



**KOMITE NASIONAL KESELAMATAN TRANSPORTASI
REPUBLIC OF INDONESIA**

INTERIM REPORT

KNKT.15.03.06.04

Aircraft Accident Investigation Report

PT. Deraya Air

British Aerospace BAe ATP; PK-DGB

Wamena Airport, Papua

Republic of Indonesia

4 March 2015



2017

This Interim investigation report was produced by the Komite Nasional Keselamatan Transportasi (KNKT), Transportation Building, 3rd Floor, Jalan Medan Merdeka Timur No. 5 Jakarta 10110, Indonesia.

The report is based upon the initial investigation carried out by the KNKT 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. 62/2013).

The interim report consists of factual information collected until the report published. This report will not include analysis and conclusion.

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ABBREVIATIONS AND DEFINITIONS

AGL	:	Above Ground Level
AIP	:	Aeronautical Information Publication
ALAR	:	Approach and Landing Accident Reduction
ATC	:	Air Traffic Control
ATPL	:	Airline Transport Pilot License
ATS	:	Air Traffic Services
C of A	:	Certificate of Airworthiness
C of R	:	Certificate of Registration
CPL	:	Commercial Pilot License
CRM	:	Cockpit Resources Management
CVR	:	Cockpit Voice Recorder
FDR	:	Flight Data Recorder
FO	:	First Officer
km	:	Kilometer
KNKT	:	<i>Komite Nasional Keselamatan Transportasi</i>
PF	:	Pilot Flying
PIC	:	Pilot in Command
PM	:	Pilot Monitoring
SIC	:	Second in Command
UTC	:	Universal Time Coordinated

SYNOPSIS

On 4 March 2015, a BAe-ATP registration PK-DGB operated by PT. Deraya Air conducted a cargo flight from Sentani to Wamena Airport. On board of this flight were two pilots. The Pilot in Command (PIC) acted as pilot flying and First Officer (FO) acted as pilot monitoring.

The aircraft departed from Sentani at 0524 UTC to Wamena airport. The pilot contacted Wamena Tower Controller while position over point Jiwika point at altitude 10,000 feet.

At 0619 UTC, Wamena Tower controller informed that the weather reported continuous heavy rain, visibility was reported 2 up to 3 km and wind was from 060° with 6 knots speed. The aircraft left Pyramid for approach landing runway 33. The aircraft proceed to left downwind descent to 6,500 feet, during turning base leg the pilot observed runway insight and continue for approach.

At 0620 UTC, the aircraft landed. After touchdown aircraft veered off to the right of the runway then skidding. The aircraft re-entered the runway at approximately 400 meters from beginning runway 33 and stopped near taxiway Delta at approximately 800 meters from beginning runway 33.

At the time of issuing this interim report, the *Komite Nasional Keselamatan Transportasi* had been informed safety actions taken by Deraya Air.

The KNKT acknowledges the safety actions taken by the Deraya Air and considered that the safety actions were relevant to improve safety, however there still remain safety issues that need to be considered. Therefore, the KNKT issues the safety recommendations addressed to Deraya Air to review the flight crew training related to runway wet landing technique.

1. FACTUAL INFORMATION

1.1 History of the Flight

On 4 March 2015 a BAe-ATP registration PK-DGB operated by PT. Deraya Air as scheduled cargo flight from Sentani to Wamena Airport. On board of this flight was two pilots while the Pilot in Command (PIC) acted as pilot flying and First Officer (FO) acted as pilot monitoring.

The aircraft departed Sentani at 0524 UTC to Wamena airport. The pilot contacted Wamena Tower controller while position on Jiwika way point at altitude 10,000 feet. Wamena Tower controller instructed to use runway 33 and to proceed to left runway 33. At 0602 UTC the pilot requested to proceed to Pyramid waypoint and to descend to 8,000 feet and made holding due to weather. At 0613, a C-130 pilot that was on approach reported making go around runway 33 and ATC instructed to C-130 pilot to proceed to Pyramid waypoint and hold.

At 0619 UTC, Wamena Tower controller informed that the weather reported continuous heavy rain, visibility was reported 2 up to 3 km and wind was from 060° with velocity of 6 knots. The PK-DGB aircraft left Pyramid waypoint for approach left runway 33. The aircraft proceed to left downwind and descent to 6,500 feet. During turning base leg, the pilot observed runway insight and continued the approach.

At 0620 UTC, the aircraft touched down, thereafter veered off to the right of the runway and skid. The aircraft re-entered the runway at approximately 400 meters from beginning runway 33 and stopped near taxiway Delta at approximately 800 meters from beginning runway 33.

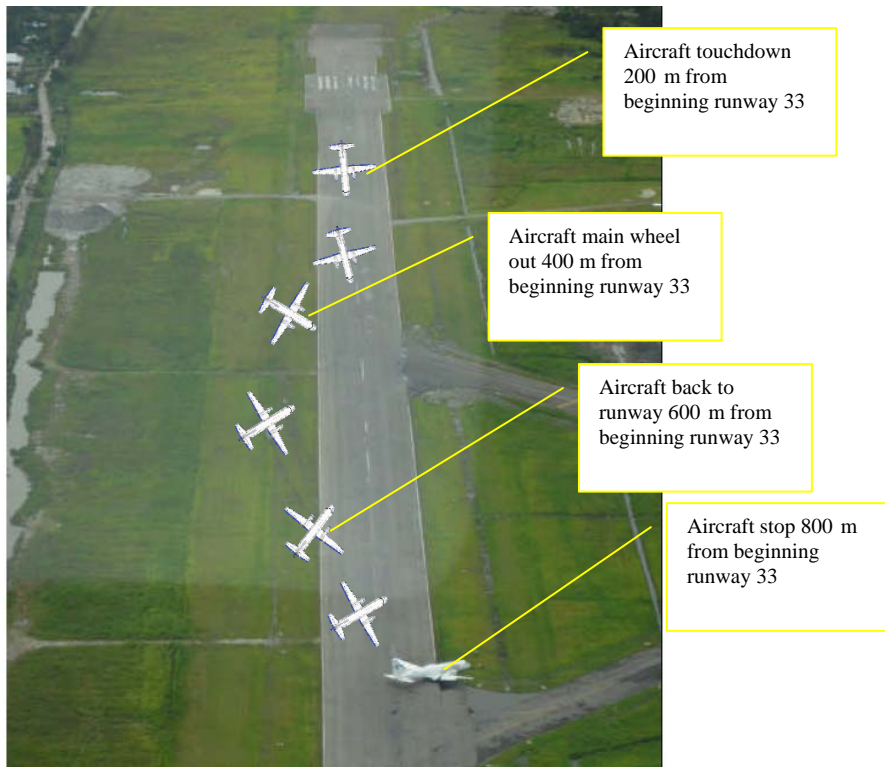


Figure 1: The illustration of aircraft movement



Figure 2: The aircraft final position, taken from aircraft holding over Wamena airport at 500 feet AGL

1.2 Injuries to Persons

Injuries	Flight crew	Passengers	Total in Aircraft	Others
Fatal	-	-	-	-
Serious	-	-	-	-
Minor/None	2	-	2	-
TOTAL	2	-	2	-

1.3 Damage to Aircraft

The aircraft substantially damaged, the detail damaged were as follows:

- The nose landing gear and left main landing gear were detached.
- The propeller blades of the left engine and radom were broken.
- The left engine dislocation from the main body.



Figure 3: The damage of the aircraft

1.4 Other Damage

A runway light was damage after hit by the aircraft.



Figure 4: Damage on the runway light hit by the aircraft

1.5 Personnel Information

1.5.1 Pilot in Command

Gender : Male
Age : 39 years
Nationality : Indonesian
Marital status : Married
Date of joining company : 15 June 2004
License : ATPL
 Date of issue : 22 February 2010
 Aircraft type rating : BAe ATP
Medical certificate : First Class
 Last of medical : 5 February 2015
 Validity : 4 August 2015
 Medical limitation : None
Last line check : 24 July 2014
Last proficiency check : 2 November 2014

Flying experience

Total hours : 3,912 hours 34 minutes
Total on type : 833 hours 38 minutes
Last 90 days : 55 hours 57 minutes
Last 60 days : -
Last 24 hours : 4 hours 42 minutes
This flight : 56 minutes

1.5.2 Second in Command

Gender : Male
Age : 42 years
Nationality : Indonesia
Marital status : Married
Date of joining company : 7 July 2014
License : CPL
 Date of issue : 7 April 2009
 Aircraft type rating : BAe ATP
Medical certificate : First Class
 Last of medical : 19 November 2014

Validity	: 19 May 2015
Medical limitation	: None
Last proficiency check	: 13 September 2014
Flying experience	
Total hours	: 415 hours
Total on type	: 45 hours 29 minutes
Last 90 days	: 39 hours 47 minutes
Last 60 days	: -
Last 24 hours	: 04 hours 42 minutes
This flight	: 56 minutes

1.6 Aircraft Information

1.6.1 General

Registration Mark	: PK-DGB
Manufacturer	: British Aerospace
Country of Manufacturer	: United Kingdom
Type/Model	: BAe ATP Freighter
Serial Number	: 2029
Date of Manufacture	: 1990
Certificate of Airworthiness	
Issued	: 25 March 2014
Validity	: 24 March 2015
Category	: Transport
Limitations	: None
Certificate of Registration	
Number	: 3435
Issued	: 25 March 2014
Validity	: 24 March 2015
Time Since New	: 20,845.43 hours
Cycles Since New	: 27,921 cycles
Last Major Check	: C check at 19,295 flight hours performed on 6 September 2014
Last Minor Check	: Inspection 25 hours performed on 28 February 2015

1.6.2 Engines

Manufacturer	:	Pratt & Whitney Canada
Type/Model	:	PW 126A
Serial Number-1 engine	:	PCE-124322
▪ Time Since New	:	12,331.79 hours
▪ Cycles Since New	:	17,866 cycles
Serial Number-2 engine	:	PCE-124423
▪ Time Since New	:	14,621.47 hours
▪ Cycles Since New	:	21,959 cycles

1.6.3 Propellers

Manufacturer	:	Hamilton Sunstrand
Type/Model	:	6/5500/F-1
Time Between Overhaul	:	8000 hours
Serial Number-1 propeller	:	BA97
▪ Time Since Overhaul	:	1,542.43 hours
▪ Cycles Since Overhaul	:	<i>Not recorded</i>
Serial Number-2 propeller	:	AC6158
▪ Time Since Overhaul	:	1,542.43 hours
▪ Cycles Since Overhaul	:	<i>Not recorded</i>

1.7 Meteorological Information

Weather report for Wamena Airport, issued 4 March 2015, at 0620 UTC was as follows:

Wind	:	060 / 6 knots
Visibility	:	2-3 Km
Weather	:	Continuous heavy rain
Cloud ¹	:	Few 013 CB, BKN 009
Temperature / dew point	:	24/16° C
QNH (mb/in Hg)	:	1004 mbs
QFE (mb/in Hg)	:	832 mbs

¹ Cloud amount is assessed in total which is the estimated total apparent area of the sky covered with cloud. The international unit for reporting cloud amount for Few is when the clouds covers up to 2/8 and Broken (BKN) is when the clouds cover more than half (5/8 up to 7/8) area of the sky

1.8 Aids to Navigation

The aircraft operator issued route guidance for flight to Wamena. The guidance was as follow:

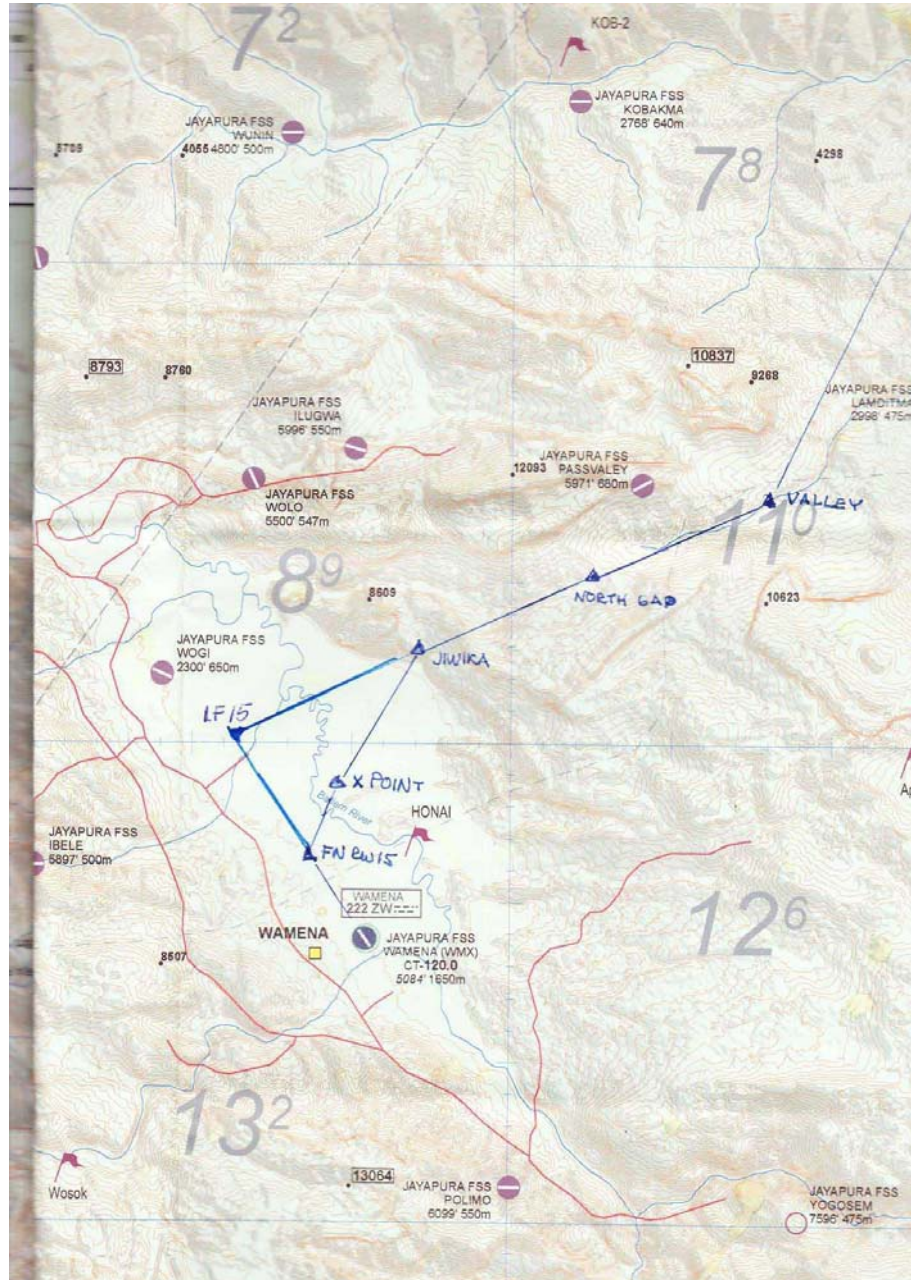


Figure 5: Flight guidance to Wamena Airport

There was no instrument approach procedure published for the runway 33 of Wamena Airport.

1.9 Communications

All communications between Air Traffic Services (ATS) and the crew were normal as recorded on ground based automatic voice recording equipment and Cockpit Voice Recorder (CVR) for the duration of the flight. The quality of the recorded transmissions was good.

The excerpt of the communication will be included in the final report.

1.10 Aerodrome Information

Airport Name	:	Wamena Airport
Airport Identification	:	WAVV / WMX
Airport Operator	:	Wamena Airport Unit, Directorate General of Civil Aviation
Airport Certificate Number	:	1001/SBU-DBU/XI/2015
Coordinate	:	04° 05' 51" S; 138° 57' 05" E
Elevation	:	5,100 ft
Runway Direction	:	15 - 33 / 154° - 334°
Runway Length	:	1,825 m
Runway Width	:	30 m
Surface	:	Asphalt
Fire fighting category	:	V

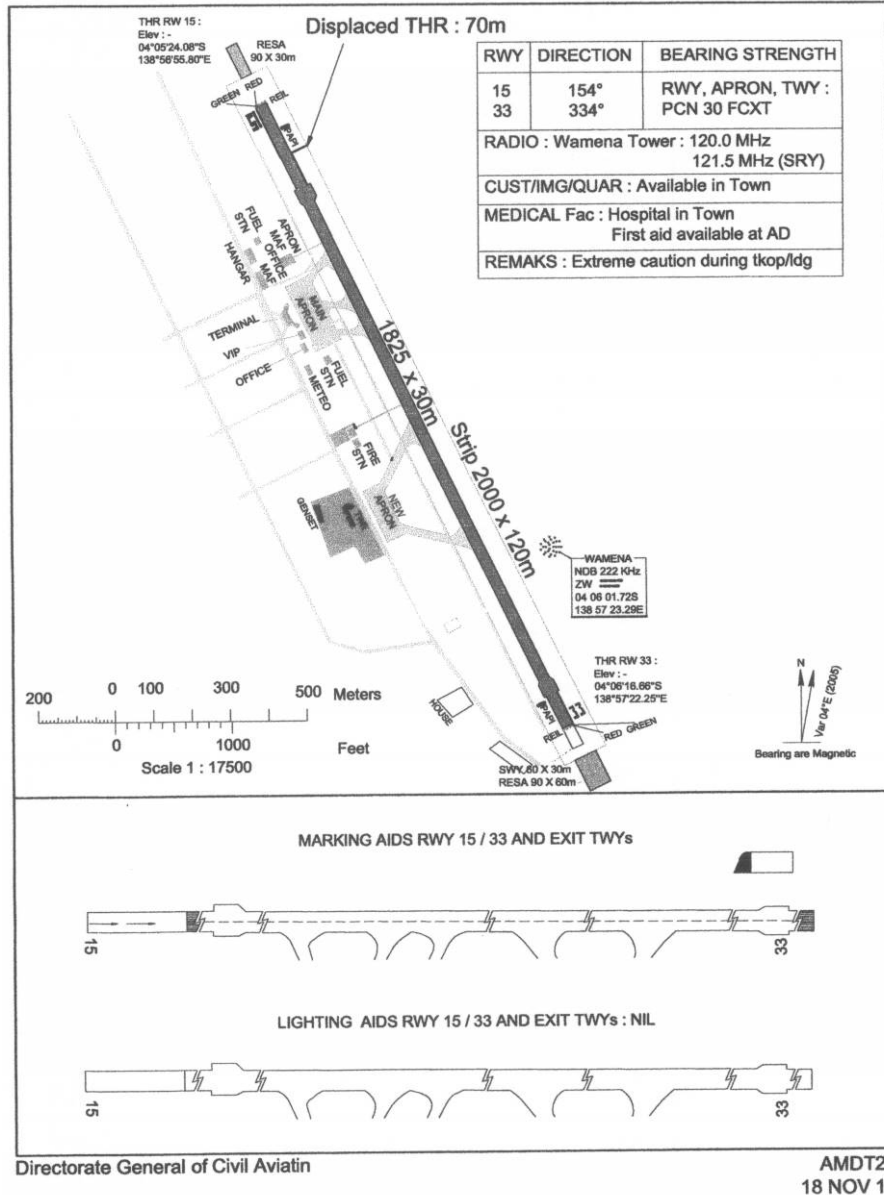


Figure 6: Aerodrome Chart AIP Indonesia (Vol III) of Wamena Airport

1.11 Flight Recorders

1.11.1 Flight Data Recorder (FDR)

Manufacturer : The Plessey Company Limited
 Type/Model : PV 1584 F2
 Part Number : 650/1/14040/205
 Serial Number : 10014

The FDR data was successfully downloaded and the information will be included in the final report.

1.11.2 Cockpit Voice Recorder (CVR)

Manufacturer : Fairchild
Type/Model : A100 A
Part Number : 93-A100-83
Serial Number : 57434

The significant excerpt of the CVR will be included in the final report.

1.12 Wreckage and Impact Information

The aircraft touch down mark found at approximately 200 meters from beginning runway 33. The initial main wheel mark out of the runway was found at approximately 400 meters from the beginning of the runway, the main wheel mark re-enter the runway surface at approximately 600 meters from the beginning runway 33 and the aircraft stopped at approximately 800 meters from the beginning of the runway.

1.13 Medical and Pathological Information

No medical or pathological investigations were conducted.

1.14 Fire

There was no evidence of fire.

1.15 Survival Aspects

To be included in the final report.

1.16 Tests and Research

No tests or research conducted as a result of this occurrence.

1.17 Organizational and Management Information

Aircraft Owner : PT. Deraya Air, Indonesia
Aircraft Operator : PTB (EMERALD) Pty Ltd, Australia
Address : Bandara Halim Perdanakusuma, Terminal
Building, 1St Floor, No.150/HT, Jakarta 13610-
Indonesia

1.18 Additional Information

The investigation is continuing and will include information of the following:

- Relevant aircraft operator manuals and procedures,
- Recorder information,
- Organization information,
- Human factors.

1.19 Useful or Effective Investigation Techniques

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

2. FINDINGS²

According to factual information gathered during the investigation, the findings were listed as follows:

- All crew have valid licenses with current type rating and valid medical certificates.
- The aircraft was airworthy prior to the occurrence.
- The Pilot in Command (PIC) acted as Pilot flying (PF) while the Second in Command (SIC) acted as pilot Monitoring (PM).
- After Jiwika point, the Wamena Controller instructed proceed to left downwind runway 33.
- The aircraft left Pyramid waypoint and proceed to left downwind and descent to 6,500 feet.
- During turning base leg, the pilot observed runway insight and continued the approach.
- The aircraft landed at 0620 UTC, and during landing roll the aircraft skid to the right, then re-entered the runway and stopped near taxiway Delta approximately 800 meters from beginning runway 33.
- During the approach, the weather reported 060/06 visibility 2-3 km continuous heavy rain.

² Findings are statements of all significant conditions, events or circumstances in the accident sequence. The findings are significant steps in the accident sequence, but they are not always causal, or indicate deficiencies. Some findings point out the conditions that pre-existed the accident sequence, but they are usually essential to the understanding of the occurrence, usually in chronological order.

3. SAFETY ACTION

At the time of issuing this interim report, the *Komite Nasional Keselamatan Transportasi* had been informed of safety actions resulting from this occurrence.

3.1 PT. Deraya Air

- Immediately instructed to stop operation flight in Papua until the internal evaluation becoming progress
- Review operation flight at Papua, SOP and socialization for all pilots.
- Special brief to all pilots about Approach and Landing Accident Reduction (ALAR), Crew Resources Management (CRM) and un-stabilized approach criteria,
- Corrective training for the pilots related to ALAR/un-stabilized approach; CRM/teamwork, route qualification and medical checkup.

4. SAFETY RECOMMENDATIONS

The KNKT acknowledges the safety actions taken by the PT. Deraya Air and considered that the safety action were relevant to improve safety, however there still remain safety issues that need to be considered. Therefore, the KNKT issues the following safety recommendations addressed to:

4.1 PT. Deraya Air

- **04.O-2017-06.1**

The aircraft landed and skid to the right, then re-entered the runway, KNKT recommends to review the flight crew training related to wet or slippery runway landing technique.

- **04.O-2017-06.2**

During the approach, the visibility was reported 2-3 km and continuous heavy rain, KNKT recommends to ensure the pilot to comply to the minimum weather condition prior to initiate the approach.

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