

**Aviation Safety Investigation Report  
199602965**

**Hughes Helicopters  
Hughes 300**

**10 September 1996**

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**Occurrence Number:** 199602965                      **Occurrence Type:** Accident  
**Location:** 12km W Tully  
**State:** QLD    **Inv Category:** 3  
**Date:** Tuesday 10 September 1996  
**Time:** 1140 hours                                      **Time Zone** EST  
**Highest Injury Level:** Fatal  
**Injuries:**

	Fatal	Serious	Minor	None	Total
Crew	1	0	0	0	1
Ground	0	0	0	0	0
Passenger	0	0	0	0	0
<b>Total</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>

**Aircraft Manufacturer:** Hughes Helicopters  
**Aircraft Model:** 269C  
**Aircraft Registration:** VH-WPP    **Serial Number:** 500926  
**Type of Operation:** Commercial    Aerial Agriculture - Other  
**Damage to Aircraft:** Destroyed  
**Departure Point:** Tully Qld  
**Departure Time:** 1120 EST  
**Destination:** Tully Qld

**Crew Details:**

		<b>Hours on</b>	
<b>Role</b>	<b>Class of Licence</b>	<b>Type</b>	<b>Hours Total</b>
Pilot-In-Command	Commercial	32.0	10730

**Approved for Release:** Wednesday, July 2, 1997

**FACTUAL INFORMATION**

The helicopter was being used to spray banana crops in the Tully area of Queensland. The airfield from which the helicopter was operating was approximately 2 NM to the south-east of the treatment area. Having little experience in agricultural operations, the pilot was under the direct supervision of the operator. Five days prior to the accident, the pilot and operator had conducted a ground inspection of the intended treatment area. Before commencing flying at 0915 EST, the pilot and operator examined the treatment area map, highlighting the location of powerlines. They also discussed the planned spray patterns. After the pilot had delivered four of the planned seven loads, the operator again spoke with him to ensure that all was progressing as planned. The operator watched him take off on the planned final run for the day at 1120.

Witnesses reported that at approximately 1130, they heard a loud crack followed by a thud. At about the same time, the local community lost electrical power. There were no eyewitnesses to the accident.

The helicopter had struck a powerline at a height of approximately 8m whilst tracking in a north-westerly direction. It then impacted the ground and burned. The pilot received fatal injuries. The weather at the crash site was fine with no cloud and the wind was light and variable.

An examination of the badly burnt wreckage did not find any anomalies or defects that may have contributed to the accident. Damage to the powerline was consistent with the helicopter skid supports striking the power cable. The dynamics of the cable strike resulted in the main rotor blades slicing off the tail boom forward of the tail rotor assembly. Other damage sustained by the helicopter was consistent with the severe forces generated during the subsequent ground-impact sequence. The emergency locator transmitter did not activate as it was turned off.

An audit of the maintenance documentation revealed a number of discrepancies; however, it is unlikely that maintenance action contributed to the accident.

The pilot's licence and medical examination were current and appropriate. He was endorsed on the Hughes 269 during the previous January, had undergone a company check flight in April, and had completed an agricultural pilot (helicopter) rating (grade 2) in July, 46 days prior to the accident. The pilot had more than 10,725 flying hours, primarily gained in mustering. His logbook recorded 4.9 hours agricultural flying; however, the operator reported that the pilot had since accumulated about another 10 hours experience. The pilot had sprayed at the same farm 11 days prior to the accident and had not reported experiencing any problems. He did, however, report to the operator that he had struck a sprinkler during his first job 12 days before and had flown uncomfortably close to wires during another job about a week prior to the accident flight. As the pilot had not accumulated 20 hours agricultural flying experience, CAO 40.6 required the pilot to operate under the direct supervision of an approved agricultural (helicopter) pilot. Whilst the operator was approved to supervise the pilot and appeared to be supervising the pilot's spraying operations in accordance with CAO 40.6, the pilot had not annotated his logbook in accordance with the order.

The operator reported that he had discussed hazard avoidance with the pilot the night before the accident. He observed that the pilot appeared to take longer than normal to conduct jobs and considered him to have a cautious approach to agricultural flying.

The flight was planned to be the last for the day and the operator reported that the pilot was most probably performing a clean-up run. Clean up runs "fill in" areas which cannot be covered during the longer swath runs. These runs are normally close to obstacles such as powerlines and are performed at the end of a flight because the helicopter is lighter and more manoeuvrable.

The spray area was nestled in undulating terrain, situated on the northern slope of a hill. A major set of powerlines ran to the north-west along the edge of the field and formed the western limit of the spray runs. A prominent power pole stood near the northern edge of the spray area. As well as supporting the powerlines running north-west, the power pole was the origin of a further set running to the north-east. The cross bar supporting the powerlines leading towards the north-east was almost end-on to the pilot flying along the direction of the cables. The next power pole supporting the powerlines leading to the north-east was also quite prominent and the span between the two poles was approximately 88m. The helicopter impacted one of the powerlines leading to the north-east, approximately 30m from the westerly power pole. The rising terrain north of these cables was heavily vegetated with dark green foliage.

## ANALYSIS

The pilot was inexperienced in agricultural flying. The operator closely supervised the pilot by accompanying him on ground and air inspections of the property and checking with the pilot during the flight. Although the pilot had failed to correctly annotate the supervisory time in his logbook, the operator appeared to have performed his responsibilities under CAO 40.6. The pilot did not appear to act overconfidently and was candid with the operator about his recent incidents.

The pilot was performing a clean-up run, flying the helicopter along the western edge of the property, paralleling the major set of powerlines heading north-west. His attention was probably focussed on maintaining separation from the powerlines and he may have failed to notice either the crossbar supporting the powerlines nearly perpendicular to his flightpath or the easterly power pole which was on his right. The powerlines would have been difficult to see due to the lack of contrast with the dark green background. His reduced attention may have also been due to the fact he was flying a clean-up run on the last flight for the day.

## SIGNIFICANT FACTOR

The lack of contrast between the background and the powerlines, in the direction of flight, made it difficult for the pilot to sight the obstruction.

## SAFETY ACTION

As a result of this and similar occurrences, the Bureau of Air Safety Investigation is evaluating safety issues concerning wire strikes. Any forthcoming recommendations will be published in the Quarterly Safety Deficiency Report.