



**KOMITE NASIONAL KESELAMATAN TRANSPORTASI  
REPUBLIC OF INDONESIA**

# **PRELIMINARY**

**KNKT.24.02.07.04**

**Aircraft Accident Investigation Report**

**PT Whitesky Aviation**

**Bell 429; PK-WSW**

**Weda, Halmahera, North Maluku**

**Republic of Indonesia**

**20 February 2024**

**2024**

This Preliminary Report is published 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 investigation carried out by the KNKT in accordance with Annex 13 to the Convention on International Civil Aviation, the Indonesian Aviation Law (UU No. 1/2009) and Government Regulation (PP No. 62/2013).

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

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Jakarta, 23 April 2024  
**KOMITE NASIONAL  
KESELAMATAN TRANSPORTASI  
CHAIRMAN**



**SOERJANTO TJAHJONO**

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## ABBREVIATIONS AND DEFINITIONS

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AFIS	:	Aerodrome Flight Information Service
AFML	:	Aircraft Flight and Maintenance Log
AIA	:	Accident Investigation Authority. The authority designated by a State as responsible for aircraft accident and incident investigations within the context of the ICAO Annex 13.
BASARNAS	:	Indonesia <i>Badan Nasional Pencarian dan Pertolongan</i> (Indonesia Search and Rescue Agency)
CPL-H	:	Commercial Pilot License – Helicopter
CVDR	:	Cockpit Voice and Data Recorder
ELT	:	Emergency Locator Transmitter
GPS	:	Global Positioning System
HDA	:	Helicopter Deck Assistance
HLO	:	Helicopter Landing Officer
IWIP	:	Indonesia Weda Bay Industrial Park
KNKT	:	Komite Nasional Keselamatan Transportasi
LT	:	Local Time (see UTC)
LUT	:	Local User Terminals. The LUT is a ground station that processes the signals received from the satellites and calculates the location of a 406 distress beacon (ELT) alert.
UTC	:	Universal Time Coordinated. The 24-hour clock in Universal Time Coordinated (UTC) is used in this report to describe the local time as specific events occurred. Local Time at Weda Bay or Halmahera is UTC+9 hours.
VHF	:	Very High Frequency

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## SYNOPSIS

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A Bell 429 helicopter, registered PK-WSW, was being operated by PT Whitesky Aviation in several helipads to serve the operation of the mining company of Indonesia Weda Bay Industrial Park (IWIP) in Halmahera area. The daily activity of the helicopter operation was centralized at the Kaorahai Helipad and controlled by the Helicopter Landing Officer (HLO).

On 20 February 2024, at 0239 UTS (1139 LT), the helicopter took off from Weda Bay Airport to Kaorahai Helipad and landed safely at 1152 LT. Subsequently, the helicopter conducted four flights to helipads for the mining operation uneventful.

The helicopter then continued a series of flights and at 1244 LT, the helicopter took off from the Kaorahai Helipad to Jiguru Helipad with 6 passengers. At 1252 LT, the helicopter landed at Jiguru Helipad and 5 passengers disembarked.

At 1255 LT, the helicopter took off from Jiguru Helipad to Pinto East Helipad and carried 2 passengers. At 1301 LT, the helicopter arrived at Pinto East Helipad to disembark 1 passenger.

At 1304 LT, the helicopter took off from Pinto East Helipad to Kaorahai Helipad. Onboard this flight were two pilots and one passenger. About 2 minutes after departure, the Helicopter Deck Assistance (HDA) who assisted in the departure of the helicopter heard an explosion but was unable to identify the source of the sound. At the same time, the rain started and the visibility degraded significantly. Afterward, the HDA in Pinto East Helipad contacted the HLO in Kaorahai Helipad to inform that the helicopter had departed and to monitor whether the helicopter safely landed in Kaorahai Helipad.

At 1316 LT, the operator flight following indicated that the helicopter was inactive and the helicopter was considered missing. Subsequently, the search and rescue mission was activated.

On 21 February 2024 at 0955 LT, the helicopter was found in the rain forest about 1.5 Nm on radial 350° from Pinto East helipad, at the coordinate of 00° 37' 19.9" N; 128° 06' 30.6" E at an elevation of about 2,900 feet above mean sea level. All occupants were fatally injured.

The KNKT launched the ICAO Annex 13 investigation and forwarded a Notification to National Transportation Safety Board (NTSB) of the United States of America and Transportation Safety Board (TSB) Canada inviting participation in the investigation. NTSB and TSB appointed Accredited Representative and Advisers.

At the time of issuing this Preliminary Report, the KNKT had not been informed of any safety actions resulting from this occurrence and KNKT issued safety recommendation for the safety issue identified in the course of the investigation.

The investigation is ongoing. Should further safety issues emerge during the course of the investigation, KNKT will bring the issues to the attention of the relevant parties and issue safety recommendation(s) as required.

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# 1 FACTUAL INFORMATION

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## 1.1 History of the Flight

A Bell 429 helicopter, registered PK-WSW, was being operated by PT Whitesky Aviation to conduct an unscheduled flight. The helicopter served the operation of the mining company of Indonesia Weda Bay Industrial Park (IWIP). The daily activity of the helicopter operation was centralized at the Kaorahai Helipad<sup>1</sup> and controlled by the Helicopter Landing Officer (HLO).

The routine daily operation, the helicopter departs in the morning from Weda Bay Airport, Halmahera, North Maluku, Indonesia to Kaorahai with all the operator staff on board (about 6 personnel) including the HLO. The helicopter then conducts the flight from Kaorahai to several helipads. Before sunset, the helicopter flies back and carries operator staff to Weda Bay Airport. The actual flight may be deferred from the flight plan, based on the mining activity and the weather conditions. The Helicopter Deck Assitance (HDA) assists the helicopter activity in helipads other than the Kaorahai Helipad.

On 20 February 2024, according to the flight plan, the helicopter was scheduled to conduct 15 flights.

At 0236 UTC (1136 LT<sup>2</sup>), the helicopter started the engine at Weda Bay Airport.

At 1139 LT, the helicopter took off from Weda Bay Airport to Kaorahai Helipad.

At 1152 LT, the helicopter landed at Kaorahai Helipad safely. Subsequently, the helicopter conducted flights to several helipads of the mining operation. The helicopter flights was Kaorahai Helipad – Pinto Aceh Helipad – Kaorahai Helipad – Pinto Cirebon Helipad – Kaorahai Helipad. All the flights were uneventful.

The helicopter then continued series of flights. At 1244 LT, the helicopter took off from the Kaorahai Helipad with the destination of Jiguru Helipad with 6 passengers.

At 1252 LT, the helicopter landed at Jiguru Helipad and 5 passengers disembarked.

At 1255 LT, the helicopter took off from Jiguru Helipad to Pinto East Helipad and carried 2 passengers.

At 1301 LT, the helicopter arrived at Pinto East Helipad<sup>3</sup> to disembark 1 passenger.

At 1304 LT, the helicopter took off from Pinto East Helipad to Kaorahai Helipad. Onboard this flight were 2 pilots and 1 passenger. The HDA in the Pinto East Helipad assisted the departure process near the helipad to make sure the helicopter able to take off safely.

About 2 minutes after the helicopter took off, the HDA heard an explosion but was unable to identify the source of the sound. At the same time, the rain started and the visibility degraded significantly. Afterward, the HDA in Pinto East Helipad contacted

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<sup>1</sup> Kaorahai Helipad is located on coordinate of 0° 40' 16.81" N; 127° 58' 45.57" E, on radial about 007° from Weda Bay Airport with the distance about 12 Nm (see the operational helipad in figure 4)

<sup>2</sup> 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 at Weda Bay and Halmahera is UTC+9 hours.

<sup>3</sup> Pinto East Helipad was located on coordinate of 0° 36' 48.03" N; 128° 4' 56.43" E on radial about 120° from Kaorahai Helipad with the distance about 7 Nm (see the operational helipad in figure 4).



the HLO in Kaorahai Helipad to inform that the helicopter had departed and to monitor whether the helicopter safely landed in Kaorahai Helipad.

At 1316 LT, the operator flight following indicated that the helicopter was inactive and the helicopter was considered lost. Subsequently, the search and rescue mission was activated. About 1621 LT, another helicopter departed to conduct a search operation and terminated about 1621 LT however, the helicopter had not been located.

On 21 February 2024 at 0955 LT, the helicopter was found in the rain forest about 1.5 Nm on radial 350° from Pinto East helipad, at the coordinate of 00° 37' 19.9" N; 128° 06' 30.6" E at an elevation of about 2,900 feet above mean sea level.

All occupants were fatally injured.

## 1.2 Injuries to Persons

Injuries	Flight crew	Passengers	Total in Aircraft	Others
Fatal	2	1	3	
Serious	-	-	-	
Minor	-	-	-	
None	-	-	-	
<b>TOTAL</b>	<b>2</b>	<b>1</b>	<b>3</b>	

All occupants were Indonesian.

## 1.3 Damage to Aircraft

The aircraft was destroyed by the impact force.

## 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 : 46 years old  
Nationality : Indonesian  
Date of joining the company : 5 December 2022  
License : CPL-H  
Date of issue : 24 April 2013  
Aircraft type rating : Helicopter BO-105, AS-350, EC-130, AW-119, Bell-429  
Instrument rating validity : -

Medical certificate : Class I  
     Last of medical : 9 January 2024  
     Validity : 9 July 2024  
     Medical limitation : Holder shall possess glasses that correct for near vision  
  
 Last line check : 15 January 2024  
 Last proficiency check : 15 January 2024  
**Flying experience**  
 Total hours : 3327.46 hours  
 Total on type : 155.28 hours  
 Last 90 days : 87.54 hours  
 Last 30 days : 65.20 hours  
 Last 7 days : 15.05 hours  
 Last 24 hours : 2.14 hours  
 This flight : 1.25 hours

### 1.5.2 Second In Command

Gender : Male  
 Age : 28 years old  
 Nationality : Indonesian  
 Date of joining company : 20 February 2020  
 License : CPL-H  
     Date of issue : 29 March 2019  
     Aircraft type rating : Helicopter Bell-206, Bell-505, Bell-429  
 Instrument rating validity : -  
 Medical certificate : Class I  
     Last of medical : 15 February 2024  
     Validity : 15 August 2024  
     Medical limitation : None  
 Last line check : 15 February 2024  
 Last proficiency check : 15 February 2024  
**Flying experience**  
 Total hours : 1361.44 hours  
 Total on type : 79.15 hours

Last 90 days : 79.15 hours  
Last 30 days : 7.19 hours  
Last 7 days : 0  
Last 24 hours : 0  
This flight : 1.25 hours

## 1.6 Aircraft Information

Registration Mark : PK-WSW  
Manufacturer : Bell Helicopter Textron  
Country of Manufacturer : United States  
Type/Model : Bell-429  
Serial Number : 57077  
Year of Manufacture : 2012

### Certificate of Airworthiness (C of A)

Date of issue : 27 September 2023  
Validity : 26 September 2024  
Category : Normal  
Limitation : None

### Certificate of Registration (C of R)

Number : 3178  
Date of issue : 14 September 2022  
Validity : 13 September 2025  
Time Since New : 2,331.9 hours  
Cycles Since New : 8,603 cycles  
Last Major Check : 200 Hours or 12 Months Inspection conducted on  
Date/Insp. Type/Hours/Cycle 2 February 2024 when the aircraft total hour was  
2289.4 hours and the total cycle was 8348 cycles.  
Last Minor Check : 10 Hours IBF Bypass Check conducted on 20  
Date/Insp. Type/Hours/Cycle February 2024 when the aircraft total hour was  
2331.9 hours and the total cycle was 8603 cycles.

The investigation reviewed the Aircraft Flight and Maintenance Log (AFML) and found there were no aircraft abnormalities reported before the accident.

## 1.7 Meteorological Information

The aviation meteorological service was not available at Weda Bay Airport and all helipads. The weather information relied on the HDA report and pilot visual observation.

The *Badan Meteorologi Klimatologi dan Geofisika – BMKG* (Bureau of Meteorology, Climatology and Geophysics of Indonesia) provided satellite weather images at 0400 UTC (1300 LT) and 0430 UTC (1330 LT) as shown in the figure below.

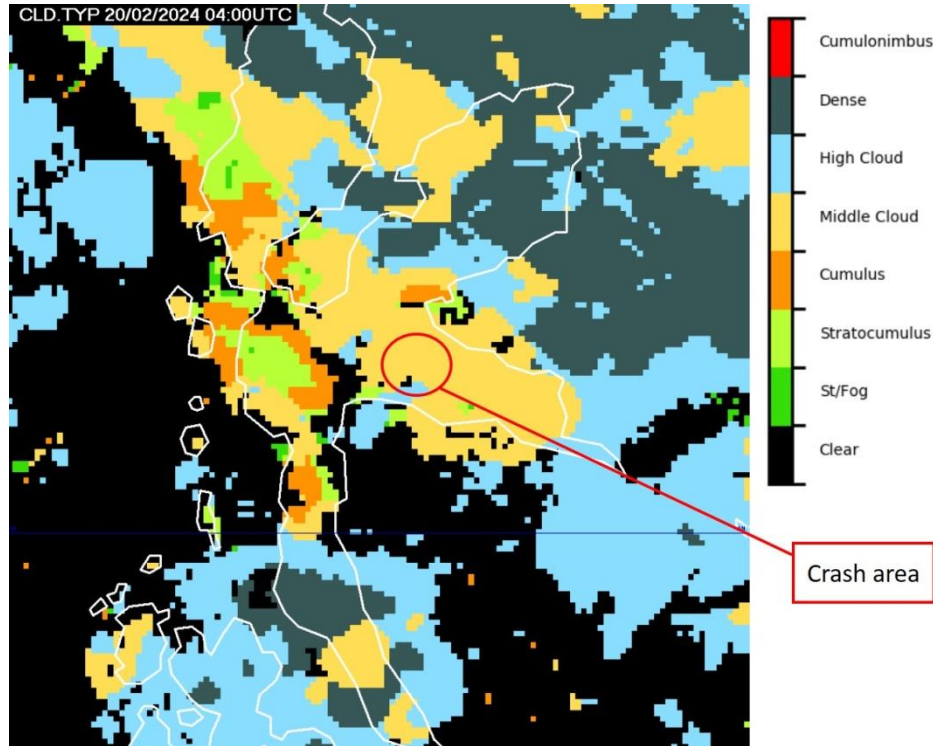
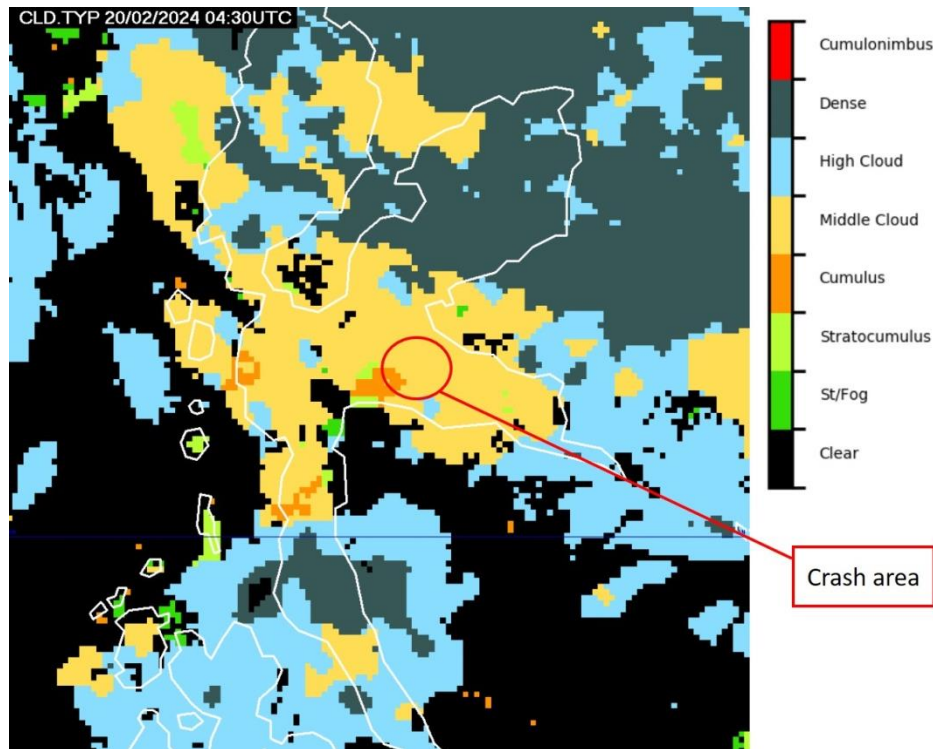


Figure 1: The weather situation at 1300LT



**Figure 2: The weather situation at 1330 LT**

The satellite images of the weather situation showed that the area of the accident was covered by the middle cloud.

The HDA who assisted the helicopter departure stated that about 2 minutes after the helicopter took off, the weather started raining and the visibility was degraded significantly. A witness who was in a shelter about 700 meters from the crash site stated that at the time the explosion was heard, the weather was raining and the visibility was degraded.

## **1.8 Aids to Navigation**

No ground based navigation aids available at Kaorahai Helipad and Pinto East Helipad.

The pilot used the Global Positioning System (GPS) onboard the helicopter which was programmed with customized data for operation in the Halmahera area, including the Weda Bay Airport and the helipads.

## **1.9 Communications**

The aircraft was equipped with two Very High Frequency (VHF) radio communication systems. The pilots used the VHF radios for routine communications with air traffic services at Weda Bay Airport and other aircraft. The accident flight was in uncontrolled airspace and outside the authority of air traffic services of Weda Bay Airport, therefore no radio communication was made by the pilot.

## 1.10 Aerodrome Information

### 1.10.1 Weda Bay Airport

Airport Name	:	Weda Bay Airport
Airport Identification	:	WAEH
Airport Operator	:	PT Weda Bay Nickel
Airport Certificate	:	153/SBU/I/2024 Amandemen 2
Validity	:	20 December 2024
Coordinate	:	0° 28' 05.23" N; 127° 56' 46.07" S
Elevation	:	11 feet
Runway Direction	:	09/27
Runway Length	:	1968 meters
Runway Width	:	45 meters
Surface	:	Concrete

The Weda Bay Airport was a special airport operated by PT Weda Bay Nickel which was part of the IWIP. The airport was equipped with the Aerodrome Flight Information Service (AFIS) for the traffic service.

### 1.10.2 Pinto East Helipad

Before the accident, the helicopter departed from the Pinto East Helipad. The Pinto East Helipad was located at the coordinate of 0° 35' 49.7" N; 128° 6' 43.3" E in an elevation of 2,700 feet above mean sea level with a distance of about 9 Nm at a radial of 120° from the Kaorahai helipad. The Pinto East Helipad situation was shown in the figure below.



**Figure 3: The Pinto East Helipad with another helicopter landed on it**

### 1.11 Flight Recorders

The aircraft was fitted with a combined recorder Cockpit Voice and Data Recorder (CVDR). The CVDR was recovered on 23 February 2024 from the crash site. The recorder was transported to the KNKT recorder facility for the data downloading process.

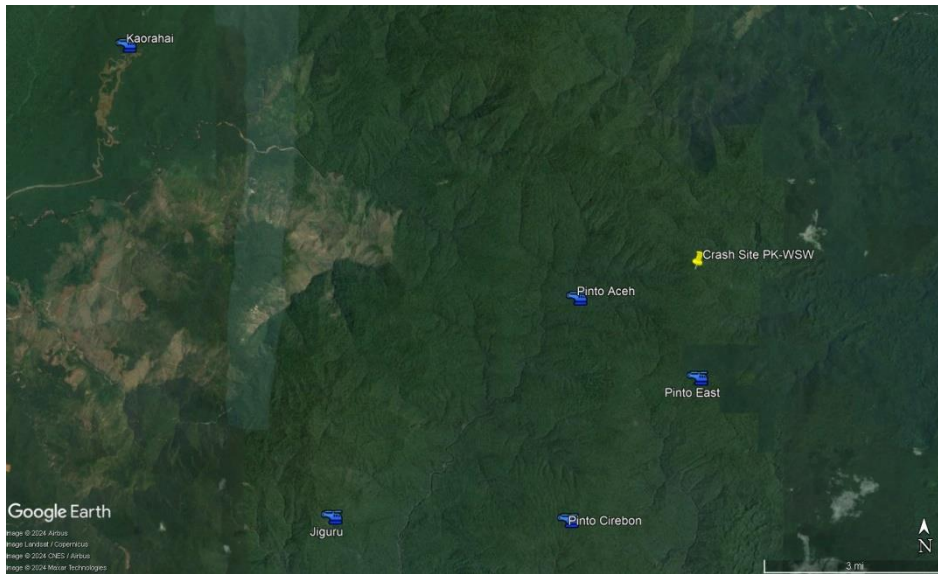
The CVDR information is as follows:

Manufacturer : Penny & Giles Aerospace (Curtiss–Wright)  
Type/Model : -  
Part Number : D51615 – 202 – 011 Iss 01  
Serial Number : A03304 – 003

Detailed information on the CVDR will be included in the Final Report.

### 1.12 Wreckage and Impact Information

The helicopter wreckage was found in the rain forest at a coordinate of 00° 37' 19.9" N; 128° 06' 30.6" E at an elevation of about 2,900 feet above mean sea level and about 1.5 Nm on radial 350° from Pinto East helipad. The crash site location in the Google Earth application is shown in the figure below.



**Figure 4: The helipad location and the crash site information**

The investigation documented the location during the crash site visit using the helicopter. The crash site location as seen from the helicopter is shown in the figure below.





**Figure 5: The crash site location and impact trajectory**

The helicopter impacted several trees and made a narrow opening in the forest as shown in the figure below.



**Figure 6: The opening area created by the helicopter impact**

The investigation identified that the helicopter impacted 7 big trees and several small trees before resting at the crash site. The cutting trees created an angle of about  $15^\circ$  down with a heading of  $285^\circ$ .

The first tree impacted by the helicopter was the biggest tree with a diameter of about 50 centimeters. The trail of the first impacted tree up to the crash site was about 100 meters. The broken trees were consistent with the witness statement who took shelter about 700 meters from the crash site, which stated there were repetitive impact sounds



prior to the explosion. The witness could not trace the source of the sound as it was heavy rain.

The condition of the helicopter after impacting the trees is shown in the figure below.



**Figure 7: The helicopter condition at the crash site**

During the data collection at the crash site, it was found that the Emergency Locator Transmitter (ELT) indicator light in front of the ELT unit was blinking and a “BEEP” sound was also heard while the activation switch was in the AUTO position. In addition, the ELT antenna cable was found broken.

### **1.13 Medical and Pathological Information**

Detailed information on medical or pathological investigations will be included in the Final Report.

### **1.14 Fire**

There was no evidence of in-flight or post-impact fire.

### **1.15 Survival Aspects**

On 20 February 2024, at 1304 LT, the helicopter took off from Pinto East Helipad to Kaorahai Helipad with only 1 passenger. The departure process was assisted by the HDA in Pinto East Helipad.

About 2 minutes after the helicopter took off, the HDA heard an explosion but was unable to identify the location of the sound. The explosion was also heard by the mining personnel in Pinto Aceh Helipad, and Pinto Cirebon Helipad (see the location in figure 4). Subsequently, the HDA in Pinto East Helipad contacted the HLO in Kaorahai Helipad to inform that the helicopter had departed and to monitor whether the helicopter safely landed in Kaorahai Helipad.

At 1316 LT, the helicopter was indicated inactive in the operator flight following system (which also can be monitored in Kaorahai Helipad), and the helicopter was considered missing.

At 1321 LT, the HLO which standby in the Kaorahai Helipad activated an emergency condition and informed the Weda Bay Airport that the helicopter was missing. The investigation found there was no evidence of the distress message issued by the Weda Bay Airport. At the same time, the HLO kept trying to contact the pilot until 1325 LT without success.

At 1335 LT, the Weda Bay Airport Supervisor forwarded the information to the Indonesia *Badan Nasional Pencarian dan Pertolongan* (Indonesia Search and Rescue Agency – BASARNAS) region Ternate, North Maluku, Indonesia. The BASARNAS confirmed that the Emergency Locator Transmitter (ELT) of the accident helicopter was not detected by the Local User Terminals (LUT<sup>4</sup>) in the BASARNAS Headquarters in Jakarta, Indonesia.

The Weda Bay Airport Supervisor activated the search mission and utilized another helicopter that was on standby at the airport, as a rescue helicopter. The rescue helicopter could not depart until 1600 LT as the weather was raining.

About 1621 LT, the rescue helicopter took off from Weda Bay Airport to search the helicopter. About 1730 LT, about sunset, the rescue helicopter returned to Weda Bay Airport and the helicopter was unable to be located.

About 1900 LT, the BASARNAS search and rescue team departed from Ternate to Weda Bay Airport via land transportation and arrived on 21 February 2024 about 0300 LT.

On 21 February 2024 at 0800 LT, the rescue helicopter took off from Weda Bay Airport to search the helicopter.

About 0910 LT, the rescue helicopter returned to Weda Bay Airport to refuel for the next search missions.

About 0940 LT, the rescue helicopter took off for the second search mission.

About 0955 LT, the rescue helicopter pilot spotted the sign of newly broken trees at coordinate of 0° 37' 19.47" N; 128° 6' 33.75" E. After flying low near the newly broken trees, the rescue helicopter identified the wreckage of the helicopter and informed to the rescuer in the Pinto East Helipad.

Based on the information from the rescue helicopter pilot about the location of the crash site, the rescuer departed from the Pinto East Helipad to the crash site with mining transportation.

The rescuer arrived at the accident site and found all occupants were fatally injured. About 1231 LT, all of the occupants were transported from the crash site to the Pinto East Helipad using mining transportation. Subsequently, all the occupants were flown to a hospital near the Weda Bay Airport for identification.

## **1.16 Tests and Research**

The test and research will be included in the Final Report.

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<sup>4</sup> The LUT is a ground station that processes the signals received from the satellites and calculates the location of a 406 distress beacon (ELT) alert.

## **1.17 Organizational and Management Information**

### **1.17.1 The Operator**

Aircraft owner and operator : PT Whitesky Aviation  
Secure Building – Tower A1.1 Floor  
Jalan Raya Protokol Halim Perdanakusuma  
Jakarta 13610

Air operator certificate : 135-016 vut 26 April 2026

The operator had an operation base in Jakarta. At the time of the occurrence, the operator operated 1 (one) helicopter Bell 429 (the accident helicopter), 4 (four) helicopters Bell 505, 2 (two) Airbus helicopters EC135, 1 (one) Airbus helicopter EC145, and 1 Cessna 208.

### **1.17.2 The Indonesia Weda Bay Industrial Park**

The helicopter served the mining operation of PT Indonesia Weda Bay Industrial Park (IWIP).

The Weda Bay Airport was a special airport operated by PT Weda Bay Nickel which was part of the IWIP, to support the exploration mining operation from and to Weda Bay. The airport was equipped with the Aerodrome Flight Information Service (AFIS) for air traffic services. The transportation to and from the exploration mining serves by helicopter if the location is unreachable by land transportation.

The exploration mining location consists of more than 20 locations that were equipped with helipads, including Pinto Aceh Helipad, Pinto Cirebon Helipad, Jiguru Helipad, and Pinto East Helipad.

The operation of the helicopter activities was centralized in Kaorahai Helipad. The helicopter operation to support the mining operation was arranged by the staff of the Planning and Logistics unit as the subordinate of the Geology Department of the IWIP in coordination with the HLO. All of the mining exploration units will report the required logistics or personnel movement to the staff of the Planning and Logistics daily, normally in the afternoon. Based on the reports, the staff of the Planning and Logistics will make the plan for the following day activities and communicate it to the HLO. Based on the plan, the HLO will make the flight plan for the following day. The plan may be deferred based on several conditions including the weather.

At the end of the operation of the day, after the helicopter landed at Weda Bay Airport, the HLO reports to the staff of Planning and Logistics of the actual flight conducted on the day including the unaccomplished plan if any, to be planned for the following day flight operation.

The investigation found the fact that the mining operation utilized more than 20 locations for the mining exploration which consisted of a helipad. However, the investigation did not find any evidence or documentation of who was responsible for managing the helipad.

The investigation reviewed the Aerodrome Manual and Aerodrome Emergency Plan of Weda Bay Airport and did not find any procedure for managing the Kaorahai

Helipad or other helipads of the mining exploration. The manual also did not contain the procedure for managing the emergency involving helicopter operation in any location of the mining exploration.

### **1.18 Additional Information**

The KNKT launched ICAO Annex 13 investigation and forwarded a Notification to Accident Investigation Authorities (AIA). This investigation involved the participation of the National Transportation Safety Board (NTSB) of the United States of America as the State of Design and the State of Manufacture of the helicopter and Transport Safety Board (TSB) Canada as the State of Design and the State of Manufacture of the engine. The agencies have appointed their Accredited Representatives and the Technical advisers to assist in this investigation in accordance with the provisions in ICAO Annex 13.

The investigation is continuing and KNKT plans to complete the investigation within 12 months from the day of the occurrence. Should any further relevant safety issues emerge in 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.

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## 2 FINDINGS

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The 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.

In this occurrence, the KNKT identified several findings as follows:

1. The pilot held valid licenses and medical certificates.
2. The aircraft had a valid Certificate of Airworthiness (C of A) and Certificate of Registration (C of R).
3. There was no helicopter system abnormality reported prior to the flight.
4. The Weda Bay Airport was an airport operated by PT Weda Bay Nickel which was part of the IWIP to support the mining activities. The airport utilized the Aerodrome Flight Information Service (AFIS) for the air traffic services.
5. The helicopter was used to support the transportation to the exploration mining locations which cannot be reached by land transportation via several helipads which consist of more than 20 helipads including Pinto Aceh Helipad, Pinto Cirebon Helipad, Jiguru Helipad, and Pinto East Helipad.
6. The operation of the helicopter activity was centralized in Kaorahai Helipad to distribute personel and goods to the exploration mining locations.
7. The operation of the helicopter was controlled by the HLO and the activity in the helipads was assisted by the HDA.
8. Before the accident flight, the helicopter served 7 flights uneventfully. The accident flight was intended to fly from Pinto East Helipad to Kaorahai Helipad. About 2 minutes after the helicopter departure, the HDA heard an explosion which was also heard by the mining personnel at Pinto Aceh Helipad and Pinto Cirebon Helipad. At the same time, the weather started to rain and the visibility was degraded significantly.
9. On the following day, the helicopter was identified at coordinate 0° 37' 19.9" N; 128° 06' 30.6" E at an elevation of about 2,900 feet above mean sea level in a heading of approximately 285°. All occupants were fatally injured.
10. The examination of the accident site found that before resting at the crash site, the helicopter impacted seven big trees, and the biggest diameter of the tree was about 50 centimeters. The trail of the first impacted tree up to the crash site was about 100 meters.
11. The broken trees were consistence with the witness statement who took shelter about 700 meters from the crash site which stated there were repetitive impact sounds prior to the explosion.
12. The helicopter was destroyed by the impact force and it was found that the Emergency Locator Transmitter (ELT) was activated but the antenna line was broken.

13. The investigation found that the mining operation utilized more than 20 helipads but could not find any evidence or documentation of who was responsible for managing the helipad.
14. The investigation reviewed the Aerodrome Manual and Aerodrome Emergency Plan of Weda Bay Airport and did not find any procedure for managing the Kaorahai Helipad or other helipads of the mining exploration. The manual also did not contain the procedure for managing the emergency involving helicopter operation in any location of the mining exploration.
15. The investigation found there was no evidence of the distress message issued by the Weda Bay Airport.

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### **3 SAFETY ACTION**

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

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## **4 SAFETY RECOMMENDATIONS**

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In the course of the investigation, KNKT found the safety issues. Therefore, the KNKT issued safety recommendations to address safety issues identified in this report.

The safety recommendation in this investigation report is made with the intention of preventing accidents or incidents and which in no case has the purpose of creating a presumption of blame or liability for an accident or incident.

### **4.1 The Indonesia Weda Bay Industrial Park**

- **04.B-2024-07.01**

The investigation found that the mining operation under Indonesia Weda Bay Industrial Park (IWIP), utilized more than 20 helipads and the investigation did not find any evidence or documentation of who was responsible for managing the helipad. The investigation reviewed the Aerodrome Manual and Aerodrome Emergency Plan of Weda Bay Airport and did not find any procedure for managing the Kaorahai Helipad or other helipads. The manual also did not contain the procedure for managing the emergency involving helicopter operation. The absence of the procedure resulted in the lag of coordination in the aviation occurrence as indicated by no evidence of the distress message issued by the Weda Bay Airport. The absence of procedure may also result in unmanaged helipads for safe operation.

Therefore KNKT recommends IWIP to review the Aerodrome Manual and Aerodrome Emergency Plan of Weda Bay Airport to include the procedure of responsibility in managing helipads including the procedure of the emergency involving helicopter operation.



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