Aviation Safety Investigation Report 199701920

Bell Helicopter Co JetRanger III

13 June 1997

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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.

Aviation Safety Investigation Report

199701920

The Bureau did not conduct an on scene investigation of this occurrence. The information presented below was obtained from information supplied to the Bureau.

Occurrence Number: 199701920 **Occurrence Type:** Accident
Location: 26km NE Jabiru, (ALA)
State: NT **Inv Category:** 4
Date: Friday 13 June 1997
Time: 1115 hours **Time Zone** CST
Highest Injury Level: Minor
Injuries:

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

Aircraft Manufacturer: Bell Helicopter Co
Aircraft Model: 206B (III)
Aircraft Registration: VH-HRE **Serial Number:** 2745
Type of Operation: Charter Positioning
Damage to Aircraft: Substantial
Departure Point:
Departure Time:
Destination:

Crew Details:

Role	Class of Licence	Hours on Type	Hours Total
Pilot-In-Command	Commercial	4740.0	8616

Approved for Release: Thursday, August 7, 1997

The helicopter was being flown in suport of geological drilling operations and had just been used to externally sling-load a pump into a creek bed. The refuelling point and landing area were located about 20 m from the edge of a ravine which was approximately 30 m deep and 100 m wide. A tree was growing from a point below the top of the ravine and the tree's tops protruded approximately 3 m above the ravine's edge. When the pilot flew the helicopter to the landing area to refuel, he lowered the external sling to the ground and then flew the helicopter backwards approximately 1 m, intending to land next to the fuel drums.

As the pilot was landing the helicopter, evidence indicates that the left skid became caught on a rock. When the pilot attempted to fly the helicopter clear, the left skid suddenly broke clear of the rock. The helicopter rolled right as it climbed and the right skid impacted a pump housing protruding from the top of a fuel drum before striking the top of the tree located on the ravine's edge.

The helicopter continued drifting and began yawing right as it descended into the ravine. The pilot reported that just as he was regaining some control of the helicopter, it landed, upright, on a rock shelf approximately 2 m from the ravine floor. It appears that at this stage, the main rotor impacted the helicopter's tail boom. The helicopter then rolled and fell off the rock shelf to the ravine floor. It came to rest on its right side with the engine still running and main rotor turning.

The pilot reported that he then closed the throttle, turned the fuel switch off and exited the helicopter through the front windscreen, having suffered minor injuries. He also reported that he turned off the emergency locator transmitter beacon although it did not appear to be operating.

During the landing, evidence indicates that the left skid became stuck in the rock. When the pilot attempted to reject the landing, it is likely that he would have used a combination of up collective and right cyclic as the helicopter pivoted around the left skid. It appears that the rock then broke. The sudden release of the left skid, associated with the cyclic and collective control positons probably caused the helicopter to rapidly roll and drift right. As the helicopter climbed, rolled and drifted, it was likely that the pilot could not have quickly regained control due to the subsequent impacts with the fuel pump and tree. It was probably fortunate that the helicopter entered the ravine, giving the pilot time to recover some control before the landing on the rock ledge. The forces and imbalance generated by the main rotor strike on the tail may have then caused the helicopter to rollover, fall off the shelf before finally coming to rest on the ravine floor.