PHILIP A. HART
MICHIGAN

COMMITTEES:
COMMERCE
JUDICIARY

United States Senate

WASHINGTON, D.C. 20510

March 1, 1972

Mr. Michael J. Wirt
605 West Hoover Ave.
Ann Arbor, Mich. 48103

Dear Mr. Wirt:

Enclosed is a copy of the collateral report of investigation conducted into the CH-47A helicopter accident of October 3, 1968 in which your brother, Sp/4 Dennis A. Wirt was killed.

As soon as I receive the photographs and map to the report from the Department of the Army, I will send them on to you.

With best wishes,

Sincerely,

Philip A. Hart

Philip A. Hart

Enclosures

DEPARTMENT OF THE ARMY
OFFICE OF THE JUDGE ADVOCATE GENERAL
WASHINGTON, D.C. 20310

REPLY TO
ATTENTION OF:
DAJA-LTD-G 1968/10398

8 MAR 1972

Honorable Philip A. Hart
United States Senate
Washington, DC 20510

Re: Aircraft Accident - 3 October 1968 (SP4 Dennis A. Wirt)

Dear Senator Hart:

In accordance with our letter of 28 February 1972, inclosed are the photographs and map on the above-captioned aircraft accident in which SP4 Dennis A. Wirt was killed.

Sincerely yours,

William B. Carne

WILLIAM B. CARNE
Colonel, JAGC
Chief, Litigation Division

2 Incl
Photos
& Map

DEPARTMENT OF THE ARMY
HEADQUARTERS 1ST CAVALRY DIVISION (AIRMOBILE)
APO San Francisco 96490

24 November 1968

SUBJECT: Collateral Investigation (CH-47A (61-9041))

Commanding General
ATTN: Staff Judge Advocate
1st Cavalry Division (Airmobile)
APO San Francisco 96490

1. GENERAL.

This collateral investigation commenced at 1130 hours, 5 October 1968 per VOCG, 1st Cavalry Division (Airmobile) to determine the facts and circumstances surrounding the mid-air collision of a US Army CH-47A (61-9041) and US Air Force C-7A (63-9753) at approximately 1610 hours, 3 October 1968, visinity Camp Evans, RVN (See appointing orders at TAB A). The majority of the attached statements consist of verbatim testimony taken under oath by a qualified court reporter.

2. FACTS.

a. An Air Force C-7A (63-9753) flew into the rear rotar of Army CH-47A (61-9041) at approximately 1610 hours, 3 October 1968, about 2 - 3 kilometers ESE of Camp Evans, RVN (see TAB B).

b. There were no survivors to the accident. At TAB C is a list of 25 casualties, all of whom have been identified. There were 11 on the CH-47A and 14 on the C-7A.

c. The weather reported at Camp Evans at the time of the accident was clear, with a 30,000 foot ceiling (see TAB D).

d. Air Force C-7A (63-9753) took off to the north on runway 36. Witness statements (see TAB E-1 thru E-21) indicate the aircraft initiated a climbing right turn at less than 500 feet of altitude just after passing the end of the runway, and did continue the climb until it collided with the Army CH-47A (61-9041).

SUBJECT: Collateral Investigation (CH-47A (61-9041))

e. The standard fixed wing departure procedure for Camp Evans Airfield is a straight climb after take-off to 1000 feet prior to turnout. This procedure was published, and distributed on 18 February 1968 in a letter, Headquarters, 1st Cavalry Division (AM), subject: Air Traffic Control, Camp Evans, dated 18 February 1968 (see TAB F). The letter was classified confidential because of 2 inclosures which depict actual unit locations on Camp Evans.

f. Army CH-47A (61-9041) was on the regularly scheduled division bus run (see schedule at TAB G). It had departed LZ Nancy (YD4339) enroute to Camp Evans for landing at the ASP. The ASP is located on the southern edge of Camp Evans, about 1000 meters south of runway 36. (See map at TAB B).

g. Camp Evans Airfield tower had radio contact with C-7A (63-9753) at the time it started its take-off roll. There was no contact after the aircraft was airborne. (See TAB E-5).

h. Camp Evans Airfield tower had no contact with the CH-47A (61-9041).

i. The aircraft commander of each aircraft was considered by his immediate superior to be a highly skilled and well qualified aviator. (See TAB E-19 thru E-21). It is impossible to determine which aviator was actually at the controls of each aircraft at the time of the accident.

j. Witness statements (see TAB E), and the fact of collision indicate that the crews of neither aircraft were aware of the presence of the other until possibly the very last moment.

k. Both aircraft had normal crews at the time of the accident. The normal crew for a CH-47A is five: aircraft commander, pilot/co-pilot, flight engineer, crew chief and gunner. A normal crew for a C-7A is four: aircraft commander/pilot, co-pilot, crew chief and loadmaster.

3. FINDINGS.

a. Air Force C-7A (63-9753) did fly into the rear rotor of Army CH-47A (61-9041) at approximately 1610 hours, 3 October 1968, about 2 - 3 kilometers ESE of Camp Evans, RVN.

b. Twenty-five casualties resulted from the air crash.

c. The cause of this accident cannot be placed completely on any one individual, crew member or unit. A combination of factors contributing to this accident were:

(1) Failure of the C-7A pilot to follow published airfield departure procedures, i.e., climb straight out to 1000 feet prior to turning.

SUBJECT: Collateral Investigation (CH-47A (61-9041))

(2) Failure of both the C-7A and CH-47A crews to properly monitor traffic in a heavily congested area and effect clearance.

d. The investigation does not warrant the imposition of disciplinary action or pecuniary liability against any individual.

4. RECOMMENDATIONS:

a. No disciplinary action or pecuniary liability be imposed against any individual.

b. A continuing program of instruction be implemented at unit level stressing the importance of visual observation by all crew members at all times, while airborne.

c. Re-publication of Camp Evans air traffic control procedures.

d. A photograph of the Camp Evans Airfield, with current and pertinent information and remarks, be submitted to the 765lst Aeronautical Chart and Information Squadron for inclusion in the DOD Specialized Flight Information Publication, Tactical Aerodrome Directory, South Vietnam.

e. That Division air traffic controllers (tower operators) advise all transient fixed wing aircraft of specified arrival and departure procedures for the Airfield being immediately controlled.

8 Incl
(See attached index)

EDWARD R. KENNINGTON
LTC, Armor
Investigating Officer

C-[redacted]

AVDAAO 18 February 1968

SUBJECT: Air Traffic Control, Camp Evans

TO: DISTRIBUTION

1. This letter establishes air traffic control at Camp Evans. The density of helicopter and fixed wing traffic during day and night VFR, marginal VFR, and IFR conditions, and friendly artillery firing out of Camp Evans requires that traffic patterns are followed to maintain traffic safety. Aircraft will contact Evans Tower for entry into or operation in the Evans Control Zone and for landing or take off instructions to or from Camp Evans.

2. Frequencies:

a. Evans Tower (operational 24 hours a day):
FM 45.1
UHF 252.1

b. Evans GCA (operational approx. 0630 - 1900 hrs, other times on request by contact with Evans Tower. Allow 15 min from time of request until GCA is operational.):

FM 48.6
UHF 367.0, 301.3, 243.0
VHF 121.5

3. Fixed wing traffic:

a. Traffic pattern altitude: 1000 ft

b. Traffic pattern for both north and south landing will be east of runway.

c. All departures will use northeast and southwest turnout.

d. On take off F/W aircraft will climb straight out to 1000 ft prior to turnout.

4. Rotary wing traffic:

DEC[redacted]

[redacted] L

[redacted] L

AVDAAO 18 February 1968
SUBJECT: Air Traffic Control, Camp Evans

a. All rotary wing landing and take off traffic will parallel and conform to direction of fixed wing traffic.

b. Traffic pattern altitude: 600 ft downwind, 300 ft base and entry to final approach.

c. Traffic east of runway:

(1) All traffic pattern entries will be right downwind for north landings and left downwind for south landings.

(2) All departures will use northeast and southeast turnout.

(3) Aircraft landing and taking off from lanes A, B, and C located in the 227/229th AHB areas east of control tower will designate desired lane for landing or lane position on the ground. Lanes south of intersecting highway will be A, B, and C south and north of highway will be lanes A, B, and C north. Examples of desired radio calls: "Evans Tower, Bearcat 26, Alpha south for take off", or "Evans Tower, Hatchet 16, left downwind for landing Bravo north".

(4) Helicopters operating to and from 228th Helipad will comply with the following:

(a) Final approach to the north will be direct to helipad.

(b) Take off to the north will be an initial northwest departure to runway then over runway to the north.

(c) Final approach to the south will be over runway with turn on short final to helipad.

(d) Take off to the south will be parallel to runway.

(5) Air traffic to and from POL:

(a) Landing/ taking off south:

1. Approach POL parallel to runway.

2. Depart POL SE and fly Lane A traffic.

(b) Landing/taking off north.

1. Approach POL in Lane A traffic with shourt final turn out to POL.

2. Depart POL parallel to runway.

[redacted] L

-2- [redacted]

[redacted]

AVDAAC 18 February 1968
SUBJECT: Air Traffic Control, Camp Evans

(6) Air Traffic to and from FSE and sling out helipads will be: Approaches and departures will be over the runway. Aircraft on approach will make a short final turnout to the FSE/sling out helipads. Aircraft will depart to the NW to the runway then north over the runway, or SW to the runway then south over the runway for departures north and south, respectively.

d. Air Traffic west of runway:

(1) All traffic pattern entries will be right downwind for south landings and left downwind for north landings.

(2) All departures will use northwest and southwest turnout.

(3) Traffic to and from VIP helipad will be: (See Incl #1)

(a) Approaches to the north will parallel runway until short final (not less than 100 ft) with left turn to helipad landing west.

(b) Departures to the north will be west take off, climbing to not less than 100 ft then turn to parallel runway.

(c) Approaches to the south will parallel runway with a left turn on short final (not less than 100 ft) to the pad landing east.

(d) Departures south will be east take off climbing to not less than 100 ft then right turn parallel to runway.

(e) Aircraft will avoid no fly area.

(f) Special instructions for use of the Division VIP Helipad, see Incl 2.

(4) Traffic to and from Med Evac Helipad will conform to same type traffic pattern as used by VIP Helipad. (See attached diagram)

(5) For all other west helipads, approaches and departures will parallel runway.

FOR THE COMMANDER:

2 Incl
as

GEORGE W. PUTNAM JR.
Colonel, GS
Chief of Staff

A TRUE COPY

Edward R Kennington

EDWARD R. KENNINGTON
LTC, Armor

[redacted]

6 November 1968

LIST OF CASUALTIES

CH-47A (61-9041)

1.	Johnson, James E.	CW2	W3152863
2.	Conroy, Roy L.	WO1	W3160644
3.	Costley, Larry L.	SP4	US54967742
4.	Reese, Dennis	SP4	US56709795
5.	Pierce, Jerry L.	SP4	RA18994157
6.	Clements, Dawson	SFC	RA14588693
7.	See, Michael D.	SP4	US55451119
8.	Lucier, John W.	PFC	RA16931835
9.	Wallace, Charles J.	SSG	RA19559923
10.	Young, William	SGT	RA16435221
11.	Perreault, David D.	SP5	RA51546894

C-7A (63-9753)

1.	Bundy, Wayne P.	CPT	FR77336
2.	Schiavone, Ralph	1LT	FV3181390
3.	Cleaver, Donald G.	SSG	AF19346602
4.	Connor, James K.	SSG	AF14811946
5.	Gomes, Allen E.	SP5	RA50012856
6.	Disrud, David A.	SP5	RA16973529
7.	Cramer, Donald J. Jr.	SP4	US54961666
8.	Tomlinson, Robert D.	PFC	US56836168
9.	Wirt, Dennis A.	PFC	RA16937556
10.	Dellangelo, David J.	SP4	US56458975
11.	Granger, Dale	SP5	RA16863211
12.	Hibbler, Joe J.	SP5	US54564973
13.	Alderson, Thomas E.	CPT	05542009
14.	Nguyen, Thu	E6	ARVN, Vietnamese

DEPARTMENT OF THE ARMY
Headquarters 1st Cavalry Division (Airmobile)
APO San Francisco 96490

SPECIAL ORDERS
NUMBER 281

8 October 1968

EXTRACT

90. TC 350. Fol indiv this sta APPOINTED.

KENNINGTON, Edward 02266309 (SSAN: NVAL) LTC Armor HHC 1ACD

APT to: Investigating Officer
Eff date: 4 Oct 68 VOCG ofm date
Pd: 11 days
Purpose: To conduct collateral investigation of facts and circumstances surrounding the mid-air collision occuring vicinity of Camp Evans on 3 Oct 68.
Auth: AR 15-6, AR 385-40
Sp instr: Report to SJA and Safety Officer for briefing prior to commencing investigation. Completed report of envestigation will be forwarded to SJA NLT 15 October 1968.

FOR THE COMMANDER:

CONRAD L. STANSBERRY
Colonel, GS
Chief of Staff

OFFICIAL:

J. L. GIBSON
1LT, AGC
Asst AG

DISTRIBUTION:
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2 - AVDAAG-ASD
2 - AVDAAG-OR

REPLY TO
ATTN OF: Staff Weather Officer, 1 ACD 10 October 1968

SUBJECT: Weather Observation

TO: Whom it may concern

The following is a weather observation for Camp Evans at 03/1609L October 1968:

a. Wind, 040 degrees at 5 knots.
b. Visibility, 9999 meters.
c. Sky Condition, 3500 ft. scattered, 8000 ft. scattered, 30000 ft. thin broken.
d. Temperature/Dewpoint, 31/21 (degrees C).
e. Altimeter Setting, 29.79 inches.

S/THOMAS E. TAYLOR
T/THOMAS E. TAYLOR, Captain, USAF
Staff Weather Officer

A TRUE COPY

Edward R. Kennington

EDWARD R. KENNINGTON
LTC, Armor
Investigating Officer

Major Valiento Panzitti, Headquarters 16th Cmbt Aviation Group, APO 96337, Republic of Vietnam, was called as a witness, was sworn and testified as follows:

Q. I think we will start by asking you to relate to us what you know about the collision which took place the 3rd October.

A. To begin with my purpose for being at Camp Evans was to discuss some operational reauirements with the Commander and I accompained my Commander as one of his staff officers. At the termination of our discussion we were riding back to the area where our helicopter was parked and in doing so we had to circumnavingate the Evans Air Strip. I noticed on the north end of the strip on the debarking ramp a C-7 and south perimeter I noticed a Caribou which became involved in the accident later. It was taking off While he was doing that we turned into the area where we had parked our helicopter. We got out of the jeep I was in and walked on the east side of the hill and the terrain that we were standing on, was the high terrain in the area. It was 150 to 250 elevation. I just finished using the urinal and I observed the Caribou just as he broke ground. As he broke ground he started a climbing right hand turn. This came to my attention right away because there were some six or seven helicopters in the traffic pattern on the east side. I watched him climbing and I never took my eye off of him. I watched him fly into the tail of a CH-47. I would like to describe it as I saw it. He was in a climbing turn and from my vantage point I would estimate maybe a mile to a mile and a half away. As he hit the tail end of the helicopter you could see the debris flying in several directions. The tail end of the helicopter dropped like, struggled, and at this time one of the rotor heads came off of it and in my judgement I figured the other that was left was now destroyed. I saw the chopper come over and fell straight to the ground. I was amazed with the rapidity with which it fell to the ground. It seemed like it was over with just like that. In the mean time C-7; seemed like it climbed, it looked like the pilots were having control problems. It just hung in the air and then came down. I was amazed with the speed that the aircraft came down at. In my judgement The angle of descent was somewhere between 70 and 80 degress. He did like this, he came up and then came over and straight down. From where I was the Chinook hit the ground a second or so before the C-7 started his final turn. The Chinook burst into flames immediately. I would say that no more than five seconds later the Caribou came down. I noticed things flying around and I could identify the upper rotor heads of the Chinook. There may have been some parts from the C-7 but naturally they weren't large part sand I didn't recognize any of them. In my estimation it looked like the left wing of the Caribou was ready to come off, but it was still on when it hit the groun.

Q. Between the engine and the cockpit, that is where you felt the major impact was?

A. Yes, sir. I would say that is where he it.

Q. Where you able to determine how far out the caribou was before he indicated his right turn?

A. I would say it was no more than fifty feet off of the ground. He started turning immediately. He was taking off out of the area like it was a hostile area. He had just broken ground when he started his turn. I watched a C-123 take off just a few minutes earlier and he didn't seem to fly the same pattern.

Q. Could you tell if he had reached the northern perimeter in that turn?
A. I would say he started his turn almost before he hit the end of the runway.

Q. In your estimation at what altitude were the aircraft at when they collided?
A. I have searched my soul on this one because when I made the Statement, I made it up right away because I didn't want my mind to be playin tricks on me. In my statement I put he was about 1,000feet. When I started thinking about it he fell to the ground so fast that in my professional judgement he somewhere between 500 and a thousand ft.

Q. Was the Chinook descending?
A. He was traveling on a straight level flihgt.

Q. Was the Caribou level?
A. That is the thing that amazed me, there was no movement by either plane to avoid the accident.

Q. Was the Caribou in a climbing position?
A. Yes sir, I would say that he was in a climbing position. I would estimate about a 15 to 20 degree angle of climb.

Q. Where was the point of impact?
A. I would say it happended almost right over Hiway 1.

Q. Did you see anything separate from the Caribou?
A. I saw flying debris and it wouldn't suprise me if there we falling bodies but I cant swear to that. The only thing I can be sure of was the aft rotor section of the Chinook. In my statement I said I saw free falling objects and I considered them to the aft rotor section of the Chinook although they could have been parts from the Caribou mixed in.

Q. When the aircraft collided you were looking at if from the rear?
A. I would say that I was looking at it from 90 degrees because they were right out in front of me. The Chinook was coming up like this and the Caribou was coming from the right rear but more toward the center of the right wing.

Q. Was the Caribou still in turn?
A. If I had to make a judgement I would say that his turn, 180, was complete and he was probably getting to travel out toward the sea.

Q. Once again would you estimate the relative speed of the aircraft?
A. I can't give you an accurate judgement on that. I would say that th Chinook was cruising somewhere between 70 and 90 knots. I don't know what the Caribou was doing but I am positive that the Caribou overtook the Chinook. The Caribou didn't come directly from behind but more of an angle shot.

Q. About what degree of angle was he coming at?
A. About 30 or 45. They then collided and my first reaction was that I didn't want to believe it. It was just like in the movie. I knew there was going to be a bad accident.

(There being no further questions by any members of the board the witness was excused and withdrew from the boardroom.)

Seaman 1 Roy Earhart, US Navy, Camp Evans, Republic of Vietnam, was called as a witness was sworn and testified as follows:

Q. Would you relate to us just what it was that you seen take place on the 3rd of October 1968.
A. I saw the airplane just after it took off and it was turning around and coming back heading South. I saw the Chopper and it was going across like this and the plane was coming like this. The right wing caught the rear section of the Chopper. The plane continued to make a right bank and the Chopper went straight down.

Q. Where were you as you observed this?
A. I was working on bunker 10 which is located right over here on the map.

Q. This is the scene of the accident and you were looking down towards the Southeast then and you actually saw the aircraft from their rear?
A. Yes, sir.

Q. Looking in the general direction you are now and this would be the scene of the accident, which aircraft would be to the right and which would be to the left?
A. The Chinook to the left and the aircraft to the right. After they collided then the Chinook goes to the right and then the Caribou continued to make a right hand turn. I didn't see the Caribou hit the ground but I did see the Chinook hit the ground.

Q. Would you please indicate for us what direction the Chinook was traveling?
A. Just before impact; say this was the Caribou, the Chinook was traveling something like this. It seemed to be in the same general direction but at a slight angle. Something like this. It was almost straight but there was that slight angle.

Q. Did the Caribou seem to be going faster than the Chinook; other words as you viewed it, did it look like the Caribou came up on the rear of the Chinook?
A. I couldn't really tell what the speed or if one was going faster than the other. They just came together like this.

Q. I don't recall if you said what portion of the aircraft contacted the Chinook?
A. The right wing.

Q. How long prior to the impact had you observed the flight path of the two aircraft, I know it is hard to estimate time but would it be 10 seconds, 20 seconds or what?
A. I couldn't see him when he took off but when he got off the runway I was able to watch the whole flight pattern of the Caribou.

Q. From the time he made his turn heading back down Southeast, did he stay in the same general direction or did he make any turns or what?
A. He didn't make any deviations. He just kept the course straight.

Q. Had he completed his turn or was he turning the entire time when he hit the Chinook?
A. He had straightened up and was climbing straight ahead.

Q. He was climbing?
A. Yes sir. They were both climbing, it seemed like.

Q. Just prior to impact did you see any manuever by either aircraft?
A. No, sir. They seemed like they were in two separate worlds and they weren't going to pay any attention to each other. I couldn't believe it I thought it was an illusion. I figured one was higher than the other and they are just going to go like this and that will be that but I saw them hit and there are some people working on the bunker with me and we all couldn't believe it.

There being no further questions by the board the witness was excused and withdrew from the boardroom.

Captain Neal E. Walker, Chief Transportation Officer, Camp Evans, was called as a witness, was sworn and testified as follows:

Q. Would you relate to us what it was that you saw on the afternoon of the 3rd of October 1968?

A. I was in my office, and we have the sides of the tent up so that we have a full view of everything, and alot of construction has been going on out here. I have been responsible for it. It is being conducted for the purpose of getting the airfield back in safe shape. I watched a C-7 Alfa, the one which was involved in the accident, taxi from the rear parking area down to the south end of the taxi runway and take off in the north and direction. The aircraft seemed to have reached an altitude of about five hundred feet take a steep bank to the right continue to climb moving out in a southern direction in about the same direction as the Caribou. During this same period of time I noticed a CH-47 which was at a higher altitude than the Caribou coming from the north and going toward the south, and he appeared to be at approximately one thousand feet. We refer to them as the Hook and I may call them the Hook from time to time. The CH-47 always seemed to be at a higher altitude but they both seemed to be going in the same direction. I wasn't looking for an accident so I wasn't paying that close of attention to them. I was talking on the phone trying to get the operator and I looked back up and saw the Hook coming out from underneath the Caribou. The Hook was minus its tail rotor. How the two aircraft actually got together I can't really say. The Hook lost its rear rotor and it came down, just straight with no recovery at all. The nose seemed to come up and then came straight down. The Caribou seemed to make a steep right bank and then he went down. The Caribou seemed to hang up in the air quite a bit longer because the Hook was already out of sight when the Caribou started to come. This is the way that it appeared to happen to me. I can't answer how the two aircraft got together. This has been a question to me to. The Hook always seemed to be above the Caribou and I can't figure out how he came out from underneath the Caribou. I can't shed any light on this for you.

Q. As you observed them through your field of vision the Hook was always above?

A. Yes, he seemed to be from a thousand to fifteen hundred feet. He never seemed to change altitudes, but the Caribou after he took off I would say he got about five hundred feet and he made a sharp right bank and he was gaining altitude. There were several aircraft in the area at the time.

Q. The Caribou when he started this right bank did it appear to be a shallow or a steep climb?

A. It didn't seem to be a climb it seemed to be a bank. After the collision happened...

Q. I mean prior to the collision. After he took off he got about five hundred feet he made a turn to the right and started climbing was it a shallow climb?

A. It was a normal climb like these people make all of the time. I didn't see any difference in the take off of that aircraft and any other aircraft.

Q. You say that he was about five hundred feet in the air when he started his turn?

A. It appeared that way sir. He went out a certain distance...

Q. This distance out would this be out toward the end of the runway?
A. Yes, this would be out about five hundred feet off of the runway and then he started his turn.

Q. Would you estimate his altitude at the time he made his turn?
A. I would estimate, I have no way of estimating it.

Q. The ladt time you looked before impact did it appear that the Chinook was at a higher elevation than the aircraft?
A. Yes, sir.

Q. When you looked back had the collision already occured or was it in the process?
A. I would say that the collision had already occured, because the two aircraft were together when I looked back up. The Hook came out from underneath the Caribou.

Q. Did you see anything seperate either from the Caribou or the Chinook?
A. As I said when the Hook came down he was minus the tail rotor.

Q. When you first looked the two aircraft appeared to be together and the Hook as you say was below the Caribou?
A. Yes, sir.

Q. The Hook was below the Caribou?
A. The Hook was always above the Caribou prior to the collision and the Caribou was climbing and the next time I saw them the Hook came out from below the Caribou. Something happened in there that I missed. I can't really say what happened.

Q. You can't say at the time of the impact that the Chopper was not above the Caribou?
A. No, sir, I can't

Q. You saw him and he was below it. It could well have been that the Chopper was falling?
A. Yes, sir, I can't say just how much time lapsed from the time that I looked up and the accident occured. It couldn't have been more than fifteen to tw twenty seconds.

Q. From the angle you were looking at it could it have really been off to the side of it?
A. I would say as it appeared to me the Hook came out from beneath the hull of the aircraft, the pilots right hand side.

Q. Was there one continous movement, by that I mean when you looked up was there just a continous standard movement on the part of the Hook?
A. The Hool just feel out and came straight down. It didn't appear to stop or anything it just came straight down.

Q. Then the Caribou continued on a straight course?
A. After the collision the Caribou seemed to just hang there and then make a right bank.

Q. Was it a steep bank or a shallow bank?
A. I don't know what you mean by a shallow or steep bank. It just seemed to be a normal bank. It wasn't a jerky or violent movement.

Q. Proceed to tell what happened after that?
A. The Caribou turned to the right what I consider a normal turn. He seemed to loose air speed and then he went nose down.

Q. Did he continue to turn as he was going down?
A. He turned and then went down. It wasn't a glide but a rapid descent.

Q. After the turn he made a steep dive?
A. The angle I was looking at him he could have made a turn a turn and I was looking at the top of the aircraft and he came down this way and it is just possible that he did.

Q. What time of the day was this?
A. About ten after two.

Q. Are you a pilot?
A. No, sir.

Q. Have you flown in airplane?
A. I am on my second tour in Vietnam and I had one hundred and forty eight hours of flying time in helicopters on my last tour here and I fly two or three times a week.

(There being no further questions by any of the board members the witness was excused and withdraw from the boardroom.)

Specialist 4 Paul W. Wilkins, 11th Aviation Group, Camp Evans, Republic of Vietnam, was called as a witness, was sworn and testificed as follows:

Q. Where were you physically at the time of the accident?
A. I was in the tower, sir. I work the left side.

Q. Did you actually observe the collision?
A. No sir.

Q. Would you tell us then in your own words what contact you had with the two aircraft and generally what you know about them.
A. I had negative contact with either one. They were both on the east side of the field.

Q. Would you normally have had contact with either one operating in the area that they were in?
A. No sir, no normally.

Q. At what point would a helicopter planning to land at Evans west contact you were he on the east side?
A. I would say ten or fifteen seconds prior to crossing the runway north or south for instructions for landing.

Q. Do you have any procedures for traffic handling where they are going to cross the runway?
A. Yes sir.

Q. Would you state briefly what they have in writing for you to follow in those cases?
A. They are to cross one mile south of the extended line, south of the river and north of the railroad tracks and they are to call prior to crossing.

Q. What is their altitude at entry in to the traffic pattern?
A. I believe it is 700 feet, sir.

Q. If a helicopter is going to cross, you said he has to be one mile south of the river, north of the railroad tracks, now what altitude must he be above or below at these points?
A. Some they cross low and other times high.

Q. There is no specificed altitude at which they must cross above or below in your instructions?
A. None that I know of, sir.

Q. Do you have any instructions to give the pilot when they call you to cross north or south, east or south, east of west of the extended center line? Say I am taking off from POL north. I would call Evans west requesting instructions?
A. You would give him his traffic and tell him to call prior to call before crossing the extended runway south of the river.

Q. Call who?
A. Evans East.

Q. In other words I am taking off from the west and you tell me in effect to call Evans East prior to crossing the extended centerline south?
A. South of the river.

Q. With no altitude?
A. With no altitude.

Q. In coming into the area and aircraft or helicopter would contact you to the East side of Highway 1, what do you tell him?
A. We really don't give him any specific instructions. Do you mean if he were to call me and I was working west and he was coming in east?

Q. If he were on the other side of the Highway and he called you for guidance as to how to land your house, would you give him any guidance?
A. If he were on the west side and wanted instructions as to landing on the east you give him instructions to call prior to crossing the extended runway center line and to call the east.

Q. Call the east?
A. If I am working west and he is callin from the east I would give him instructions to have him contact me when he crossed the extended line, so that I could keep an eye on him.

Q. So actually he need not have contact with Evans East if he is going to land in the west?
A. There is no requirement for him to call them.

Q. Do you have knowledge of the fixed wing traffic landing here at Camp Evans?
A. Yes sir. We coordinate between each other whenever they have an incoming Caribou or 130. The east controller will let you know whenever he is down wind and incoming, and down wind and final. He will point him out.

Q. When you have this information aircraft inbound he is in final or down wind, do you pass that to the traffic that is landing at your house?
A. If it has anything to do with where he is landing, yes sir. If he was landing right there close to the runway you would have him hold and stay clear. If it is going to cause any kind of conflict at all you have the rotary wing hold.

Q. Can I assume that they would be given any fixed wing traffic?
A. If there were fixed wing traffic, yes.

Q. Do you have any authority over Camp Evans traffic patterns? Can you clear aircraft through when you are operating the west?
A. I can clear him as far as the center line and then he has to contact the east.

Q. Say a man is east of here and he knows that he is going to land at the VIP pad west or over at the POL, which is all west traffic and he doesn't call Evans east but balls directly to Evans West and gives you his location as 10 miles east and request landing instructions, what are your instructions to him at that time?
A. I would give him whatever traffic you have and to call before crossing the extended line runway.

Q. Would you instruct him to contact Evans East for any advisement?
A. No sir.

Q. I'm not trying to put words in your mouth but would you assume that he will not be going through east traffic?
A. If he is going to contact you north of the runway center line he shouldn't come through your traffic.

Q. You are assuming this now that he's not? You don't instruct him to contact east you just tell him to contact you?
A. Yes sir.

Q. How he gets to that particular point is up to him?
A. Yes sir.

Q. And the same thing goes when you clear for departure. You clear them for departure here but you don't tell them to contact Evans East because you assume that if they are going to get into that control Zone of Evans East that they will contact Evans East on their own.
A. If they are departing here they will let know. If they are, give them the traffic.

Q. That has been taught to you?
A. Yes sir. What you have pertinent to them on the west side and you tell them to contact Evans east if they are departing here.

Q. So those aircraft I saw going over head even though they departed from the west and to me they are going through the east control zone, now I can assume that they have contacted Evans East.
A. No sir. Because they are still in Evans West. Evans East is just the other side of the center line of the runway. As long as they don't cross the centerline they don't have to contact them.

There being no further questions by any members of the board the witness was excused and withdrew from the boardroom.

DIVISION BUS SCHEDULE (CH-47)

	MORNING		AFTERNOON	
	ARR	DPT	ARR	DPT
HUE PHU BAI (Warhorse Pad)		0900		1500
CAMP EVANS (ASP)	0915	0930	1515	1530
LZ NANCY	0945	0950	1545	1550
LZ SHARON	1000	1015	1600	1615
LZ NANCY	1030	1035	1630	1635
CAMP EVANS (ASP)	1050	1105	1650	1705
HUE PHU BAI (Warhorse Pad)	1120		1720	

Schedule times will vary, depending on the weather, aircraft, and loads at various scheduled stops.

AVBAJA (24 Nov 68) 1st Ind
SUBJECT: Collateral Investigation [redacted] (61-9041))

HEADQUARTERS 1ST CAVALRY DIVISION (AIRMOBILE), APO San Francisco 96490, 25 November 1968

TO: The Judge Advocate General, Department of the Army, ATTN: JAGL-C
Washington, D.C. 20310

1. The findings and recommendations are approved.

2. Forwarded for such action as deemed appropriate.

FOR THE COMMANDER:

8 Incl
nc

DANIEL P. KOCEJA
CW3, USA
Actg Asst AG

Captain David C. Schlacter, 20th Task Force, Quang Tri Air Base, Republic of Vietnam, was called as a witness, was worn and testified as follows:

Q. Could you please make a general statement as to what you saw on the 3rd of October 1968?
A. I had taken off from the Quang Tri airfield on a normal distribution run. I approached Evans somewhere around 1610 and I was paralleling somewhere to the east, southaside of the runway. I was up about 1200 feet, approximately two miles from the departure end of the runway. The Caribou took off and I kept an eye on him, because there was quite a bit of helicopter traffic in the area. I checked the Caribou once again and he was on the south, southwest side of route 1, a straight ahead climb, somewhere around 500 feet. About a half of mile to a mile southeast of the from the runway. The Caribou completed a 180 degree turn before impact. I didn't get too clear a focus in impact but from what I saw it was at the right wing of the Caribou. The impact from my vantage point was in the aft section of the Chinook. The whole time I was a click to a click and a half from the waterfront. I contacted Evans East as to what happened.

Q. Prior to impact how far away were you?
A. I would say a click.

Q. You were level then?
A. Yes, sir, they were just below me.

Q. You were at 1200 feet?
A. Yes, sir.

Q. The course of the helicopter was more to the left than was that of the Caribou?
A. It is easy for myself to confuse directions because route one goes more east than it does south. The Chinook course was probably more south and Caribou was probably more east.

Q. What angle at which the two aircraft were heading toward each other?
A. I would say no more than 30 degrees. The Caribou had completed his turn and was more or less in a climb heading toward the south. In my estimation he had completed his turn out of traffic and was on a straight ahead climb up. The Chinook in my opinion was in a straight ahead descent. At first I thought the Caribou was going to fly away from it.

Q. When you first noticed the helicopter what was it general heading?
A. It would be roughly between 180 and paralleling the runway. When I first noticed it I didn't pay a whole lot of attention to it. When I picked him up he was just about crossing center line. At the time he seemed to be slightly above me and I was at 1200 feet.

Q. You say he was slightly above you?
A. Yes, sir, he was I would say at my five o'clock position.

Q. What was your position?
A. Just one the east side of QL-1, about four of five kilometers at the most.

Q. Do you recall exactly at what point you were?
A. It is hard to use a land mark but I was on the ocean side.

Q. You noticed him at five o'clock but at what range?
A. Clsoe to a click.

Q. At the same time you had already noticed the Caribou?
A. Yes, sir.

Q. What was his relative position?
A. Somewhere to my three thirty position, just behind my wing.

Q. At what range?
A. Roughly a click to a click and a half.

Q. The Chinook pass through your three o;clock position?
A. No, sir, I was doing some where close to 75[illegible] knots and the Chinook overtook the Caribou just about my three o'clock position and the Caribou stayed relatively in the same perspective. He stayed pretty much at three thirty.

Q. At the time you observed the accident you were looking out to your right through a three o'clock position?
A. Yes, sir, it was a side angle around the three o'clock position.

Q. Did you notice any movement by either aircraft to try and avoid the accidnet?
A. The Caribou must have noticed him at the last second becuase he tried to make a turn to the left.

Q. Was it a violent movement?
A. No, sir, he didn't have enough time. From my vantage point it looked like the impact was with the rear rotor of the Chinook.

Q. Did you actually see the Caribou go down?
A. Yes, sir.

Q. How high off the ground was he when you quit looking at him the first time?
A. He was roughly five hundred feet and he was in a straight ahead climb. I didn't pay whole lot of attention to him.

Q. You didn't see him make his turn at all?
A. No, I did not.

Q. At what position was he when he made his turn to the left?
A. It was just about at three o'clock.

Q. What were your communications with the base?
A. Normally it is done in FM and I was monitoring to see what I could pick up. I did not have Evans at that time. I was on my Company Fox Mike.

Q. Was the descent of the Chinook gradual?
A. Yes, sir, it was gradual in my mind. I wouldn't be able to estimate how many feet per second but it was gradual.

Q. Do you have any way of knowing if the Chinook observed you?
A. No, sir.

Q. In your estimation what would be the angle at the point of collision?
A. I would say ten degrees at the most, sir.

Q. If we are to accept the ten degrees then the Chinook had to pass very close to the left wing of the Caribou in his flight pattern?
A. Yes, sir, it was very close.

Q. Did the Chinook make any type of turn?
A. Yes, sir, about five seconds before the impact ; he a thirty degree turn. Not really a turn but a piviot. It seemed like a normal turn for a Chinook.

Q. What was your total distance from Camp Evans:
A. At the time of impact I was probably close to three click away.

Q. When you crossed the center line of the runway how far out were you?
A. About two clicks from the runway.

(There being no further questions by the board members the witness was excused and withdrew from the boardroom.)

Specialist 4 Herman Anderson, 11th Aviation Group, Camp Evans, Republic of Vietnam, was called as a witness, was sworn and testified as follows:

Q. What is your job?
A. I am an air traffic controller.

Q. Where were you at the time that you observed the accident or did you observed the accident?
A. I was working the east side of the LZ. I was a controller in the tower

Q. Where were you physically located?
A. I was in the tower.

Q. Did you have contact with both aircraft?
A. No, sir,

Q. Did you have contact with the Caribou?
A. Not after his departure.

Q. How about the Chinook?
A. No, sir.

Q. Is this normal?
A. Normally we do have contact. They generally contact us about a mile or a mile and a half from the LZ depending upon which direction they are coming in from.

Q. What contact does the east tower have with the west tower?
A. We are right together, within six inches of each other.

Q. Traffic patterns that are formed on the east side of the runway and the west side are in fact controlled by the same tower in the same physical location?
A. Yes, sir.

Q. You did not have radio contact with the Chinook at any time?
A. No, sir.

Q. To your knowledge did the operator of the Chinook ever have contact with the west side?
A. No, sir, to my knowledge he didn't.

Q. At what point did you last have contact with the Caribou?
A. On departure when he was cleared for take off. That was the last call.

Q. Is a right turn out normal for traffic departing to the south?
A. He had departed 36 to the north and the right turn out of that was normal.

Q. Was the Chinook coming for a landing or was he just passing the area, do you have any knowledge?
A. I really couldn't say, sir, the first time I saw him he was to the north-east of the LZ. It was possible that he was entering traffic, but would appear that he was just passing through.

Q. Do you have Fox Mike and UHF?
A. Yes, sir.

Q. Were they very busy at that time?
A. Yes, sir, but I would say that we were at normal traffic then.

Q. Do you monitor both UHF and FM for each traffic?
A. He didn't come on either Fox Mike or UHF.

Q. Do you record your transmission?
A. No, sir.

Q. Did you see the accident yourself?
A. I observed the aircraft just prior to impact.

Q. Would you tell us exactly what you observed?
A. Well, it appeared that the Chinook run into.... I can't say it happened this way but from the tower it appeared that the Caribou was climbing and gradually gaining altitude. The Chinook was heading southeasterly and they ran into each other.

Q. Which one over took the other or could you tell?
A. No, sir, I couldn't really say. I guess you could say they were just together.

Q. Could you tell us the points of impact when the two hit?
A. It appeared from the tower that the front rotor blades of the Chinook hit the rear tail section of the Caribou.

Q. In your recollection were they both going in the same direction or was it at a cross angle?
A. It appeared that it was a cross angle. I would say the Caribou was more east or southeast bound, and the Chinook appeared to be south or southeast bound.

Q. As you were looking at the scene from your vantiage point in the tower, which aircraft would be on your left and which would be on your right?
A. The Chinook was on the left and the Caribou was on the right.

Q. I might have to have you repeat yourself but did you observe any change of direction of either of the vehicles during such time as you observed their flight path?
A. No, sir, I didn't. I can't say that there was any deviation in course. If there was I didn't see it.

Q. This is pretty hard to answer, but do you have any recollection or how long or how many minutes you were able to observe the two vehicles before impact?
A. I couldn't say, but it couldn't have been more than five seconds.

Q. From what yuu know now that is where the impact ocurred, is that is normal point of entry for a helicopter traffic coming into your landing zone?
A. From the point of impact that is not a normal place of entry. Normally they enter the pattern more from the east. Normally they enter a pattern just east of the LZ outside the green line.

Q. For the record Evans East is operated in the same location as Evans West?
A. Yes, sir.

Q. Did Evans West ever make any contact with the Chinook?
A. No, sir, not that I know of.

Q. Utilizing the traffic pattern coming into Evans East what is his required altitude?
A. 700 feet on the down wind leg.

Q. Normally speaking traffic taking off from 36 and making the turn would be going over traffic coming in?
A. Depending upon his rate of climb and what not he would be over the traffic?

Q. Do you have a minimum altitude for making any turns before entry?
A. A down wind leg is a thousand feet.

Q. Do you have any fixed altitude for planes making turn?
A. It is a thousand feet on a down wind leg.

(There being no further questions by any of the board members the witness was excused and withdrew from the broadroom.)

Seaman 4 Charles L. Smith, MACV-2, Camp Evans, Republic of Vietnam, was called as a witness, was sworn and testified as follows:

Q. Where were you located at the time of the accident?
A. I was sitting down here behind the Chaplins office. That would be right outside this building about 50 yards.

Q. Will you tell us just what you saw?
A. I didn't see the Caribou until he was straight away from me. I sit back here and watch them all the time because I am getting short and am ready to go home. I watched him circle, gain altitude. I thought I was seeing things. I didn't think he was going to hit the Chinook, but then the Chinook came up right behind him. He caught part of the tail section of the Chinook. It was the left hand wing of the plane that caught it. It looked like it also caught part of the cockpit.

Q. Looking straight ahead and using my hands as the aircraft, which aircraft would be on the left and which would be on the right?
A. The Caribou made a circle and was coming around. The Chinook was right here and the Caribou caught it with the wing section as it was turning. The Caribou kept coming right around and it looked like he was going to settle down in the rice paddies. The tail section of the Chinook came off. I won't swear to it but I believe some of the wing came off.

Q. Would you say that the helicopter was flying straight ahead like this and the Caribou was coming up and turning? Did he come up and turn from the inside or did he swing to the outside or what position was the Caribou in? Did he cross for instance like this?
A. I though my eyes were playing tricks on me. He came right across like he was trying to scare him, as a matter of speaking. Then he caught the back tail section of him. It looked like the Caribou was going to go right over the top.

Q. As you were looking at it from the back and the Caribou was crossing over did they cross like this?
A. No, sir, they crossed like this.

Q. When you first observed them and the aircraft was going away from you, was the Caribou to the right or left of the Chinook?
A. It was banking to the left.

Q. When you observed the two aircraft which one was on your right and which one was on your left?
A. The Chinook was on the right and the Caribou was on the left.

Q. Was the Chinook flying straight and level or was it turning?
A. I can't really say because I wasn't paying that much attention to it but it looked like he was just flying level.

Q. You dind't notice any movement out of the normal flight pattern?
A. No, sir, I didn't.

Q. Then the Caribou was doing what, was it climbing or turning or what?
A. It seemed to be making a bank like it was going to go off on a different angle.

Q. Did it appear that it was attempting to turn from your left towards you right
A. In a sense I would say, yes.

Q. What do you mean in a sense?
A. The Caribou was coming from around here and it seemed like it was going to go off on an angle like that and the Chinook was coming in.

Q. In relation to the map, this would be the main road, this is the airfield, now after the aircraft took off approximately where did you first notice the aircraft?
A. About right straight out.

Q. Where was the helicopter?
A. It was back down here.

Q. The aircraft had taken off was turning heading back down this way now did he catch up with the helicopter?
A. Yes, sir, he overtook it.

Q. Was the helicopter heading this way or did he generally follow the road?
A. Down the road.

For the record let it indicate that the helicopter was traveling in a southeasterly direction, parallel to Hiway 1 and that the airplane after departing Evans airfield was making a right hand turn towards the southeast climbing.

Q. You didn't notice both aircraft at the same time did you?
A. I saw the Caribou first and then the Chinook.

Q. The Caribou was heading in a Southeasterly direction and the Chinook was traveling in basicly the same direction?
A. Yes, sir.

Q. When you first observed them the Chinnok was to your right is that correct?
A. Yes, sir.

Q. The Caribou would be to your left?
A. Yes, sir.

Q. Both heading in the southerasterly direction?
A. Yes, sir.

Q. Were they converging on each other, were they heading towards each other or were they just heading parallel to each other?
A. They were heading parallel to each other.

Q. Now how long had you watched them from the time that you first noticed until impact?
A. I couldn't really say.

Q. When did they cease to fly parallel to each other and start converging on each other?
A. You mean time wise?

Q. No, I think you said earlier that the airplane caught up to the Chinook.
A. The Chinook was right here and I saw the plane make its circle and come over here.

Q. Did it appear to you that the Caribou was overtaking the Chinook?
A. Yes, sir.

Q. I believe you said the Caribou was up here flying straight and level?
A. No, sir, that was the Chinook.

Q. And the Caribou was climbing?
A. Yes, sir.

Q. At the time that you first saw the two did the Caribou or the Chinook have the greater altitude.
A. When I first saw them the Chinook was actually higher.

Q. Did the Caribou make any sudden turns or did he follow a basic flight pattern?
A. He seemed to be making a tight hand bank. That is why I figured that he was going to miss him.

Q. Just when he got behind the Chinook was that the time that it appeared that he banked to the right?
A. He was coming like this and here are the roters. He banked like this and turned into the rotors.

(There being no further questions from any of the board members the witness was excused and withdrew from the broadroom.)

Herbert Wilkinson, Medical Section, Camp Evans, Republic of Vietnam, was called as a witness, was sworn and testified as follows:

Q. Would you relate to us in your own words what you saw happen on the 3rd of October?
A. It was more or less limited from where I was sitting. We were coming down Hiway I and we were coming around a turn in the road and Corpsman Foley brought our attention to the sky and I looked up and all I could see was the helicopter and the plane just at the point of impact. The helicopter then fall.

Q. Could you describe the relation of the two aircraft upon impact?
A. I would say when I saw it the helicopter was at this position here and this was the fixed wing here. The helicopter was to the right of the plane.

Q. Lower?
A. Yes, sir.

Q. At what point did the fixed wing aircraft hit the helicopter or vise versa?
A. I would say the helicopter back rotor hit the wing of the Caribou.

Q. Which wing would it be if you were sitting in the aircraft?
A. It would be the right wing.

Q. Was the Caribou in a wing level alttitude or did it look like one wing was lower than the other?
A. That is hard to determine but when I saw it they were like this.

Q. In relation to the way that you were traveling down the road what direction were the rwo planes traveling?
A. Like I said sir from the position I was sitting I was trying to look up. The driver had a better view than I did and so did Foley.

Q. When you saw them were they traveling in the same direction?
A. When I saw them they were traveling in the same direction.

Q. If the helicopter was to the right and slightly behind, that is what you said before, I think, how did the impact come about? The helicopter had to get in front of the Caribou in order for it to hit the rotter of the chopper, did the helicopter overtake the aircraft or what?
A. They hit each other like this.

Q. Did you see them before impact?
A. Just at the point when they did.

Q. You saw them just at the point of impact?
A. All I saw was when they hit each other.

Q. When you looked up and saw them at the point of impact were they off to the right side of the road or the left side of the road?
A. As I was looking at them they were off to the right side of the road.

Q. Could you tell how far off to the right they were?
A. Not really, but an estimated guess I would say this is the road and going over about a hundred yards is where they were at.

Q. Immediately following the impact you observed debris falling, could you identify what the debris was:
A. No, sir, not really, because after I saw the Chinook fall and the Caribou turning we had to go up a hill and it kind a cut off my vision for a second of two. As we got to the crash site it was all in flames. Actually I didnn't see anything fall. The only thing that I saw fall was the rotor.

Q. You did see the rear rotor fall of the helicopter?
A. Yes, sir, that is the only thing I saw. Some people have said the saw bodies fall but that is all I saw.

Q. There was no apparent change in the direction of the aircraft immediately prior to the collision?
A. No, sir, I didn't see any. Foley could give you a lot more information on that.

Q. In your estimation how far were you from the collision point?
A. I would say a fourth of a mile.

Q. Here is a map of the general area, this is Evans and this is the road and this is basic where the wreckage is now. Would you point out on this particular map where you were at the point of impact?
A. We were across the railroad tracks and were into this turn here and by this dip here. Right between the dip and the turn just as we were coming out of the turn. Let the record reflect that he indicated that they were out of the durn and was proceeding in a northwest direction on Route 1 just on the hill.

(There being no further questions by any of the board members the witness was excused and withdrew from the courtroom.)

Seamman 3 William E. Rodgers, 4th Battalion, Construction Company, Camp Evans, Republic of Vietnam, was called as a witness, was sworn and testified as follows:

Q. Where were you physically when you observed the accident?
A. I was at this Army Gate and we were coming into the Compound. I believe it is called Gate 2, going into Camp Haynes.

Q. What did you see on the afternoon of the 3rd October.
A. I was at the gate and I watched the aircraft take off make a circle climb and the Chinook was in front of it. It hit the Chinook in the rear. I saw the Chinook fall and the Caribou make a slight right bank and then come on down. The Chinook came straight down.

Q. If you were looking straighthead to the southeast could you give us the relative flight paths of the two aircraft? Please use the map.
A. The Caribou was flying approximately down the road. It took off and was going in this direction and when if finally hit the Chinook they hit over in this area like this.

Q. Was the airplane overtaking the helicopter?
A. Yes, sir.

Q. What part of the airplane hit what part of the helicopter?
A. The left wing between the engine and the tip of the wing is where it caught the helicopter below the blades and above the ram. It took the entire motor thing in that area and sliced it completely off.

Q. Did you see pieces of helicopter fall away?
A. Yes, Sir.

Q. Which pieces did you see fall away?
A. He lost most of his rotor blade.

Q. What happened then?
A. The helicopter just fell. It looked like his whole engine had come apart.

Q. They were both coming down the road in the same direction?
A. Yes, sir, they were coming in like this and the Caribou came in back of the Chinook like this. The Caribou was on the right side of the Chinook.

Q. The Caribou was on the right side of the Chinook?
A. Yes, sir, it was on the right hand side since the time of take off until the time of impact.

Q. Did the Caribou make any change in flight pattern just before they hit?
A. A yes and a no. It loooked like he could have been trying to bank away. If he had of just turned left he he would have flown underneath him. All he had to do was just drop his left wing and he would have gone underneath him.

Q. There was a definite movement just before they hit?
A. Yes, sir.

Q. Relative to flight paths would you say as far as you observed the helicopter was maintaining a more or less stationary altitude and the Caribou was climbing.
A. Yes, sir.

Q. The Caribou was traveling at a higher rate of speed than the helicopter as far as you could tell?
A. Yes, sir.

Q. From the period of time that you observed the two aircraft there was no change in direction they continued along the same flight pattern until they hit?
A. Just that one little turn by the Caribou.

Q. Do you have any idea as to the altitude at the point of impact?
A. Between three and five hundred feet, sir.

(There being no further questions by the board members the witness was excused and withdrew from the broadroom.)

Lt Colonel Robert L. Coleman, Junior, 537th Tactical Aircraft Squadron, APO S. F. 96368, was called as a witness, was sworn and testified as follows:

Q. What is your specific job?
A. I am chief of Standarization and Evaluation.

Q. In your job as Standarization and Evaluation officer could you go into a little bit of detail as to what you do?
A. Primarily the job has to do with quality control of the pilots.

Q. Do you have a required Standarization and Evaluation check for pilot utilization?
A. Yes, sir, they are required every six months.

Q. Does this go into such things as, operating techniques and so forth?
A. Yes, sir.

Q. Would you tell us what a normal take off could be from a place like Camp Evans and what is expected?
A. At the present time we have approximately 3,000 ft of runway available, up until about a week ago we only had 1,400.. As far as a typical take off we normally take the runway to the end of the field, the extreme end the take off end line up and wait for instructions from the tower. We go at full power until we have taken off and made out turn and our out of the traffic pattern.

Q. What speed would this climb out be made at?
A. The climb out will be made a 95 knots until such time as it is reduced to medio power.

Q. Is this a fairly high nose climb nose condition?
A. It would be a nose high altitude. It is definitley a nose high altitude at 95 knots.

Q. What is the visibility at a 95 knots nose climb.
A. I would say it is a little less than radical.

Q. Do you have a procedure set out for when you are in a threat area and I use the terminology threat area to mean one in which you expect to get small arms fire, where after take off you sort of turn and climb?
A. This would depend on the local and the size perimeter you have. We try to stay inside the secure area as much as possible.

Q. Do you consider Camp Evans one of these areas?
A. Yes, sir, I understand that Camp Evans has just recently had a couple of helicopters shot down, outside the perimeter.

Q. Do you have a regulation or a published procedure where they will not start their turn until they have reached a certain height?
A. Yes, sir.

Q. You do not have a minimum altitude?
A. No, sir, not until recently.

Q. Which is what?
A. 1,000 ft now.

Q. That is at Evans only?
A. Yes, sir.

Q. The Army has certain regulations about local operating procedures do you have access to these?
A. Yes, sir, these have been made available to us from time to time. Whether those on Camp Evans specifically I don't know.

Q. Is there anything in your procedures that say you go to the operations facility, as an example, Camp Evans and see if there are any restrictions as to what you can do?
A. No, sir, the 1st Cav has been pretty top notch on this. They have sent people out to our squadron, since we are their main suppliers , and have briefed us.

Q. In any of these briefings did they point out that there was a restriction not to start your turn until you reached a thousand feet?
A. No, sir.

Q. Considering the pilots in the accident could you give the board some of their qualifications?
A. As far as Captain Sundy was concerned I would say that he was probably one of the outstanding pilots in the organization. He was top notch. As far as Lt Schiavonn was concerned he was above average. He was a good pilot considering his length of service, age and experience.

Q. Is there any way for you to project who would have been at the controls of the aircraft on that take off?
A. No, sir, I would have no way of knowing because Camp Evans is a type III airfield because they have a 3,000 feet ronway.

Q. What status must the co-pilot attain before he is allowed to make a take off?
A. He can make a take off from a type I airfield with an IP aboard without passengers aboard. I am getting my types confused. From a short field he is not allowed to make any takeoffs or any landings without and instructor pilot aboard and he cannot have passengers aboard. On type II airfield he must either be with an IP or with an AC that has at least 200 hours in command of the aircraft. On a type III airfield either an IP or AC that has a least 200 hours in the aircraft.

Q. What type of passengers?
A. Only from a type III.

Q. Legally he could have been in the seat?
A. Yes, sir.

Q. A new man arriving in the organization is considered a Co-pilot after what?
A. After he has completed phase I and Phase II in terminology, when he comes in we consider him unqualified and he is in training until he is at least working with an instructor pilot. Then he gets a check ride before he is upgraded to the grade of Co-pilot.

Q. This was the procedure of Lt Schiavone?
A. Yes, sir, he had approximately 750 hours total and over 450 hours in the aircraft. He has been in the organization about six months and has just recently been upgraded to first pilot.

Q. You said he had a total time of over 700 hours?
A. Approximately 750 hours.

Q. What was the 400 hour figure?
A. That is his total Caribou time in country.

Q. Is there an average length of time that is required for a man to reach AC?
A. He must have a minimum of 250 hours in the Caribou and a total time of 600 hours, before he is considered for upgraded to first pilot.

Q. How about to AC?
A. He must have a minimum total flying time 1500 hours flying time total and a total of 125 hours in the Caribou.

Q. This total flying time can that be waived?
A. Yes, sir, if he has the approval of the Wing Commander.

Q. Your pilots are expected to execute their turn when they feel that they are free of traffic?
A. Yes, sir.

Q. Would you tell me, what you mean by free traffic?
A. Well, above the helicopter traffic or the surrounding traffic in the area. This has been a very strong point since I have taken over because of the high traffic density in the areas that we work in. We do operate under heavy traffic circumstances. It has been emphasized time and time again.

Q. Do you know what the normal helicopter traffic pattern altitude is at Camp Evans?
A. No, sir, because they are anywhere from tree top level to 1,000 feet.

Q. Going along with your definition your pilots should not start their turn until at least 700 feet? What would you consider a minimum amount to start your turn?
A. See and be seen is all I can say. So many times we have had to turn to avoid traffic that we can't set a hard and fast rule.

Q. You have your people pretty well briefed on Camp Evans?
A. Yes, sir.

Q. Because of the absence of any published regulations on procedures at Camp Evans would it be normal to follow Air Force prescribed pattern, that is an entry leg down wind?
A. We're given instructions by the tower at Evans.

Q. If you had something to offer to prevent collisions such as the one at Camp Evans what would that suggestion be?
A. One word pure and simply-control, and by control I mean the control agency at the station. How they are going to manage this I couldn't begin to imagine. But controlling the traffic both fixed wing and rotary wing because in the last, I was up there day before yesterday, the tower operator was very specific in giving instructions to helicopters to cross center line and there was a helicopter that crossed under me just after take off and he was well within the three miles that the tower briefed him on. Control is the answer but how you are going to get it I just can't imagine. People coming back with radios shout out and things like that.

Q. Do you feel that using the perimeter of the camp as the airfield control zone is sufficient or do you think it should be extended along Air Force lines say the five mile limit?
A. Once again control is all important. If you can insure that contact will be made this will help.

Q. What about climb corridors specifically for army helicopters?
A. Specifically not only climb corridors but separate traffic patterns.

(There being no further questions by any members of the board the witness was excused and withdrew from the boardroom.)

Lt Colonel Ruthford R. Richardson, 537th Tactical Airlift Squadron, Phu Cat Air Base, Republic of Vietnam was called as a witness, was sworn and testified as follows:

Q. What is your job in the squadron?
A. I am Ops officer and Acting Commander at the time.

Q. How long have you been Ops Officer?
A. Since the 1st of August of this year.

Q. I wonder if you would go through for us a normal procedure for take say from Camp Evans.
A. At Evans the runway is long enough that we don't have to use the STOL take off. In taking off from Evans we take off to the north and climb up at 95 knots at MRTO power in order to swing high enough and away from incoming traffic. Then we turn to the right and parallel highway 1 back toward Phu Bai.

Q. Do you have in your procedures a prescribed altitude that you will climb to after a take off?
A. No sir, just climb until you have reached a safe engine speed.

Q. What is a safe engine speed?
A. 84 knots.

Q. Do you have a published procedure that is hostile terrain that the crew will attempt to stay within the confines of the friendly area or pointing out that they will need to turn faster than normal after take off?
A. We do not have a letter or anything that I am familiar with. It is a known fact that when we are in a hostile area that we turn as soon as possible after take off at 95 knots.

Q. Is Camp Evans considered a hostile area, or do you even publish such a thing that says that this is a hostile area?
A. No sir, we do not. There are areas are hostile and normally we do not consider Camp Evans as hostile; however, not too long ago there were a few choppers shot down.

Q. When a pilot first gets in country what type of training do you give them?
A. We have a rather lengthly training program. A lengthly briefing by the Awairing officer and a review of equipment. He then gets 25 hours of instruction before he can go to co pilot.

Q. Is this ground time or air time?
A. This is air time.

Q. Before he is a qualified co-pilot?
A. Yes sir. In the 537th we run our people a little bit longer than most squadrons, and part of the reason for that is that we have the long missions that run all day from the south to the north. He will get another 25 hours of instruction in the air before he can become an aircraft commander. He has to have 125 hours in the Caribou to become an aircraft commander. He further has to have a total of over 1600 hours flying time.

Q. How much training do they normally get in the states?
A. Sixty hours.

Q. This particular crew involved in the accident how many times had the aircraft commander made this particular run?
A. That would be a real rough guess, because he has made it numerous times. It would be extremely difficult to guess.

Q. He had traveled it numberous times?
A. Yes sir.

Q. Could we have just a comment from you on the qualifications of the crew?
A. He arrived here in July, latter part of July, he became an aircraft commander. He was in the process of becoming Flight Examiner. He was a IPFP. In order to become a IP or FP every man has to have two separate recommendations from acting IP's. When we select an IP we have a meeting with our training people and we discuss it and we select a man and he rides with an IP purely on observation and this is the first ride with an instructor and then he has have two recommendations and that means that he must give at least two rides and they don't always get a recommendation with every ride. A man will give maybe three of four rides before he gets the recommendations. Captain Bundy had been given those two recommendations immediately. He had previous IP time and this is one thing that we look for. He had been appointed as a flight examiner at his previous assignment in the C-133. This was just prior to his departure so he didn't have much experience as a flight examiner but he did have quite a little time as a Pilot Instructor in the C-133.

Q. How much time did he have in the C-7?
A. Around 300 hours and that is a real rough figure.

Q. Was Captain Bundy in the left seat?
A. I'm not sure. I can't say.

Q. We don't know if Captain Bundy had been flying the aircraft?
A. I don't know, sir.

Q. Could you discuss the other pilot?
A. For Lieutenant Schavonne this was his first operational flight after his UPT, under pilot training. He was held back from becoming a first pilot due to lack of total time. As soon as he got the total time he would have to have the two recommendations. I was in September that he passed his upgrading test.

Q. How do you determine the difference between a first pilot and an AC?
A. The first pilot will normally ride in the co-pilots position, but he can ride in the left seat providing the AC is in the right seat. There has to be an AC on the aircraft. It is total time that gives the AC the rating as such and the AC has total responsibility for the aircraft, and for making all decisions.

Q. Normally on missions like this do you allow the pilot and the AC to change seats?
A. Yes sir.

Q. Do you stress the traffic congestion around army fields at your pilot meetings?
A. Yes sir. We have stressed this continually. I have gone to Evans and watched the traffic. This was caused at the time by the construction being done. We do stress the helicopter traffic. I do have aircraft commander reports that come back to me and we discuss them when we can.

Q. When one of your crews lands at a field like Evans is there any way that they can or any provisions for them to check on the traffic regulations and conditions around the field, in other words is there an operations set up through the TALO that allows them to deal with local restrictions?
A. No sir. I have never seen one. We have discussed the problems with the TALOs and have talked to them.

Q. When you clear out of Evans is there any requirement that you do anything other than just call the tower?
A. No sir.

Q. Do you receive all of the NOTAMS that are published by the First Cav Division?
A. Yes sir, we do. Our distribution on the First Cav NOTAMS are a little slow but we are receiving them.

Q. In your training do you have anything so to speak where an old hand takes them around to the airfields that they will be operating out of, not necessarily land there but take them over it and point it out?
A. Yes sir. We call it the dollar ride and it is merely sightseeing for the new man and he is required in operation to land at the different fields.

Q. Would it be at all unusal for the 469 mission to check with a STOL take off out of Evans?
A. No, I don't think so.

Q. Do you have any prohibitions with reference to emergency procedures on a mission such as 469?
A. Yes sir, we have passengers on board.

Q. Since you have been connected with the Caribou outfit have you had any complaints about visibility in the cockpit of the Caribou?
A. Not an awful lot, but there has been some, and some of the pilots don't like to climb at 95 knots with a nose high attitude, but there hasn't been an awful lot of them. You do have to strain your neck to see out when you climb at 95 knots.

Q. What is the visibility above and to the left?
A. It is good except for the panels around the windows.

Q. Could you normally see as far back as a nine o'clock position?
A. Yes sir.

Q. Assuming you were taking off to the north at Camp Evans, normal turnout and climb and you reached a point about a mile southeast of the field would you normally be involved in checklists at this time or would they have been completed?
A. They should have been completed with the exception of reduction to climb power.

Q. Which is done at what point?
A. 1500 feet normally.

Q. When leaving Camp Evans the normal route is fly down route 1 and stay to the west side of route 1 until what point?
A. The normal procedure would be since you are taking off to the north, a right turn and then head down the highway until you contact Sally and then you have to go around the west side, because of the Artillery.

Q. Where is Sally?
A. Sally is south of Camp Evans approximately eight or nine miles just across the river.

Q. Midway between Camp Evans and Hue?
A. Yes.

Q. Since you have been operations officer have you downgraded an Aircraft Commander?
A. No sir. We have not downgraded an Aircraft Commander.

Q. Have you found it necessary to ground an Aircraft Commander for a specified time?
A. No sir.

Q. I understand the 469 mission has a block time of 7:00 o'clock in the morning approximately how many landings and takeoffs has the pilot accomplished before ~~he~~ before he arrives at Camp Evans?
A. He would be on his eighth takeoff and seventh landing.

Q. He was heading at that time to what normal point?
A. From Camp Evans to Hue Phu Bai to pick up his load or remainder of his load, if he didn't have a full load when he left Evans, then to Ann Khe, then to Phu Cat where he would terminate.

Q. What time would he return to Phu Cat?
A. Around five o'clock.

Q. Do your crews have a normal 12 hour day?
A. Yes, most of our missions are run right close to a full crew day. Our missions are averaging 7.4 flying hours.

Q. How many days on the road does the average crew have on the road before prior to getting a full day off?
A. We are working a sequence schedule at this point. They fly two days and then they will have an alert standby on the third day.

Q. At the duty station?
A. He is in his quarters unless he is called out. After that he has a day off and then he starts the normal sequence. There are some occasions when we have to fly people three days in a row, but that is very seldom.

Q. What is the average amount of flying time that the pilots are getting in?
A. The IP is averaging about 120 hours per month and the AC will average between 90 and 100 hours per month.

Q. We can assume that Captain Bundy had been averaging over 100 hours per month?
A. Yes sir.

Q. Are there provisions for box lunches for a flight departing in the morning or provisions for getting lunch?
A. We have been obtaining C rations. Whenever possible we try and have them stop for lunch. On this particular day Captain Bundy had lunch at the Phu Cat Open Mess.

Q. Do I assume that normally it would not be possible to get a hot meal?
A. Yes sir. That is correct.

Q. Do you feel that the great amount of helicopter traffic and the fixed wing traffic at Camp Evans with the large number of landing pads cause a hinderance to flight safety?
A. I would say at this point in time that the flight paths do conflict, however I think there could be procedures that could be established to alleviate this. They do have trouble with helicopters that come in that have been shot up and don't have radio transmission.

Q. You have been with the 537th since 1 August?
A. No sir. I have been with it longer but I have been the Commander since 1 August and in charge of Flight Operations.

Q. In your experience in flying in and out of Camp Evans and have been involved in operational aspects how many near misses have been reported between fixed wing and helicopters, do you know?
A. Right at this time I am trying to recall ACR's because this is the written report. I cannot pin down the exact number.

Q. What is frequency of them, daily?
A. Starting in September I think we have started getting at least one a week. During September there were two days in a row where we had one each day. There seems to have been an increase after the middle of the year.

There being no further questions by any members of the board the witness was excused and withdrew from the boardroom.

WICHMAN

Major Arthur R. ~~Whitman~~, 228 Aviation ~~Center~~ BATTALION, Camp Evans, Republic of Vietnam, was called as a witness, was sworn and testified as follows:

Q. Would you tell us what you know about the accident on the 3rd of October?
A. At the time of the accident, I was not present here on the post. I arrived back here from a flight about an hour after the accident. I flew in from Phu Bai. The first time I heard about the accident was when I was flying in and I asked for the local artillery upon flying in from the southeast and at that time the radio message came back to ouskirt the area where the accident happened so I outskirted it to the northeast and looked down at it. At the time I saw the area where the Chinook had fallen, although at the time I didn't know it was a Chinook. I did not see the Caribou. I landed and pulled up pad and that is when I found out that it was an aircraft in my battallion. My Colonel was out at the accident at the time. Upon his return I talked to him and he told me basically .....

LEGAL ADVISOR: I think this would be hearsay and unless you feel that it would serve some purpose normally it wouldn't warrant to have him testify to what the Colonel said.

COLONEL BENIT: You will eliminate that portion which you are relating to us.

A. After I landed the aircraft I went into the tower and there were quite a few people around so I asked them what had happened ~~so I asked them what had happened~~ and they told me that there had been a mid air collision between a Chinook and a Caribou.

Q. You have no personal knowledge of the accident?
A. I was not in the area.

Q. The aircraft that was involved in the accidnet, what was its mission on that day?
A. The mission of that aircraft was the bus run, what we call the bus run. Starting at Phu Bi, flying to Evans, Nancy, Sharon and return.

Q. Explain the return. Wat time does it depart Phu Bi?
A. It departs Phu Bai in the morning approximately 0900 o'clock, arriving here about 9:20. These are approximate time due to weather, maintenance and other things. Upon arriving here at Evans it lands at the ASP pad and picks up passengers and all the mail heading north. It leaves here and flies to Nancy, Bette and Sharon where we have company. At Sharon it will pick up people connected with out Battlion. At Betty it picks up people connected with the first Brigade or any other people desiring a ride south. Then it traces it steps back through Nancy and on to Evans landing at the ASP pad and picking passengers up heading for Phu Bai.

Q. It is safe for us to assume here now that the aircraft had departed Nancy and it was intending to land here at Evans?
A. To the best of my knowledge we had a medic on board that aircraft from our headquarters company here at Camp Evans and he died in the crash.

Q. In the event a aircraft such as this is ~~set~~ SHOT down by hostile fire somewhere in route between another station and here how do you determine who was on board?
A. Sir, the only manifest that we have is that we manifest people from Bravo

Company at Sharon for return trip to Phu Bai. The people with the Brigade and others are not manifested.

Q. They are not manifested?
A. No, sir. They are not manifested.

Q. At each point where the vehicle departs there is no complete list left with anyone indicating who is on board?
A. We do in our battalion and that is how we know that Steve was on board because he was manifested at our Bravo Company at Sharon.

Q. Is this a normal procedure or is it strictly in this area, that is a lack of a manifest?
A. Sir, I could not answer that.

Q. Do you normally file a flight plan for a bus run such as this?
A. An actual flight plan is not filed, but the flight following from the Company to Evans and from our Battalion, the aircraft calls into our battalion and the flight following to Sharon, and the flight following back to our battalion.

Q. This is radio or voice?
A. This is voice.

Q. No, radar?
A. No sir.

Q. Is there a set flight path that this normally takes? Is it a published flight path?
A. No sir.

Q. In this flight path when they are normally returning from the northern [redacted] station to Camp Evans are they proceeding between the road, highway 1 and the coastline, somewhere in that general direction?
A. I would say, sir, that Highway 1 is their boundary as far as their closeness in.

Q. They will not come any further west than Highway 1.
A. The aircraft usually calls into Evans east approximately two miles ~~west~~ East, coming in from Sharon. Basically what I am saying is that there is a village and we take fire from that village many times and the village is basically on Highway 1 so instead of flying directly over it we try and outskirt it.

Q. You stated that normally the bus run would call in approaching the north south extension about a couple of miles before he got there?
A. He calls into Evans East stating that he is in the area and he will land at ASP pad.

Q. Is this a published procedure or is it just a policy?
A. It isn't a published procedure but a policy.

Q. Coming in from the north to the area here they would normally go around base to the east, rather than go around to this area over here?
A. Yes sir. Going around to the west we have a division training center that has open ranges and usually lots of fire power when they are putting on demonstrations for the new personnel. The only time that you would come in from that way would be if you were going in for refueling and at that time contacting Evans West for entry.

Q. What altitude are you normally flying when you cross the north, south center line?
A. I would say about a thousand to twelve hundred feet due to the fact of the village and then letting down east outside the perimeter for landing at the ASP Pad.

Q. Could I ask you something in a general nature as to qualifications of the pilots that fly your bus run here. When they first come into country are they classified as Pilots or Aircraft Commanders or are they made co-pilots?
A. They are classified as Pilots. They fly with an IP for the first five hours then they fly with an Aircraft Commander, usually for fifty hours or more depending upon the individual. Also fifty hours is required before he can haul passengers.

Q. After completing this he would normally be permitted to fly as the Aircraft Commander?
A. He would also have a check out by the IP after he flies with the AC and be designated him ready to fly with the IP to be cleared.

Q. Are there any general area qualifications that he must follow on this or can we assume that once he has cleared as an Aircraft Commander that he can fly anywhere in this area or any other area?
A. He is cleared because in his fifty hours he has to land in all the LZ's and drop zones that we have, usually they fly into two or three of the Air Force Bases, Marines and Navy. He is completely checked out to make sure that he can handle that aircraft. If there is any doubt in the AC's or the IP's mind he is continued in training and some of them go as high as 75 hours, depending upon the individual. He has to know all the Artillery frequencies, he has to know who to call, and so forth.

Q. Do you know the qualifications of the pilots that were aboard the Chinook?
A. Yes, Mister Johnson was one AC and Mister Conroy was the pilot.

Q. At what stage of the program was the Copilot?
A. Sir, I could not answer that. I would have to check it out in his records. He came here about the first part of August.

Q. How about Mister Johnson?
A. He probably came here about July. I can't designate the date but he did come here around the first part of July.

Q. Then we can assume that sometime in August he was flying as an AC?
A. I would have to check, I couldn't say. Mister Johnson, from what I had heard, was a very good pilot and had a lot of flying.

Q. Normally about how many flight hours do your crews get a month?
A. It could range anywhere from 75 to a 110 or 115.

Q. In flying this particular bus run, what is the normal communications procedure as far as monitoring frequencies when you come down the route?
A. Starting at the beginning?

Q. Start north and come back.
A. He is at Sharon and he would tell Sharon to tell my Bravo Company that he is leaving and he would contact east control for take off and clearance.

Q. Fox Mike or UHF?
A. It could be either one because we have both. He would come into Nancy and I can not answer you on Nancy, basically because I do not fly that much, but I imagine he would contact Nancy control. In coming into Evans he would contact Evans on UHF or Fox Mike, Evans East is on both. It would probably be UHF so as to have the LCC at the ASP Pad on at the Fox Mike. I try to use the UHF if possible when I come in so that I can monitor the Caribou's taking off because they are generally on UHF, I think. That is my own personal opinion.

Q. What do you monitor the Artillery on?
A. Fox Mike.

Q. So you can't monitor the Artillery and still be listening to the UHF at the same time?
A. Yes sir.

There being no further questions by any member of the board the witness was excused and withdrew from the boardroom.

1st Lt Robert F. Poland, 537th Tactical Airlift Squadron, Phu Cat Air Base, Republic of Vietnam, was called as a witness, was sworn and testified as follows:

Q. Tell us what you know of the collision that took place on the 3rd October.
A. To start at the beginning we were holding east of Camp Evans at about 2500 feet when the Caribou involved departed runway 36 right. As he lifted off we got clearance and started our entry into the traffic pattern and that was the last time I saw mission number 469. I had lost sight of him. The next time I saw him we were entering our down wind leg for 36 right and as I recall, it was on the right hand side. I don't recall the exact mode of entry because I was running the checklist. We were in a right turn in a heading of 140 when the Caribou appeared at our 11 o'clock position at about the same altitude which I estimate to be about 1100 or 1200 feet. At about the same clock position was the Chinook only about 100 to 200 feet lower and it was obvious that there had been a midair collision from the attitude of the Caribou and the Chinook. The Caribou was in about an 80 degree nose low attitude and descending as though he was in a slow spin. The helicopter was descending in, I would say a heading of about 180 with a 60 degree nose low attitude. The rear rotor appeared to still be turning and there was debris flying from the front of him. I couldn't tell if the rotor was still intact or not. We were headed pretty much toward the area of the accident and so the Aircraft Commander, Tom Warren, rolled into a steeper right hand bank, and I saw the helicopter at the instant it hit the ground. I lost sight of the Caribou just an instant later and it was still descending. The next time I saw anything was when we rolled into a left bank and then I could see a large fire and from the relative positions I assumed it was the Caribou. That was the last that I saw of either of them.

Q. You did not see the actual collision yourself?
A. No sir. I didn't.

Q. Did you actually see the Caribou take off?
A. Yes sir. I did.

Q. How high would you estimate he climbed before he started his right turn?
A. I lost sight of him before he made his turn. I am sure that he had to make it to get down the highway going southeast.

Q. How high would you estimate he was when you last saw him?
A. He wouldn't have been more than a hundred or two hundred feet.

Q. At this time he was past the end of the runway?
A. Yes, but I couldn't say how far.

Q. What was your position in your ship?
A. I was the co-pilot and I was sitting in the right seat.

Q. On normal C-7 missions out of Camp Evans what is your take off run?
A. Sir, I would estimate, before they opened the new runway that we are using now, 1400 feet of it. We were taking just about all of it. We lifted off just about at the end of it.

Q. You normally use about half of the runway then?
A. Yes sir.

Q. What is your rate of climb normally?
A. Out of Camp Evans with a normal load, the initial climb is a little faster because we are taking off. I would say the initial rate of climb would be 500 to 1000 feet per minute.

Q. What is it with a normal load?
A. About 500 feet; not more than that.

Q. With this sort of climb is the attitude of the plane such that you have normal visibility?
A. Climbing straight ahead the visibility isn't all that good. It is pretty limited, really. If I could just think of someway to demonstrate it to you. As you are climbing out the dash board is high enough because of the attitude that you can't see below you, unless it is quite a ways in front of you. It is pretty much a blind spot.

Q. Can you see the actual horizon?
A. Yes, you can see the horizon.

Q. What is your visibility seated in the right seat at the 3 o'clock position; can you see out that way?
A. From the right seat in a right turn you can't see it very well. The left seat is pretty well restricted.

Q. How about the 4 o'clock position to the right side of the aircraft from the right seat?
A. The co-pilot can see pretty well but it is somewhat restricted.

Q. What is the test position for visibility?
A. I would say an angle of about 45 degrees straight up, because of your restrictions and your helmet.

Q. What about head movement?
A. I would say if I held my head up about like this that would be the best I could do. Because of the helmet and the headrests I could not look straight up.

Q. Are you required to wear this helmet when flying the C-7?
A. Yes sir.

Q. Getting back to the climb again, in a METO climb at 500 feet you say that you can see the horizon?
A. Yes sir.

Q. Over the nose?
A. To both sides you can but not over the nose. The dash covers up the nose but off to the sides you can see it. When the seat is too low you can't see much of the horizon at all.

Q. Does the seat have enough adjustment so a small man can adjust it high enough?
A. I believe so. I'm so long that I have to put it down a ways. I'm sure that a shorter person could raise it high enough to see out.

Q. Did you ever see the helicopter?
A. I didn't as the Caribou took off but I did see them both.

Q. Prior to the accident?
A. No sir, and when I did see them I didn't see any visible damage to the Caribou, but there was debris flying from the helicopter.

There being no further questions by any members of the board the witness was excused and withdrew from the boardroom.

1st Lt Garland G. Moore, 537th Tactical Airlift Squadron, Phu Cat Air Base, Republic of Vietnam, was called as witness, was sworn and testified as Follows:

Q. Will you please relate to us what you know about the accident that took place on the 3rd October?

A. I was given a load of passangers to take from Hue Phu Bai to Evans. When I got to the river just south of Evans about six miles I was told when I called in for landing instructions that they had one 123 and a C-7A on the runway, which is normal and at the time the ramp wasn't open. I spotted a 123 that was holding also. He was higher than I was so I decided to hold at 2500 feet. I had only gotten in the proximity of the field when the 123 taxied out for take off and was cleared. The Caribou that would eventually fly into the Chinook called in and was cleared for taxing.and did so. He executed his 180 on the runway and was in position for takeoff. The other 123 had entered on a downwind leg and was cleared to land. At that time I set myself for a descent on a downwind leg and would land behind the 123. The Caribou took a long time on the runway so I did a 360. The 123 had done a left hand turn to reestablish his pattern. At that time the Caribou was s cleared for take off and he was talking on the UHF and I was on the FM. As I was making my 360 I noticed a Chinook below me. I was probably between 1500 and 1800 feet. The Chinook was below me and traveling down the road. I entered on down wind at approximately the nothern end of the runway. I saw the Caribou make his take off and make his turn and start his climb down the Hiway. I saw the Chinook from my position was just behind the cockpit, maybe a little left of the centerline of the Caribou. At that time they were out of my field of concern and I started to clear my immediate area again because I had that those two aircraft spotted. I spotted the 123 who had called in final. I did another left 360 and as I turned and started to roll into my bank I saw a bright orange flash over about the position of the number two engine of the Caribou. My first thought was that his number two engine had exploded. His nose came up further than it was and he went into a right descending sprial which he never came out of. At the time I still thought it was his number two engine exploding. Someone called in and said there had been a midair between a Caribou and a Chinook. I looked down and watched the Chinook hit the ground and then I watched the Caribou hit the ground. I called the tower and told them to send out some rescue ambulances and by that time there already four or five hueys in the area. They were all hovering around making sure that it was safe to enter. I went ahead and reentered on a down wind again and executed my landing. When I got on the ground I got out and talked to Captain Bolling and I told him that I was going to notify our people. I notified them and they relayed the message to Hilda ALCC.

Q. Could you tell what altitude the Caribou was at when he initiated his turn?

A. It would be a rough estimate, but I would say between two and four hundred feet.

Q. How far out from the end of the runway?
A. I don't know I didn't see him commence his turn I just saw him as he rolled out over the Hiway.

Q. Then he started a straight ahead climb paralleling the Hiway?
A. Yes, sir, It appeared to me that he was following the Hiway down to Phu Bai.

Q. What speed do you normally make your climb at?
A. After we have made our take off we go to METO power and climb at 95 knots.

Q. Would you say that the Caribou was at METO power at this time?
A. Yes, sir, I would say he was probably at METO power at the time of the climb.

Q. Do you know what instructions were given to the C-7 pilot?
A. He was cleared to take off and he got the wind. That is about all we get unless there is artillery.

Q. You mentioned something about him taking alongtime to take off, what exactly was the cause for that?
A. I have no idea, it could have been that he was checking his engines at the end of the runway. This is the ideal condition. We like to check our engines on the ground and then while we are completeing our 180 turn. We run the power up and check for oil leaks and so forth.

Q. You didn't actually see the impact then?
A. No, sir, all I saw was the bright flash.

Q. When you noticed the two aircraft on what was a converging course could you tell at what angle they were at?
A. I didn't at the time think it was a collision course. I wasn't even thinking about a collision at the time. The Caribou was belwo and very slightly to the right of the Chinook and there is probably a 15 to 20 degree angle between them.

Q. You were looking back at them?
A. I was down and to the side. They were at approximately my 10;30 or 11:00 o'clock position, when I entered on down wind. When I saw the flash they were about my 10:00 o'clock position, and lower than I was.

Q. Did it appear that the Chinook was ahead of or behind the Caribou?
A. The last time I saw them together was when I turned down wind and I explained that a minute ago. The next time I saw them it looked like the Chinook fell from the right wing of the Caribou.

Q. When you initially saw them the Chinook was to the left of the Caribou and you couldn't tell if he was infront of or behind him?
A. He was behind the wing of the Caribou and then when I turned down wind...

Q. Behind the left wing?
A. Yes, sir, very slightly. He was at about the Caribou's eight o'clock position.

Q. In you opinion as a C-7A pilot, putting yourself in his position do you feel that his ability looking forward was sufficient to see the C-47? I am asking the question to see if the climb angle is such that you can't see over the nose?
A. The climb angle from the cockpit looks steep. You don't have very good visibility. Your best visibility is say about 10 degrees elevation up to about 35 degrees, then you have the cross bar across this way and across your head and you have a panel. The left seat pilot should have some visibility up and to his left, but the Caribou is really not too good an aircraft for visibility in a climb.

Q. Does he have clear visibility in clearing to the right?
A. The left seat pilot would have more trouble clearing to his right and above him than any other way.

Q. When you are ground taxing your crew chief or your flight engineer often go on top, where is he located during take off?
A. During the take off we have him seated at the left front side of the aircraft. After we get up he checks the the engines for leaks and what not. After his check he will most of the time come up front and stand between the two pilots. When it is a short leg he will stay seated and do his paper work.

Q. Your normal procedure when you take off from a runway like Camp Evans is to your turn right away to avoid small arms fire?
A. Not now. Before we did not worry about ground fire as much as running into somebody. Now we are receiving instructions to climb to a thousand feet before making our turn.

Q. Who is giving those instructions?
A. The tower. This came about right after the accidnet.

Q. Prior to that time you were given no specific climbing instructions?
A. No, sir.

Q. What is the area to the north of Camp Evans like? Is it hostile?
A. None of our aircraft have been shot at. I really can't say that it is known to be hostile. It is just policy to stay within the perimeter.

Q. Is this a procedure?
A. They have a procedure for staying within the perimeter.

Q. That is for both entry and departure?
A. Yes, sir.

Q. Are you familiar with the 469 mission?
A. Yes, sir.

Q. Have you flown it before?
A. Yes, sir.

Q. What time do you generally get up in the morning for this mission?
A. Approximately 5:15.

Q. When do you show up for the flight?
A. We show up an hour before the mission and if I remember right the 469 is blocked for 7:20 in the morning. I generally rise at least 45 minutes before that, in other words an hour and 45 minutes before block time. That gives me time to get dressed and eat breakfast. It is the latest block that we have and I generally arrive down there a little early.

Q. Just out of curiosity on the 469 mission what do you do for lunch?
A. Different crews do different things. Me, I stay with the aircraft and help the loadmaster fuel and service the plane and then go over to the snack bar at Qui Nhon and get a sandwich or what ever I feel like eating.

Q. When you observed him in his turn before he started into his straight ahead climb what bank angle would you estimate he was in?
A. He was shallow in his bank about 15 to 20 degrees. He was coming out of his turn when I saw him. This is opinion but he had to start his turn early off the end of the runway and have a good amount of banking to have turned and started his climb when he did.

Q. You did not observe the impact?
A. I didn't know what it was, all I observed was that bright orange flash.

Q. When you observed that the helicopter was not included in your field of vision and if it was you were not aware of it?
A. The only time I was aware of the helicopter was when he fell.

(There being no further questions by any of the board members the witness was excused and withdrew from the boardroom.)

Major Forrest E. Franklin, Corp of Engineers, Headquarters Headquarters Company Camp Evans, Republic of Vietnam, was called as a witness, was sworn and testified as follows:

Q. What is your specific job?
A. I am president of the Aircraft Investigation Board, 1st Cav Division. (I would like it to be noted here that this is a permanently assigned staff section of the Division Headquarters. It's not an appointed board. It is designated and it is a full time job.)

Q. As president of this board what are your duties?
A. My duties are to maintain an office equipped to instantly proceed to investigate every accident the 1st Cav Division has.

Q. How long have you been doing this?
A. About three months and two weeks.

Q. During this time how many accidents have you investigated?
A. About thirty three.

Q. What in addition to the investigation to the thirty three accidents have you had in the way of training for this job?
A. I graduated from the Southern California Aerospace Safety Management Course on the 16th June this year. The purpose of that course is to train Aviation Officers in all services for accident investigation.

Q. Major Franklin, we have some specific questions that we will ask you, if you would rather when I ask one of these questions and it triggers off something and you would like to give us some further facts feel free to do so. The first thing we would like for you to do is locate the wreckage for us on a 1 to 25,000 map. We would like you to locate the two main bodies of wreckage and then to locate where there may have been some other wreckage that you discovered? (The map sheet is 6442 II, sheet page Lima 8020, 60 Supplement to Standards 1 to 50,000 but the scale is to 1 to 25,000.)
A. Would you like me to mark the map at the point of collision and give the coordinates?

Q. Yes, please?
A. I have marked the map at the coordinates Yankee Delta 563318 approximately. This is the nearest possible point to select as the point of impact. That is the point of collision.

Q. Would you mark the map at the point where the aircraft wreckage struck the ground?
A. I have marked the map. I would estimate the wreckage of the Chinook to be centered on a point roughly 56 by 5675 on the scale and 3145.

Q. That is the wreckage of the Chinook?
A. I'm sorry, correction that's 5675, 3130, that is the Chinook. I would say the wreckage of the C-7 Alfa would be 5630 and 3140.

Q. Now in reference to those two locations if you like can you tell us 1,000 meters, 1500 meters where you found any other wreckage?

A. On a line between the point of collision and the point of impact of the Chinook was a major portion of the wreckage, which was the after pylon and after mast of the CH-47. Along that line from the point of collision and generally on a line to the point of wreckage of the Chinook there were portions of both sides of the C-7 Alfa sheet metal from in the vicinity of the right and left propellers. In addition was one blade of the left propeller. Along those same lines the remainder of the left propeller intact. The stuck cell member including two pieces of the syncronhizer drive shaft of the CH-47, the pilots helmet of the C-7 Alfa, the top of the C-7 Fuselage and numerous pieces of Chinook rear rotor blade. Now these were distributed to the right and left, the majority of them to the left of the line I described by the point I chose as that of collision an that of impact of the Chinook. About midway between the point of collision and the point of impact. Both of these bodies were identified as having coming from the fuselage of the Chinook. The major portions of the Chinook rear rotor blade were distributed to both the left and right of this line one at about 130 meters and one as much as 300 meters and one almost directly under the path of the Chinook.

Q. Did you find any evidence of a portion of the blade of the helicopter still embedded in a portion of the Caribou?

A. Yes, we removed an outward section of one of the rear rotor blades of the Chinook. It was 9 feet 1 inch long, from the immediate cockpit of the Caribou wreckage. This was bent into a box and the longest section, of which was about 3 feet, was jammed under the instrument panel wreckage in the vicinity of one of the pilots bodies.

Q. Did you find any other evidence of a blade striking the Caribou in any other location than that which you have just described?

A. Yes, we have distinct evidence that at least one of the rotor blades cut through the cockpit of the Caribou. If I was sitting in the cockpit of the Caribou it was the top right edge of the windshield, down and through the lower left edge of the windshield. That is from co-pilots side down to the pilots side.

Q. You found the front rotor blade where an in what condition?

A. The front rotor blade was burnt in the post-crash fire. The wreckage of the Chinook was basically inverted. When it struck it did not move itself, it fell straight to the ground at a very slow speed. It was intact except for the crushing of the impact and the fire which followed. The rotor was intact and stopped at impact where it lay on the ground undamaged except for the fire.

Q. Are there any other facts which you discovered in your investigation that might be material to this investigation?

A. The flight surgeon and the remainder of my board were able to establish from the remains of the pilots that neither of them could have been alive after the initial impact of the two aircraft.

Q. That's the pilots of the C-7?
A. Yes, sir.

Q. Utilizing you and the gentleman sitting to your left would you depict for me the angle that the blade cut through the cockpit?
A. The angle is obvious from the evidence. The depth of the cut is indeterminable because the blade went beyond the top of the cockpit so we can't say how far back it went. Also, the length of the blade that was in the cockpit is immaterial becuase we don't know if any of it were protruding from the cockpit when it broke off. All we can establish is the angle of the disc on this one particular slice through the cockpit. The angle of that disc was from the top of the co-pilots head to approximately to bottom of the pilots waist.

Q. Can you tell us from your investigation of the impact site of the Caribou whether or not he was in a left turn or a right turn as he struck the ground?
A. The investigation of the site indicates that the first point of contact of the Caribou preceeds the first piece of wreckage by a leat 60 feet. Now the line described from this point to the first piece of wreckage is a curve. It's an arc of a circle perhaps 100 meters in diameter. This curve to the right on an average of about three quarters of a degree. This proves that the aircraft was in a right turn and the degree of angle and the pitch are open to discussion. The radius and direction of the turn are obvious.

(There being no further questions by any of the board members the witness was excused and withdrew from the boardroom.)

Sergeant Richard P. Mitchell, Air Force, Naval 1st Calvary, Da Nang Air Base Republic of Vietnam, was called as a witness, was sworn and testified as follows:

Q. Did you witness the midair collision on the 3rd of October?
A. Yes, I did.

Q. Would you tell us generally what you saw?
A. The Caribou had just left the field, made a right turn, was proceeding toward the beach in a climb. It was normal departure. The Chinook was flying roughly parallel to the Hiway and they just collided. The weather was clear and they should have been able to see each other real clear.

Q. Were both aircraft as far as you could determine heading in generally the same direction?
A. They were heading in approximately ninety degrees difference. The Chinook traveling parallel to the Hiway and the Caribou heading toward the beach.

Q. When the Caribou took off it made a normal turn to the right? How far would you say it turned?
A. It looked like he turned around and was heading toward the beach and then he started to climb out. Just prior to impact with the helicopter he started to make a very short right turn and pulled up and to the right and just as he started to turn he hit the Chinook helicopter.

Q. Where would say the Caribou hit the helicopter or vise versa?
A. The Caribou hit the helicopter in approximately the location of the right engine part.

Q. It hit in the rear rotor?
A. Yes, sir below the rear rotor.

Q. What part of the Caribou?
A. The front nose section.

Q. Could you tell how high the Caribou was when he started his turn?
A. The view just off the runway blocked my vision, all I know is that he made his turn and came back. I don't know if he proceeded straight out or wether he turned immediately after take off.

Q. Looking toward the scene, toward the southeast, where you viewed this had they not collided they would have made an X is that the flight path with the Caribou heading out toward the ocean?
A. Right, the Caribou was heading out toward the beach and the Chinook was generally parallel to the beach.

Q. Did the Chinook make any turns or any effort to move away from its normal southeast pattern?
A. No, sir.

Q. Did it appear to you that the Chinook was flying straight and level, descending or climbing?
A. Straight and level.

Q. Had the Caribou been in a wing level altitude prior to the crash?
A. A wing level climb. It was a gradual climb out.

Q. Did you think there was any danger of them colliding until the Caribou started its last turn?
A. That is why I watched, because it appeared to be on a collision course and in this are you have so many helicopters and so many aircraft quite often what appears a collision course really isn't.

Q. The Caribou was in effect overtaking the Chinook?
A. Well, sir they were both converging on the same point. One was coming this way and the other was coming this way.

Q. As you were facing it you were looking at the rear end of the Caribou?
A. Yes,sir.

Q. Upon impact you say it was the front section of the Caribou that made contact with the rear rotor of the Chinook, what did you observe after contact?
A. Just prior to contact the Caribou started its right turn in an attempt to avoid the accident. After impact it continued its right turn and the Chinook dropped. It lost the rotor off the rear end.

Q. Did you see the rotor?
A. It shattered. The Chinook dropped and the Caribou continued its right turn. It appeared for a couple of seconds to be recovering and then he went down.

Q. How did the Chinook drop?
A. Almost straight down.

Q. Tail first?
A. Yes, sir.

Q. The Caribou did what?
A. After impact the Caribou continued its left turn, leveled off, and then went into a sharp left turn and headed toward the ground. I lost sight of it before he hit the ground. All I saw was the final left hand turn.

(There being no further questions by any of the board members the witness was excused and withdrew from the boardroom.)

Captain Salazar, 11th Aviation Group, Camp Evans, Republic of Vietnam, was called sworn and testified as follows:

Q. What is your job?
A. I'm the communications team leader, which falls under the 11th Aviation Group.

Q. Do the people that operate the control tower work directly under you?
A. Yes, that is correct.

Q. I would like to separate the questions into two parts. I understand that you observed all or a portion of the collision.
A. Yes sir. We were on our way back from Nancy.

Q. Let's talk first about the collision. How about relating to us what you saw?
A. The first thing I saw was an object falling out of the sky. I didn't see the Caribou and then I looked up and saw the Caribou. It seemed to appear in a normal flight and then the next thing it did was turn and go into the ground.

Q. You did not see the impact itself, you just saw the result of the impact?
A. When I looked up the Chinook was coming back down. It started rolling over. It took a couple of minutes to hit the ground. I would estimate it was at about twelve or thirteen hundred feet.

Q. Where were you physically located at the time?
A. We were just on the other side of the LZ over here, coming in to land at the Red Ops pattern over here, which would have made us coming in from the north. We were on the left base.

Q. Which tower were you operating with?
A. I was on the left traffic.

Q. What were you flying?
A. A Loch, 0 [redacted]6 Alfa.

Q. Approximately what altitude were you at the time?
A. We were about 400 feet.

Q. What was their elevation in your estimation?
A. Eleven, twelve or thirteen hundred feet. I was looking up out of the cockpit when I saw the Chinook coming down. Part of the glass is tinted and there is a cross piece and that was blocking part of my vision and that is why at first I didn't see the Caribou.

Q. What was the orientation of the Chinook, was it head first or tail first?
A. The time I saw it it looked tail low and I know I had a hard time figuring out what the tail was. There just wasn't anything sticking up back there. Normally your pylons stick up back there and this one completely level all along the fuselage.

Q. Reconstructing the scene would you say with relative assurance what was missing?
A. It looked like to me that the aft part of the pylon was gone. I didn't really notice the blades at all but it seems to me that I didn't see those either, I can't really be certain about that. The top part of the aircraft was level.

Q. Did you notice specifically one pylon with the main rotor?
A. I couldn't say that for sure, because when it rolled over the silhouette I saw was not that of a Chinook. It just wasn't what normally looks like a Chinook.

Q. Did you hear any radio transmissions made by either aircraft?
A. I was on the left pattern. As soon as I saw the collision I called the west and told them that they had a collision. Evidently they had gotten it too because the people were already on their way. I called the Army and told them that they had a midair.

Q. What did you observe of the flight pattern of the Caribou at any time?
A. I never observed the Caribou until after the collision.

Q. What did you observe of his flight pattern after the collision?
A. It seemed to me that the aircraft was at a level altitude, because after I saw the Chinook I looked up and it looked like there was nothing wrong with the Caribou. It still looked like it was in a normal flight configuration. Then it kinda veered off and went into the ground.

Q. Which way?
A. I don't know which way it turned.

Q. You don't know which way it turned?
A. No, I can't remember. I know the aircraft went into a bank, nose low.

Q. You don't know if it banked to the left or the right?
A. No sir.

Q. Now we will ask you some questions dealing with traffic control towers. First, we understand that there are two control towers, one for the east and one for the west, located in the same facility.
A. There is only one control tower, but there are two controllers that stand arm to arm. There are three people up there a B man and two A men. Your B man gets the Artillery and things like this.

Q. How many landing zones would each of these operators control?
A. At Camp Evans I believe there is a total of 42 in the area. These are different helipads. These are split between the west side and the east side. There are more on the west side than the east side.

Q. Are those generally to the east and west of the landing strip or are they all around it?
A. They are generally to the east and west, because off of this end of the runway you run right off the perimeter and off the other end you also go off the perimeter, within an eighth of a mile.

Q. Now for these forty two separate places where the choppers can land, sub- [illegible] there specific routes of entry and take off into and out of

Q. I don't understand quite what you mean, is there a north and south traffic pattern for each one, is that what you said?
A. I will show you a diagram if I may.

For the record Captain Salazar has indicated that all traffic at Camp Evans for all helipads is generally oriented north and south with the exception of the VIP pad, which does have east and west traffic. The predominence of the helipads at Camp Evans are on the west side of the runway. There are approximately 42 helipads with 20 plus to the west and 20 minus on the east.

Q. Is that information correct?
A. Yes, the information that Colonel Kennington gave out is correct as to the number of helipads on Camp Evans and that most of them are on the west side of the field.

Q. Traffic flying to a helipad west of the airstrip would normally follow what routing if they were entering the general area from the east?
A. Normally he would go around to the north end of the runway calling east or west traffic. Some people used different procedures, some people call east and tell them that they are crossing west, and they will tell them to change frequencies upon crossing the center line and other people call directly to west traffic and say that we are two miles east of the runway and want to cross and go into west traffic and land at such and such a spot. They generally go around the north end of the runway because to the south at the middle of the LZ or the south perimeter you have the division training center and every four days they conduct a regular power demonstration for the new troops, plus they have a small rifle range up there. Most people are reluctant to fly around that way.

Q. There is then a specific arrangement whereby the east operation handles the fixed wing traffic plus helicopter traffic landing on those pads to the east side of the runway?
A. Yes sir.

Q. Would you say that from their positions in the control tower that the two operators controlling the two general area, east and west, are aware of the traffic other respective areas?
A. Yes sir. They can see the traffic almost all over the LZ, except when a man is about 25 feet into the air going into the POL because it is at a slope and into a gully. When the pilot is in he will say, "report for final". They will generally say, "cleared to land at pilots discression," [illegible] that nobody else calls and says departure from the POL request instructions. In that case they will tell them to hold.

Q. As far as holding traffic out of your area, I don't know if you call this control area around the field or your landing zone area, but traffic is approaching this area, is there any instructions that are published that tell them how high they are suppose to be or where they are suppose to contact the tower?
A. No sir. Other than that document that was somehow classified, there is no way for a transit aircraft coming in. Most of them adjusting to this base adjust to helicopter frequencies and this sort of thing.

Q. This is true not only for incoming aircraft but this is applicable for aircraft clearing from here, do you give them any special instructions when they take off here as to how they should proceed out of the area?

A. No sir, on fixed wing traffic, normally the tower will give them some sort of instructions depending on whether the pilot has asked for any or not. Helicopters in transient will call the tower and they will guide them out of here and give them the best procedures to get out of Evans area.

Q. The best procedure with other traffic or ground fire or what?

A. Artillery fire is given to them when they request it or when it looks like they are flying toward it. The tower will tell them that we have artillery fire going in such and such an area.

Q. Is it accurate to say that the fixed wing landing and departures sometimes overlap the helicopter patterns?

A. They will overlap, but it depends what the context of the word is, because a lot of the traffic is helicopters, but they are landing between the area from the runway and a down wind leg of a fixed wing aircraft, because the helicopter traffic is in between there. It has to overlap. So I'm not sure what you are trying to get at. Normally your helicopter is inside your fixed wing. He will generally be five to six hundred feet inside.

Q. That depends upon how far from the field that the fixed wing aircraft makes his down wind. You could have helicopter traffic taking off and landing directly beneath the flight path of the aircraft?

A. Yes sir. Directly beneath the flight path, I mean the aircraft is on the ground and the fixed wing is on the east side of the runway he is going to be on the outside perimeter and all our traffic takes off from the inside of the perimeter. Their flight paths will be the same but the helicopter is going to break one way or the other to get away.

Q. You state in your air traffic control for Camp Evans that fixed wing aircraft on take off will climb straight out to a thousand feet prior to turn out, again my question is; is this published anywhere else other than this document that you know of, is it sent out as a NOTAM?

A. It was sent out to the distribution that is noted on the third or fourth page. Other than those people I don't know who would have a copy of this.

Q. Is this instruction given to the pilot upon arrival or departure.

A. It is now, but prior to the time of the accident it was not given to the fixed wing pilots.

Q. What instructions if any are there in the DOD Flip for Camp Evans?

A. It is in the TACTICAL DIRECTORY. It shows the grading of the runways. It shows you east and west traffic. I can't remember what else is on that page. I know that we are in the process of revising it.

Q. What I am trying to establish now is whether there are entries and or exits into the helipads and into the fixed wing landings strip that will cross.

A. No, sir. Your traffic like I mentioned before, basically runs north and south and that is the way that it is set up so I wouldn't say that they would cross. They may parallel to each other in most cases. The traffic will all be parallel to the runway. One helicopter will be going to his pad he will travel parallel to the runway.

Q. If you are landing aircraft to the south, if a helicopter comes in from the ~~east~~ it must cross the traffic pattern to land on Evans west? There is no way to avoid it?

A. In that instance and in that instance only. There are specific altitudes that they must fly 700 feet for the helicopter and a thousand for the other and it says that the helicopters will cross on the outside of the perimeter. We are moving this out further and trying to establish a definite land mark so the pilot can see, which will be the other side of railroad tracks and the helicopter will not fly in closer than this when crossing the center line of the runway.

Q. At the time of the accident did your people exercise any control of the helicopter traffic if they were beyond the perimeter?

A. If they were interferring with the normal traffic pattern or other traffic coming in or departing and they hadn't called then they normall call them and see if they are going to make contact with Evans or not.

Q. I'm trying to establish a corrallary between Air Force and Army procedures. We have what we call a five mile traffic control, whereby anyone within a five mile radius of an airfield must have radio contact with it; what is it with the Army?

A. All of our ships call when they are four or five miles of Evans and they request landing instructions and we given them to them at that time.

Q. Then it was unusal for the Chinook transiting not to have had contact with the Camp Evan Tower?

A. Not specifically, a lot of people turn on their radio to monitor to get the traffic pattern until he gets to where he feels he has entered the traffic pattern.

Q. But he does not have to contact Evans facility five miles out or three miles out?

A. No sir. We do not have anything in writing to reflect that. This is taught in flight school as proper procedure.

Q. If an aircraft being a fixed or rotary wing is traveling north, west, south or east say from Quang Tri to Hue out along the highway, is there anything written that makes it mandatory for them to contact Evans that they are traveling along the highway?

A. Most people, all of our people listen in for the Artillery fire until they get pretty close to Evans and know that they are clear of the Artillery fire.

Q. Traveling down Highway 1 north or south generally, how far is Highway 1 from the center of this runway?

A. The runway is about 2900 feet, it is better than that, it is better than one runway lenght from the railroad tracks to the runway. I would say about 3500 feet.

Q. It is less than one mile and if I understand you correctly that it is no violation of local procedures for traffic to fly down this highway less than a mile from the runway without making some sort of contact with the tower?

A. I was measuring to the rail road tracks and not to the highway. It is a little closer.

Q. Say even three quarters of a mile, be it three quarters of a mile or less than that, then this traffic can be traveling down this highway north or south at whatever altitude they choose?
A. Below 600 feet or above 2,000 feet.

Q. He could make this transit without contacting the tower?
A. He would contact the tower normally.

Q. At what point would he?
A. Before he crossed the centerline.

Q. If he is on the Northeast side of the highway?
A. When they cross the centerline, even if they are a mile out they would call. I can't say a hundred percent of the cases, but as much flying as I have done around here I can't recall any people who fly around here that haven't called when they are crossing the center line to the north or south.

Q. I am a little confused as to your center line, which I am assuming to be an imaginary line extending north and south and the way that I view the general area the highway is east of that.
A. Yes sir. The runway runs north, south and the highway runs northwest, southwest EAST.

Q. So we do have a case, the Chinook did cross the center line without contacting Camp Evans Tower?
A. I don't know what altitude he was flying at. If he was flying over 2,000 feet they don't normally call us. It is just like an airport in the states if you fly over it at above 2500 feet you don't have to make contact.

Q. Let me just state this question again so that we can get it straightened out. Regulation wise, technically wise, helicopter traffic may proceed southeasterly along highway 1 and not call the tower, they are not required to call the tower?
A. No sir. They are not.

Q. I just want to know if they are not required?
A. No sir. They are not.

Q. What you are saying is that most of the local traffic that works this vicinity will call the tower?
A. Maybe I'm reading into this but when any pilot has gone to any flight school and they fly this close to an airfield they are taught that they will make some sort of a call if they are going to come within some distance of the runway.

Q. Where was the helicopter coming from?
A. The Chinook, it was coming from Sharon or Betty.

Q. Is there any requirement for a helicopter departing Sharon or Betty landing zone proceeding to Camp Evans to call when crossing the north center line of the Camp Evans runway?
A. No sir.

Q. Is there an altitude box that determines this?
A. Below two thousand feet. If he was crossing below two thousand feet he should be at six hundred feet below.

Q. If he was between six hundred and two thousand he normally should call?
A. Yes sir.

Q. Did you state before that the geographic point at which contact with the tower must be made was the perimeter of the field or was it a fixed distance from the field in all directions?
A. We have never established or said when a helicopter pilot will have to call the tower for landing instructions because it is like in the states or most places they use the five miles or some fixed distance and they will call tower. The runway runs north and south into the hills and the ocean. All of our traffic comes from the east and the west, except during the Ashu Valley operation and then we were flying over the mountains here.

There being no further questions by any member of the board the witness was excused and withdrew from the boardroom.

Specialist 4 Gary R. Lothamer, Headquarters, Headquarters Company 5th Aviation Group.

Q. What is your duty assignment?
A. I'm a radio Operator, Aircraft Controler.

Q. How about stating for us in general terms what you know of the accident that took place on the 3rd of October?
A. Prior to accident I was standing approximately in the middle of the runway or just a little bit east of it, where I live and where our radar band operates. I saw the Caribou depart runway 36 and because of the noise I stopped and watched him take off and make his turn. I turned around and was involved in a conversation and as it came around goind due east it caught my eye again and then I observed the Chinook coming northeast proceeding west bound. The Chinook appeared to be at a fairly higher altitude and in a gradual descent. The Caribou was heading southeast at a lower altitude. It appeared that they were going to collide and I called this to the attention of my friend. Up to the point of impact they had slight vertical separation and just prior to impact the Caribou started a gradual descending left turn. The Caribou had impact with the rear section of the Chinook.

Q. Prior to impact it appeared that the Caribou started a descending left turn?
A. Asceńding turn.

Q. You say that the Hook appeared to be coming in from the northeast to the southwest?
A. Yes, sir.

Q. Was he level?
A. I'm not sure I thought he was slightly descending.

Q. Was he well ahead of or to the right or what of the Caribou?
A. As I looked due east at them the Chinook was above and behind the Caribou. The Chinook was coming like this and the Caribou was coming like this and at the last second the Caribou made a left turn.

Q. How steep was this left turn?
A. Perhaps he climbed 50 feet because it wasn't very steep.

Q. What was the angle of the turn, was it a shallow bank?
A. Yes, I would say it was a shallow bank.

Q. Which one of the two vehicles was traveling at the higher rate of speed?
A. I believe just from analyzing, that the Chinook was going faster than the Caribou, because he was behind and above. It appeared that he turned in front of the Caribou as the Caribou made his turn.

Q. This is the Chinook?
A. Yes, sir.

Q. The chinook was slightly to the rear and above, so if you were looking to the southeast he was to the left of the Caribou.
A. Yes, sir.

Q. Is it fair to say that the Caribou was on a more easterly route than the Chinook?
A. Yes, sir.

Q. Other than the one ascending turn to the left were there any other deviations in the flight paths of either vehicle?
A. No, sir, the Chinook appeared to be in a descending flifht and the Caribou was making his right break. It was just a normal take off. It seemed to me that the Caribou did not have the Chinook in site and he could not see him. I think he probably saw the Chinook about a half second before impact.

Q. Could you tell, what part of the Caribou hit the Hook?
A. No, sir, I couldn't. Mostly I was watching the Caribou. At first I thought he missed him and that they had more separation than I thought they did. In a second I saw debris fly from the rear section of the Chinook and then I knew there was impact. I didn't know what section of the Caribou had been hit. I know it was toward the front of the plane.

Q. Could you tell what part of the Hook?
A. Yes, sir, the whole rear end was missing.

(There being no further question by any members of the board the witness was excused and withdrew from the boardroom.)

Seaman 4 Raymond Wilson, Medical Section, Camp Evans, Republic of Vietnam, was called as a witness, was sworn and testified as follows:

Q. Would you relate to us what you saw on the 3rd of October 68?
A. We were returning from METCAF and I saw the two aircraft in midair and they seemed as though they were going to pass each other and one hit the other, I don't know which was which, I slowed down in the vehicle when Seaman Foley told me to hurry up and get there. I saw the Chinook circling around as though it was going to fall and I slowed the vehicle down because I didn't want to get to close to it. We were about a quarter of a mile to a half of a mile away. I don't know the exact distance. After it fell it burst into flames and then a few seconds later the Caribou circled or rather glided around and fell after that.

Q. You were riding in the right seat or were you driving?
A. I was driving the vehicle.

Q. You were on Hiway 1 coming up and you were about a half of mile south of were you saw it take place?
A. A quarter of a mile to a half of mile.

Q. When you observed them collide were they off to the right of the road?
A. Yes, sir, they were.

Q. You saw them just before they hit?
A. Yes, sir.

Q. Could you tell anything about the altitude of the fixed wing aircraft?
A. It seemed that, I'm not sure, but he was taking off and climbing.

Q. Was he in a bank or was he level?
A. Actually I don't Know, sir. When they take off they have to make a turn to come back this way.

Q. He could have completed his turn, that is what we were trying to determine?
A. Yes, sir, I understand. After he hit, it seemed as if he was going to straighten up, but then he kept gliding around and finally fell.

Q. Did you see anything separate from either airplane?
A. Yes, sir, the rotor was just flying trough the air all in pieces.

Q. What about the Caribou?
A. I think the wing was just bent.

Q. Could you tell which rotor was falling off of the Chinook?
A. The rear one.

Q. Which portion of the Caribou came in contact with the Chinook?
A. I believe it was the right wing?

Q. It was the right wing as you were looking at it?
A. Excuse me it was the left wing as I was looking at it.

Q. As you were driving along the road the aircraft was to the front and right of you?
A. Yes, sir.

Q. When you first saw them were they in process of colliding at that time' or were they still some distance apart?
A. They seemed, I thought the Caribou was going over the Chinook

Q. Did it appear to be higher?
A. I can't really say. They were just close together and the other Seaman keep yelling, "look at that can't you see what's going to happen." I said, "Yes.", and then I slowed down.

Q. At that time which airplane seemed to be higher?
A. I can't say.

Q. Did they seem to be around the same altitude?
A. They seemed to be coming right into each other. The Caribou seemed like it was climbing and the Chinook seemed like it was coming right under it.

Q. Were they going to the same direction or the opposite direction?
A. They were coming toward each other.

Q. Were they coming head on?
A. Yes, sir.

Q. As they approached each other were they still in a head on position?
A. The chinook was off to the side. I don't know if it dove down under it, but it seemed like it was at the side of the Caribou.

Q. Which side if you were facing forward on the Caribou?
A. It would have been on the left side.

Q. You were driving on the road heading norht and which aircraft was coming toward you and which aircraft was heading along the same direction as you were?
A. The Chinook was going across the road and the Caribou was going this way. The road goes straight ahead and then the road has a bend in it.

Q. Assuming that you were heading due north which direction was the Caribou heading?
A. It was heading east across the road.

Q. Which way was the Chinook going?
A. It was going west across the road.

Q. They were both on the right side of the road?
A. Yes, sir.

Q. Prior to the collision were you able to observe the flight of the aircraft sufficiently to determine if they had just altered directions or were they in the same general flight pattern?
A. I remember we were riding and discussing something and I saw the two aircraft just as they were meeting each other and ready to collide. At that time I slowed the vehicle down and tried not to go anywhere near it.

Q. Roughly how many minutes were you observing the aircraft in flight before impact?
A. I would say ten or fifteen seconds, sir.

Q. During that time that you observed them they did not alter course?
A. It seemed that way, sir.

Q. Which part of the Caribou came in contact with the Chinook?
A. The rear rotor of the Chinook came in contactwith the left wing of the Caribou.

Q. Did you notice the damage done to the wing?
A. It looked as though it was bent but it hadn't completely come off.

Q. Did you hear any sounds?
A. We didn't hear any sounds because it was quite noisey.

Q. What exactly happened to the Caribou after impact?
A. It circled back toward the road and then crashed.

Q. How about the Chinook?
A. It went into a slow spin, and I think the front rotor was still going.

Q. Was this a straight and level descent?
A. The rear end was lower. It was spining around and as soon as it hit it burst into flames.

Q. Did it travel very far while it was going down?
A. Impact was on the right side of the road and it fell about two hundred yards off the left hand side of the road.

Q. Go over the pattern of the Caribou once again please?
A. It glided around after it hit the Chinook and it crashed about four of five hundred yards from the Chinook.

Q. Did you see it go down?
A. I saw it go down but I didn't see the final impact.

Q. You say on contact the rear rotor on the Chinook disintegrated?
A. Yes, sir, pieces were flying everywhere.

Q. Did you see any of the pieces make contact with the Caribou?
A. The rear rotor hit the left wing.

Q. When you said the Chopper was moving to the west and when you were looking at it, thatwould be from your right to your left.
A. It seemed to me that the Chinook was moving from my left to my right.

Q. The Chinook was?
A. Yes, sir, the Chinook was going to the right side of the road. The Caribou seemed like it was coming from the right side of the road.

Q. This was at impact?
A. No, this was just before impact.

Q. You said something about after impact it went from the right side to the left side?
A. Yes, sir.

Q. Were you at that portion of the road that bends out and comes back?
A Yes, sir, we still had another bend to go before we got there and that is why I say that my judgement could be a little bit off.

Q. If we had a map of the area could you show us you exact position?
A. Yes, sir.

Let the record indicate here that Wilson has indicated that he had crossed the railroad tracks that run perpendicular to the Hiway and they were approaching a hill along Hiway 1. Along this road the road heads generally north northwest.

Q. Which way was the Chinook helicopter coming?
A. He was heading toward it, but no directly toward it. They both seemed to be on this side of the road. After they collided the Chinook fell and exploded immediately.

Q. On your left side of the road?
A. Yes, sir. The caribou glided around and then it fell maybe four or five hundred yards north of where the Chinook fell?

Q. That is also on your left side?
A. Yes, sir.

Q. Is it possible that they were both heading in the same general direction or are you sure that they were coming together this way or could they have been going in the same general direction like this on a close angle collision?
A. Sir, it is possible. There were other aircraft in the sky at the same time but what I think I saw that they were heading toward each other.

(There being no further questions by any members of the board the witness was excused and withdrew from the boardroom.)

Seamen Foley, Medical Section, Camp Evans, Republic of Vietnam, was called as a witness, was sworn and testified as follows:

Q. Would you first give us a general statement as to what you saw with reference to the accident that took place on the 3rd of October?
A. We were coming back from MEDCAF heading south. We were heading down the road at approximately the second rise. I was sitting next to the driver and it is a big ambulance so I can see all the aircraft in the air. I could see these two were going to hit. They were both on the left hand side of the road, the Caribou and the Chinook. If they hadn't of collided the Chinook would have passed over the road.

Q. Using the map here will you please point out your location?
A. This is the road and I was here.

Q. Please indicate the general flight pattern of the two aircraft?
A. They were coming like this. At the point of collision they were like this and the rear rotor struck the wing or the fuselage of the aircraft.

Q. At the time of impact the helicopter had changed direction about 90 degrees?
A. Yes, sir.

Q. Did the helicopter turn?
A. Just before the collision he went like this and then they were both heading in the same general direction. I didn't notice the change but I just looked up and he had changed position. Then they were both on the right side of the road. After the collision the Caribou came around this way and the Chinook just came down like this.

Q. Using your hands what was the relative orientation or position of the two aircraft?
A. This is the rotor and this is the wing. Now the Chinook came in like this and hit the wing. It didn't really hit the end of the wing but it was about in the middle of the wing. Then the rotor just went all over the place.

Q. Was it the left wing of the aircraft?
A. Yes, sir, it was the left wing of the aircraft.

Q. Could you tell at the exact moment of impact whether the Caribou had banked slightly or did it look like he was going straight ahead?
A. He was climbing.

Q. Was he climbing straight ahead?
A. Yes, sir.

Q. Just at the time of impact did you notice any manuever on the part of either the part of the Caribou or the Chinook?
A. None whatsoever.

Q. Was the Chinook on a straight and level flight?
A. It seemed like the front of the Chinook was higher. I don't know if this is normal flying or not. I have been looking at them since then to try and determine if this was a straight and level flight or whether it was ascending descending and I just don't know. It seemed like he was up like this and his front rotor was higher than the tail.

Q. How far were you from them?
A. We hadn't crossed the railroad tracks and I told him to hurry up and get up there in case someone was still alive. I don't really remember if we crossed the railroad tracks or not because there is a rise here and the second rise is here. We must have crossed the tracks. We were right here just between the railroad tracks and the road. We came this way and turned like this.

Q. Where did the two aircraft collide?
A. Right here, sir.

Let the record reflect that Foley has indicated that the two aircraft collided at a position approximately 1500 to 1800 meters northwest of his location between QL-1 and the railroad which parrells the highway.

Q. How long had you been observing the two aircraft before the collision?
A. Approximately ten, fifteen or twenty seconds maybe. It couldn't have been more than a couple of minutes.

Q. As you viewed these aircraft in the prior seconds to the crash, I will try and reconstruct this and I want you to correct me if I mistake anything. The Caribou was coming in the same general direction and was on the right hand side going this way. It had to be going this way in order to strike the Caribou in the left wing with the rear rotor. The Caribou had to be somewhere to the right side of the Chinook. Where they going like this?
A. Yes, sir.

Q. Were they at the ame level when you first observed the two aircraft or was one lower or higher and did they remain in generally the same altitude?
A. Yes, sir, generally the same altitude.

Q. Once again trying to summarize what you said, there was no last instance change in the flight path of either aircraft?
A. No, sir.

Q. One final question, did you see the disintigration of any part of any aircraft?
A. Most of the rear rotor and possibly part of the fuselage.

Q. No doubt in your mind that the Caribou came in contact with the rear rotor of the Chinook?
A. That is what I saw, sir.

There being no further questions by the boardmembers the witness was excused and withdrew from the Boardroom.

Specialist 4 Daniel J. Ingreham, 184th Chemical Paton, 1st Division, was called as a witness, was sworn and testified as follows:

Q. Where were you and what happened when you saw the accident?
A. I was on bunker 20 near the green line setting up my field gear and I just happened to look up in that general direction where the two planes were. The first thing I saw, it seemed that the Caribou, his left wing hit the rear rotor assembly of the Chinook. This was the first thing I saw. I didn't see the approaches or anything like that. I just saw his left wing hit the rear rotor assembly and debris started flying and it looked like the rear assembly of the Chinook was all tore off. The Chinook went to the ground and it looked like the Caribou was going to be all right but after about five to eight seconds it slowly went to the ground. He never pulled out. This is generally what I saw.

Q. Did the Caribou roll to the right?
A. Yes, it made a slow roll to the right.

Q. What altitude would you say the Caribou was flying?
A. That would be rough to estimate from the ground, but I would say anywhere from a thousand to fifteen hundred feet.

Q. How far away from you would you estimate they were?
A. Approximately a mile.

Q. How far is this position you were at from the air strip?
A. It is directly behind it on the southeastern tip of the green line and I was on top of a bunker which gave me a better view than some people.

Q. Where is this bunker 20?
A. I believe it is on the southeastern portion of the green line.

Q. You did not see the airplanes at all until you looked up and saw them come together?
A. I didn't see the approach. All I saw was the moment of impact.

Q. Could you tell from the position you were in if both aircraft seemed to be at the same elevation or was one a little higher and one a little lower?
A. I believe the Caribou was a little higher if I am not mistaken. He appeared to be gaining elevation. His nose was up in the air when he was hit.

Q. Did they both appear to be heading in the same direction?
A. Yes, sir.

Q. It appeared to you that the rear rotor made contact with the left wing?
A. Yes, sir, with the left wing of the Caribou. I don't know if it was the rotor or part of the assembly.

Q. The helicopter must have been ahead of the Caribou?
A. Yes, sir.

Q. Could you tell if both of the aircraft were at a level flight or if one was climbing and the other was descending?

A. As I said the Caribou seemed to be climbing at the position where they hit, but I didn't really see him gaining elevation.

Q. Could you tell if the Caribou had a nose high turning altitude or was he level or at the point of impact could he have been turning or were his wings level?
A. There was a possibility that he could have been turning but at the moment of impact they appeared to be level.

Q. Going to impact you looked up and saw the chopper leading the Caribou, is that right?
A. Yes, sir.

Q. Then you noticed that a portion of the rear rotor assembly came into contact with the wing on the Caribou?
A. It did, sir.

Q. Which portion of the wing?
A. About three quarters of the way out on the wing.

Q. Were you close enough to hear the sound?
A. I really can't say, I don't think I heard too much sound.

Q. Upon impact what movement did the helicopter go into?
A. As I said there was debris from the rotor assembly and after that the Chinook started to sprial to the ground and I was watching that. It did appear that a big portion of the assembly did come off.

Q. When you say a big portion would you say all the blade?
A. The complete blade I believe.

Q. It appeared to you that it broke off right at the hub?
A. It appeared that it took part of the motor assembly or whatever you call it.

Q. After the collision then the helicopter was falling down from the sky, did you have the impression that it fell straight down or did it drift down or how did it fall?
A. It more or less sprialled straight down. I was standing at an angle but it appeared to come straight down.

Q. In connection with the Caribou, after impact you said that it continued to fly for a while as if it was going to be all right, did you see any damage on the Caribou?
A. I was to engrossed in the Chinook going down and I didn't notice any actual damage to the Caribou. It seemed to be continuing in its normal flight pattern.

Q. You didn't notice any portion being gouged out of the Caribou?
A. No, sir.

Q. The Chinook went straight down as far as you could tell and then the Caribou continued on its pattern?
A. Yes, sir.

Q. Turning to the right, going straight ahead or what?
A. It went straight I would say for maybe five seconds, and as I said the Chinook had already hit the ground before the Caribou went into its turn.

Q. So the Caribou seemed to fly in a straight level and by the time the Chinook hit the ground the Caribou started into its roll to the right?
A. Yes, sir. It just rolled over to the right and started toward the ground. I drew the conclusion that he was just turning around to see what damage had been done to the Chinook and he just never pulled out of his dive. He went toward the ground and never pulled out. This was my conclusion that he was turning around it looked like a real slow roll.

Q. There was no violent movement in connection with the Caribou?
A. No, sir.

Q. Would you for the record indicate to us what your specific job is?
A. I work with the Chemical Platoon and my job is working with the sniffer team. I work with a device that picks up Charlies scent from a chemical in his sweat. I have been working with this for about the last four months.

Q. Do you participate in regular aerial flights and how many hours have you flown?
A. I would say that I have about 45 hours, sir.

Q. What kind of airplanes do you fly in?
A. I fly in Huies.

Q. Getting back to the Caribou when it started its turn back and its nose going down, did it ever appear that he was diving steeply into the ground or rather that he was gradually approachin the ground?
A. At first it appeared that he was making a turn and just starting to pull out and then he went into a dive. You could tell that he wasn't going to pull out of if then. At fist it did appear that he would be able to pull out.

Q. As he was diving down toward the ground could you tell if his wings were level or did he haye one wing down?
A. I believe that he went straight down.

Q. What was the weather like on that day?
A. It was hot and humid just like it is now.

Q. Was it clear?
A. Yes, sir.

Q. Could I assume correctly that you were within a mile of the accident scene?
A. Yes, sir, I believe it was within a mile. There was rise between myself and the accident and it appeared to be over the rise a good ways off, but as I got over the rise it was a lot closer than I expected.

Q. Both the aircraft and the chopper were heading in the same direction?
A. Yes, sir. In the same direction.

Q. Were you able to note any deviation, say even ten or fifteen degrees?
A. From my angle that would be impossible, sir.

Q. As far as the Caribou was concerned at no time from your position were you able to notice any damage to the Caribou?
A. I noticed no damage at all.

There being no further questions by any members of the board the witness was excused and withdrew from the boardroom.

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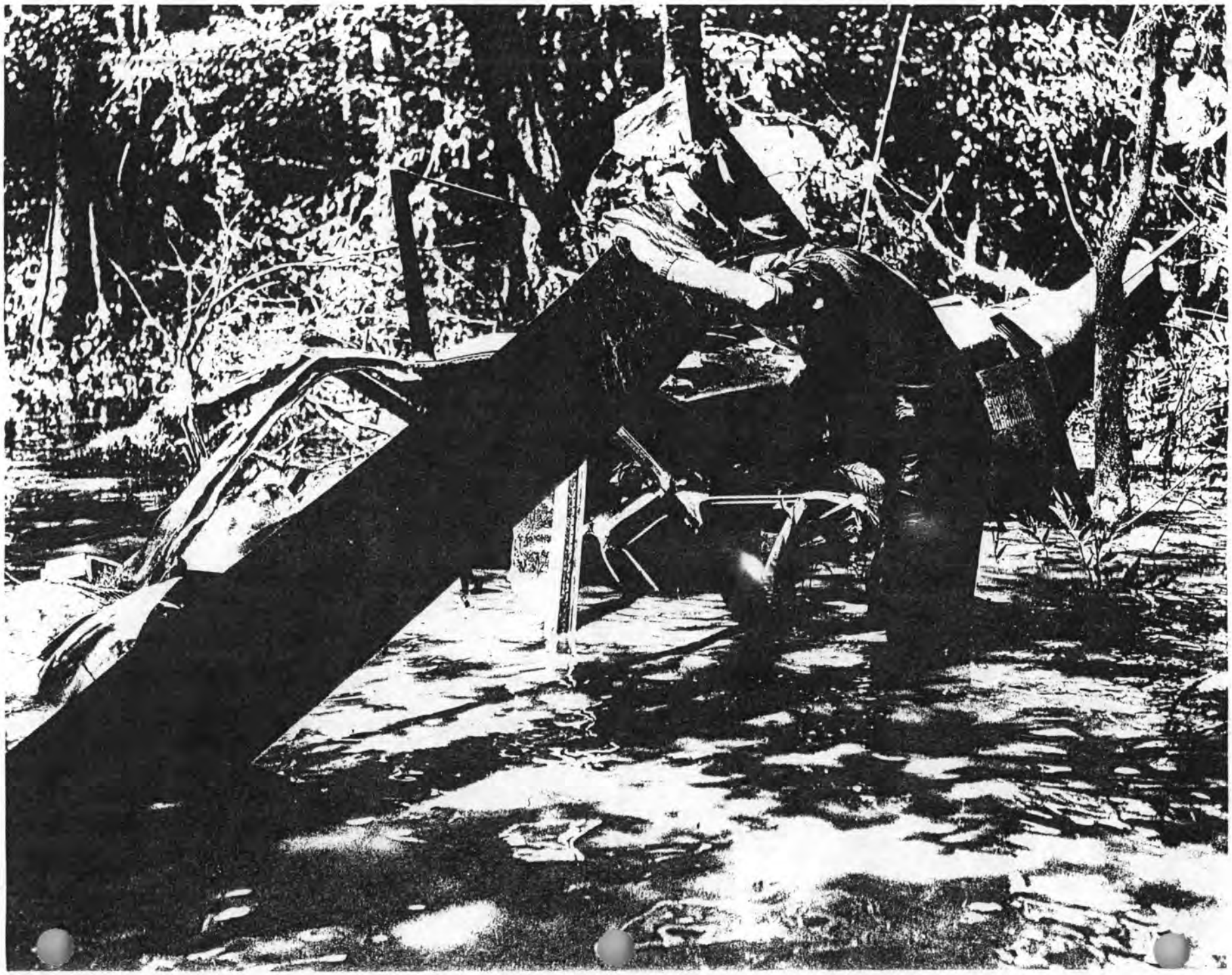

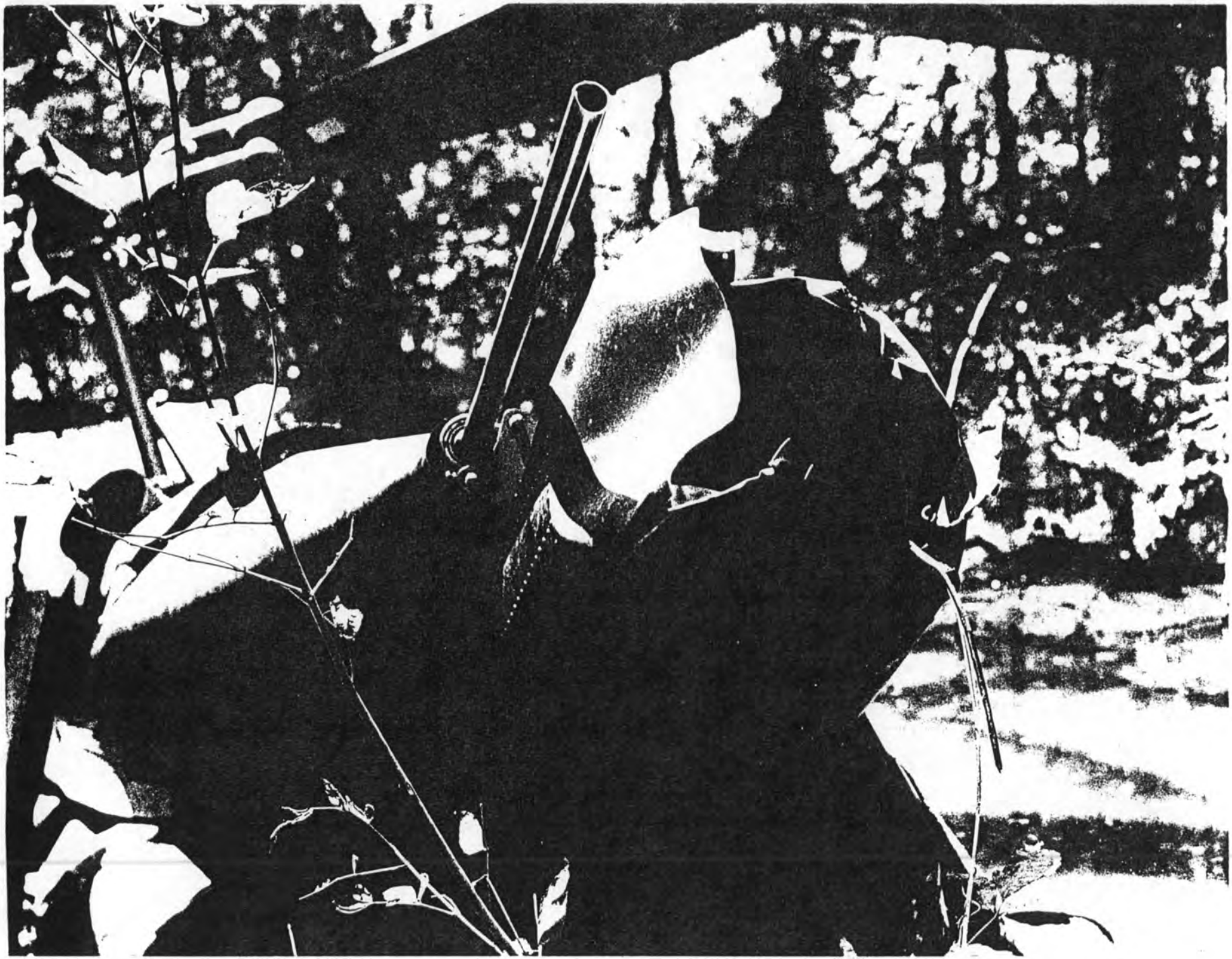

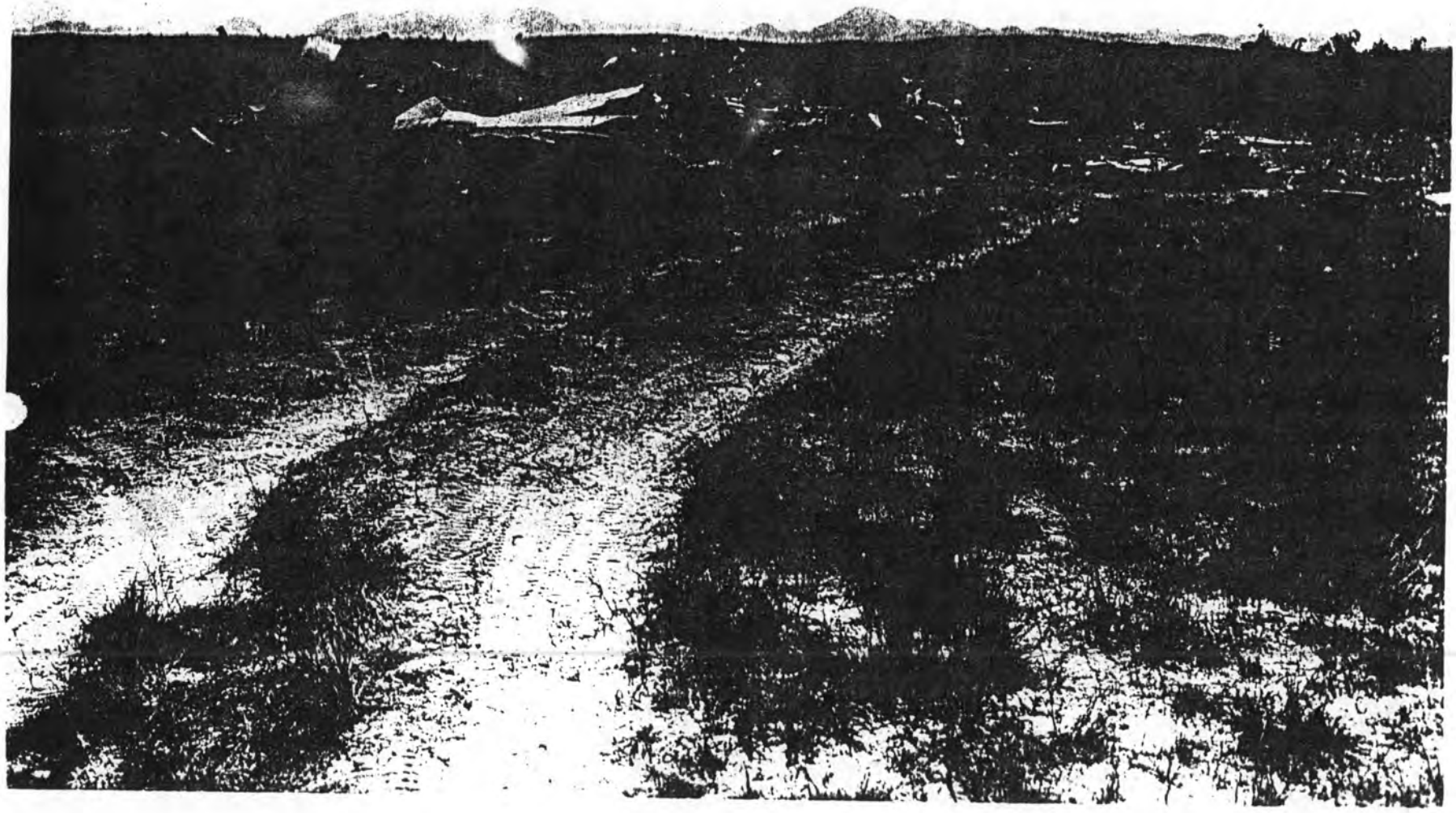

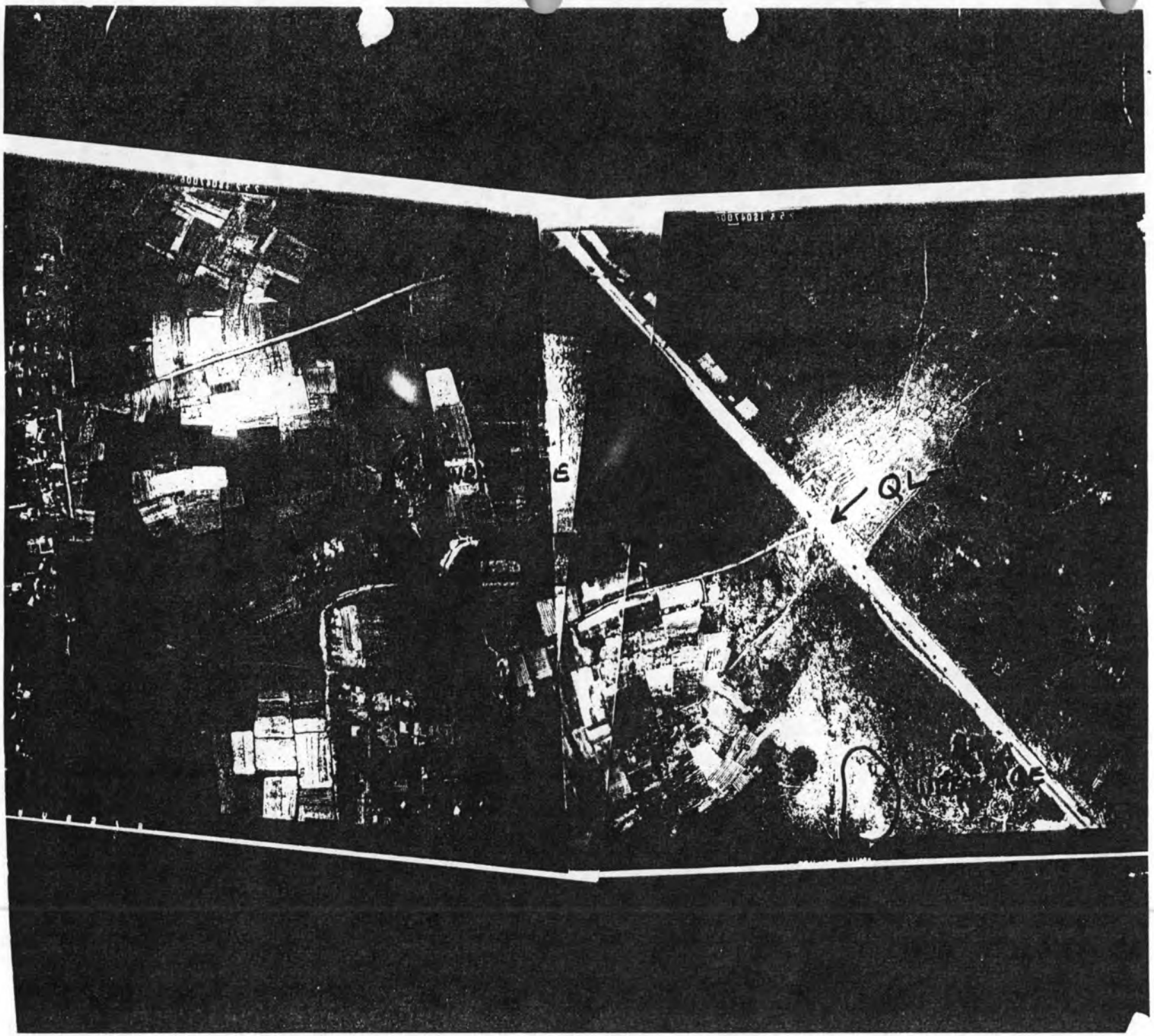
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