 block, about five statute miles (eight kilometers) northeast of WC 509.

The search was complicated by several days of adverse weather, including sea conditions of four feet to eight feet (one meter to two meters) and winds of 30 knots to 40 knots. On Oct. 12, 2003, divers found the wreckage in about 165 feet (50 meters) of water in the area where the pinger had been heard on the day of the accident; the wreckage was recovered and transported to PHI facilities in Lafayette for examination.

The investigation revealed no anomalies or discrepancies in the engine or airframe, but flight-control continuity could not be established because of the “extensive fragmentation” of the wreckage. The helicopter’s emergency flotation system had not been deployed.

Divers had to cut through the seatbelt to remove the pilot from the wreckage; the configuration of the two passenger seatbelts prevented investigators from determining whether they had been in use at the time of the accident.

An autopsy on the pilot revealed no preexisting medical problem that could have contributed to the accident, and toxicological tests revealed no carbon monoxide, cyanide or drugs.♦

[FSF editorial note: This article, except where specifically noted, is based on U.S. National Transportation Safety Board accident report FTW04FA007. The report comprises 85 pages and includes illustrations.]

Further Reading From FSF Publications

FSF Editorial Staff. “Ship’s Changing Heading Cited in AS 332’s Rollover on Helideck.” *Helicopter Safety* Volume 30 (September–October 2004).

FSF Editorial Staff. “Unstable External Load Blamed in Helicopter Water-contact Accident.” *Helicopter Safety* Volume 30 (January–February 2004).

FSF Editorial Staff. “Bell 407 Strikes Water During Rescue Flight Off Australian Coast.” *Helicopter Safety* Volume 29 (July–August 2003).

FSF Editorial Staff. “Sikorsky S-76B Strikes Water During Approach to North Sea Oil and Natural Gas Production Platform.” *Helicopter Safety* Volume 28 (January–February 2002.)

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