



**KOMITE NASIONAL KESELAMATAN TRANSPORTASI
REPUBLIC OF INDONESIA**

PRELIMINARY

KNKT.21.10.15.04

Aircraft Accident Investigation Report

PT. Smart Cakrawala Aviation

Cessna 208 Caravan; PK-SNN

Ilaga Airport, Papua

Republic of Indonesia

25 October 2021

2021

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

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Jakarta, 27 December 2021

**KOMITE NASIONAL
KESELAMATAN TRANSPORTASI
CHAIRMAN**



SOERJANTO TJAHHJONO

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ABBREVIATIONS AND DEFINITIONS

AC	:	Advisory Circular
AFIS	:	Aerodrome Flight Information Services
ALAR	:	Approach and Landing Accident Reduction
AOC	:	Air Operator Certificate
CFIT	:	Controlled Flight Into Terrain
CPL	:	Commercial Pilot License
DGCA	:	Directorate General of Civil Aviation
kg	:	Kilogram of mass
KNKT	:	<i>Komite Nasional Keselamatan Transportasi</i> is the independent investigation authority of Indonesia
lbs	:	libra (ancient Roman unit) identical standard of mass to the pound. The lbf stand for pound of force.
LT	:	Local Time
PIC	:	Pilot in Command
PF	:	Pilot Flying
PM	:	Pilot Monitoring
SIC	:	Second in Command
TBN	:	To be notified
TSO	:	Time Since Overhaul
UTC	:	Universal Time Coordinated
VHF	:	Very High Frequency

SYNOPSIS

On 25 October 2021, a Cessna 208 Caravan registered PK-SNN, was being operated by PT. Smart Cakrawala Aviation (Smart Aviation) on an un-scheduled cargo flight, from Moses Kilangin Airport, Timika (WAYY) to Ilaga Airport in Puncak district of Papua, Indonesia (WAYL). On board in this flight were two pilots and the flight carried 2,352 lbs (1,067 kg) of cargo.

The flight departed from Moses Kilangin Airport, Timika on 24 October 2021 at 2154 UTC (25 October 2021 at 0654 LT) on day light. The Pilot in Command (PIC) acted the Pilot Flying (PF) and the Second in Command (SIC) acted the Pilot Monitoring (PM). The flight until commenced the approach at Ilaga was uneventful.

According to the witness that was on the Ilaga apron, stated that the short final area of the Runway 25 partially covered by ground fog. Two aircraft that were making approach landing before PK-SNN cancelled the approach and made go around.

About 0725 LT, PK-SNN made approach and impacted to the embankment about 15 meters before the runway. The aircraft stopped about 90 meters from the beginning runway 25.

The investigation is ongoing and in this preliminary investigation report, KNKT issued safety recommendation to the aircraft operator.

1. FACTUAL INFORMATION

1.1 History of the Flight

On 25 October 2021, a Cessna 208 Caravan registered PK-SNN, was being operated by PT. Smart Cakrawala Aviation (Smart Aviation¹) on an un-scheduled cargo flight, from Moses Kilangin Airport, Timika (WAYY) to Ilaga² Airport in Puncak district of Papua, Indonesia (WAYL). On board in this flight were two pilots and 2,352 lbs (1,067 kg) of cargo.

The flight departed from Moses Kilangin Airport, Timika on 24 October 2021 at 2154 UTC³ (25 October 2021 at 0654 LT) on day light. The Pilot in Command (PIC) acted as the Pilot Flying (PF) while the Second in Command (SIC) acted as the Pilot Monitoring (PM). The flight until commenced approach at Ilaga was uneventful.

According to the witness that was on the apron of Ilaga, stated that the short final area of the runway 25 partially covered by ground fog. Two aircraft that were making approach landing before PK-SNN cancelled the approach and made go around.

About 0725 LT, PK-SNN made approach landing and impacted to the embankment about 15 meters before the runway. The aircraft stopped about 90 meters from the beginning runway 25.



Figure 1: The aircraft condition after accident

¹ PT. Smart Cakrawala Aviation will be named as Smart Aviation for the purpose of this report.
² The Ilaga Airport in Puncak district of Papua Indonesia will be named as Ilaga for the purpose of this report.
³ The 24-hours clock in Universal Time Coordinated (UTC) is used in this report to describe the local time as specific events occurred. Local time is UTC+9 hours.

1.2 Injuries to Persons

Injuries	Flight crew	Passengers	Total in Aircraft	Others
Fatal	1	-	1	-
Serious	1	-	1	-
Minor	-	-	-	-
TOTAL	2	-	2	-

Both pilots were Indonesian.

1.3 Damage to Aircraft

The aircraft was substantially damage.

1.4 Other Damage

There was no other damage to property and/or the environment.

1.5 Personnel Information

1.5.1 Pilot in Command

Gender	:	Male
Age	:	59 years
Nationality	:	Indonesia
Marital status	:	Married
Date of joining company	:	-
License	:	CPL
Date of issue	:	8 March 1989
Aircraft type rating	:	Single Engine Land
Instrument rating validity	:	N/A
Medical certificate	:	First Class
Last of medical	:	12 August 2021
Validity	:	18 November 2021
Medical limitation	:	Holder shall wear corrective lenses for near and distant vision.
Last line check	:	TBN
Last proficiency check	:	30 August 2021
Flying experience		
Total hours	:	25,441:28 hours

Total on type : TBN
 Last 90 days : 183:34 hours
 Last 30 days : 69:21 hours
 Last 7 days : 16:24 hours
 Last 24 hours : 6:31 hours
 This flight : 31 minutes

The PIC had undergone the Approach and Landing Accident reduction (ALAR) and Controlled Flight into Terrain (CFIT) trainings in 21 March 2021.

The Flight Safety Foundation (FSF) Approach and Landing Accident Reduction (ALAR) toolkit is a collection of tools and awareness material designed to help reduce the frequency and severity of approach and landing accidents and incidents, including controlled flight into terrain (CFIT) accidents. The requirement of the ALAR and CFIT training is stipulated in the Directorate General of Civil Aviation (DGCA) Advisory Circular (AC) 120-06.

1.5.2 Second in Command

Gender : Male
 Age : 21 years
 Nationality : Indonesia
 Marital status : TBN
 Date of joining company : TBN
 License : CPL
 Date of issue : 25 March 2019
 Aircraft type rating : Single Engine Land
 Instrument rating validity : TBN
 Medical certificate : First Class
 Last of medical : 25 August 2021
 Validity : 25 February 2022
 Medical limitation : Holder shall wear corrective lenses
 Last line check :
 Last proficiency check : 30 April 2022

Flying experience

Total hours : 494:44 hours
 Total on type : TBN
 Last 90 days : 98:55 hours
 Last 30 days : 72:00 hours
 Last 7 days : 9:25 hours

Last 24 hours : 6:06 hours
This flight : 31 minutes

The SIC had underwent the ALAR and CFIT trainings in 19 March 2021.

1.6 Aircraft Information

1.6.1 General

Registration Mark : PK-SNN
Manufacturer : Cessna Aircraft Company
Country of Manufacturer : United States of America
Type/Model : Cessna Caravan 208
Serial Number : 20800556
Year of Manufacture : 2014
Certificate of Airworthiness
 Issued : 29 June 2021
 Validity : 28 June 2022
 Category : Normal
 Limitations : None
Certificate of Registration
 Number : 4076
 Issued : 29 June 2021
 Validity : 28 June 2024
Time Since New : 3,658:50 hours
Cycles Since New : 3,399 cycles
Last Major Check : TBN
Last Minor Check : TBN

1.6.2 Engines

Manufacturer : Pratt & Whitney Canada
Type/Model : PT6A-114A
Serial Number-1 engine : PCE-PC2095
 ▪ Time Since New : 3658:50 hours
 ▪ Cycles Since New : 3,399 cycles

1.6.3 Propeller

Manufacturer : McCauley Propeller Systems
Type/Model : 3GFR34C703-B

- Serial Number propeller : 110370
- Propeller Hub : 1,882:39 hours
Time Since
Overhaul (TSO)
 - Propeller Blade : 1,882:39 hours
Time Since
Overhaul (TSO)

There were no indications of the aircraft and the power plant system malfunction before the accident.

According to the weight and balance report, the aircraft operated within the aircraft weight and balance envelope.

1.7 Meteorological Information

The meteorological station was not available in Ilaga. The *Badan Meterologi, Klimatologi, dan Geofisika* (BMKG – the agency of meteorology, climatology and geophysics of Indonesia) provided the satellite images of the cloud that showed the high cloud covered the surrounding area of Ilaga as shown in the figure below.

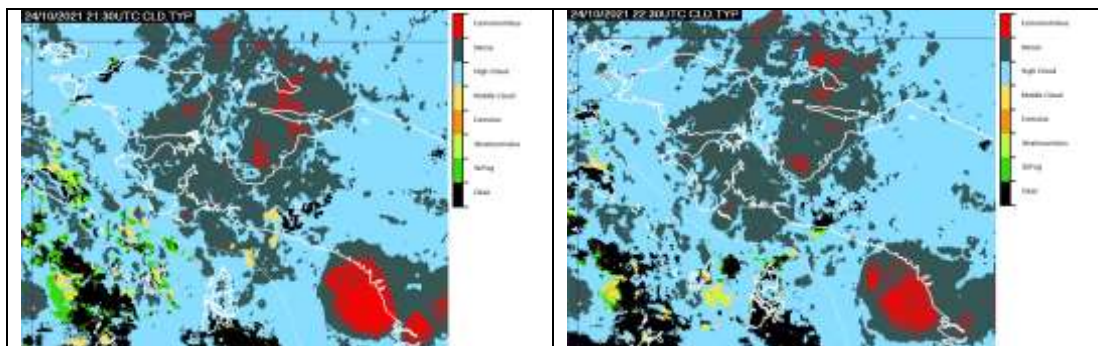


Figure 2: Satellite image of the cloud surrounding Ilaga area during the occurrence

The witnesses who were on the apron of Ilaga stated that the beginning of runway 25 was covered by ground fog.

The investigation received a video footage recorded the accident aircraft that was on approach and landing. The video also showed the ground fog on the beginning runway 25 as shown in the figure below.



Figure 3: The accident aircraft and the ground fog on the beginning runway 25

1.8 Aids to Navigation

The ground-based navigation aid was not available in Ilaga. The information of navigation equipment installed on the aircraft will be included in the final report.

1.9 Communications

The communication between the Aerodrome Flight Information Services (AFIS) officer and the pilot in Ilaga radio was not recorded.

The aircraft was equipped with two Very High Frequency (VHF) radio communication systems. The crew used two of the VHF radios for routine communications with air traffic control, but the communication was not recorded.

1.10 Aerodrome Information

Airport Name	: Ilaga Airport
Airport Identification	: WAYL
Airport Operator	: Directorate General of Civil Aviation
Airport Certificate	: TBN
Validity	: TBN
Coordinate	: 03° 58' 38" S; 137° 37' 13" E
Elevation	: 7,975 feet
Runway Direction	: 07/25
Runway Length	: 600 meters
Runway Width	: 23 meters
Surface	: Asphalt

1.11 Flight Recorders

The aircraft was not fitted with a flight data recorder or cockpit voice recorder. Neither recorder was required by current Indonesian aviation regulations.

1.12 Wreckage and Impact Information

The information of the wreckage and impact information will be included in the Final Report.

1.13 Medical and Pathological Information

The information of the medical and pathological (if any) will be included in the Final Report.

1.14 Fire

There was no evidence of fire in-flight or after the aircraft impacted to the runway.

1.15 Survival Aspects

After the aircraft stopped, a pilot of another aircraft of the operator which already landed in Ilaga, went to the aircraft and found the engine was still running. The pilot then shut down the engine and the electrical system of the aircraft.

The PIC and SIC evacuated from the aircraft by first responders. The PIC was unconscious and trapped in the cockpit. The SIC was injured but was able to communicate. The PIC deceased in the medical facility of Ilaga.

1.16 Tests and Research

Information of any test and research will be included in the Final Report.

1.17 Organizational and Management Information

Aircraft Owner	:	PT. Smart Cakrawala Aviation
Aircraft Operator	:	PT. Smart Cakrawala Aviation Gedung Smart Deal lantai 4, Jl. Cideng Timur
Address	:	No 16A, Petojo Utara Gambir – Jakarta Pusat 10130.
Operator Certificate	:	AOC 13-02 valid until 28 August 2022

The operator operated 13 aircraft consist of 3 Cessna 208 Caravan (including the accident aircraft), 7 Cessna 208B Grand Caravan, 1 Pilatus PC6-E2H4, 1 Airbus Helicopter EC130T2 and 1 Robinson R66 Helicopter.

The operator held the current Operation Manual (OM). In the chapter 8.6.2 of the OM-A regarding the weather anticipation, it was stated as follow:

8. OPERATING PROCEDURE

8.6.2. Application

Smart Cakrawala Aviation pilot will not takeoff or land an aircraft under Day VFR when the reported ceiling is less than 1,000 feet and the visibility is less than 5 km.

All Smart Cakrawala Aviation pilot shall not commence a flight if the reported weather condition below the requirement by Day VFR for taking off.

All Smart Cakrawala Aviation pilot shall not make a landing attempt to an airport if the reported weather condition below the requirement by Day VFR for landing. If

this condition happens, then the pilot must proceed to the landing alternates or must return to base.

The Pilot in Command may not begin a flight unless the PIC is thoroughly familiar with reported and forecasted weather conditions on the route to be flown and until the PIC has obtained all available weather report at airport destination that may affect the safety of the flight.

During the flight, the PIC must obtain any additional available information on meteorological conditions on along route to be flying (special weather of en-route alternate or alternate if available as applicable).

1.18 Additional Information

The investigation is continuing and KNKT plans to complete the investigation within 12 months since the day of the occurrence. Should any further relevant safety issues emerge during the course of the investigation, KNKT will immediately bring the issues to the attention of the relevant parties and publish as required.

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. FINDINGS⁴

According to factual information during the investigation, the KNKT identified initial findings as follows:

1. The aircraft had a valid Certificate of Airworthiness and Certificate of Registration.
2. The pilots held the current licensed.
3. There were no indications of malfunction in the aircraft system prior to the accident.
4. According to the weight and balance sheet, the aircraft operated within the aircraft weight and balance envelope.
5. According to the witnesses on the Ilaga apron, the beginning of runway 25 was covered by ground fog and supported by video footage.
6. There was no indication of inflight and post impact fire.
7. The investigation received a video which recorded by witness showing that the pilot committed to make aircraft landing while the ground fog covered the vicinity of short final runway 25.

⁴ 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 Preliminary Report, the KNKT had not been informed of any safety actions resulting from this occurrence.

4. SAFETY RECOMMENDATIONS

4.1 PT. Smart Cakrawala Aviation

- **04.O-2021-15.01**

In the OM-A chapter 8.6.2, it was stated that all Smart Cakrawala Aviation pilot shall not make a landing attempt to an airport if the reported weather condition below the requirement by Day VFR for landing. If this condition happens, then the pilot must proceed to the landing alternates or must return to base. The investigation received a video footage recorded the accident aircraft that was on approach and landing. The video also showed the ground fog on the beginning runway 25. The pilot decision to land the aircraft when the weather below minima was contrary to the company procedure and endanger the aircraft operation.

The KNKT recommend to develop a system to ensure the implementation of company procedures to confirm safe aircraft operation.

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