



AIRCRAFT ACCIDENT REPORT AND EXECUTIVE SUMMARY

				Reference:	CA18/2/3/8166	
Aircraft Registration	ZS-RFV	Date of Accident	14 August 2006		Time of Accident	1025Z
Type of Aircraft	Robinson R22 HP Plus		Type of Operation		Game Capture	
Pilot-in-command Licence Type		Commercial	Age	46	Licence Valid	Yes
Pilot-in-command Flying Experience		Total Flying Hours	10 810.8		Hours on Type	3 341.6
Last point of departure		Game farm Adrianshoop, in the Alma district				
Next point of intended landing		Game farm Adrianshoop, in the Alma district				
Location of the accident site with reference to easily defined geographical points (GPS readings if possible)						
Game farm Adrianshoop, Alma (GPS position: South 24° 26.451' East 027° 59.561', elevation: ±4500 feet AMSL)						
Meteorological Information		Surface wind; Variable from NW/gusting ±15kt, Temperature; 24°C, CAVOK				
Number of people on board	1 + 1	No. of people injured	1 + 1	No. of people killed	0	
Synopsis		<p>The pilot, accompanied by a passenger, who was an employee of a game capture company, departed on a local flight from the farm Adrianshoop. The intention of the flight was to dart several antelopes in order to test a new tranquillising drug. Soon after lift off they managed to dart one animal, however, the wind kept on changing direction, which made flying conditions very difficult in the Robinson R22, which could only hover OGE (out of ground effect) with the nose into wind. Due to the prevailing wind conditions they had to abort several darting runs, mostly because the animals seldom ran into the wind. They then landed for a while to rest and waited. It was decided to continue with the darting operation and they managed to dart two other animals. Conditions didn't improve and it was decided to look for a Kudu bull, and then call it a day. They managed to locate a bull. The helicopter was positioned next to the animal (on its right-hand side) and the animal was darted. As the pilot diverted his attention back, in front of him, he noted that they were below the tree line. At that time the main rotor RPM was in the middle of the green arc and the throttle was at its maximum setting. The pilot then made the decision to turn out right to try and avoid the trees. His options were limited, as any increase in power demand would cause the main rotor RPM to decay, a condition he wanted to avoid. The option of an attempted uncontrolled crash on top of the tree branches was also considered but appeared too risky due to the distance to the ground. Following the right turn, the pilot was unable to gain sufficient height and the main rotor blades struck several trees before the helicopter collided head on with a fairly large tree. During the impact sequence the helicopter rolled left and impacted the ground in that attitude. The impact and subsequent left roll caused the passenger to be propelled out of the helicopter to the left, while still suspended to his monkey chain, with the helicopter falling partially on top of him. The pilot was hanging from his safety harness and was bleeding from his head. He managed to disembark from the helicopter on his own. The game capture team arrived shortly afterwards on the scene and the veterinarians attended to the two occupants until they were both airlifted to hospitals in Pretoria.</p> <p>The last MPI (Mandatory Periodic Inspection) that was certified on the helicopter prior to the accident was on 14 June 2006 at 4 089.0 airframe hours. Since the MPI was certified a further 53.0 hours were flown. The operation was conducted under the Air Operating Certificate (AOC) No. N538D/N685D, which was valid until 9 March 2007.</p>				
Probable Cause						
<p>While manoeuvring the helicopter in order to dart an antelope, the pilot descended below the tree line, in an attempt to clear the trees ahead he found himself behind the curves of power and collective pitch requirement. In an attempt to fly out of the condition the pilot turned right, which placed him in a downwind condition and the aircraft run out of power. The main rotor blades made contact with several trees, which rendered the aircraft uncontrollable and they collided with a tree.</p>						
IARC Date				Release Date		