

**Aviation Safety Investigation Report
199401731**

**Hughes Helicopters
Hughes 300**

05 July 1994

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NOTE: All air safety occurrences reported to the ATSB are categorised and recorded. For a detailed explanation on Category definitions please refer to the ATSB website at www.atsb.gov.au.

Occurrence Number: 199401731 **Occurrence Type:** Accident
Location: 65km SW Mackay
State: QLD **Inv Category:** 3
Date: Tuesday 05 July 1994
Time: 1430 hours **Time Zone** EST
Highest Injury Level: Fatal
Injuries:

	Fatal	Serious	Minor	None	Total
Crew	0	1	0	0	1
Ground	0	0	0	0	0
Passenger	1	0	0	0	1
Total	1	1	0	0	2

Aircraft Manufacturer: Hughes Helicopters
Aircraft Model: 269C
Aircraft Registration: VH-THV **Serial Number:** 880710
Type of Operation: Commercial Aerial Mustering
Damage to Aircraft: Destroyed
Departure Point: Fort Cooper Station QLD
Departure Time: 1200 EST
Destination: Fort Cooper Station QLD

Crew Details:

		Hours on	
Role	Class of Licence	Type	Hours Total
Pilot-In-Command	Commercial	170.0	2150

Approved for Release: Tuesday, October 31, 1995

The helicopter was being crewed by the pilot and the property owner. They were assisting stockmen to herd cattle from one paddock to another. The fence line contained a number of gates through which the cattle were being moved. Normally the cattle were taken through a gate well to the south of the accident site, but on this occasion the other gates were being used as well. One of these gates was under a high tension powerline (with steel towers) and the other was at the corner of the paddock at its junction with a fence running along a road.

Witnesses reported that the helicopter had been working at the head of the mob for a short time to recover some strays before making a left turn to move around to the rear of the mob. The helicopter was moving towards the road when it struck the wire. Witnesses reported that some cracks were heard and the pilot seemed to have the aircraft under control again before it broke apart about 6 ft above the ground. It caught fire and burned. The stockmen were able to get the pilot away from the fire but were unable to save the other occupant.

The powerline struck was a single wire earth return line about 7 m high and running parallel to the road fence about 6 m inside the paddock. Investigation at the scene determined that the powerline was struck by the front brace on the left skid. This caused the tail to be raised into the rotor disc, whereupon it was severed by at least two blades, producing the cracks reported by the witnesses. The anti-clockwise yawing tendency produced by the wire on the left skid was countered by the clockwise yawing tendency of the rotor torque, and the helicopter ran along the wire for about 23 m before freeing itself. As it came free the wire progressed toward the leading edge of the skid, eventually breaking off the forward end of the skid.

Initial impact marks on the ground were produced by the forward end of the right skid which broke off. The subsequent marks were produced by the remainder of the right skid. The marks indicated that the helicopter was probably yawing rapidly anti-clockwise at the time. The main rotor mast and fuel tanks then broke away from the main body of the helicopter. Evidence indicated that a fire erupted after the helicopter collided with the ground. There was no sign of fire prior to ground contact.

No evidence of any pre-existing defects was found.

Although the pilot was unable to remember the accident after the collision with the wire, he could recall noticing the wire just prior to colliding with it. He was aware of the wire's presence, having worked in the area on a number of previous occasions. On this pass through the area he forgot about it.

In regard to aerial stock mustering operations, Civil Aviation Order 29.10 para 5.2 states, in part: 'During aerial stock mustering operations a pilot shall not carry more than one other person, and that person must be essential to the successful conduct of the operation'. An examination of the injuries to people involved in mustering accidents in the ten years to the time of this accident was conducted. Seven pilots and three passengers had received fatal injuries, while 13 pilots and two passengers had received serious injuries. A further eight pilots and eight passengers had received minor injuries. Of the 132 people involved in mustering accidents, 87 were pilots and 45 were passengers. The most effective way to minimise the injury rate to passengers is considered to be an educational campaign intended to make graziers more aware of the dangers involved in aerial stock mustering operations.

Significant Factors

1. The pilot forgot about the presence of a power line.
2. The tailboom of the helicopter was severed after collision with the powerline.
3. The pilot was unable to maintain directional control of the helicopter.

Safety Action

The Bureau of Air Safety Investigation is preparing an article concerning the potential hazards of carrying passengers during aerial stock mustering operations. This will be featured in a forthcoming issue of the BASI magazine 'Asia Pacific Air Safety'. The Bureau also proposes to distribute the article to aviation and rural industry publishers for wider dissemination.