

**PRELIMINARY**  
KNKT.12.11.26.04

**NATIONAL  
TRANSPORTATION  
SAFETY  
COMMITTEE**

**Aircraft Accident Investigation Report**

**PT. Whitesky Aviation  
Bell 407 Helicopter; PK-WSC  
Balikpapan, Kalimantan  
Republic of Indonesia  
28 November 2012**



**NATIONAL TRANSPORTATION SAFETY COMMITTEE  
MINISTRY OF TRANSPORTATION  
REPUBLIC OF INDONESIA  
2013**

This Preliminary Report was produced by the National Transportation Safety Committee (NTSC), Ministry of Transportation Building 3<sup>rd</sup> Floor, Jl. Medan Merdeka Timur No. 5, Jakarta 10110, INDONESIA.

The report is based upon the initial investigation carried out by the NTSC in accordance with Annex 13 to the Convention on International Civil Aviation Organization, the Indonesian Aviation Act (UU No.1/2009), and Government Regulation (PP No. 3/2001).

Readers are advised that the NTSC investigates for the sole purpose of enhancing aviation safety. Consequently, NTSC reports are confined to matters of safety significance and may be misleading if used for any other purpose.

As NTSC believes that safety information is of greatest value if it is passed on for the use of others, readers are encouraged to copy or reprint for further distribution, acknowledging NTSC as the source.

When the NTSC makes recommendations as a result of its investigations or research, safety is its primary consideration.

However, the NTSC fully recognizes that the implementation of recommendations arising from its investigations will in some cases incur a cost to the industry.

Readers should note that the information in NTSC reports and recommendations is provided to promote aviation safety. In no case is it intended to imply blame or liability

---

# TABLE OF CONTENTS

---

TABLE OF CONTENTS .....	i
TABLE OF FIGURES .....	iii
GLOSSARY OF ABBREVIATIONS.....	iv
INTRODUCTION.....	1
1 FACTUAL INFORMATION .....	2
1.1 HISTORY OF THE FLIGHT.....	2
1.2 INJURIES TO PERSONS .....	3
1.3 DAMAGE TO HELICOPTER.....	3
1.4 OTHER DAMAGE .....	3
1.5 PERSONNEL INFORMATION .....	4
1.5.1 Pilot in command.....	4
1.5.2 Engineer on Board .....	4
1.6 HELICOPTER INFORMATION.....	4
1.6.1 General.....	4
1.6.2 Engines.....	5
1.7 METEROLOGICAL INFORMATION .....	5
1.8 AID TO NAVIGATION .....	5
1.9 COMMUNICATIONS .....	6
1.10 AERODROME INFORMATION .....	6
1.11 FLIGHT RECORDERS .....	6
1.12 WRECKAGE AND IMPACT INFORMATION.....	6
1.13 MEDICAL AND PATHOLOGICAL INFORMATION .....	6
1.14 FIRE.....	6
1.15 SURVIVAL ASPECT .....	7
1.16 TESTS AND RESEARCH.....	7
1.17 ORGANISATIONAL AND MANAGEMENT INFORMATION .....	7
1.17.1 Helicopter Operator .....	7
1.17.2 Speedboat Operator.....	7
1.18 ADDITIONAL INFORMATION .....	7
1.19 USEFUL OR EFFECTIVE INVESTIGATION TECHNIQUES.....	7
2 ANALYSIS.....	8
3 CONCLUSION.....	9

4	SAFETY ACTION .....	10
4.1	PT. Whitesky Aviation .....	10
5	RECOMMENDATION .....	11
5.1	Recommendation to PT. Whitesky Aviation .....	11

---

## **TABLE OF FIGURES**

---

Figure 1 Whitesky Aviation Bell 407 registered PK-WSC.....	3
--	---

---

## GLOSSARY OF ABBREVIATIONS

---

ALAR	Approach and Landing Accident Reduction
AMEL	Aircraft Maintenance Engineer License
AOC	Air Operator Certificate
ASL	Above Sea Level
ATC	Air Traffic Controller
CFIT	Controlled Flight Into Terrain
CB	Cumulonimbus
C	Celsius
CPL/H	Commercial Pilot License Helicopter
CVR	Cockpit Voice Recorder
EOB	Engineer on Board
FDR	Flight Data Recorder
FOO	Flight Operation Officer
Ft	Ft
ICAO	International Civil Aviation Organization
Km	Kilometre
KNKT (NTSC)	<i>Komite Nasional Keselamatan Transportasi</i> (National Transportation Safety Committee)
Mb	Millibars
SAR	Search and Rescue
SCT	Scattered
UTC	Universal Time Coordinate
VFR	Visual Flight Rules
QFE	Height above airport elevation based on local station pressure
QNH	Height above mean sea level based on local station pressure

---

## INTRODUCTION

---

### SYNOPSIS

On 28 November 2012 a Bell 407 Helicopter registered PK-WSC was operated by PT. Whitesky Aviation on a test flight mission. The flight plan was to conduct a functional test of the helicopter's Auto Pilot system as an Auto Pilot post maintenance was carried out previously. The route of test flight was departed from Balikpapan to Batu Kajang heliport and return to Balikpapan. Person on board were one pilot, one engineer on board (EOB), one flight operation officer (FOO) and 3 off-duty employees.

At 0705 UTC, the helicopter departed from Sepinggan Airport (WALL/BPN), Balikpapan. During en-route, the pilot and engineer on board conducted test for Auto Pilot system. The test result was shown the auto pilot system have problem. The helicopter landed at Batu Kajang area than return back to Sepinggan airport Balikpapan as planned.

During return flight about 15 Nm to Sepinggan; the Sepinggan ATC instructed the helicopter to descent to 1000 ft ASL due to traffic at Sepingan final.

Prior to approach Balikpapan or above Penajam bay, the pilot saw heavy rain in the Sepinggan airport direction, than the pilot decided to descend for good visibility. The helicopter descent to 500 ft ASL than to 100 ft ASL and continues visual flight below the cloud.

At about 0805 UTC the flight crew and the passenger heard a stranger sound. The pilot was decided to climb to 50 ft ASL and made 180° turn to check what has just happened. They saw a sailing speedboat with some passengers. The pilot feels that the helicopter landing skid was collided with some part of the speedboat. Since there was none of the cockpit indicators shown problem and the speedboat was continued sail, the pilot decided to continues flight to Sepinggan.

At 0815 UTC, the helicopter return back landed safely at Sepinggan Airport.

At 0840 UTC, PT. Whitesky Aviation received notification from Local SAR office that there was a speed boat, which consists of one motorist and 7 passengers, reported collided with helicopter and the motorist was fatal injured.

All helicopter occupants were no injured and no damage to the helicopter. The motorist of speedboat was fatal injured.

---

# **1 FACTUAL INFORMATION**

---

## **1.1 HISTORY OF THE FLIGHT**

On 28 November 2012 a Bell 407 Helicopter registered PK-WSC was operated by PT. Whitesky Aviation on a test flight mission. The flight plan was to conduct a functional test of the helicopter's Auto Pilot system as an Auto Pilot post maintenance was carried out previously. The route of test flight was departed from Balikpapan to Batu Kajang heliport and return to Balikpapan. Person on board were one pilot, one engineer on board (EOB), one flight operation officer (FOO) and 3 off-duty employees.

At 0705 UTC, the helicopter departed from Sepinggan Airport (WALL/BPN), Balikpapan. During en-route, the pilot and engineer on board conducted test for Auto Pilot system. The test result was shown the auto pilot system have problem. The helicopter landed at Batu Kajang area than return back to Sepinggan airport Balikpapan as planned.

During return flight about 15 Nm to Sepinggan; the Sepinggan ATC instructed the helicopter to descent to 1000 ft ASL due to traffic at Sepinggan final.

Prior to approach Balikpapan or above Penajam bay, the pilot saw heavy rain in the Sepinggan airport direction, than the pilot decided to descend for good visibility. The helicopter descent to 500 ft ASL than to 100 ft ASL and continues visual flight below the cloud.

At about 0805 UTC the flight crew and the passenger heard a stranger sound. The pilot was decided to climb to 50 ft ASL and made 180o turn to check what has just happened. They saw a sailing speedboat with some passengers. The pilot feels that the helicopter landing skid was collided with some part of the speedboat. Since there was none of the cockpit indicators shown problem and the speedboat was continued sail, the pilot decided to continues flight to Sepinggan.

At 0815 UTC, the helicopter return back landed safely at Sepinggan Airport.

At 0840 UTC, PT. Whitesky Aviation received notification from Local SAR office that there was a speed boat, which consists of one motorist and 7 passengers, reported collided with helicopter and the motorist was fatal injured.

All helicopter occupants were no injured and no damage to the helicopter. The motorist of speedboat was fatal injured.





Figure 1 Whitesky Aviation Bell 407 registered PK-WSC

## 1.2 INJURIES TO PERSONS

Injuries	Flight crew	Passengers	Total in Helicopter	Others
Fatal	-	-	-	1
Serious	-	-	-	-
Minor	-	-	-	-
Nil Injuries	1	5	6	7
<b>TOTAL</b>	<b>1</b>	<b>5</b>	<b>6</b>	<b>8</b>

## 1.3 DAMAGE TO HELICOPTER

No damage to the helicopter.

## 1.4 OTHER DAMAGE

No damage to the speedboat.

## 1.5 PERSONNEL INFORMATION

### 1.5.1 Pilot in command

Gender : Male  
Age : 35 years  
Nationality : Indonesian  
License : CPL/H  
Date of issue : 26 May 2009  
Type rating : Bell 407, -412, -206  
Medical certificate : Class 1  
Date of last medical : 14 November 2012  
Valid to : 14 May 2013  
Medical Note : Holder shall wear corrective lenses  
Last proficiency check : 8 February 2011

#### FLIGHT TIME

Total time : 1,741 hours  
This make & model : 500 hours  
Last 90 days : 27 hours 54 minutes  
Last 24 Hours : 1 hours 6 minutes  
This Flight : 1 hours 12 minutes

### 1.5.2 Engineer on Board

Gender : Male  
Age : 30 years  
Nationality : Indonesian  
License : AMEL  
Type rating : Bell -407, -429

## 1.6 HELICOPTER INFORMATION

### 1.6.1 General

Registration Mark : **PK-WSC**  
Manufacturer : Bell Helicopter Textron  
Country of Manufacturer : United States of America  
Type/ Model : Bell 407

Serial Number : 53939  
Year of manufacture : 2010  
Certificate of Airworthiness  
Validity : 14 August 2013  
Certificate of Registration  
Validity : 14 August 2013  
Time Since New : 433 hours  
Cycles Since New : 561 cycles

### **1.6.2 Engines**

Manufacturer : Roll Royce  
Type/Model : Turbo Shaft RR 250-C47B  
Serial Number : CAE 838216  
Time Since New : 434 hours 12 minutes  
Cycles Since New : 562 cycles

## **1.7 METEOROLOGICAL INFORMATION**

Weather report for Sepinggan Airport (WALL), issued on 28 November 2012 at 0700 UTC as follows:

Surface wind : 080 / 5 knots  
Visibility : 10 km  
Present weather : CB to North and North West  
Cloud : Sct 1800 ft  
Temperature : 30° C  
Dew Point : 25° C  
QNH : 1007 mbs  
QFE : 1006 mbs

## **1.8 AID TO NAVIGATION**

Not relevant to this accident.

## **1.9 COMMUNICATIONS**

All communication between the helicopter PK-WSC, Balikpapan ATC and Balikpapan Approach were established and reported in good condition.

## **1.10 AERODROME INFORMATION**

Airport Name	: Sepinggan Airport
Airport Identification	: WALL / BPN
Airport Address	: Jl. Marsma Iswahyudi, Balikpapan
Airport Operator	: PT. Angkasa Pura I (Persero)
Runway Direction	: 07 - 25
Runway Length	: 2,500 meters
Runway Width	: 4 meters
Surface	: Asphalt concrete

## **1.11 FLIGHT RECORDERS**

The helicopter was not equipped with a Flight Data Recorder (FDR) or Cockpit Voice Recorder (CVR). Neither recorder was required by current Indonesian Civil Aviation Regulations.

## **1.12 WRECKAGE AND IMPACT INFORMATION**

During investigation found that the helicopter collided with speedboat at about 300 meter east west from Penajam bay or about 12 Nm north west from Sepinggan Airport.

There was no impact and no damage indicated on the helicopter or the speedboat. Most likely that the helicopter landing skid collided with the motorist body only.

## **1.13 MEDICAL AND PATHOLOGICAL INFORMATION**

No medical or pathological investigations were conducted as a result of this accident, nor were they required.

## **1.14 FIRE**

There was no evidence of fire in flight or after the helicopter impact.

## **1.15 SURVIVAL ASPECT**

Not relevance to this accident.

## **1.16 TESTS AND RESEARCH**

Where appropriate will be included in the final report.

## **1.17 ORGANISATIONAL AND MANAGEMENT INFORMATION**

### **1.17.1 Helicopter Operator**

Helicopter Owner	:	Alpha Capital Singapore
Helicopter Operator	:	PT. Whitesky Aviation
Address	:	Secure Building 1 <sup>st</sup> Floor Jl. Protokol Halim Perdanankusuma Jakarta Timur, Indonesia
AOC Number	:	AOC 135/016

### **1.17.2 Speedboat Operator**

The speedboat was operated as a “traditional” ferry services in Penajam Bay area. The late motorist was the owner of speedboat.

## **1.18 ADDITIONAL INFORMATION**

The investigation is continuing and will include an analysis of the flight data and cockpit voice recorders during the flight, and airport’s operational documentation and procedures with respect to airport sterilization area and any other relevant information.

## **1.19 USEFUL OR EFFECTIVE INVESTIGATION TECHNIQUES**

The investigation was conducted in accordance with NTSC-approved policies and procedures, and in accordance with the standards and recommended practices of Annex 13 to the Chicago Convention.

---

## **2 ANALYSIS**

---

To be included in the final report.

---

### **3 CONCLUSION**

---

To be included in the final report

---

## **4 SAFETY ACTION**

---

At the time of issuing this Preliminary Accident Investigation Report, the National Transportation Safety Committee had been informed of safety actions resulting from this accident from the parties.

### **4.1 PT. Whitesky Aviation**

- Released Safety Notice No. QSS/SN/012/XII/2012 dated 19 December 2012 about "Safety Instruction Post Bell PK-WSC Accident".
- Released Safety Recommendation No. QSS/SK/023/XII/2012 dated 19 December 2012 about "Safety Action Post Bell PK-WSC Accident".
- Conducted trainings for the Pilot as Basic Indoctrination, Crew Resources Management, Approach and Landing Accident Reduction (ALAR) and Controlled Flight Into Terrain (CFIT) awareness.
- Conducted a Human Factor training for the Engineer on Board.



---

## **5 RECOMMENDATION**

---

According to factual information and initial finding, the National Transportation Safety Committee issued the following recommendations to address safety issues identified in this preliminary report.

### **5.1 Recommendation to PT. Whitesky Aviation**

- To enforce the flight operation procedure in particular VFR (Visual Flight Rules) during marginal visibility situation.