

5002-01901



Government of Canada

Gouvernement du Canada

RECORDS RETENTION AND DISPOSAL REQUEST

DEMANDE DE CONSERVATION ET DE DISPOSITION DE DOSSIERS

TO - À ASIO	FROM - DE GSRI-14
Attn: Mr Tapp	

File No. - N° de dossier 5002-0907 ✓ - 01901 ✓ - 00801-1 - 00005-H.A.	Vol No. - N° de vol. - W1009 - W0083	Subject - Sujet Accidents - General	Period - Période From - De To - À	
---	--	--	---	--

Scheduled Retention Period - Durée de conservation prévue 5 yrs - Subject to Review Consult Archives	Disposal Authority - Autorisation de disposition TP-111
---	--

Security Classification - Classification de sécurité Confidential	Signature Jean Zito	Date April 28/76
--	------------------------	---------------------

ATTACHED IS SUBMITTED TO YOU FOR REVIEW. PLEASE INDICATE DISPOSAL ACTION TO BE TAKEN AND RETURN AS SOON AS POSSIBLE.
LES PIÈCES CI-JOINTES SONT ENVoyées EN VUE DE VOTRE EXAMEN. VOU S VOUZ RENVoyer LE TOUT AUSSITÔT QUE POSSIBLE.

W1009
W0083

[Handwritten signature] 7-5-76

0907 - Retain for archival
01901 - Destroy
00001

00801 - Destroy *[Handwritten signature]* 7-5-76

FILE NO.

5002 - 01901

Confidential

VOLUME NO. 1

VOL. 1

DEPARTMENT OF TRANSPORT

FROM FEB. 18, 1971

TO

IMPORTANT - NOTIFY RECORDS WHEN FILE IS PASSED DIRECT TO ANOTHER SECTION

SUBJECT AIRCRAFT

SUB-SUBJECT ACCIDENTS - FOREIGN REGISTERED - GENERAL

FILE TITLE N9812R BEECH 35U

NR OSHAWA AIRPORT, ONT.

17-2-71

Confidential

(1) DATE LEFT RECORDS	(2) PURPOSE FOR WHICH REFERRED (IF PURPOSE FOR WHICH REFERRED CANNOT BE EXPRESSED IN ONE LINE ADD MEMO TO FILE AND ENTER HERE "WITH MEMO")	(3) REFER FILE TO	(4) ENTER DATE TO BRING FORWARD WHEN REQUIRED	(5) USER'S INITIAL TO SHOW ACTION COMPLETED
FEB 24 1971 MAR 19 1971	15628	CA10		[initials]
	19930	CA10		[initials]
MAY 14 1971	9186	CA10-8		[initials]
		CA10-5		[initials]
	BF	CA10 - Sylvia	2/5/72	[initials]
APR 20 1972	1/4/72	CA10 1		[initials]
	050	CA10-1		[initials]
MAY 1 - 1972	JUN 14 1972	CA10 (S)		[initials]
	Repro	CA10		[initials]
<p>Destroy</p> <p>Destroy</p>				

AIR SERVICES
SERVICES DE L'AIR



DEPARTMENT OF TRANSPORT
MINISTÈRE DES TRANSPORTS

YOUR FILE
VOYRE RÉF:

IN REPLY QUOTE
RÉF. À RAPPELER:

5002-01901 (CAIO)

CAI,
Ottawa, Ontario,
K1A 0N8
23 June, 1972.

Director, Bureau of Aviation Safety,
National Transportation Safety Board,
Department of Transportation,
800 Independence Ave., SW NA-80
Washington, D.C. 20591

Reference: Aircraft Registration N9812R
Accident Report 01901

Dear Sir:

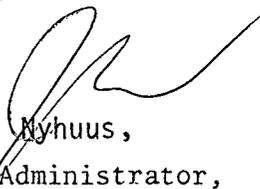
Enclosed are a copy of the *Report of an Inquiry into an Aircraft Accident* and a copy of the published *Aircraft Accident Report*.

The Ministry of Transport treats as confidential all investigation material in the Report of the Inquiry, except:

- a) the contents of the first two (yellow) pages of the Report of an Inquiry;
- b) the names only, of the witnesses.

We request that a similar treatment be accorded this material.

Yours truly,


J.H. Nyhuus,
for Administrator,
Canadian Air Transportation Administration.

Encl.

PILOT
PILOTE

OWNER
PROPRIÉTAIRE

PILOT/OWNER
PILOTE-PROPRIÉTAIRE

SPECIAL REQUEST
DEMANDE SPÉCIALE

.....N/A.....19.....

Gulf Oil of Canada Ltd.,
477 Mount Pleasant Road,
Toronto 7, Ontario.

YOUR REF. _____ OUR REF. 5002-01901 (CAIO)
VOTRE RÉF. _____ NOTRE RÉF.

DATE ACKNOWLEDGED _____
DATE D'ACCUSÉ DE RÉCEPTION: _____

DATE SENT 23-6-77
DATE D'EXPÉDITION: _____

000006

PILOT
PILOTE

OWNER
PROPRIÉTAIRE

PILOT/OWNER
PILOTE-PROPRIÉTAIRE

SPECIAL REQUEST
DEMANDE SPÉCIALE

s.19(1)

N/A

19.....

YOUR REF. _____
VOTRE RÉF. _____

OUR REF. 5002-01901 (CAIO)
NOTRE RÉF. _____

DATE ACKNOWLEDGED _____
DATE D'ACCUSÉ DE RÉCEPTION: _____

DATE SENT 23-6-77
DATE D'EXPÉDITION: _____

000007


Waterdown, Ontario.

Bill

Steve Messier's observation
Only one approach made

J
20/4/72

✓

see amendment
to report

WMA

PA10-1

24-4-72



MINISTRY OF TRANSPORT

AIRCRAFT ACCIDENT INVESTIGATION DIVISION

This aircraft accident report has been prepared by the Aircraft Accident Investigation Division of the Ministry of Transport, Ottawa. The report is based on information determined during the investigation. You will note that the report has been prepared to make it suitable for publication so that *the aviation community may derive some benefit from learning of this occurrence.*

If there is any new evidence that has come to light since the investigation and is not reflected in this report, please submit this evidence before..... *May 2/72*.....

000009

DEPARTMENT OF TRANSPORT
MINISTÈRE DES TRANSPORTS

AIRCRAFT ACCIDENT REPORT
RAPPORT D'ACCIDENT D'AVIATION

REFER TO REPORT NO.
REF. RAPPORT N°
Ø1901

AIRCRAFT MAKE & MODEL - <i>Marque & modèle d'aéronef</i> Beechcraft 35U	REGISTRATION - <i>Immatriculation</i> N9812R	DATE-TIME - <i>Date-Heure</i> 17Feb71 1230 EST	OPERATION - <i>Opération</i> Private
PLACE - <i>Endroit</i> Near Oshawa Airport, Ont		LATITUDE 43/56N	LONGITUDE 79/54W
LOCALE - <i>Scène</i> Snow-covered clearing in rolling terrain 1½ mile NW of Oshawa Airport, elevation 458 feet asl			
WEATHER - <i>Conditions météorologiques</i> Overcast cloud 400 feet, visibility 1½ mile in snow, temperature 30°F, wind S at 5 mph or less; whiteout conditions reported at Oshawa Airport			

PILOT PILOTE	LICENCE	TOTAL HOURS - <i>Heures totales</i>	TOTAL HOURS, LAST 90 DAYS - <i>Total d'heures (90 derniers jours)</i>
		1023 ALL TYPES - <i>Tous types</i> 823 ON TYPE - <i>Type en cause</i>	119 ALL TYPES - <i>Tous types</i> 119 ON TYPE - <i>Type en cause</i>
	Private		

DESCRIPTION OF OCCURRENCE - *Description de l'événement*

The pilot, who held an instrument flight rating, obtained a weather briefing and filed an IFR flightplan at Buffalo, New York for a flight direct to Sterling and thence to Ottawa. While crossing Lake Ontario at 5000 feet the pilot reported encountering icing conditions and changed his cruising altitude to 4000 feet with the permission of air traffic control. Still encountering ice he made another authorized change to 3000 feet. South of Peterborough at 3000 feet the pilot reported he was still encountering heavy icing and requested clearance to Toronto International Airport. The route to Toronto took him close to Oshawa Airport and he accepted a clearance to attempt an instrument approach at Oshawa. An instrument approach was made and the aircraft was sighted by the Oshawa Tower personnel who offered what assistance they could to enable the pilot to line up with a runway. The pilot radioed that he had put the gear down and was having trouble turning. There was no further transmission. The aircraft struck the ground under power in a steep nosedown attitude with wings level - fire ensued.

The aircraft did not have anti-icing equipment except on the pitot system.

Full details of the weather briefing at Buffalo are not known; however, the forecast showed that although the weather at the destination was suitable, most of the route was affected by a trowal (trough of warm air aloft) which gave overcast cloud based at about 1000 feet above sea level with tops to 10,000 feet and conditions producing heavy snow and heavy icing. The weather at Trenton, near Sterling, was 200 feet overcast, visibility ½ mile. At other stations ceilings as low as 400 feet with (Cont'd on back)

	TOTAL	FATALITIES - <i>Pertes de vie</i>	SERIOUS INJURIES - <i>Blessures graves</i>	MINOR INJURIES - <i>Blessures légères</i>
CREW - <i>Équipage</i>	1	1		
PASSENGERS	1	1		
OTHERS - <i>Autres</i>				

ASSIGNED CAUSE(S) - *Cause(s) assignée(s)*

The pilot did not correctly assess the hazards indicated by the aviation weather forecast.

The pilot attempted to continue his flight into weather conditions for which his aircraft was not equipped.

APPROVED
[Signature]
CAI

Ø1901

visibility down to 1 mile in freezing rain were forecast.

Under the forecast conditions it would have been almost impossible to complete the flight as planned in an aircraft without anti-icing equipment.

It is believed that due to the heavy accumulation of ice and the added drag from the extended landing gear, the aircraft finally became uncontrollable.

DEPARTMENT OF TRANSPORT
MINISTÈRE DES TRANSPORTS
AIRCRAFT ACCIDENT REPORT
RAPPORT D'ACCIDENT D'AVIATION

DRAFT

REFER TO REPORT NO.
REF. RAPPORT N°
01901

AIRCRAFT MAKE & MODEL - <i>Marque & modèle d'aéronef</i> Beechcraft 35U	REGISTRATION - <i>Immatriculation</i> N9812R	DATE-TIME - <i>Date-Heure</i> 17Feb71 1230 EST	OPERATION - <i>Opération</i> PRIVATE
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WEATHER - <i>Conditions météorologiques</i> Overcast cloud 400 ft, visibility 1½ mile in snow, temperature 30°F, wind S, 5 mph ^{at} or less; whiteout conditions reported at Oshawa Airport			

PILOT PILOTE	LICENCE	TOTAL HOURS - <i>Heures totales</i>	TOTAL HOURS, LAST 90 DAYS - <i>Total d'heures (90 derniers jours)</i>
	Private	1023 823 ALL TYPES - <i>Tous types</i> ON TYPE - <i>Type en cause</i>	119 119 ALL TYPES - <i>Tous types</i> ON TYPE - <i>Type en cause</i>

DESCRIPTION OF OCCURRENCE - *Description de l'événement*

The pilot, who held an instrument flight rating, ^{OBTAINED} received a weather briefing and filed an IFR flightplan at Buffalo, New York for a flight direct to Sterling and thence to Ottawa. While crossing Lake Ontario at 5000 feet the pilot reported encountering icing conditions and changed his cruising altitude to 4000 feet with the permission of Air Traffic Control. Still encountering ice he made ^{AUTHORIZED} another change to 3000 feet. South of Peterborough, at 3000 feet the pilot reported he was still encountering heavy icing and requested clearance to Toronto International Airport. The route to Toronto took him close to Oshawa Airport and he accepted a clearance to attempt an instrument approach at Oshawa. ~~Two approaches were made and on the second approach the aircraft was sighted by the Oshawa Tower personnel who offered what assistance they could to enable the pilot to line up with a runway. The pilot radiod that he had put the gear down and was having over..~~ ^{An instrument approach was made and the}

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ASSIGNED CAUSE(S) - *Cause(s) assignée(s)*

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- The pilot attempted to continue his flight into weather conditions for which his aircraft was not equipped.

WMH:JC

APPROVED
[Signature]
CAI

7-10-71

trouble turning. There was no further transmission. The aircraft struck the ground under power in a steep nosedown attitude with wings level - fire ensued.

PARA → The aircraft did not have anti-icing equipment except on the pitot system.

PARA → Full details of the weather briefing at Buffalo are not known; however, the forecast showed that although the weather at the destination was suitable, most of the route was affected by a ~~T~~rowal (trough of warm air aloft) which gave overcast cloud based at about 1000 feet ~~above sea~~^{STR} level with tops to 10,000 feet and conditions producing heavy snow and heavy icing. The weather at Trenton, near Sterling, was 200 feet overcast, visibility $\frac{1}{4}$ mile. At other stations ceilings as low as 400 feet with visibility down to 1 mile in freezing rain were forecast.

Under the forecast conditions it would have been almost impossible to complete the flight as planned in an aircraft without anti-icing equipment.

PARA → It is believed that due to the heavy accumulation of ice and the added drag from the extended landing gear, the aircraft finally became uncontrollable.

DEPARTMENT OF TRANSPORT
MINISTÈRE DES TRANSPORTS

AIRCRAFT ACCIDENT REPORT
RAPPORT D'ACCIDENT D'AVIATION

REFER TO REPORT NO.
REF. RAPPORT N°
Ø1901

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	TOTAL	FATALITIES - <i>Pertes de vie</i>	SERIOUS INJURIES - <i>Blessures graves</i>	MINOR INJURIES - <i>Blessures légères</i>
CREW - <i>Équipage</i>	1	1		
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ASSIGNED CAUSE(S) - *Cause(s) assignée(s)*

The pilot did not correctly assess the hazards indicated by the aviation weather forecast.

The pilot attempted to continue his flight into weather conditions for which his aircraft was not equipped.

Ø1901

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It is believed that due to the heavy accumulation of ice and the added drag from the extended landing gear, the aircraft finally became uncontrollable.

050

MEMORANDUM

GOVERNMENT OF CANADA



NOTE DE SERVICE

GOUVERNEMENT DU CANADA

5002-01901



FROM DE OGAI Toronto

TO A CAI Ottawa
Attn: W. Howes

SECURITY - CLASSIFICATION - DE SÉCURITÉ
OUR FILE - N/RÉFÉRENCE 5004-01901
YOUR FILE - V/RÉFÉRENCE
DATE April 25, 1972

SUBJECT SUJET
Accident - Beech 35U, N9812R
- Near Oshawa Airport, Ontario
- February 17, 1971

EA10 (1)

1. Reference our telephone conversation April 20, 1972, please note that paragraph 1 of Accident Report #01901 refers to two approaches to Oshawa Airport, while in fact only one abbreviated approach (no procedure turn) was carried out and that the Oshawa Tower sighted the aircraft visually to the south west of the Tower, flying in a southwesterly heading. The Tower Operator then advised the pilot to turn onto 040° to return to the airport. The airport is north east of the NDB utilized for the approach.

S. H. McPherson
V. H. McPherson
Regional Superintendent,
Accident Investigation.

OK - amended
JMA EA10-1
30-4-72

P.A.

5002-1901(CAIO)

Ottawa, Ontario,
KIA 0N8
July 28, 1971.

s.19(1)

[REDACTED]
Waterdown, Ontario.

Dear Sir:

This is in reply to your letter requesting the Accident Report pertaining to the unfortunate accident in which your father lost his life.

The investigation into this accident is in progress but it is impossible at this time to forecast how long it will take to complete. A copy of the report will be forwarded to you in the near future.

In the interim please find a copy of the initial report which may be of interest to you.

Yours sincerely,


H. A. Fawcett,
Chief, Accident Investigation,
Civil Aviation Branch.

Encl.

JSB:JC

FILIZ

5007-01901

Reg 166.

s.19(1)

5007-01901



23032

Waterdown, Ont.

July 5, 1971

CAYO

Mr. S.A. Musson.
Department of Transport
60 Adelaide St. E.
Toronto 210, Ont.

Dear Mr. Musson;

The purpose of this letter is to request a copy of the accident report concerning the crash of a Beechcraft Bonanza, Registration number N9812R at Oshawa on February 17, of this year in which both persons in the plane (pilot Dr.D.C. Brunton and J. Hickman) were killed.

I spoke to you at the time and you suggested that I write to you in a couple of months. My schedule, unfortunately, extended a couple into almost five months. I hope that this additional delay does not inconvenience you.

I wish to thank you for your assistance, both then and now.

Sincerely,



CA 10
5/12

MEMORANDUM

9186

CLASSIFICATION



TO
A CAI Ottawa

YOUR FILE No.
Votre dossier

OUR FILE No. 5004-01901
Notre dossier

FROM
De OCAI Toronto

DATE
May 12, 1971

FOLD

SUBJECT
Sujet
Accident - Beechcraft M-35 N9812R
- Oshawa Airport, Ontario
- February 17, 1971

1. Enclosed please find two copies of the Report of Inquiry into the marginally noted aircraft accident.

V. H. McPherson
Regional Superintendent,
Accident Investigation.

Encl.

CAI 10

STATS
17-5-71
bK

Final + Synopses
19.5.71

DEPARTMENT OF TRANSPORT

MINISTÈRE DES TRANSPORTS

ROUTE SLIP

BORDEREAU D'ACHEMINEMENT

	Routing Symbol Symbole d'acheminement	Date
TO: <i>Je - Nom</i>		23.2.71
A: C.A.I. OTTAWA		<input type="checkbox"/> Comment Observations 5004-01901
		<input type="checkbox"/> For your information Pour votre gouverne
		<input type="checkbox"/> Per our conversation Selon notre conversation
CAI	15628	<input type="checkbox"/> Approval Approbation
		<input type="checkbox"/> Discuss with me Discuter avec moi
		<input type="checkbox"/> Take appropriate action Prendre les mesures appropriées

REMARKS:

REMARQUES:

FROM:

DE:

OCAI TORONTO

Routing Symbol

Symbole d'acheminement

loading on
25.2.71
CL

Ne



DEPARTMENT OF TRANSPORT
AIRCRAFT ACCIDENT INVESTIGATION DIVISION

REPORT OF THE INQUIRY INTO AN AIRCRAFT

① ACCIDENT DISAPPEARANCE INCIDENT
NEAR MISS OTHER

REGIONAL REF. 5004-01901
H.Q. REF. 500
AIRCRAFT REG. N9812R

FOR INSTRUCTIONS SEE REVERSE SIDE OF EACH PAGE

AT (Name of nearest gazetted place) Oshawa Airport	PROVINCE Ontario
GEOGRAPHIC CO-ORDINATES 43° 56' N; 79° 54' W	DATE DAY 17 MONTH Feb. YEAR 1971
TIME (Standard Time Local) 1230 EST	
REGION	PACIFIC <input type="checkbox"/> WESTERN <input type="checkbox"/> CENTRAL <input type="checkbox"/> ONTARIO <input checked="" type="checkbox"/> QUEBEC <input type="checkbox"/> ATLANTIC <input type="checkbox"/>

PERSONNEL IDENTIFICATION ②

OWNER	NAME Dr. D. C. BRUNTON		ADDRESS 2354 Kensington Dr., Columbus 43221, Ohio	
	NAME: SAME AS OWNER <input checked="" type="checkbox"/> OR		A.T.C. LICENCE CLASSIFICATION THIS FLIGHT	
	ADDRESS:		NONE <input checked="" type="checkbox"/> 4 <input type="checkbox"/> 7 RF <input type="checkbox"/> 7 AAD <input type="checkbox"/> 7 AAM <input type="checkbox"/> 1 <input type="checkbox"/> 5 <input type="checkbox"/> 7 FT <input type="checkbox"/> 7 AIRA <input type="checkbox"/> 8 <input type="checkbox"/> 2 <input type="checkbox"/> 6 <input type="checkbox"/> 7 AP <input type="checkbox"/> 7 AC <input type="checkbox"/> 9 <input type="checkbox"/> 3 <input type="checkbox"/> 7 APS <input type="checkbox"/> 7 A CONST. <input type="checkbox"/>	
	ATC LICENCE NUMBER	H.Q. USE OPER. CODE:		
OPERATOR	STATUS RESPECTIVE TO THIS AIRCRAFT		OWNER <input checked="" type="checkbox"/> RENTER <input type="checkbox"/> LESSEE <input type="checkbox"/>	
	UNKNOWN <input type="checkbox"/>			
	NAME: SAME AS OWNER <input checked="" type="checkbox"/> OPERATOR <input type="checkbox"/> OR		STATUS IF NOT OWNER OR OPERATOR	
PILOT IN COMMAND	ADDRESS:		UNAUTHORIZED USER <input type="checkbox"/> EMPLOYEE <input type="checkbox"/> RENTER <input type="checkbox"/> BORROWER <input type="checkbox"/> CLUB MEMBER <input type="checkbox"/> OTHER <input type="checkbox"/>	
	LICENCE NUMBER		SPECIFY:	
OTHER CREW ON BOARD ③	NONE <input checked="" type="checkbox"/> THIRD PILOT <input type="checkbox"/> FLIGHT ENGINEER <input type="checkbox"/> FLIGHT OBSERVER <input type="checkbox"/> NO. OF CABIN ATTENDANT(S)		PASSENGERS NUMBER ON BOARD	
	SECOND PILOT <input type="checkbox"/> NAVIGATOR <input type="checkbox"/> CREWMAN <input type="checkbox"/> TECHNICIAN <input type="checkbox"/>		One	

MATERIAL IDENTIFICATION

AIR-CRAFT	REGISTRATION	MAKE	MODEL	TOTAL HRS.	MAXIMUM CERT. TAKE-OFF WEIGHT	YEAR OF MANUFACTURE
	N9812R	Beechcraft	35			
CATEGORY	LANDING GEAR AMPHIBIOUS (HULL) <input type="checkbox"/> FLOATS <input type="checkbox"/>		LANDING GEAR CONFIGURATION		SPECIAL EQUIPMENT	
AEROPLANE <input checked="" type="checkbox"/>	RETRACT-ABLE WHEELS <input checked="" type="checkbox"/> FIXED WHEELS <input type="checkbox"/>		TRICYCLE <input type="checkbox"/> OTHER <input checked="" type="checkbox"/>		NONE <input checked="" type="checkbox"/> TOWING GEAR <input type="checkbox"/>	
GLIDER <input type="checkbox"/>	WHEEL FLOATS <input type="checkbox"/>		TAIL WHEEL <input type="checkbox"/>		AMBULANCE <input type="checkbox"/> AIR-DROP (CARGO) <input type="checkbox"/>	
VTOL <input type="checkbox"/>	HULL <input type="checkbox"/> SKIDS <input type="checkbox"/>		WING/ROTOR LOW-WING <input checked="" type="checkbox"/> BI-PLANE <input type="checkbox"/>		AIR-DROP (PARACHUTIST) <input type="checkbox"/> PHOTO <input type="checkbox"/>	
GYRO COPTER <input type="checkbox"/>	SKIS <input type="checkbox"/> FLOAT-SKID <input type="checkbox"/>		HIGH-WING <input type="checkbox"/> MID-WING <input type="checkbox"/>		MAGNET OMETER <input type="checkbox"/> SLING/HOIST <input type="checkbox"/>	
GYRO GLIDER <input type="checkbox"/>	OTHER <input type="checkbox"/> IF OTHER SPECIFY		SINGLE-ROTOR <input type="checkbox"/> TWIN-ROTOR <input type="checkbox"/>		WATER BOMBING <input type="checkbox"/> SPRAY DUST <input type="checkbox"/>	
FREE BALLOON <input type="checkbox"/>			OTHER <input type="checkbox"/>		MONSOON GEAR <input type="checkbox"/> OTHER <input type="checkbox"/>	
DIRIGIBLE <input type="checkbox"/>					IF OTHER SPECIFY:	
IF OTHER SPECIFY:						
HOME BUILT YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>						
ULTRA LIGHT YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>						



INSTRUCTIONS

Pages 1 and 2 of the form are to be submitted to Headquarters within 15 working days of the occurrence

The remaining pages are to be submitted as soon as possible after the investigation is complete

Photographs should be included as they assist in presenting an understandable statement of the circumstances of an occurrence. They should be appropriately identified, affixed to 8½" × 11" sheets of white bond and inserted between pages 8 and 9 of the report.

Questions which are identified with a circled number: e.g. ②, are further explained on the reverse side of the same sheet

Upper case X's are to be used to indicate selected squares

All substantiating documents, reports, etc. are to be appended following page 12

Occurrences, which are the result of a collision of two or more moving aircraft will be reported on two or more report forms, i.e., one form for each moving aircraft.

① This report intends to provide a standard means of communicating concisely and accurately, the factual findings of aircraft accident investigators. It has been designed with the workload of the investigator in mind. The arrangement of the data is deliberately keyed to the probable sequence of events inherent in any aircraft accident. In this way a clear picture of what happened will be conveyed from the mind of the investigator to the reader of the report.

It is important that every section of the report be carefully completed since it is a source document for accident prevention activities. Should an investigator decide that the form does not adequately accommodate a particular accident, the investigator should supplement the report with notes at appropriate places.

② The intent here is to clearly establish the relationship between the aircraft and certain specific persons and the relationship of those persons to each other. The total complement of persons on board the aircraft should be accounted for in this section.

③ Crew member is defined as any person involved in the operation of the aircraft. In cases where a student pilot or licenced pilot is receiving training the instructor is normally classified as the pilot in command and the trainee as the second pilot.

ENGINE(S)	MAKE Continental	MODEL IO 470	SERIAL NO. 72041-0C	NUMBER INSTALLED One
TYPE	SUPERCHARGED PISTON <input type="checkbox"/>	PISTON <input checked="" type="checkbox"/>	TURBO-COMPOUND <input type="checkbox"/>	POWER 240 RATED H.P.
	JET TURBINE WITH AFTERBURNER <input type="checkbox"/>	TURBO PROP <input type="checkbox"/>	JET TURBINE <input type="checkbox"/>	
OTHER <input type="checkbox"/> IF OTHER SPECIFY				RATED THRUST
PROPELLER(S)	MAKE Beech	MODEL	SERIAL NO. 73487	
TYPE	FIXED WOODEN <input type="checkbox"/>	FIXED METAL <input type="checkbox"/>	VARIABLE PITCH <input type="checkbox"/>	CONSTANT SPEED <input checked="" type="checkbox"/>
				CONSTANT SPEED FULLY FEATHERING <input type="checkbox"/>
			REVERSIBLE <input type="checkbox"/>	NOT REVERSIBLE <input checked="" type="checkbox"/>

ENVIRONMENT IDENTIFICATION (1)

OPERATION

SCOPE THIS FLIGHT	LOAD DESCRIPTION						LOAD POSITION
INTERNATIONAL <input checked="" type="checkbox"/>	NONE <input type="checkbox"/>	FREIGHT/EXPRESS <input type="checkbox"/>	PESTICIDES <input type="checkbox"/>	PHOTO EQUIPMENT <input type="checkbox"/>	SIGN/DROGUE <input type="checkbox"/>	INTERNAL <input checked="" type="checkbox"/>	
DOMESTIC <input type="checkbox"/>	PASSENGERS <input checked="" type="checkbox"/>	CARGO/PASSENGERS <input type="checkbox"/>	POLES/TOWERS <input type="checkbox"/>	FERTILIZER <input type="checkbox"/>	GLIDER <input type="checkbox"/>	EXTERNAL <input type="checkbox"/>	
NOT KNOWN <input type="checkbox"/>	PARACHUTIST <input type="checkbox"/>	IF OTHER SPECIFY:	WATER/CHEMICAL <input type="checkbox"/>	FISH/FISH EGGS <input type="checkbox"/>	OTHER <input type="checkbox"/>	N/A <input type="checkbox"/>	

OBJECTIVE (2)

ADVERTISING <input type="checkbox"/>	CONTROL <input type="checkbox"/>	DEMONSTRATION <input type="checkbox"/>	FIRE CONTROL <input type="checkbox"/>	HOISTING <input type="checkbox"/>	INSPECTION <input type="checkbox"/>
TRANSPORTATION <input checked="" type="checkbox"/>	SURVEY <input type="checkbox"/>	SPRAY/DUST/SEEDING <input type="checkbox"/>	SEARCH <input type="checkbox"/>	RECREATION <input type="checkbox"/>	TESTING <input type="checkbox"/>
TOWING <input type="checkbox"/>	TRAINING <input type="checkbox"/>	FERRYING <input type="checkbox"/>	POSITIONING <input type="checkbox"/>	OTHER <input type="checkbox"/>	SPECIFY:

PRELIMINARY VERSION OF ACCIDENT (3)

PROVIDE A BRIEF HISTORY OF THE FLIGHT AND NARRATE AS MANY OF THE CIRCUMSTANCES OF THE ACCIDENT AS ARE KNOWN AT THIS TIME, BEGINNING WITH THE FIRST IRREGULARITY OF THE FLIGHT.

The pilot and one passenger departed Buffalo, New York, on an IFR flight to Ottawa, Ontario. Icing conditions were encountered and the pilot diverted to Oshawa, Ontario, for a landing.

The aircraft crashed and burned approximately 1 1/2 miles north west of the Oshawa Airport.

PRELIMINARY POST-OCCURRENCE DATA

AIRCRAFT DAMAGE	NUMBER OF CASUALTIES					INVESTIGATION
		KILLED	SERIOUS INJURY	MINOR INJURY	UNINJURED	
NONE <input type="checkbox"/>						BY CIVIL AVIATION INSPECTOR(S) ONLY <input type="checkbox"/>
MINOR <input type="checkbox"/>	PILOT-IN-COMMAND	One				BY CIVIL AVIATION AND AIRWORTHINESS INSPECTORS <input checked="" type="checkbox"/>
SUBSTANTIAL <input type="checkbox"/>	OTHER CREW					BY AIRWORTHINESS INSPECTOR(S) ONLY <input type="checkbox"/>
DESTROYED <input checked="" type="checkbox"/>	PASSENGERS	One				BY CORRESPONDENCE <input type="checkbox"/>
UNKNOWN <input type="checkbox"/>	PERSONS OUT-SIDE AIRCRAFT					D.N.H.W. ASSISTANCE <input type="checkbox"/>
						TECHNICAL/METALLURGICAL EXAM. <input type="checkbox"/>

PRE-OCCURRENCE CONDITIONS - CREW

1 AIRCRAFT REGISTRATION
19812R

PERSON. DATA-QUALIFICATIONS COMPLETE A SEPARATE PAGE FOR EACH PERTINENT CREW MEMBER. 2

CREW MEMBER		STATION OCCUPIED		SPECIAL FUNCTION	
PILOT-IN-COMMAND <input checked="" type="checkbox"/>	2ND PILOT <input type="checkbox"/>	NOT KNOWN <input type="checkbox"/>	PILOT SEAT <input checked="" type="checkbox"/>	NONE <input checked="" type="checkbox"/>	INSTRUCTOR <input type="checkbox"/>
3RD PILOT <input type="checkbox"/>	FLIGHT ENGINEER <input type="checkbox"/>	SECOND IN COMMAND SEAT <input type="checkbox"/>	FLIGHT ENGINEER SEAT <input type="checkbox"/>	COMPANY EXAMINER <input type="checkbox"/>	D.O.T. EXAMINER <input type="checkbox"/>
NAVIGATOR <input type="checkbox"/>	CREWMAN <input type="checkbox"/>	NAVIGATOR SEAT <input type="checkbox"/>	REST POSITION <input type="checkbox"/>	TECHNICIAN <input type="checkbox"/>	STUDENT <input type="checkbox"/>
CABIN ATTENDANT <input type="checkbox"/>	FLIGHT OBSERVER <input type="checkbox"/>	PASSENGER CABIN <input type="checkbox"/>	OTHER <input type="checkbox"/>	OTHER <input type="checkbox"/>	SPECIFY:
OTHER <input type="checkbox"/>	SPECIFY:	SPECIFY:			

PERSONAL DATA	AGE	SEX	SURNAME	INITIALS	LICENCE NUMBER
	54	M	BRUNTON	DR. D. G.	1852414

LICENCES AND PERMITS HELD		AIRCRAFT CLASSIFICATIONS		RATINGS	
CANADIAN <input type="checkbox"/>	FOREIGN <input checked="" type="checkbox"/>	SINGLE-ENGINE LAND <input checked="" type="checkbox"/>	SINGLE-ENGINE SEA <input type="checkbox"/>	INSTRUCTOR CL 1 <input type="checkbox"/>	NONE <input type="checkbox"/>
NONE <input type="checkbox"/>	AIRLINE TRANSPORT <input type="checkbox"/>	S. E. LAND AND SEA <input type="checkbox"/>	S. & MULTI ENGINE LAND <input type="checkbox"/>	INSTRUCTOR CL 2 <input type="checkbox"/>	
UNKNOWN <input type="checkbox"/>	COMMERCIAL <input type="checkbox"/>	S. & MULTI ENGINE SEA <input type="checkbox"/>	S. & M.E. LAND AND SEA <input type="checkbox"/>	INSTRUCTOR CL 3 <input type="checkbox"/>	
SENIOR COMMERCIAL <input type="checkbox"/>	STUDENT PERMIT <input type="checkbox"/>	AIRCRAFT TYPE ENDORSEMENTS		INSTRUMENT 1 <input checked="" type="checkbox"/>	
PRIVATE <input checked="" type="checkbox"/>	NAVIGATOR <input type="checkbox"/>	HELICOPTER <input type="checkbox"/>	GYROPLANE <input type="checkbox"/>	INSTRUMENT 2 <input type="checkbox"/>	
FLIGHT ENGINEER <input type="checkbox"/>	GYROPLANE <input type="checkbox"/>			BLOCK AIRSPACE <input type="checkbox"/>	
GLIDER <input type="checkbox"/>	MAINTENANCE ENGINEER <input type="checkbox"/>			NIGHT <input type="checkbox"/>	
BALLOON <input type="checkbox"/>					

EXPERIENCE - FLYING TIME (To nearest hour - if unknown complete with X)

	ALL TYPES	THIS TYPE	DUAL ON THIS TYPE	THIS U/C CONFIGURATION	SINGLE ENGINE	MULTI ENGINE	ACTUAL INSTRUMENT	NIGHT	NIGHT X-COUNTRY	ROTOR-CRAFT
TOTAL HOURS	1023	823	45	1023	1023	0	82	112	100	0
HRS. LAST 90 DAYS	119	119	0	119	119	0	21	25	25	0

FATIGUE FACTORS

FLYING TIME	TOTAL LAST 3 DAYS	TOTAL THIS FLIGHT	HOURS AWAKE SINCE LAST REST PERIOD
	X HRS.	.8 HRS.	X HRS.

PILOT FLIGHT PREPARATION COMPLETE ON PILOT-IN-COMMAND PAGE ONLY

WEATHER BRIEFING	OTHER BRIEFINGS	DOCUMENTS CARRIED	FLIGHT PLAN FILED
ACCREDITED BRIEFER <input checked="" type="checkbox"/>	NONE <input type="checkbox"/>	NONE <input type="checkbox"/>	NONE <input type="checkbox"/>
NONE <input type="checkbox"/>	UNKNOWN <input checked="" type="checkbox"/>	FLIGHT OR OPERATING MANUAL <input type="checkbox"/>	SVFR <input type="checkbox"/>
UNKNOWN <input type="checkbox"/>	ROUTE <input type="checkbox"/>	ADEQUATE VFR <input type="checkbox"/>	IFR <input checked="" type="checkbox"/>
ACCREDITED FORECASTER <input type="checkbox"/>	DEPARTURE PROCEDURES <input type="checkbox"/>	INADEQUATE VFR <input type="checkbox"/>	CONTROLLED VFR <input type="checkbox"/>
SELF BRIEFING <input type="checkbox"/>	ARRIVAL PROCEDURES <input type="checkbox"/>	ADEQUATE IFR <input type="checkbox"/>	FLIGHT NO. TIFICATION <input type="checkbox"/>
	NOTAMS <input type="checkbox"/>	INADEQUATE IFR <input type="checkbox"/>	

EXECUTION OF FLIGHT TO START OF OCCURRENCE

ADHERENCE TO PLAN	PHASE OF FLIGHT DURING WHICH FIRST IRREGULARITY OCCURRED				
	GROUND	TAKEOFF	IN-FLIGHT	LANDING	OTHER
NO DEVIATION <input type="checkbox"/>	START-UP <input type="checkbox"/>	LINE-UP <input type="checkbox"/>	CLIMB <input type="checkbox"/>	INITIAL APPROACH <input type="checkbox"/>	LOAD-PICKUP <input type="checkbox"/>
ALTERATION FOR WX <input checked="" type="checkbox"/>	STATIONARY <input type="checkbox"/>	RUN <input type="checkbox"/>	DESCENT <input type="checkbox"/>	FINAL APPROACH <input type="checkbox"/>	
ALTERATION FOR TRAFFIC <input type="checkbox"/>	TAXIING <input type="checkbox"/>	LIFTOFF <input type="checkbox"/>	CRUISE <input checked="" type="checkbox"/>	FLARE <input type="checkbox"/>	LOAD DROP <input type="checkbox"/>
BECAME LOST <input type="checkbox"/>	AIR-TAXIING <input type="checkbox"/>	HOVER <input type="checkbox"/>	LEVEL TURN <input type="checkbox"/>	HOVER <input type="checkbox"/>	
ALTERATION FOR U/S <input type="checkbox"/>	STEP-TAXIING <input type="checkbox"/>		CLIMBING TURN <input type="checkbox"/>	TOUCH-DOWN <input type="checkbox"/>	
SPECIFY: OTHER <input type="checkbox"/>	BEACHING <input type="checkbox"/>		DESCENDING TURN <input type="checkbox"/>	RUN-OUT <input type="checkbox"/>	LOAD POSITIONING <input type="checkbox"/>
			TRANSLATION <input type="checkbox"/>	TURN-OFF <input type="checkbox"/>	
			HOVER <input type="checkbox"/>		

NAVIGATION AND APPROACH AIDS

AIDS AVAILABLE	V.H.F. D.F.	DME	VOR	TACAN	ILS	ASR	PAR	ADF	LORAN	L.F. RNG	NONE
IN AIRCRAFT			<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			
ON GROUND								<input checked="" type="checkbox"/>			
IN USE BY A/C AT TIME OF OC.								<input checked="" type="checkbox"/>			000027

- ① The purpose of this section is to identify the man being reported on the remainder of the page and to define his function with respect to the aircraft. Also included are the flying background facts which indicate his level of proficiency.

- ② A pertinent crew member is one who can or did affect the course or conduct of the flight.

Example 1: A student pilot allows a swing to develop on take-off and the instructor is unable to correct before a ground loop results. In this case a separate page for each is required. On the other hand, during cruising flight the engine fails suddenly and the instructor takes over control and strikes a fence during the forced landing. Complete a page for the instructor only.

Example 2: The aircraft collides with ramp vehicle while taxiing. No page need be completed for navigator or flight engineer if carried on board.

PRE-OCCURRENCE CONDITIONS

MATERIAL ①

DESCRIPTION OF SYSTEM CONDITIONS				FUNCTION AFFECTED	COMPONENT/SUB-SYSTEM CAUSING PROBLEM	NATURE OF COMPONENT SUB-SYSTEM FAILURE
Condition A - NOT DETERMINED S - SERVICEABLE B - NOT INSTALLED U - UNSERVICEABLE						
A	B	S	U			
<input checked="" type="checkbox"/>				CANOPY WINDSCREEN		
	<input checked="" type="checkbox"/>			DE-ICING-AIRFRAME		
<input checked="" type="checkbox"/>				ELECTRICAL SYSTEM - UP TO CONSUMER DEVICE		
		<input checked="" type="checkbox"/>		EMPENNAGE - FIXED SURFACES		
		<input checked="" type="checkbox"/>		ENGINES, ANCILLARIES AND CONTROLS		
		<input checked="" type="checkbox"/>		FLIGHT CONTROLS		
<input checked="" type="checkbox"/>				FLAPS-SPOILERS-DIVEBRAKES AND CONTROLS		
		<input checked="" type="checkbox"/>		FLUIDS AND GASES		
<input checked="" type="checkbox"/>				FUEL SYSTEM-UP TO MIXTURE CONTROL DEVICE		
<input checked="" type="checkbox"/>				FUSELAGE-STRUCTURE SKIN		
	<input checked="" type="checkbox"/>			HYDRAULIC SYSTEM & ALL HYDRAULIC DEVICES		
<input checked="" type="checkbox"/>				INSTRUMENTS, FLIGHT DATA; DETECTORS, CIRCUITS		
<input checked="" type="checkbox"/>				INSTRUMENTS, SYSTEMS DATA; DETECTORS, ETC.		
<input checked="" type="checkbox"/>				LIFE SUPPORT SYSTEM; OXYGEN-CABIN PRESS		
<input checked="" type="checkbox"/>				LIGHTING-INTERNAL/EXTERNAL		
<input checked="" type="checkbox"/>				PANELS/DOORS/WINDOWS/HATCHES/HOUSINGS		
		<input checked="" type="checkbox"/>		PROPELLER(S) AND CONTROLS		
		<input checked="" type="checkbox"/>		RADIO COMMUNICATIONS SYSTEM		
<input checked="" type="checkbox"/>				RADIO NAVIGATION SYSTEM-AURAL, VIS, AUTO.		
	<input checked="" type="checkbox"/>			MAIN ROTOR-BLADES, STRUCTURE, DRIVETRAIN		
	<input checked="" type="checkbox"/>			TAIL ROTOR-BLADES, STRUCTURE, DRIVETRAIN		
		<input checked="" type="checkbox"/>		LANDING GEAR, WHEELS, TIRES, BRAKES, STRUC.		
<input checked="" type="checkbox"/>				WARNING SYSTEMS-VISUAL, AURAL		
		<input checked="" type="checkbox"/>		WING-STRUCTURE, SKIN		
<input checked="" type="checkbox"/>				AUTO PILOT		

BASIC DATA ②

PRE-OCCURRENCE	I.A.S. _____ KTS	FUEL ON BOARD _____ IMP. GALS.	CALCULATED A.U.W. _____ LBS	MIXTURE Unknown RICH <input type="checkbox"/> LEAN <input type="checkbox"/> AUTO <input type="checkbox"/>	CARB. HEAT POSITION n/a HOT <input type="checkbox"/> PARTIAL <input type="checkbox"/> COLD <input type="checkbox"/>
	C OF G Aircraft Manuals and documents destroyed by fire				
	POSITION _____ % MAC	OR _____ INS		AFT OF DATUM <input type="checkbox"/>	FORWARD OF DATUM <input type="checkbox"/>
C OF G PERMISSIBLE RANGE _____ % MAC TO _____ % MAC	77.0 85.7		AFT OF DATUM <input checked="" type="checkbox"/>	FORWARD OF DATUM <input type="checkbox"/>	
AT GROUND CONTACT	I.A.S. _____ KTS	POWER SETTING Estimated NONE <input type="checkbox"/> PARTIAL <input type="checkbox"/> ASYMMETRIC <input type="checkbox"/> FULL <input checked="" type="checkbox"/>	LANDING GEAR POS'N UNLOCKED <input type="checkbox"/> UP <input type="checkbox"/> FIXED GEAR <input type="checkbox"/> DOWN <input checked="" type="checkbox"/>	FLAP POSITION NO FLAPS <input type="checkbox"/> UP <input checked="" type="checkbox"/> PARTIAL <input type="checkbox"/> DOWN <input type="checkbox"/>	

① The intent of this page is to collect as much information as practicable about the condition of aircraft which have become involved in accidents. The conditions described here may or may not have a bearing upon the occurrence but must be conditions which the investigator is able to prove existed at the beginning of the accident sequence.

When completing the page, each item should be checked off in the appropriate square on the left hand side. In the columns opposite any "U" condition which is indicated, the investigator need only select words which are most descriptive of his findings.

Example:

A helicopter on take-off began an uncontrollable turn and the investigation revealed a fractured tail rotor drive-shaft. This information would be recorded thus:

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Tail Rotor Blades, Structure, Drive	directional control	drive- shaft	fractured
--------------------------	--------------------------	--------------------------	-------------------------------------	--	------------------------	-----------------	-----------

The foregoing example bears directly upon the occurrence. But supposing the investigator also discovered that the VHF was unserviceable, it should also be recorded and might appear thus:

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Radio Communi- cations System	VHF	Transmitter	no output
--------------------------	--------------------------	--------------------------	-------------------------------------	----------------------------------	-----	-------------	-----------

The requirement to record all pre-existing mechanical irregularities arose from our failure in the past to immediately recognize some of these failures and malfunctions as accident cause factors. Consequently, searching out and recording all pre-existing irregularities will permit the re-assessing of many accidents in the light of more recently acquired knowledge.

② To assist in assessing the conditions of flight, certain vital data are necessary. The data recorded in this section will probably be based on facts gleaned from examination of the wreckage. For some items such as fuel quantity, some calculations may be necessary to convert amount of fuel on board after the accident to amount of fuel on board at the time of the first irregularity of the flight.

- ① Environment conditions refer to all conditions external to the subject aircraft. This includes: all weather conditions, ground or air traffic, obstructions, surface conditions, etc. Since these conditions at the time and place of the first irregularity of flight can be different from the conditions where the aircraft came to rest, the conditions in both instances must be recorded.

- ② The point of the first irregularity of the flight can be best described as that point at which there were definite symptoms that something had gone wrong. The details in this section will help to develop an understanding of the adequacy of the aircraft and the pilot's judgement. If the first irregularity occurred near or on the ground in the immediate vicinity of the place where the aircraft came to rest, this section is to be omitted.

- ③ Regardless of the circumstances of the accident, this section will always be completed. As with the previous section, the details will provide some evidence of aircraft adequacy and indicate the degree of skill and judgement applied by the pilot. Conditions in the area where the aircraft came to rest strongly influence the degree of aircraft breakup and the occupant's chances of survival.

R

1 PRE-OCCURRENCE CONDITION - CREW

PERSONAL - COMPLETE A SEPARATE PAGE FOR EACH PERTINENT CREW MEMBER

CREW MEMBER	PILOT-IN-COMMAND <input checked="" type="checkbox"/>	2ND PILOT <input type="checkbox"/>	FLIGHT ENGINEER <input type="checkbox"/>	CABIN ATTENDANT <input type="checkbox"/>	OTHER <input type="checkbox"/>	SPECIFY:
	NAVIGATOR <input type="checkbox"/>	3RD PILOT <input type="checkbox"/>	CREWMAN <input type="checkbox"/>	FLIGHT OBSERVER <input type="checkbox"/>		

TESTS AND FINDINGS (2) **QUANTITATIVE RESULTS** NO TESTS DONE

ALCOHOL Nil	BLOOD SUGAR	FOOD POISONING	DRUGS	OTHER TEST (S)
HYPOXIA	CARBON MONOXIDE Nil	EXPLOSIVES RESIDUE	PESTICIDES	

SENSATIONS EXPERIENCED (3) ADMITTED OBSERVED NOT INVESTIGATED

PHYSICAL			EMOTIONAL		
NONE <input type="checkbox"/>	EXCESSIVE PERSPIRATION <input type="checkbox"/>	FATIGUE <input type="checkbox"/>	CONFUSION <input type="checkbox"/>	DEPRESSION <input type="checkbox"/>	
DROWSINESS <input type="checkbox"/>	MUSCLE SPASMS CRAMPS <input type="checkbox"/>	NAUSEA <input type="checkbox"/>	ANGER <input type="checkbox"/>	ELATION <input type="checkbox"/>	
FEVERISHNESS/HOT <input type="checkbox"/>	PAIN <input type="checkbox"/>	DROWSINESS <input type="checkbox"/>	IMPATIENCE <input type="checkbox"/>	LISTLESSNESS <input type="checkbox"/>	
NUMBNESS <input type="checkbox"/>	DIARRHOEA <input type="checkbox"/>	OTHER:	NERVOUSNESS ANXIETY/TENSENESS <input type="checkbox"/>	PREOCCUPATION <input type="checkbox"/>	
VISION DIFFICULTIES <input type="checkbox"/>	STOMACH CRAMPS <input type="checkbox"/>		OTHER:		
COLD/ CHILLS <input type="checkbox"/>	DIZZINESS <input type="checkbox"/>		NONE EXPERIENCED <input type="checkbox"/>		

MEDICAL HISTORY - LAST ROUTINE MEDICAL **THIRD CLASS MEDICAL PRIVILEGES EXPIRE OCTOBER 31, 1971.**

DATE October 10, 1969	PLACE Unknown	NAME AND/OR NUMBER OF MEDICAL EXAMINER Unknown
MEDICAL PROFILE N/A	RESTRICTIONS IMPOSED Glasses available	RECEIVING MEDICAL TREATMENT YES <input type="checkbox"/> NO <input type="checkbox"/> SPECIFY Unknown

TESTS OF PASSENGER CONDITIONS (4) **TO BE COMPLETED ON PILOT-IN-COMMAND PAGE ONLY**

CARBON MONOXIDE Nil	FOOD POISONING	EXPLOSIVES RESIDUE	HYPOXIA	NONE PERFORMED
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MEDICAL ANALYSIS - REGIONAL MEDICAL OFFICER TO DISCUSS ANY MEDICAL FACTORS WHICH, IN HIS OPINION, WERE INVOLVED IN THE OCCURRENCE.

000033

- ① The requirement here is similar to that for material. The background of the man, and some measure of how well he is functioning physiologically and psychologically is vital to an understanding of the occurrence.

- ② Testing in cases where the pilot made some error of omission or commission should be routine. The investigator will have no serious difficulty in cases where the individual was killed. Regulations provide the authority for autopsies. In cases where the person survived, physical examination and testing can be carried out only with his cooperation. Wherever possible, quantitative results will be reported in this section.

- ③ Again, a cooperative attitude on the part of the individual will be necessary in order to complete this section. If the individual has a genuine interest in aviation he will not hesitate to provide the necessary data.

- ④ Since this section can apply to more than one person, the maximum readings obtained are to be reported here.

OCCURRENCE DESCRIPTION ①

R

FIRST IRREGULARITY OF FLIGHT ②

NARRATE THE EVENT(S) WHICH FIRST INDICATED THAT THE FLIGHT WAS NOT PROCEEDING AS DESIRED.

At 5,000 feet, about 20 miles north of the Buffalo VORTAC enroute direct to the Stirling VORTAC, the pilot encountered unfavourable icing conditions.

RESULTANT ACTION(S) • REACTION(S) ③

NARRATE ALL THE ACTIONS OF THE PILOT; ALL THE REACTIONS OF THE AIRCRAFT TO PILOT DEMANDS; ALL INTERACTIONS OF PILOT, AIRCRAFT, AND ENVIRONMENT.

See Page 7A

TERMINAL EVENT ④

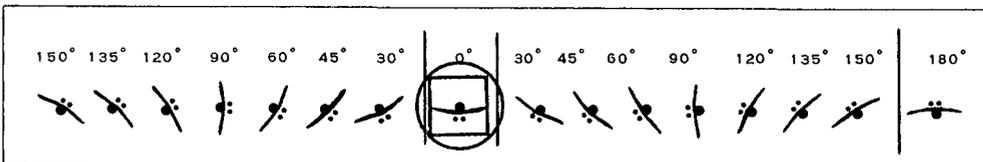
DESCRIBE THE MOVEMENTS OF THE AIRCRAFT FROM THE MOMENT BEYOND WHICH CORRECTIVE ACTION COULD NOT BE EXPECTED TO RETRIEVE THE SITUATION, OR FROM TOUCHDOWN PRECEDING A LANDING UNDER EMERGENCY CIRCUMSTANCES.

The aircraft struck the ground in a steep nose down, wings level attitude on a heading of approximately 330° H, coming to rest right side up on a heading of approximately 100° H. Fire destroyed the complete cabin section to a point just aft of the rear seats and both wings outboard from the cabin area to a point just inboard of the fuel tanks.

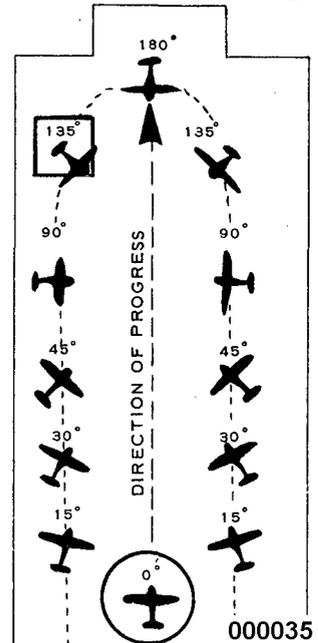
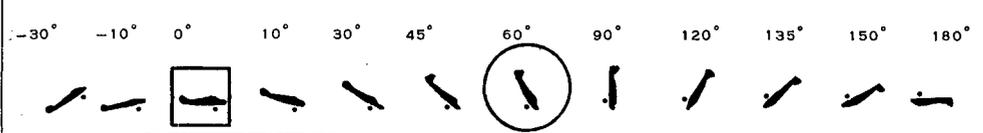
CIRCLE THE SILHOUETTES WHICH MOST CLOSELY DESCRIBE ANGLE OF GROUND CONTACT

DRAW A SQUARE AROUND SILHOUETTES TO DESCRIBE ATTITUDE OF AIRCRAFT AT REST

FRONT ELEVATION



STARBOARD ELEVATION



- ① The description of the occurrence is divided into three areas so that the sequence of events is more readily understood. If the paragraph headings are rigidly applied there should be no difficulty in defining the limits of each of the three areas of interest.

- ② The first irregularity of flight is the initial event in the sequence leading up to the termination of the occurrence. In some instances it may be separated by considerable time or distance from the terminal event, such as the case in which a pilot becomes lost and continues the flight until fuel is exhausted. Or in other instances may be closely related to the terminal event as in a swing preceding a ground loop following a normal approach.

- ③ In this paragraph, it is essential that the pilot's response to the first irregularity be clearly described. All subsequent actions and reactions must be included, up to the point where any corrective action is obviously futile.

- ④ A description of the terminal event is useful mainly in understanding the reason for the extent of damage to the aircraft or the seriousness of the injuries. The position of the aircraft at rest, of course influences the problem of evacuating the occupants.

- 7A -

Resultant Action(s)

The pilot contacted Buffalo Departure stating that he was picking up a little ice and requested descent to 4,000 feet. Buffalo Departure, in coordination with Toronto Center, cleared the aircraft to maintain 4,000 and to contact Toronto Center on 121.2.

At 16:51Z (11:51 EST) Trenton Terminal began receiving calls from N9812R trying to contact Toronto Center. Trenton was unable to establish radio contact with N9812R on 121.2 and at 16:56 Z (11:56 EST) advised N9812R that Toronto Center frequency was 123.9. This message was transmitted by Trenton Terminal on 121.2 and 121.5 simultaneously. At 16:56Z (11:56 EST) the Toronto Arrival Control picked up a call from N9812R on frequency 121.5 and established radio contact with the aircraft on that frequency. The pilot stated he was at 4,000 feet, still picking up ice and requested 3,000 feet. Toronto ATC cleared N9812R to maintain 3,000 feet and to contact Trenton Terminal on frequency 121.2.

At 17:05Z (12:05 EST) the pilot was advised by Trenton Terminal Control that Toronto Radar showed him heading for Peterborough instead of Stirling. The pilot stated he was picking up too much ice and requested a clearance direct to Toronto and was subsequently cleared direct to Toronto via radar vectors from Toronto ATC.

At 17:15Z (12:15 EST) the pilot was asked what his flight conditions were and stated he had a heavy load of ice. Toronto ATC asked if he would like to try an approach into Oshawa to which he replied 'Affirmative' and at 17:17Z (12:17 EST) was cleared to the Oshawa Airport for an approach and given the Oshawa weather as four hundred feet overcast, visibility 1/2 miles in light snow. Fifteen miles east of Oshawa, N9812R contacted the Oshawa Control Tower on frequency 120.1. The pilot was issued the current altimeter setting, runway conditions and weather conditions by the Oshawa Control Tower and was requested to report by the Beacon on initial approach for Runway 04.

Approximately five minutes later, the pilot reported by the Beacon initial and that he was going to do a straight-in approach (no procedure turn). Approximately 1 minute 35 seconds later an aircraft was heard overhead the Oshawa Airport and the pilot of N9812R was advised by the Control Tower Operator that he could hear him overhead the field but could not see the aircraft. The pilot was asked what his altitude was and if he had visual contact with the airport. The pilot replied that he was at 1300 feet and did not have visual contact.

It was suggested that the pilot execute a left turn back to the Beacon and was cleared for another approach. Visual contact with the aircraft was established while the aircraft was on a south southwest heading and just slightly south west of the Control Tower by the Control Tower Operator. He advised the pilot that he had the aircraft in sight and suggested the pilot execute a right turn onto a heading of 040° to return to the airport and was cleared to land on any runway, check gear down and locked. The Tower Operator lost sight of the aircraft as it started to turn to the right.

A short time later, approximately one minute, the Tower Operator advised the pilot of N9812R that he believed he had gone by the airport again (to the east). The pilot replied "I realize that, I put my gear down, I'm having trouble turning". There was no further transmission from N9812R.

ELEVATION VIEW OF LOCALE ①

SKETCH IN SIGNIFICANT RUNWAYS, OBSTRUCTIONS, FLIGHT PATH, ETC.

(R)

SHOW IMPORTANT DISTANCES, DIMENSIONS.

INST APt PRO
ADF - NDB (MOT)

Produced by Surveys and Mapping Branch
Department of Energy, Mines and Resources

OSHAWA AIRPORT
OSHAWA ONTARIO

FOR ARRIVAL CLEARANCE
CALL OSHAWA TOWER
other times call
TORONTO CENTRE 127.0

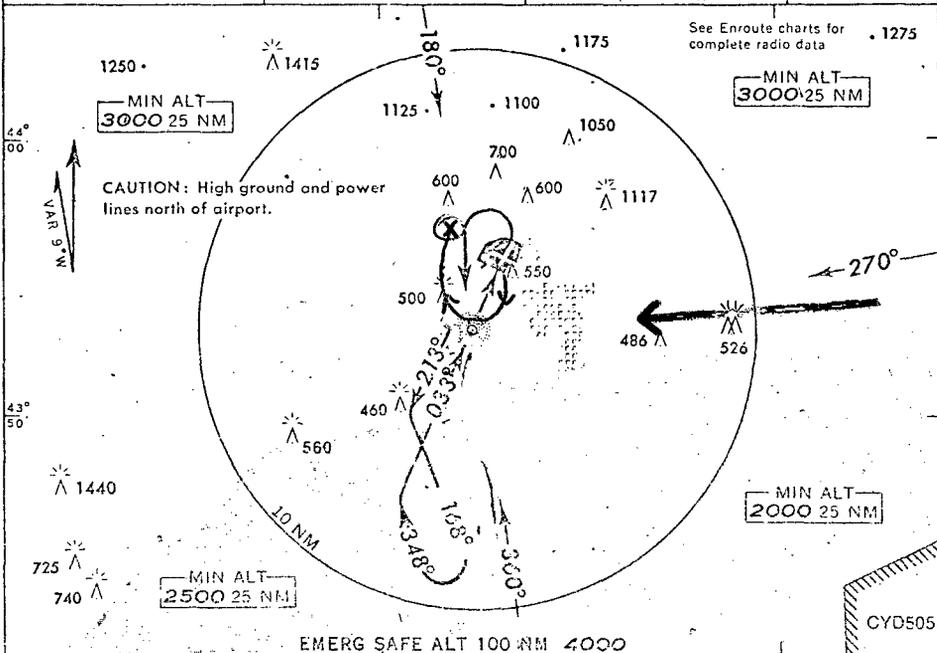
OSHAWA
391 00 $\equiv \equiv \equiv$
No voice

OSHAWA TOWER
120.1 122.5R
121.6 gnd 121.5
oper. ltd. hrs.

ELEV 458
NO ASR/PAR

PLAN VIEW OF LOCA

SHOW IMPORTANT DISTANCE



Procedure turn LEFT
within 9 NM

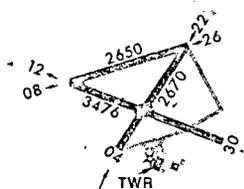
MISSED APPROACH
Climbing Left turn to 2000
to "00" NDB. Contact
TORONTO ATC for further
clearance

* 1100' authorized on final approach
for straight in to runway 04.

AUTH. MIN. ALT.

	MINIMA			
	DAY		NIGHT	
	MIN ALT	CEIL VIS	MIN ALT	CEIL VIS
STRAIGHT IN	1058	600-1	1058	600-1
CIRCLING	1458	1000-1½	1458	1000-1½
ALTERNATE	1300-2		1300-2	
TAKE OFF	500-1		500-1	

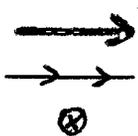
Runways asphalt
150' wide



L-164-ADF
23 OCTOBER 1970

Airport 43°56'N · 78°54'W

OSHAWA ONTARIO
OSHAWA AIRPORT



Aircraft approached the NDB from the east.
Estimated flight path after visual contact.
CRASH SITE

S

POST OCCURRENCE CONDITIONS

(R)

PERSONNEL

CREW	FATAL	SERIOUS	MINOR	UNINJURED	NOT PERTINENT	DIED AFTER 30 DAYS
PILOT-IN-COMMAND	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
SECOND PILOT	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
THIRD PILOT	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FLIGHT ENGINEER	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ALL OTHER CREW - NUMBER						
PASSENGER(S) - NUMBER	ONE					
PERSONS OUTSIDE A/C						

INJURY PATTERNS	HEAD	CHEST	LOWER TORSO	SPINE	ARM(S)	HAND(S)	LEG(S)	FOOT FEET	INTERNAL	MASSIVE
CREW/NO. OF PERSONS										
PASS./NO. OF PERSONS										
PERSONS OUTSIDE										

EVENT CAUSING INJURY	NO. OF PERSONS INVOLVED	CREW	PASSENGERS	PERSONS OUTSIDE A/C
CONTACT WITH PROPELLER/INTAKE/EXHAUST				
FELL FROM AIRCRAFT (OR THROWN)				
STRUCK INTERIOR OF AIRCRAFT AT IMPACT		ONE	ONE	
STRUCK INTERIOR OF AIRCRAFT IN TURBULENCE				
STRUCK BY FLYING OBJECT INSIDE AIRCRAFT				
STRUCK BY AIRCRAFT				
BURNS ONLY				
BURNS FOLLOWING OTHER INJURIES		ONE	ONE	
CRUSHED IN WRECKAGE				
PULLED UNDERWATER				
CAME IN CONTACT WITH MAIN ROTOR				
CONTACT WITH TAIL ROTOR				
OTHER (SPECIFY)				

AIRCRAFT

DEGREE OF DAMAGE	DAMAGE PATTERN	EVENT CAUSING DAMAGE	OBJECT OF AIR COLLISION	OBJECT OF GROUND COLLISION
NONE <input type="checkbox"/>	ENGINE <input checked="" type="checkbox"/>	AIRBORNE COLLISION <input type="checkbox"/>	AIRCRAFT <input type="checkbox"/>	AIRCRAFT <input type="checkbox"/> BUILDING <input type="checkbox"/>
UNKNOWN <input type="checkbox"/>	PROPELLER <input checked="" type="checkbox"/>	AIRBORNE COLLISION AND GROUND IMPACT <input type="checkbox"/>	BIRD(S) <input type="checkbox"/>	DETACHED PORTION OF A/C <input type="checkbox"/> FENCE(S) <input type="checkbox"/>
	NONE <input type="checkbox"/>	COLLISION ON GROUND/WATER <input type="checkbox"/>	BUILDING <input type="checkbox"/>	PEDESTRIAN <input type="checkbox"/> TREE(S) <input type="checkbox"/>
	AFT FUSELAGE <input type="checkbox"/>	EXPLOSION <input type="checkbox"/>	DETACHED PORTION OF AIRCRAFT <input type="checkbox"/>	POST/WIRE <input type="checkbox"/> VEHICLE <input type="checkbox"/>
MINOR <input type="checkbox"/>	COCKPIT <input checked="" type="checkbox"/>	FIRE <input checked="" type="checkbox"/>	POLE(S)/POST(S) <input type="checkbox"/>	DITCH <input type="checkbox"/> RIDGE <input type="checkbox"/>
	EMPENNAGE <input type="checkbox"/>	AERIAL BREAK UP <input type="checkbox"/>	TOWER <input type="checkbox"/>	SNOW BANK <input type="checkbox"/> OTHER <input type="checkbox"/>
	NACELLE(S) <input type="checkbox"/>	SUBMERGENCE <input type="checkbox"/>	TREE(S) <input type="checkbox"/>	SPECIFY:
	NOSE <input checked="" type="checkbox"/>	GROUND/WATER IMPACT <input checked="" type="checkbox"/>	WIRE(S) <input type="checkbox"/>	
SUBSTANTIAL <input type="checkbox"/>	WING(S) <input checked="" type="checkbox"/>	OTHER <input type="checkbox"/>	OTHER AIRBORNE OBJECT <input type="checkbox"/>	
	UNDERCARRIAGE <input checked="" type="checkbox"/>			
	MAIN ROTOR <input type="checkbox"/>			
	TAIL ROTOR <input type="checkbox"/>			
DESTROYED <input checked="" type="checkbox"/>	TOTAL <input type="checkbox"/>	SPECIFY:	SPECIFY:	

ENVIRONMENT

PROPERTY DAMAGE	PROPERTY DAMAGED
NONE <input checked="" type="checkbox"/>	RESIDENCE <input type="checkbox"/> VEHICLE <input type="checkbox"/> BARN/STORAGE <input type="checkbox"/> FENCE <input type="checkbox"/>
MINOR <input type="checkbox"/>	PUBLIC BUILDING <input type="checkbox"/> AIRFIELD FACILITY <input type="checkbox"/> FARM CROP <input type="checkbox"/> OTHER <input type="checkbox"/>
EXTENSIVE <input type="checkbox"/>	PUBLIC UTILITIES INSTALLATION <input type="checkbox"/> DOMESTIC ANIMAL(S) <input type="checkbox"/> AIRCRAFT <input type="checkbox"/>
	SPECIFY: 000039



LIFE - PROTECTION DATA

CRASH PROTECTION

DEVICES

CREW	NUMBER INSTALLED	SEAT (S)	SEAT ANCHORS (SETS)	LAP BELT (S)	SHOULDER HARNESS	BAGGAGE RESTRAINTS
		NUMBER USED	ONE	X	ONE	NIL
NUMBER FAILED IN CRASH	UNKNOWN	UNKNOWN				
NUMBER INSTALLED	THREE	THREE	NIL		X	
NUMBER USED	ONE	ONE				
NUMBER FAILED IN CRASH	UNKNOWN	UNKNOWN				

CRASH EVACUATION

AIRCRAFT EQUIPMENT

	ESCAPE SLIDE	ESCAPE LADDER/ROPE	DINGHY	NORMAL EXITS	ESCAPE HATCHES	PORTABLE EXTINGUISHER
NUMBER INSTALLED	0	0	0	1	0	1
NUMBER USED				0		0
NUMBER FAILED IMPROPER OPERATION						
NUMBER FAILED IN USE						

REMARKS AND RECOMMENDATIONS:

PERSONAL SAFETY EQUIPMENT

DEVICES	OXYGEN MASK	CRASH HELMET	LIFE VEST/INDIVIDUAL FLOTATION DEVICE	FILTER MASK	PARACHUTE	IMMERSION SUIT
NUMBER BEING USED	NIL	NIL	NIL	NIL	NIL	NIL
NUMBER FAILED DUE TO IMPROPER USE						
NUMBER FAILED IN OPERATION						

REMARKS AND RECOMMENDATIONS:

SEARCH AND RESCUE

PERTINENT

NOT PERTINENT

SEARCH SUCCESS

BY	DURATION	TYPE	LOCATING METHOD
NONE <input type="checkbox"/>	LESS THAN 4 HRS <input checked="" type="checkbox"/>	GROUND <input checked="" type="checkbox"/>	L/F RADIO <input type="checkbox"/>
PROVINCIAL POLICE <input checked="" type="checkbox"/>	4 HRS. BUT LESS THAN 12 <input type="checkbox"/>	AIR <input type="checkbox"/>	SARAH <input type="checkbox"/>
SAR ORGANIZATION <input type="checkbox"/>	12 HRS. BUT LESS THAN 24 <input type="checkbox"/>	BOAT <input type="checkbox"/>	AUTOMATIC CPI <input type="checkbox"/>
PRIVATE AGENCY <input type="checkbox"/>	1 DAY BUT LESS THAN 2 <input type="checkbox"/>	COMBINED AIR/BOAT <input type="checkbox"/>	VHF/UHF HOMING <input type="checkbox"/>
MUNICIPAL POLICE <input type="checkbox"/>	2 DAYS BUT LESS THAN 4 <input type="checkbox"/>	COMBINED GROUND/AIR <input type="checkbox"/>	VISUAL-MIRROR <input type="checkbox"/>
D.O.T. <input type="checkbox"/>	4 DAYS BUT LESS THAN 7 <input type="checkbox"/>	ALL <input type="checkbox"/>	NOT SUCCESSFUL <input type="checkbox"/>
OTHER <input type="checkbox"/>	7 DAYS BUT LESS THAN 14 <input type="checkbox"/>		IF OTHER SPECIFY <input type="checkbox"/>
COMMERCIAL AGENCY <input type="checkbox"/>	14 DAYS OR MORE <input type="checkbox"/>		
R.C.M.P. <input type="checkbox"/>			
SPECIFY:			

SURVIVAL

PERTINENT

NOT PERTINENT

DEVICES

	TENT	SLEEPING BAG	FIRST AID KIT	EMERGENCY RATIONS	WEAPON	FISHING GEAR	FIRE SOURCE	PROTECTIVE CLOTHING
AVAILABLE-NOT USED	<input type="checkbox"/>							
NOT AVAILABLE	<input type="checkbox"/>							
FAILED-IMPROPER USE	<input type="checkbox"/>							
NOT SATISFACTORY	<input type="checkbox"/>							

REMARKS AND RECOMMENDATIONS:

R

ANALYSIS

INVESTIGATOR'S APPRAISAL ①

INDICATE WHICH ITEMS OF THE RECORDED FACTUAL DATA, IN THE VIEW OF THE INVESTIGATOR, CAUSED THE ACCIDENT.
DESCRIBE IN NARRATIVE HOW THE ITEMS INTERACTED TO CAUSE THE ACCIDENT.

The pilot obtained his Instrument Rating in May 1969 after approximately 45 hours of training and had accumulated approximately 82 hours of actual instrument flying. His total flying time was 1023 hours of which approximately 823 hours were accumulated in the Bonanza. All the pilot's instrument flying and instrument training was obtained in the Bonanza.

Information obtained by telephone from the Buffalo Flight Service Station indicated that the pilot obtained a weather briefing in person prior to his departure from Buffalo.

The pilot attempted a flight parallel to and slightly ahead of a trowal aligned north and south and moving easterly (see Appendix II).

The flight was attempted at an altitude of 5,000 feet and encountered heavy icing conditions and freezing precipitation. As the pilot deviated and proceeded west towards the trowal, he continued to descend and as a result, remained below the warm air and in the heaviest area of icing in the form of freezing precipitation.

The aircraft was not equipped with any de-icing or anti-icing equipment, other than pitot heat, and as a result, a heavy load of ice accumulated on the airframe and propeller.

An abbreviated ADF approach (no procedure turn) was attempted at Oshawa and during the missed approach it would appear that the pilot established visual contact with the ground while he was proceeding back to the beacon and with the Control Tower Operator giving him headings to fly, began a right turn to fly 040° back to the airport. It would also appear that at

....11A

RECOMMENDATIONS ②

Establish:

A means of recording the persons name, destination, type of flight (IFR - VFR), type (telephone or in person) and time of briefing, by the Canadian Meteorological and Aeradio Stations.

(This system is in use in the USA and facilitated establishing that this pilot did in fact receive adequate weather briefing before commencing his flight).

*noted WmH
22-9-71*

FOR REGIONAL USE

CAUSES

Loss of control induced by airframe icing.

① As briefly as possible the Investigator should express his opinion of the cause(s) of the occurrence and the reasons for his opinion.

② The recommendations required here are those which the Investigator believes will prevent recurrence of similar mishaps.

- 11A -

Investigator's Appraisal (Cont'd)

some time either while in the turn or just prior to entering the turn, the pilot lowered the landing gear.

Due to the heavy accumulation of ice and the added drag from the extended landing gear, the pilot lost control of the aircraft and crashed nose down in an open field.

The cockpit and cabin area of the aircraft were completely destroyed by fire fed from ruptured fuel lines in the cockpit area rendering cockpit documentation of switches and controls impossible. It was possible to confirm continuity of the flight control cables throughout the aircraft and there was no evidence to indicate any malfunction of the ailerons or movable tail surfaces.

A review of the Air Traffic Control communication tapes (Appendix 1) and the Weather Aftercast (Appendix II) would leave little doubt about the fact that a heavy accumulation of clear and rime ice had built up on the airframe of the aircraft, inducing increased drag, increased weight and reducing the efficiency of the wings and propeller, which with the added drag of the extended landing gear resulted in the loss of control of the aircraft.

Ground impact marks and damage to the leading edge of the wings indicate the aircraft struck the ground in a wings level, steep nose down attitude, indicative of a stall at low altitude. The main undercarriage was found in the down position. The nose wheel gear was torn off at ground impact.

All attempts to locate witnesses in the immediate area of the accident were without results.

① The Regional Superintendent is invited to comment upon accident investigation procedures, techniques, etc. If he believes some addition or deletion to investigation regulations or policies should be made, suggested changes should be outlined here.



Looking south east.



Photograph of the area directly beneath the leading edge of the V tail.

"A" Note ice formation conforming to the shape of the leading edge.



Looking East.

- "A" Propeller blade
- "B" Impact mark from port wing.
- "C" Impact mark from starboard wing.



Looking north west.

- "A" Note landing gear in the down position.

APPENDIX I

Transcript of Communication
Between Buffalo Ground, Buffalo Tower,
Buffalo Departure Control
and
Bonanza N9812R.

FEDERAL AVIATION ADMINISTRATION

Airport Traffic Control Tower

Buffalo, New York

February 17, 1971

(Reference to time are in Greenwich Mean Time)

1. Facility : Buffalo Airport Traffic Control Tower
Buffalo, New York
2. Subject : Transcription of recorded conversation
pertinent to N8912R.
3. Date and Time : February 17, 1971 approximately - 1630-1650.
(Recorded time was not available).
4. Positions : GC - Buffalo Ground Control
LC - Buffalo Local Control
DR - Buffalo Departure Control
N12R - N9812R
YZ - Toronto Center
5. Certification : I HEREBY CERTIFY that the following is a true
transcription of the recorded conversation
pertaining to the subject accident.

Russell W. Shedd
(Name)

Evaluation & Proficiency Development
Specialist, Buffalo Tower
(Title)

-1-

Approximately 1630 GMT
Ground Control Frequency 121.9 MHz

N12R : Buffalo Ground this is Bonanza nine eight one two Romeo at BAC,
ah IFR Ottawa, over?

GC : Bonanza one two Romeo taxi to runway two three.

N12R : One two Romeo

GC : One two Romeo, a bit to the left to pick up the taxiway.

N12R : Roger, thank you - I may need a little help - it's pretty hard to
see here.

GC : O.K. sir continue straight ahead and I'll advise when to begin a
half right turn.

N12R : Ah - roger.

GC : Straight ahead - do you have the right turn now, you appear to be
just about there.

N12R : Yes.

GC : O.K. sir.

GC : One two Romeo continue taxiing northeast and I've got the clearance
anytime youre ready to copy.

N12R : Ready to go.

GC : Nine eight one two Romeo - cleared as filed, maintain five thousand,
maintain runway heading for vectors - departure control frequency
will be one two five point five - squawk zero one zero zero just
before departure.

-2-

- N12R : One two Romeo's cleared as filed - maintain five thousand, maintain runway heading for the vectors - departure control one two five point five - and squawk one zero zero zero, over?
- GC : Nine eight one two Romeo the clearance is O.K., but squawk zero one zero zero just before departure.
- N12R : Squawk zero one zero zero.
- GC : One two Romeo, roger.
- GC : Bonanza one two Romeo, cleared past the glide slope critical area ahead of you there - contact the tower one two zero point five when ready.
- N12R : One two Romeo.
- N12R : Ah, one two Romeo should I turn left right here, or should I go up by the glide slope thing there?
- GC : A left turn there is fine - an intersection departure from that point will give you five thousand six hundred feet available - and it's approved.
- N12R : Ah - that'll do.

Local Control Frequency 120.5 MHz

- N12R : Buffalo Tower, Bonanza nine eight one two Romeo at two four ready for take-off?
- LC : Garbled
- N12R : One two Romeo
- LC : One two Romeo - hold short - equipment on the runway.
- N12R : One two Romeo

-3-

LC : Nine eight one two Romeo - cleared for take-off runway two three.

N12R : One two Romeo.

LC calling DR : One two Romeo at four one.

1641

Departure Control Frequency 125.5 MHz

N12R : Buffalo departure this is nine eight one two Romeo, over?

DR : Nine eight one two Romeo, Buffalo departure, radar contact, turn right heading zero one zero.

N12R : Right zero one zero.

DR : Ah - one two Romeo you can maintain this heading until you receive Sterling - then proceed direct. Ah, report level at five.

N12R : One two Romeo maintain this heading til we receive Sterling - proceed direct, will report level at five.

DR : One two Romeo, roger.

N12R : One two Romeo is level at five and receiving Sterling.

DR : One two Romeo roger.

N12R : Buffalo departure - nine eight one two Romeo, over?

DR : Nine eight one two Romeo, Buffalo departure, go ahead.

N12R : Buffalo departure - I'm picking up a little ice here at five thousand - I wonder if I could go at four, over?

DR : O.K. ah, standby.

-4-

DR : Ah, one two Romeo squawk one one zero zero.

DR : Toronto?

YZ : Yes sir.

DR : Buffalo departure here - nine eight one two Romeo?

YZ : Yeh.

DR : Alright that's him ah make it ah twenty north of the Buffalo VOR going direct Sterling, and ah he's getting a little ice - he'd like four thousand.

YZ : Twenty north - direct Sterling - he's radar and he wants four - just a moment.

YZ : Four thousand approved.

DR : Thank you W.P.

YZ : And lets see - a frequency for that fellow ah - have him call Trenton terminal control on one twenty one two.

DR : O.K. that's ah Trenton?

YZ : Trenton - yeh.

DR : O.K.

YZ : R.E.

DR : One two Romeo, ah maintain four thousand.

N12R : One two Romeo out of five for four.

-5-

DR : And one two Romeo contact the Toronto Center on one two one point two.

N12R : One two one point two, thank you.

Transcript of Communication
Between Trenton Terminal Control
and
Bonanza N9812R

TRANSCRIPT OF CFB TRENTON TERMINAL CONTROL TAPES

TIME - 1651Z to 1707Z 17 Feb 1971

Frequencies - 121.2 and 121.5 KHZ

N9812R a Beech 35 was carried on the board of Trenton Terminal as an overflight - Buffalo direct Stirling Victor 300 S Lanark direct Ottawa maintaining 5000 ft and estimating Stirling at 1730Z. At approximately 1650Z Toronto ACC advised Trenton Terminal that N9812R would be entering the Trenton area from the Southwest at 5000 ft descending to 4000 and that N9812R would be coming over to Trenton Terminal Control frequency.

<u>TX AGENCY</u>	<u>TIME</u>	<u>FREQUENCY</u>	<u>TEXT</u>
A/C	1651Z	121.2	Toronto Centre, Bonanza 9812R out of, 5 for ⁴ over
TR		121.2	N9812R this is Trenton terminal, your're on Trenton frequency.
A/C	1652Z	121.2	Toronto Centre this is Bonanza N9812R over.
TR		121.2	9812R this is Trenton terminal on 121.2.
A/C	1653Z	121.2	Toronto Centre this is Bonanza N9812R over.
TR	1653Z	121.2	9812R Trenton terminal on 121.2 how do you read?
A/C	1653Z	121.2	Toronto Centre, N9812R at four thousand over.
A/C	1653Z	121.2	Toronto Centre N9812R over.
A/C	1656Z	121.2	Toronto Centre N9812R over.
TR		121.2 121.5	N9812R this is Trenton Terminal on 121.5 how do you read?
A/C	1656Z	121.2	Toronto Centre, Bonanza N9812R over.
TR	1656Z	121.2 121.5	N9812R this is Trenton Terminal on guard. The frequency for Toronto Centre is 123.9 over.
A/C		121.5	Toronto Centre N9812R over.
A/C		121.5	I am at four thousand, still picking up ice. I'd like to get to three thousand, over.
A/C	1657Z	121.5	Out of four for three.
A/C		121.5	I tried that earlier, I'll try it again.
A/C		121.2	Toronto Centre Bonanza N9812R over.
TR		121.2	N9812R Trenton terminal on 121.2 how do you read?
A/C		121.2	Loud and clear.

TR 121.2 Roger N9812R, where are you now?

A/C 121.2 I'll have to get a fix to let you know, just a second.

TR 1659Z 121.2 N9812R you're cleared through the Trenton area at three thousand call over Stirling Trenton altimeter 29.91, over.

A/C 121.2 12R cleared to Trenton VOR, call over Stirling, thank you.

1705Z 121.2 (Toronto ACC requested Trenton Terminal Controller have N9812R squawk ident.)

TR 121.2 N9812R, Trenton Terminal.

A/C 121.2 12R

TR 121.2 Roger N9812R squawk ident for Toronto

A/C 121.2 12R, Ident.

TR 1705Z 121.2 Roger 12R are you on the Stirling VORTAC now?

A/C 121.2 Affirmative.

TR 121.2 Roger, what radial are you on?

A/C 121.2 12R say again (fading).

TR 121.2 Roger, 12R, say the radial and distance on the Stirling VORTAC.

TR 121.2 12R, Trenton, Toronto has you on their radar, they say, on your present heading you are pointed towards, Peterborough.

A/C 121.2 12R I can't hear you very well and actually I'd like permission to go direct to Toronto, I'm getting too much ice.

TR 1707Z 121.2 Roger, 12R, standby one.

TR N9812R, Trenton contact Toronto now, frequency 127.0 over.

A/C 121.2 (Garbled and fading - sounds like "270").

No further contact.

Transcript of Communication
Between Toronto Air Traffic Control
and
Bonanza N9812R

TORONTO AREA CONTROL 121.5

TIME	SOURCE	COMMUNICATION
1656	N9812R	TORONTO TERMINAL THIS IS N9812R, OVER.
1657	N9812R	TORONTO TERMINAL THIS IS N9812R, OVER.
	ACC	12R, TERMINAL
	N9812R	AH, 12R I AM HERE AT 4000 FEET AND I AM STILL PICKING UP ICE AND I'D LIKE TO GET DOWN TO 3,000.
	ACC	12R MAINTAIN 3,000.
	N9812R	12R OUT OF 4 FOR 3.
	ACC	OUT OF 4.....12R?
	N9812R	12R
	ACC	CONTACT TRENTON TERMINAL ON FREQUENCY 121.2, 121.2.
	N9812R	ALL RIGHT, I TRIED THAT EARLIER, I'LL TRY IT AGAIN.
	ACC	OK, IF UNABLE, RETURN THIS FREQUENCY.
1658 TO 1715	OTHER TRAFFIC	

TIME	SOURCE	COMMUNICATION
1655	TORONTO	9812R DO YOU READ? IF YOU READ SQUAWK IDENT ON 11.
1657	TORONTO	TRENTON - TORONTO
	TRENTON	WE CHECK HE IS OUT OF 4 FOR 3 NOW.
	TORONTO	YEAH, AND I SAW YOU HEARD HIM.
	TRENTON	YEAH, WE ARE GETTING HIM ON GUARD HERE.
	TORONTO	OK, I TOLD HIM TO COME UP ON 121.2
	TRENTON	OK FINE.
1701	TORONTO	TRENTON - TORONTO. ARE YOU TALKING TO REMEO ALL RIGHT?
	TRENTON	TORONTO - TRENTON. YES I HAVE HIM, CLEARED THROUGH THE ZONE - THE TRENTON ZONE AT 3,000 NOW.
	TORONTO	OK FINE
1705	TORONTO	TRENTON - TORONTO. IS 12R STILL FLYING?
	TRENTON	AS FAR AS I KNOW.....GIVE HIM THE ALTIMETER AND HE HASN'T CALLED BY STIRLING YET, OK JUST STAND BY ONE, I'LL GET HIS RADIO CHECKED.
	TORONTO	YEAH, ASK HIM TO IDENTIFY, I THINK I SEE HIM AND HE IS NOT GOING TO GET ANYWHERE NEAR STIRLING.
1706	TRENTON	OK FINE
	TORONTO	HE'S AIMING AT PETERBOROUGH.
	TRENTON	HE SAYS HE IS IDENTIFYING NOW.
	TORONTO	YEAH, I SEE HIM, ON HIS PRESENT HEADING HE WILL BE OVER P.Q. IN 30 MILES.
	TRENTON	OK I'LL TELL HIM
	TRENTON	TORONTO - TRENTON. HE WOULD LIKE TO GO DIRECTLY OVER TO YOU NOW, HE SAYS HE IS GETTING ICING AND HE SAYS HE WOULD LIKE TO GO TO TORONTO AND I'LL SEND HIM OVER TO YOUR FREQUENCY.
	TORONTO	IT'S BETTER ON 127.0, 127.0.
	TRENTON	OK 127.0

.....2

TIME	SOURCE	COMMUNICATION
1707	N9812R	TORONTO CENTER, THIS IS BONANZA 9812R AT 3,000.
	TORONTO	9812R YOU ARE IN RADAR CONTACT AND THE TORONTO ALTIMETER 29.87.
	N9812RPROCEED DIRECT TORONTO?
	TORONTO	12R PROCEED DIRECT TO THE OSHAWA NDB AND THEN DIRECT TORONTO, THE OSHAWA NDB FREQUENCY IS 391 KC.
	TORONTO	12R DISREGARD THAT, TAKE UP A HEADING OF 280 DEGREES, 280 DEGREES, RADAR VECTORS TO TORONTO.
	N9812R	12R, WE GO 280 DIRECT TORONTO.
1711	TORONTO	9812R - TORONTO, AS SOON AS YOU CAN PICK UP THE TORONTO VOR, YOU ARE CLEARED DIRECT THE TORONTO VOR.
	N9812RTORONTO VOR, PROCEEDING DIRECT TO IT, THANK YOU.
	TORONTO	ROGER
1715	TORONTO	12R, WHAT ARE YOUR FLIGHT CONDITIONS NOW.
	N9812R	I HAVE GOT A HEAVY LOAD OF ICE NOW.
	TORONTO	OK, DO YOU WANT TO TRY TO GET TO OSHAWA, THAT'S 20 MILES ON YOUR ONE O'CLOCK POSITION.
	N9812R	YEAH, LET'S TRY OSHAWA. THANKYOU.
	TORONTO	TURN RIGHT 290.
	N9812R	290, THANK YOU.
1716	TORONTO	12R DO YOU HAVE THE APPROACH PLATES FOR OSHAWA?
	N9812R	AFFIRMATIVE.....
	TORONTO	OK SIR.
1717	TORONTO	12R DO YOU HAVE THE OSHAWA NDB TURNED IN NOW.
	N9812R	AFFIRMATIVE.
	TORONTO	OK. SO YOU ARE CLEARED TO THE OSHAWA AIRPORT FOR AN APPROACH, AND I HAVE THE WEATHER IF YOU WANT IT.
	N9812R	I'D LIKE TO HAVE IT.
	TORONTO	OK. 400 OVERCAST, 1/2 MILES IN LIGHT SNOW.
	N9812RCLEARED TO THE OSHAWA AIRPORT FOR AN APPROACH.
	TORONTO	ROGER

.....3

TIME

SOURCE

COMMUNICATION

TORONTO 9812R YOU CAN CONTACT OSHAWA TOWER ON 120.1.
N9812R 120.1, THANK YOU.
TORONTO OSHAWA AIRPORT IS 15 MILES AT YOUR 12 O'CLOCK
POSITION
N9812R ROGER.

**Transcript of Communication
Between Oshawa Control Tower
And N9812R**

SOURCE

COMMUNICATION

A/C

Oshawa Tower, Bonanza November nine eight one two Romeo about fifteen miles east...ah...south east I guess - over.

TOWER

Bonanza eight two one Romeo, Oshawa Tower. Reading you five, altimeter two niner niner zero, we check you have been cleared home for the approach. Report by the beacon on initial, visibility has not improved since the last transmission, we show sky partially obscured, estimated ceiling 400 variable 500 overcast, visibility one and one half miles variable in light snow and fog.

A/C

One two Romeo, Thank you and....ah....what kind of runway lighting do you have - over.

TOWER

Our runway lighting is of medium intensity only, we have it up full, we have no lead-in lights, we would suggest a straight-in approach to Runway 04 with the wind 170 at 5 to 10 mostly about 5. The runway is covered with approximately 1/2 to 2 inches of fresh fallen snow over mostly bare surfaces with the odd widely scattered ice patch - over.

A/C

One two Romeo, OK....ah.....you suggest Runway zero four zero Over.

TOWER

Affirmative, Runway 04 that will be a straight-in approach off the NDB...ah..the runway is 150 feet wide by twenty six hundred and seventy feet long asphalt and a straight-in approach off the Oshawa NDB 2.4 nautical miles bearing zero three three from the NDB.

A/C

One two Romeo, Thank You.

TOWER

Roger one two Romeo and you are a single Bonanza, how many souls on board please.

A/C

Two

TOWER

Check that OK, we will advise or alert the rescue services locally, we may not have them right on the field but they will be a short distance away. Do you wish them called out sir?

A/C

Ah...negative (garbled) at this time I don't think we'll need them but we'll keep you informed.

.....2

- 2 -

SOURCE

COMMUNICATION

TOWER

Roger one two Romeo, we copy that OK. The runway is not clearly marked since there has been no snow clearing since the snow fall began, however we have, the Airport Manager has kindly gone out on the runway and marked it with snow tracks to give you something more to aim at, white-out conditions are prevalent at the present time.

A/C

One two Romeo.

TOWER

Roger, we'll stand by for you to report to the Beacon initial and final.

TOWER

One two Romeo Tower, you'reah....you're position and altitude now.

A/C

One two Romeo, I am at two thousand feet and I am on about the 275...eh...077 vector out of Toronto.

TOWER

Roger the 077 would place you a little south of the airport so we will stand by for your report by the Beacon on initial, are you picking up the NDB OK.

A/C

Affirmative

TOWER

OK that's fine sir.

TOWER

Mobile One Ground, that....ah thank you for your assistance, if you could just spin it right at the button a couple of times or kind of give us a couple of markings right around there...ah...that should be OK.

A/C

One two Romeo, just past the beacon.

TOWER

Roger one two Romeo, report by the beacon on final.

A/C

One two Romeo just by the beacon now.

TOWER

Roger we check you by the beacon initial - confirm.

A/C

Yeh,.....actually I'm going to try and go straight in so I can get down quicker.

TOWER

OK we check that....ah...Mobile One Ground, clear the runway please.

TOWER

One two Romeo Roger, cleared to land at Oshawa any runway favouring Runway 04, the wind south at 5 or less.

A/C

One two Romeo

...3

SOURCE

COMMUNICATION

TOWER

One Two Romeo, the situation is more or less the same as last described to you, we do not have you visual of course, the terrain is fairly flat in the vicinity of Oshawa, about a half a mile south there is a fairly tall apartment building, white, with no marks. I believe I hear you just coming overhead the field now, just slightly to the south of the Tower possibly, we do not have you eyeball yet. What is your altitude now?

A/C

Thirteen.....thirteen hundred feet.

TOWER

Say again.

A/C

We're at thirteen hundred feet.

TOWER

Roger, we check thirteen hundred feet. If you're turning left, a left turn is suggested back to the Beacon if you can maintain altitude without problem. Do you have us visual right below you?

A/C

Negative

TOWER

OK fine, we suggest a sharp turn back to the Beacon as consistent with safety and report by the Beacon on initial, you have been cleared for a further approach set up your approach to inbound track zero three three magnetic and straight-in limits will be 1058 ASL.

TOWER

We can hear you sir but we can't see you, you're right overhead the Tower now.

TOWER

We have you eyeball,.....eyeball right overhead, that apartment block just down at your 10 o'clock low, start a right turn.... a right turn now to roll out about zero four zero.

TOWER

Roll out zero four zero.

A/C

TOWER

There are no tall structures out that way below your present altitude, I would suggest you maintain your present altitude until you rolled out on zero four zero.

TOWER

OK when you're steady on zero four zero you should be about a mile away from the airport, line up on zero four zero.... check gear down and locked.

TOWER

Ah.....negative, you've gone by us again I believe sir.

A/C

I realize that, I put my gear down, I'm having trouble turning.

TOWER

Say again.

....4....

SOURCE

COMMUNICATION

TOWER

Cleared to land any runway....cleared to land any runway,
check your gear down and locked if you have the field visual.

TOWER

One Two Romeo Tower

TOWER

One Two Romeo Tower, what's your position now.

TOWER

Ah....One Two Romeo, Oshawa Tower, do you read?

APPENDIX II

AFTERCAST OF WEATHER CONDITIONS OVER AND JUST NORTH OF LAKE ONTARIO
1500-1800 GMT FEBRUARY 17, 1971.

A TROUGH OF WARM AIR ALOFT (TROWAL) WAS ALIGNED FROM DAYTON, OHIO,
TO FLINT, MICHIGAN, AT 1200 GMT. BY 1800 GMT THIS FEATURE HAD
MOVED EASTWARD ACROSS LAKE ONTARIO TO ALINE FROM PITTSBURGH, PENNA?
TO TRENTON, ONT. THE 1200 GMT UPPER AIR SOUNDING FROM FLINT, MICH.,
CAN BE CONSIDERED TO BE REPRESENTATIVE OF ATMOSPHERIC CONDITIONS
IN THE TROWAL, AND IT INDICATES OVERCAST CLOUD BASED ABOUT 1 THOUSAND
FEET ABOVE MEAN SEA LEVEL WITH TOPS TO 10 THOUSAND FEET. IT ALSO
INDICATES CONDITIONS VERY FAVOURABLE TO HEAVY SNOW AND HEAVY ICING.
CEILINGS DETERIORATED TO 2 TO 8 HUNDRED FEET AND VISIBILITY TO 1/8
TO 1/2 MILE IN MODERATE TO HEAVY SNOW AS THE TROWAL MOVED ACROSS
SOUTHERN ONTARIO.

ALTHOUGH REGIONAL FORECASTS FOR SOUTHWESTERN AND EASTERN ONTARIO
REGIONS ISSUED AT 1130 AND VALID 1200 TO 2400 GMT SUGGESTED THAT
SNOW WOULD BE RESTRICTED NORTH OF AN EAST-WEST LINE THROUGH MOUNT
FOREST THEY DID INDICATE CEILINGS AS LOW AS 4 HUNDRED FEET ABOVE
GROUND WITH VISIBILITY AS LOW AS ONE MILE IN FREEZING RAIN.
MODERATE TO HEAVY ICING WAS ALSO INDICATED. TERMINAL FORECASTS
AND AMENDMENTS ISSUED BETWEEN 1030 AND 1245 GMT REFLECT THIS
THINKING. AS SOON AS IT BECAME APPARENT THAT SNOW WOULD BE
EXTENDING FURTHER SOUTH TERMINAL FORECASTS WERE AMENDED. AT
1400 GMT TORONTO ISLAND AIRPORT TERMINAL FORCAST WAS AMENDED TO
INDICATE CONDITIONS AS LOW AS A 3 HUNDRED FOOT CEILING WITH
VISIBILITY AS LOW AS 3/8 MILE. AT 1440 GMT TRNETON WAS AMENDED TO
INDICATE CEILING AS LOW AS 2 HUNDREDD FEET AND VISIBILITY 1/4 MILE.

Original Signed by
T. L. WIACEK

(T. L. Wlaccck),
Officer-in-Charge.

24/2/71

FA YZ1 171130
12-24

HTS ASL UNLESS NOTED

PROG

LO NR TROUT LAKE 12Z WITH CA WRM FNT SSEWD THRU GERALDTON AND
SAULT STE MARIE AND CA COLD FNT SWWD WILL LIE 80 MI SE OF
WINISK WITH CA WRM FNT SSEWD THRU ROUYN AND CA COLD FNT SWWD
THRU THUNDERBAY. MA WV NWRN OHIO WITH TROWAL NWD 12Z MOVG
EWD 25 KTS. AMS MOIST LO LVLS VCNTY TROWAL AND WWD WITH SOME
MID LVL INSTBY AHD OF TROWAL.

YZ-1-2-3

SWRN ONT ERN ONT SUDBURY RGNS
CLDS AND WX. AHD OF TROWAL 250V@40 100@V@170 /@ BCMG WITHIN 200
MI AHD OF TROWAL 20@V@LYRS180 /@ FEW EMBDD ACC 200-250 GVG
CHNC TRW- OVR XTRM SRN LKS. S OF A LN E-W THRU MOUNT FOREST 1-4ZR-F
OCNLY ZL-. PCPN GRDLY CMG R-L- FM SW. ST CIGS FRMG 4-8 HND
VCNTY TROWAL. N OF THE LN 3/4-3S- OR S-BS WITH SNW CIGS 6-10
HND AND ST CIGS 2-8 HND FRMG OVR HIER TRRN VCNTY TROWAL. W OF TROWAL
20@V@SC CU50 FQNT ST CIGS 6-12 HND IN UPSLP FLO TIL LT IN PRD.

ICG. NRN SXNS MDT RIME ICGIC RSK HVY RIME OR MXD ICGICIP. FRLVL
AT OR NR SFC. SRN SXNS MDT TO HVY RIME AND MXD ICGICIP AHD OF
TROWAL BCMG LGT-MDT RIME ICGIC ABV FRLVL W OF TROWAL. FRLVL NR
SFC WITH ABV FRZG LYR 30-50 BCMG FRLVL 50-60 AHD OF TROWAL.
W OF TROWAL FRLVL 40-50

TURBC MDT-HVY IN ACC

FT2 YZ1 171320 AMD
1320-11

YZ 60C1503S-F 1515G20 VRBL C6X1/2SF. 17Z 60C1503F 1815G20
VRBL C6015011/2R-L-F RSK ZR- TIL 19Z. 20Z C150CU 2315G25 0V0

FT1 YZ1 171250 AMD
1255-23

XU C5X1/2S 1415G VRBL C802ZR-S-. 15Z C802R-F 1415G VRBL C501R-F.
17Z C803F 2215G. 20Z C120CU 2315G28 0V0.
END

FT1 YZ1 171320 AMD
1320-23

ZD 60C1503S-F 1515G20 VRBL C6X1/2SF. 17Z 60C150 1815G20 VRBL
C6015011/2R-L-F RSK ZR- TIL 19Z. 20Z C150CU 2315G25 0V0.

14-23

TZ C8X2S- 1215G25 VRBL C3X3/8S RISK ZR-. 17Z C802R-F 1815G20
VRBL C5011/2R-L-F. 20Z C180CU 2315G25
HM C8X2S- 1512G VRBL C3X3/8S RISK ZR-. 16Z C802R-F 1515G VRBL
C501R-F. 19Z C180CU 2315G25
END

FT2 YZ1 171030
11-11

QG 50C1203F 1615G20 VRBL C50IR-L-H. 15Z C804F 2415. 17Z C180CU
2415G25 0V0. 02Z 200/04HK VRBL -XIFK AFT 08Z NO REPORTS
YZ 200C10004F 0V0 1512. 14Z 60C1504F 1515G20 VRBL C6015011/2R-L-F
RSK ZR- BRF 16Z. 20Z C180CU 2315G25 0V0
TR C1200/0. 15Z C6005H 1515. 17Z C2004H 1615G25 VRBL C1002R-L-F
CHNC ZR- TIL 19Z. 23Z C1204F 2515 05Z O 2615

FT1 YZ1 171045
11-23

ZD 200C10004F 0V0 1615. 14Z 60C1504F 1515G20 VRBL C6015011/2R-L-F
RSK ZR- BFR 16Z. 20Z C180CU 2315G25 0V0
XU 50C1203F 1518 VRBL C501201ZR- ZR- BCMG R-L- AFT 14Z. 17Z
C603F 2215G. 20Z C120CU 2315G28 0V0
YB 150C8005S- 1515G25 0V0 VRBL C8X3/4S-. 22Z C804H 2420G 0V0
AM C804F 2515G 0V0. 15Z C150CU 2515G28 0V0
END

FT1 YZ5 171245
13-23

IZ 200C10004F 0V0 1615. 14Z 70C1504F 1615G25 VRBL C7015011/2S-ZR-F
PCPN CHG TO R- L- AFT 16Z. 20Z C180CU 2315G25 0V0
HM 50C1504F 1615G25 VRBL C5015011/2S-ZR- PCPN CHG TO
R 4-L- AFT 15Z. 19Z C180CU 2315G25
END

HOURLY WEATHER REPORTS 1600-1900 GMT FEBRUARY 17 1971.

BUF

1600 W4X1/2SF 134/32/31/2112/988
1700 -XM702R-S-F 129/34/32/2112/987/S2 RB40
1800 M803R-F 125/35/33/2416/986/SE25
1900 M4011/2R-F 131/36/34/2618G26/988
NO SPECIALS AVAIBABLE FROM BUFFALO

YZ

1600 M5011/4S- 130/29/28/2102/987/ST10
1613 M4011/4S-ZR- 0000 NS10
1625 M303/4ZL-ZR-F 0000 NS10
1645 M30901ZL-F 2704 SF7ST3
1655 30M901S- 2904 SF5NS5
1700 30M9011/4S- 125/29/27/2802/986/SF3NS7
1730 M20011/2F 2404 ST10
1800 M1602F 124/29/26/2606/985/ST10
1900 M16021/2H 130/32/27/2708/987/ST10

ZD

1600 -XE7011/4S- 128/30/29/0000/987/S4ST6
1615 B5011/4IP--F 1706 ST10
1632 E3011P-F 1403 NS10
1700 E3011/4IP-F 125/31/30/2505/986/NS10
1734 -XB6011/4SG--F 2407 F3NS7
1748 -XE602F 2406 F2NS8
1800 -XB5021/2F 126/31/29/2509/987/F2NS8
1900 E1503H 126/32/28/2607/987/SC10

TZ

1600 -XE8011/4SG-F 129/31/27/1808/989/S5 ST5
1625 -XE10011/2FH 1908 F3ST7
1635 -XE10011/2SG-FH 2008 F3ST7
1700 -XM8021/4SG--FH 126/32/27/2410/988/F2ST8
1800 E1503SG--FH 124/32/29/2611/988/ST10
1900 E2003F 129/33/29/2612/989/SC9

HC

1600 B5021/2S--F 122/32/29/2111/985/S10
1700 E5021/2L--F 125/34/31/2416/986/ST10
1800 E904F 126/35/31/2712/986/ST10
1900 90E1204FH 136/35/30/2819/989/SF4SC6

PQ

1600 P3X1/4VS+ 133/26/24/1308/987/S10 VSBY 1/8-3/8
1700 P5X3/4S- 126/27/25/1407/985/S10
1720 B803S- 1305 SF10
1800 E8011/2S-SG- 121/28/26/2304/984/SF10 -
1830 B9011/2S-F 2403 SF10
1900 B10021/2S-F 121/29/28/2504/984/SF10

TR

1600 800E1200250010 144/30/23/1515G20/992/AC2AC6CI1
1618 M3008003S- 1515 SC8AC2
1622 P15X11/2S- 1515G24 S10 VSBY SE3
1625 P8X3/4S- 1516G23 S10
1630 P3X3/8S 1616G22 S10
1635 P2X1/4S+ 1515G21 S10
1640 P2X1/8S+IP 1614G21 S10
1700 P2X1/8S+IP 137/28/26/1616/990/S10 HVY DRFTG SNW
1704 P2X1/4S+ 1615 S10
1708 P5X1/2S 1615 S10 DRFTG SNW.
1735 P4X3/8S 1615 S10 DRFTG SNW
1743 P6X1/2S 1613 S10 DRFTG SNW
1800 -XM1001S- 126/29/27/1610/988/S8NS2
1808 -XM802S-IP- 1710 S6NS4
1817 -XM501S-IP- 1713 S8NS2 PIREP 1815 FALCON ASNDG TR RPTS BASE 8
1900 -XM401VS-IP-F 125/31/30/1815/987/S8NS2 VSBY 3/4-11/4 DRFTG SNW

TR

1600 800E1200250010 144/30/23/1515 G20/992/AC2AC6CI1
1618 M3008003S- 1515 SC8AC2
1622 P15X11/2S- 1515 G24 S10 VSBY SE3
1625 P8X3/4S- 1516 G23 S10
1630 P3X3/8S 1616 G22 S10
1635 P2X1/4S+ 1515 G21 S10
1640 P2X1/8S+IP 1614 G21 S10
1700 P2X1/8S+IP 137/28/26/1616/990/S10 HVY DRFTG SNW
1704 P2X1/4S+ 1615 S10
1708 P5X1/2S 1615 S10 DRFTG SNW
1735 P4X3/8S 1615 S10 DRFTG SNW
1743 P6X1/2S 1613 S10 DRFTG SNW
1800 -XM1001S- 126/29/27/1610/988/S8NS2
1808 -XM802S-IP- 1710 S6NS4
1817 -XM501S-IP- 1713 S8NS2 PIREP 1815 FALCON ASNDG TR RPTS BASE 8
1900 -XM401VS-IP-F 125/31/30/1815/987/S8NS2 VSBY 3/4-11/4 DRFTG SNW

GK

1600 E700120010 166/26/20/1815/999/AC7AS3
1700 E50010008 148/27/22/1718 G25/994/SC7AS3
1715 E3005S- 1720 G27 SC10
1725 P8X1S- 1718 S10
1727 P2X1/8S+ 1727 G35 S10 SNW WET
1800 P2X1/8S+ 138/26/25/1726/991/S10 DRFTG SNW
1830 P4X1/2S 1825 G35 S10 DRFTG SNW
1900 P6X3/4S- 131/27/26/1717/989/S10 DRFTG SNW

OW

1600 M8009 186/11/-3/0613/003/AS10
1700 550M8008 170/13/0/0611/998/SC3AC7 INTMT S-- PRESFR
1800 M80012008 155/13/2/0713/994/AC8AC2 PIREP 1745 DC-3 RPTS
HVY ICG BLO 80 PQ-QC
1900 M5008007 149/15/4/0713/992/SC7AC3

UL

1600 E220015 218/11/-1/0111/016/CI6
1700 1000E250015 191/19/6/0509/007/AC2CS8 VSBY NW2 PRESFR
1800 M150012 170/20/6/0408/001/AS10 VSBY NW2 PRESFR
1900 E15004HK 162/16/8/0311/999/AS10 VSBY NW2

A 170 171300
 YB M34021/2S- 156/17/10/1109/990/SC10
 QA 250E9008 157/22/17/1415/992/SC3AC7
 MN S 171300 P4X1/4S+ 121/24/23/1614/982/S10 PRESFR
 KF P3X3/8S 134/24/22/1110/986/S10
 ZR -XB701ZR--IP-F 119/31/31/1707/985/FISF9
 QG -XB201/2L-F 123/33/32/2305/986/F8ST2 BLN VSBL 300 FT
 VIA XU
 XU P2X3/8S 127/28/28/1612/985/S10 SNW WET
 MK P2X1/8S+ 145/26/25/1006/990/S10 PRESFR
 HM S 171300 P3X1/2S 145/26/20/1408/991/S10
 YZ M7004F 150/28/22/1208/993/AC10
 ZD E50010006F 153/28/26/1211/994/SC7AC3
 TZ E80025006H 154/30/21/1106/996/AC8CI1
 TR M9007 179/24/19/1314/003/AC10
 GK E120015 197/16/7/1111/008/AS10
 PQ E9006F 161/21/18/0604/996/AC10

SA 160 171300
 YW 500100-0240-015 012/30/23/2406/950/SC1AC1CI1
 GQ E250120015 019/32/29/1314/956/SC8AC1
 WR E603/4S- 061/31/29/1310/963/SC10
 YU 130E23012 059/23/25/1916/964/SF2SC3
 TS S 171300 -XE40039- 093/23/20/1814620/975/S4SC6 DRFTG SNW RWY 03
 23 JBI A17/B17/C18/ RWY 10 JBI A18/B15/C14 1230
 LD E9010 092/26/22/2010/071/ST10
 AM E502H 106/27/22/1204/980/ST10
 ZE S 171300 B905S--F 110/29/26/0006/981/SC10
 SE P6X1S- 141/18/15/1410/983/S10 DRFTG SNW
 XR P6X1S- 132/17/15/1616023/985/S10 DRFTG SNW
 VO E1000200015+ 158/14/1/1618/950/AC6CI2
 UY P2X3/8S 133/15/11/1810/985/S10
 AQ 1200150-0200-0E250015+ 191/4/-1/1310/995/AC2AS2CC1CI2

SA 140 171300
 PG 300N700230015+ 041/33/26/2723630/960/SC1AC6CI
 GM M1705S- 021/31/28/3314619/956/SC10 DRFTG SNW
 WG M43065015 030/31/25/2516/958/SC7AC1
 GN 0000/2.8/ 30/ 25/2615/963/
 QK 300120-015 026/24/22/2212/952/SC1AC FROIM
 XL S 171300 6-015 026/25/24/2204/953/CF
 IE 22015 053/26/23/2206/960/SF1
 DV 0500/5.+ / 24/288/2306/959/
 QT -X120-03F 058/18/18/2704/965/F4AC1 VSBY S-W 3/8

SA 172 171300
 XI E100015 189/12/9/0906/003/AC10
 OW 140-0E250012 222/2/-9/0710/014/AS5CI4
 MW 0000/M/-06/-14/0000/014/M

HU 220-015 255/2/-7/0604/026/CI5
 UL 1000E250015 148/3/-5/0306/025/AC2CI4 VSBY NW 21/2 MI
 SC 220-030 270/-7/-10/0708/026/CI1
 RQ 1000200-08 269/-6/-13/0604/024/AC1CI1
 QB 100-0250-025 279/-2/-11/0000/032/AC1CI1
 BG 1200250-025 264/-7/-13/1009/024/AC1CI1
 RJ E120015 253/-9/-13/0000/020/AC7

SA 170 171400
YB P8X3/4VS- 143/18/12/1110/986/S10 VSBY 1/2-1 RNWY 08 +17 JBI A 14
B14 C14 1330
QA E2508007S -- 143/23/19/1415/987/SC6AC4
MN S 171400 P12X3/4S - 121/24/23/1812/982/S10
KF P5X1/2S 129/24/22/1407/984/S10 /02/
ZR -XB7011/4F 126/32/31/2007/987/F2SF8
XU P7X3/4S- 122/29/29/1808/983/S10 SNW WET /02/
MK S 171400 P5X5/8S- 138/29/28/1612/988/S10 /01/
HM S 171400 P5X3/4S- 133/27/24/1611/987/S10
YZ S 171400 P3X1/4S+ 133/28/24/1208/988/S10
TZ S 171355 -XE20011/4S- 0906 S6SC4
TR M90012008 172/25/19/1512/001/AC8AS2
GK E80015 182/18/9/1210/004/AS10
PQ E9006F 155/22/19/0608/994/AC10

SA 160 171400
YW E22015 020/31/28/2405/953/SC9
GQ 20-0140-0230-015 020/31/27/2313/956/SC2ACCI CU CF ASOCTD
WR B601S--F 062/32/30/2112/964 SC10
YU 120E2008 055/29/26/2016/963/SF5SC5
TS E3003S-F 092/19/1910/973/SC10
LD B6010 095/27/24/2207/972/ST10
AM E802H 107/28/22/1602/980/ST10
ZE E905F 112/29/28/2408/982/ST10
SB S 171400 -XE1502S- 142/19/15/1509/984/S6SC4
XR P8X1S- 123/17/15/1518/983/S10 DRFTG SNW
VO -XE10002S- 156/14/5/1616/989/S3AS7
UY P2X3/8S 129/17/13/1810G25/982/S10
AQ 150-0E220015+ 184/7/1/1511/994/AS5CS4

SA 140 171400
PG M380100015 044/33/27/2716G25/962/SC6AC2
GM M34015S- 034/28/25/3109/959/SC9
WG M39075015 039/33/28/2718/961/SC6AC1
GN 0000/2.5/ 28/ 24/2615/966/
QK E30015 025/26/24/2214/952/SC7
RL E10015 999/29/28/2206/946/ST10
XL 60120015 028/25/24/2203/953/SFIAC1
IB 19015 055/25/22/1804/961/CF1
DV 7900/9.+ / 26/289/2408/959/
QT 1200220-015 060/14/11/2604/966/AC1CI2 QAPOM 114.1 MHZ 171400 -
1600 VSBY SW - NW 3 GRD FOG

SA 172 171400
XI E80015 184/12/9/0910/002/AC10
OW E1000250015 211/4/-7/0708/010/AS8CI2
MW 0000/M/ 00/-07/1201/013/M
HU 220-015 242/7/-4/0107/023/CI4
UL 1000E250015 233/11/-1/CI5 VSBY W 3MI
SC 220-025 266/-3/-10/0705/024/CI4
RQ 200-07 261/-1/-9/0604/026/CS4 HALO
QB 1000250-020 269/3/-8/0506/029/AC1CI2
BG 1200250-025 253/-4/-8/1009/020/AC2CI2
RJ 12001500E250015 242/-6/-10/0000/017/AC2AS2CS2

SA 170 171500
 YB S 171500 P9X3/4VS- 133/19/13/1211/983/S10 VSBY 1/2-1 /01/ RNWY 08
 +15 JBI A 14 B14 C14 1330 822
 QA P5X1/4S+ 132/23/20/1315020/984/S10 /01/ 831
 VV B8011/2S--F 123/27/24/1615E/984/ST10 806
 MN S 171500 -XE3002S- 127/25/23/2009/983/S4SC6 522
 KF S 171500 E10013/4S- 125/25/23/1804/983/NS10 518
 ZR -XB701VS-F 128/33/31/2407/988/R3SF7 VSBY 3/4-11/4 305
 XU E6011/4S--F 123/31/30/2005/984/ST10 511
 MK S 171500 -XE603/4ZR--S-F 129/31/30/1812/986/S2ST8 637
 HM -XE1501S- 122/31/28/1915/985/S4SC6 733
 YZ S 171500 P3X3/8S 126/28/27/1308/986/S10 /01/ 636
 ZD P3X3/8S 126/29/28/1405/987/S10 /01/ 736
 TZ S P3X1/2S 129/29/23/1107/989/S10 /01/ 637
 TR M90012009 156/28/20/1311/996/A66A33 SUN DIMLY VSB 834
 GK E700120010 170/24/17/1413/001/AC7A53 737
 PQ 200E9007 135/26/21/1208/988/SC4AC6 PRESFR 832

SA 160 171500
 YW E20015 020/32/28/2614/953/SC9 009
 QQ B1701400240015 021/33/30/2414/956/SC7ACCI 106
 WR E601F 059/32/30/2311/964/ SC10 1/2MI VSBLY N QUAD SNW 203
 NO E3005F 018/29/26/2018026/957/SC10 716
 YU 120E2006F 055/30/26/2012/963/SF5SC5 606
 TS S 171500Z -XE1202S-F 088/24/20/1814/972/F4SC6 807 R/W03 JBI A23/
 324/C23 1500Z R/W 10 23 JBI A18/B15/C14 1230Z
 LD B508 090/27/26/2109/971/ST10 801
 AM E7011/2H 107/29/23/1903/960/ST10 RNWY 11/29 +28 JBI A23 B23 C23
 124E2001104/1922-62260DY983/SR16 C1011455.
 SE -XE15013/4S- 134/20/16/1510/981/S8SC2 PIREPS V170 YZ-GB LNDG
 SB MDT RIME ICGIC 120-90 815
 XR P5X1S- 120/18/16/1510/983/S10 617 R07 +18 JBI A18 B20 C17 1500
 VO S 171500 P10X5/8S- 140/16/7/1616/986/S10 822
 AQ 150-0E220015+ 170/11/3/1711/990/AS4CS6 820

SA 140 171500
 PG M28015 059/33/27/2818024/966/SC9 226
 GN 70E1000220015+ 050/27/20/3014/963/SC2AC5012 239
 NG M380750105W-- 045/31/29/3016/964/SC7AC1 326
 GN 0000/2.0/ 31/ 25/2618/967/
 QK E15015 029/28/25/2212/953/SC9 307
 RL B10010S-- 000/29/28/2710/946/ST10 206
 XL S 171500 A7015 029/27/26/2207/953/SF10 100
 IB 14015 056/29/26/2210/962/CFA 004
 DV 9900/5.+ / 27/290/2508/959/
 QT 220-015 056/19/17/2803/965/CI1 QAPOM 114.1 MHZ 171400 - 1600
 LH S 171500 180E60090015 968/31/29/2416021/957/SC3SC4AC1 217

SA 172 171500
 XI E45010 179/13/8/0910/999/SC10 723
 OW 900E1100250012 200/7/-6/0612/007/AC2AC7CI1 PRESFR 832
 MW 0005/M/ 05/-00/0000/010/M

HU 220-015 224/8/-4/0210/017/CI5 836
 UL 1000E250020 222/15/1/1110/017/AC2CS5 IYUL AGEN 06L 17- 1400Z 733
 SC 220-025 246/5/-2/0206/020/CI4 826
 RQ 1000E20008 246/4/-4/0606/022/AC2CS5 HAALO 831
 QB 220-0250-020 264/6/-6/0407/028/CS2CI2 616
 BG 1200E200025 242/-1/-6/0808/018/AC3CS3 726
 RJ 1200E250015 234/-3/-11/0000/015/AC1CS6 712

SA 170 171600
YB -XM12011/4S- 128/20/14/0909/982/S7SC3 RNWY 08 +17 JBI A14 B14 C14
1330
QA P5X1/2S 130/23/22/1415/984/S10
MN -XE25021/2S- 128/27/26/2410/983/S2SC8
KF S 171600 E7021/4S- 122/27/25/0000/983/NS10
ZR S 171600 B6021/2S--F 136/34/33/2708/990/SF10
XU A5011/2F 126/33/31/2512/985/ST10 U GAHES 201 KHZ
MK S 171600 -XB403/4R--F 130/34/31/2111/986/F3ST7
HM B5021/2S--F 122/32/29/2111/985/ST10
ZD S 171600 -XE7011/4S- 128/30/29/0000/987/S4ST6
TZ S -XE8011/4SG-F 129/31/27/1808/989/S5ST5
TR 800E1200250010 144/30/23/1515620/992/AC2AC0C11
GK E700120010 166/26/20/1815/999/AC7AS3
PQ P3X1/4VS+ 133/26/24/1308/987/S10 VSBY 1/8-3/8 /01/

SA 160 171600
YV E20015 021/33/30/2615/955/SC9
QQ 220140-0250-015 019/34/30/2115020/955/SC1ACCI CU ASOCTD TR CI
WR B901F 060/33/30/2309/964 DC10 VSBY N QUAD 1/2 MI SNW
YU E1206F 053/31/27/2116/963/SF10
TS A2004004H 084/27/22/2015/971/SC7SC3 R/W 08 24 JBI A23/B24/C23 1500Z
R/W 10 23 JBI A13/B15/C14 1230Z
LD B901F 087/29/27/2111/970/ST10
AM E4011/4H 108/30/25/2005/980/ST10 RNWY 11/29 +26 JBI A23 B23 C23.
RNWY 04/22 +26 JBI A14 B13 C14 1435.
ZE E905F 118/30/28/2505/984/ST10 BALLOON VSD TO 1400FT
SB S 171600 E1503S--K 151/21/16/1009/980/SC10 SUN DIMLY VSD
XR B1001S- 118/19/17/1408/982/SF10 R07 +18 JBI A13 B20 C17 1500
VC S 171600 P6X11/2S- 188/18/9/1617/982/S10 /01/
UY S 171600 P3X3/3S 120/17/14/1810020/980/S10
AQ 1200150-0E220015+ 160/16/6/1714621/987/ACIAS1CS5

SA 140 171600
PG M24015S-- 074/30/25/3113/971/SC9
GM M45015+ 062/25/18/3212/967/SC9
WG S 171600 M2808SW-- 070/29/27/3013/969/SC10
GN 0000/1.5/ 33/ 28/2614/970/
QK S 171600 150E18012S- 035/29/25/2308/955/SF2SC8
RL B1006S- 009/29/27/2710/949/ST10
XL B7015 033/29/26/2313/959/SF10
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DV 1900/5.+ / 30/292/2609/959/
QT 015 056/28/26/3104/965/

SA 172 171600
XI S171600 E4002S-F 165/13/9/0912/995/SC10
OW M8009 186/11/-3/0613/003/AS10
MW 0009/M/ 09/ 05/0302/006/M
HU E220015 218/11/-1/0111/016/CI6
UL 1000E250015 110/19/2/0711/013/AC2CC6 CYUL GALEN 06L
17-1400Z
SC 220-025 233/15/9/0904/016/CI4
RQ 1000200-010 237/8/-3/0505/019/AC2CS3
QB 220-0250-020 251/10/-3/0804/024/CS3CI2
BG 1200E200025 232/3/-1/1010/014/AC4CS3
RJ E250015 222/-3/-11/0000/011/CS7

SA 170 171700
 YB S 171700 -XM15@11/4S- 124/20/14/1207/981/S6SC4 RNWY 08 +17 JBI A14
 B14 C14 1330
 QA P8X1S- 125/24/21/1713/982/S10
 VV E8@11/2S--F 123/32/31/1812E/984/ST10
 MN S 171700 -XB4@1/2S-F 128/29/28/2811/983/F4ST6
 KF B7@21/2F 126/30/28/2207/984/ST10
 ZR B9@4F 147/35/32/2915/994/ST10
 QG B9@3F 157/36/34/2922G27/996/SC10 VIA XU
 XU S 171700 ?7@11/2SP-F 134/33/32/2813/987/ST10
 MK S 171700 -XB4@3/4L-F 132/34/33/2513/987/F3ST7
 YZ 3@M9@11/4S- 125/29/27/2802/986/SF3NS7
 ZD E3@11/4IP-F 125/31/30/2505/986/NS10
 TZ S -XM8@21/4SG--FH 126/32/27/2410/988/S2ST8
 TR P2X1/8S+IP 137/28/26/1616/990/ S10 HVY DRFTG SNW
 GK E50@100@8 148/27/22/1718@25/994/SC7AS3
 PQ S 171700 P5X3/4S- 126/27/25/1404/985/S10 /02/

SA 130 171700
 YW E20@15 019/34/30/2415/953/DC8
 QQ 30-015 020/36/29/2414/956/SC2 CU CF ASOCTD
 WR B9@8 059/34/29/2412/954 SC10
 YU E12@6F 049/32/28/2116/961/SF10
 TS S 171700Z E15@30@5K 080/20/23/1915/970/SC7SC3 R/W 03 24 JBI A23/
 B24/C23 1500Z R/W 10 27 JBI A23/B25/C25 1645Z
 LD B9@11/2F 087/30/27/2210/970/ST10
 AM B6@2H 109/32/27/1907/930/ST10 RNWY 11/29 +28 JBI A23 B23 C23 1446
 RNWY 04/22 +28 JBI A14 B13 C14 1435.
 ZE E9@5F 117/31/29/2608/984/ST10
 SB E15@4K 130/23/19/2109/980/SC10
 XR -XE12@2S- 110/20/18/1408/980/S3ST7
 VO-S 171700 P10X 1S- 117/19/10/1619/978/S10
 WY P5X1/2S 116/13/15/2010/979/S10
 AQ E100@220@15+ 152/19/3/1614@25/984/AC6CS3 DRFTG SNW

SA 140 171700
 PG ?28@15+ 085/28/24/3008/974/SC10
 GM 18@M40@21/2S- 077/24/18/3312/971/SC2SC8 DRFTG SNW
 WG M38@12SW-- 083/28/23/2314/973/SC10
 CN 0000/2.0/ 35/ 30/2613/972/
 QK S 171700 E15@2S- 146/30/27/2310/958/SF10
 RL E10@12 026/26/25/3212/954/SC10
 XL E7@15 039/30/27/2308/956/SF10
 DV 0000/5.+/ 33/294/2611/959/
 GT 30@15 054/38/27/0000/965/SC1 TR SC

SA 172 171700
 XI 30@E40@60@10 162/13/8/0906/994/ST2SF4SC4
 OW 55@E80@8 170/13/0/0611/998/SC3AS7 INTMT S-- PRESFR
 MW 0009/M/ 12/ 10/2901/002/M
 HU E220@15 193/12/2/0214/008/CI8 PRESFR
 UL 100@E250@15 191/19/6/0509/007/AC2CS8 CYUL QALEN 06L 171400Z VSBY NW 2@
 PRESFR
 SC 230-@25 219/22/7/3402/012/CI3
 RQ E200@10 221/12/-1/0405/014/CS6
 QB 220-@250-@15 233/15/1//0706/018/CS2CI2 VSBY E-S 5MI
 BG 100@140@E200@25 217/8/3/0910/010/AC1AS4CS3 QEKOM QEFOM TIL 2100
 RJ 120@E250@15 211/5/2/1404/008/AC3CS4

SA 170 171800
 YB -X70M15011/2S- 119/21/15/1207/979/S2SF3SC5 RNWY 08 +17 JBI A14 B14
 C14 1330 714
 QA E8011/2S- 122/24/22/1708/982/SF10 /02/ 607
 VV S E1203F 123/33/26/2015E/984/ST10 302
 MN -XB403/4S-F 129/30/29/2916/984/F3ST7 306
 KF B5021/4F 123/32/31/2815/983/ST10 000
 ZR B804F 155/35/31/2915/996/ST10 327
 XU S 171800 A702F 141/33/32/3020G25/990 ST10 218
 MK S 171800 -X40B801201S-F 136/35/33/2717/988/F2SF2SF4ST2 307
 HM S 171800 E904F 126/35/31/2712/986/ST10 6HR 35 25 .18 304
 YZ M1602F 124/29/26/2606/985/ST10 502
 TZ S E1503SG--FH 124/32/29/2611/988/ST10 6HR 33 29 .17 S06 6 605
 TR S 171800 -XM1001S- 126/29/27/1610/988/S8NS2 /02/ 828
 GK P2X1/8S+ 138/26/25/1726/991/S10 DRFTG SNW 831
 PQ S 171800 E8011/2S-SG- 121/28/26/2304/984/SF10 6HR 28 14 .18 614

SA 160 171800
 YW E22015 016/35/29/2516/952/SC8 602
 GQ 25030015 015/38/30/2413/955/CUISC1 CF ASOCTD TR CU 804
 WR E908 056/34/30/2510/963 SC10 803
 MO E3004S-F 004/35/30/2218026/953/SC10 SNW WET 714
 YU E1206F 044/33/28/2114/960/SF10 710
 TS E1505H 076/29/24/2015/968/SC10 R/W 03 24 JBI A23/B24/C25 1500Z
 R/W 10 27 JBI A25/B25/C25 1645Z
 LD B8011/2F 082/31/27/2214024/960/ST10 804
 AM S E4011/2H 107/32/27/2109/950/ST10 002
 RNWY 11/29 +28 JBI A23 B23 C23 1446
 RNWY 04/22 +28 JBI A14 B13 C14 1435
 ZE E005F 116/33/30/2514/963/ST10 001
 SB S 171800 E003K 122/24/20/1908/978/SC10 PIREPS 1703 V170 LNDG
 SB BASE 850AG 709
 XR E1207 102/25/22/1810/977/SF10 718
 VO S 171800 PGK1/2SG 116/20/11/1610/973/S10 /02 624
 AQ E100015S- 136/19/10/1709/981/AS10 728

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 PG N34715 095/30/24/3020G08/976/SC9 131
 QM 4001000230-015 036/23/15/3411/974/SC1AC1C1 236
 WC 250M34012SW-- 092/27/22/3013/975/SC5SC5 235
 GN 0000/2.0/ 36/ 31/2712/973/
 QK A604S- 059/30/27/2812020/960/SF10 232
 RL E12015 037/26/22/3216/956/SC8 232
 XL S 171800 B803S- 038/31/27/2319/956/SF10 009

IB 28015 063/36/26/2512/963/SC5 007
 DV 0040/5+/ 32/293/2716/960/
 QT 150015 050/40/29/2504/964/AC1 806

SA 172 171800
 XI 300E4006008 143/13/8/0912/989/SF2 SF4SC4 833
 OW M80012008 155/13/2/0713/994/AC8AC2 PIREP 1745Z DC-3 RPTS
 HVY ICG BLO 80 PQ - QC 744
 MW 4025/M/ 13/ 10/03/998/M

HU 1000E200015 175/14/6/0313/002/AC2C18 849
 UL E150012 170/20/6/0408/001/AS10 CYUL GALEN 06L 17-1400Z
 VSBY NW 2MI PRESFR 752
 SC 1000230-025 193/29/9/0000/005/AC2C13 PRESFR 749
 RQ E800120010 195 16/2/0510/007/AS6AC2 PRESFR SUN DMLY VSBL 849
 QB 180-0250-010 217/17/3/0608/014/AC1C13 HAZY 749
 BG 1400E200025 199/15/7/0914622/006/AS50S3 740 QEKOM OEFOM TIL 2100
 RJ 1200E250015 195/7/1/1304/004/AC4C13 738

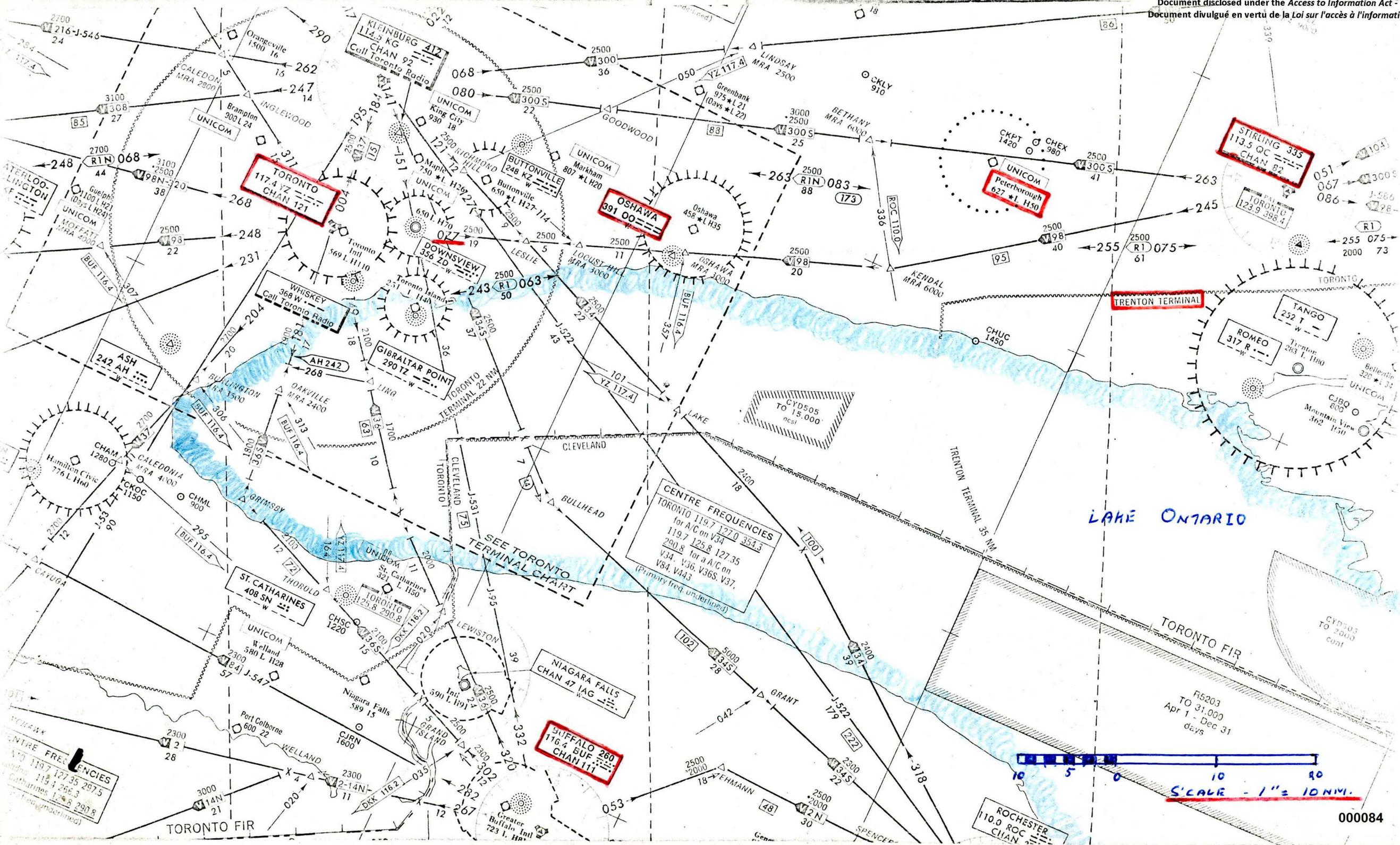
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YB 70M1002S-H 119/24/18/1704/979/SF2SC8 RNWY 08 +17 JBI A14 B14 C14 1330
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VV B1005F 129/32/27/2515E/986/ST10
MN -XB4021/2F 146/30/28/2914/990/F3ST7
KF E803F 134/33/30/2815G21/987/ST10
ZR E1405H 159/36/32/2706/997/SC10 OCNL BINOV
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XU S 171900 E1003F 152/33/31/2918G25/993/ST10
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HM S 171900 90E1204FH 136/35/30/2819/989/SF4SC6
YZ M16021/2H 130/32/27/2708/987/ST10
ZD S 171900E1503H 126/32/28/2607/987/SC8
TZ E2003F 129/33/29/2612/989/SC9
TR S 171900 -XM401VS-IP-F 125/31/30/1815/987/S8NS2 VSBY 3/4-11/4
DRFTG SNW
GK P6X3/4S- 131/27/26/1717/989/S10 DRFTG SNW
PQ S 171900 B10021/2S-F 121/29/28/2504/984/SF10

SA 160 171900
YW E22015 021/35/31/2810/954/SC9
CO 25015 011/41/25/2320G25/953/CUI CF ASOCTD
WR B1508 058/34/30/2210/964 SC10
YU E14010 042/35/27/2116G24/960/SC10
TS E1504H 072/31/27/2115/967/SC10 R/W 03 24 JBI A23/E24/C25 1500Z
R/W 10 27 JBI A25/B25/C25/ 1645Z
LD B8011/2F 081/32/28/2413/969/ST10
AM S 171900 B704H 106/30/27/2211/980/ST10 RNWY 11/29 +28 JBI A23
B23 C23 1446. RNWY 04/22 +28 JBI A14 B13 C14 1435.
ZE E905F 116/32/31/2512/983/ST10
SE E994KF 119/26/22/2011/977/SC10
XR E1207 091/27/24/1810/975/SF10
VO S 171900 -X90E12021/2S- 109/20/12/1711/976/S3SF1SC6
UY S 171900 50E1207 095/21/17/1808/973/SF5SC5
AQ E10063S- 126/19/12/1713G21/973/AS10 DRFTG SNW

SA 140 171900
PG M22090015 110/23/21/0118G25/980/SC7AC1
GM 240230015+ 098/23/15/3211/973/SC4CI1 M240
WG 200M23015 102/26/20/3011/978/SC3SC7
GN 0005/2.0/ 36/ 32/2913/975/
QK S 171900 B12015010SW- 072/29/22/2915G22/965/SF9SC1
RL E15010S-- 047/24/20/3216/959/SC10
XL -XE301S- 045/31/29/2414/959/S3SF2 SUN DIMLY VSB
IB E30015 073/36/26/2514G/967/SC10
DV 0099/5.+ / 32/292/2713/963/
QT 360250-015 047/43/27/2414/962/GUICI1 RWY 07 QALOM QAGOM 172000 - 2100

SA 172 171900
XI S 171900 P15X5/8SW-F 144/13/9/0904/989/S10
OW M5008007 149/15/4/0713/992/SC7AC3
MW 3006/M / 14/ 12/0000/994/M

HU 1000E220015 165/15/6/0211/000/AC3CI7
UL E15004HK 162/16/8/0311/9999/AS10 CYUL QALEN 06L
17-1400Z VSBY NW 2MI
SC 1000E220030 178/34/14/1810/001/AC2CI2
RQ E70010 185/18/4/0608/004/AS10
QB 1800220-0E250012 197/18/8/0708/008/AC1CS4CI1 HAZY PRESFR
BG 1400E200025 181/20/11/0816/000/AS3CS3 QEKOM QEFOM TIL 2100
RJ 1000120-0E250015 177/12/6/0000/998/AC2AS3CI2



TORONTO
117.4 YZ
CHAN 121

OSHAWA
391.00

STIRLING 335
113.5 QC
CHAN 82

Peterborough
627 *L H30

TRENTON TERMINAL

CENTRE FREQUENCIES
TORONTO 119.7 127.0 354.3
for A/C on V34
119.7 125.8 127.35
290.8 for a A/C on
V34, V36, V36S, V37,
V84, V443
(Primary freq. underlined)

SEE TORONTO
TERMINAL CHART

NIAGARA FALLS
CHAN 47 JAG

BUFFALO 260
116.4 BUF
CHAN 111

LAKE ONTARIO

F5203
TO 31.000
Apr 1 - Dec 31
days



DEPARTMENT OF TRANSPORT
AIR TRAFFIC CONTROL DIVISION

AIRPORT TRAFFIC CONTROL ACCIDENT REPORT

OSHAWA

AIRPORT

NAME OF PILOT-IN-COMMAND IN FULL

DOCTOR D.C. BRUNTON
PILOT'S LICENCE NUMBER

N/A
TYPE OF AIRCRAFT

REGISTRATION

BEECHCRAFT BONANZA MODEL 35
NAME OF OWNER OF THE AIRCRAFT

N 9812R

OPERATOR

HIRER

Ohio State University

Ohio State Univ. Air Div.

Sensor Systems Ltd.

DATE OF ACCIDENT

TIME

17 February 1971.

Approx. 1227 EST (1727 GMT)

LAST POINT OF DEPARTURE OF AIRCRAFT

LAST POINT OF INTENDED LANDING

Buffalo, N.Y. U.S.A.

Ottawa, Ontario.

POSITION OF THE AIRCRAFT WITH REFERENCE TO SOME EASILY DEFINED GEOGRAPHICAL OR TOPOGRAPHICAL FEATURE

Police advised that aircraft impacted approx. one-half mile north of Taunton Road West, east of Thornron Rd. North approx. 700 ft. facing east, one mile approx. NW Rnwy 12.

NUMBER OF PERSONS KILLED

NUMBER SERIOUSLY INJURED

Reportedly two.

None.

NATURE OF ACCIDENT AND THE APPARENT EXTENT OF DAMAGE TO THE AIRCRAFT.

Aircraft crashed while circling to land, damaged beyond repair by impact and fire.

TYPE OF FLYING (PRIVATE, NON-SCHEDULED, FERRY, ETC.)

Not known.

OPINION AS TO THE CAUSE OF THE ACCIDENT

It is believed that aircraft crashed executing an approach to land during adverse weather.

INDICATE RADIO INSTRUCTIONS OR VISUAL SIGNALS GIVEN TO THE AIRCRAFT PRIOR TO THE ACCIDENT

Aircraft was cleared to land on any runway, wind check given.

GIVE A BRIEF ACCOUNT OF THE ACCIDENT

Toronto ACC advised that N9812R was diverting to Oshawa due icing conditions, at approx. 1714Z. Undersigned advised Toronto ACC of weather below approach limits; Indefinite ceiling 300 ft. Approx. sky obscured, visibility one variable to one and one half miles in light snow and fog. This and further weather observations were relayed directly to the pilot of N9812R. Aircraft advised performing an abbreviated instrument approach, heard over the airport, circling, visual contact over tower at approx. 1723-24Z, at approx. 300 ft. heading approx SSW, advised to turn right to 040, cleared to land any runway. No further contact. AT approx. 1730Z, advised ACC aircraft overdue.

17 Feb. 1971

DATE

Mark E. Sutter

AIRPORT CONTROLLER

DATE

UNIT CHIEF

28-0001
7-66

THE REVERSE SIDE OF THIS FORM MAY BE USED FOR ADDITIONAL INFORMATION AND SKETCH



s.19(1)

OSHAWA POLICE DEPARTMENT
CONTINUATION REPORT

OCC. No. 866/71.

DATE Wed. Feb. 17/71.

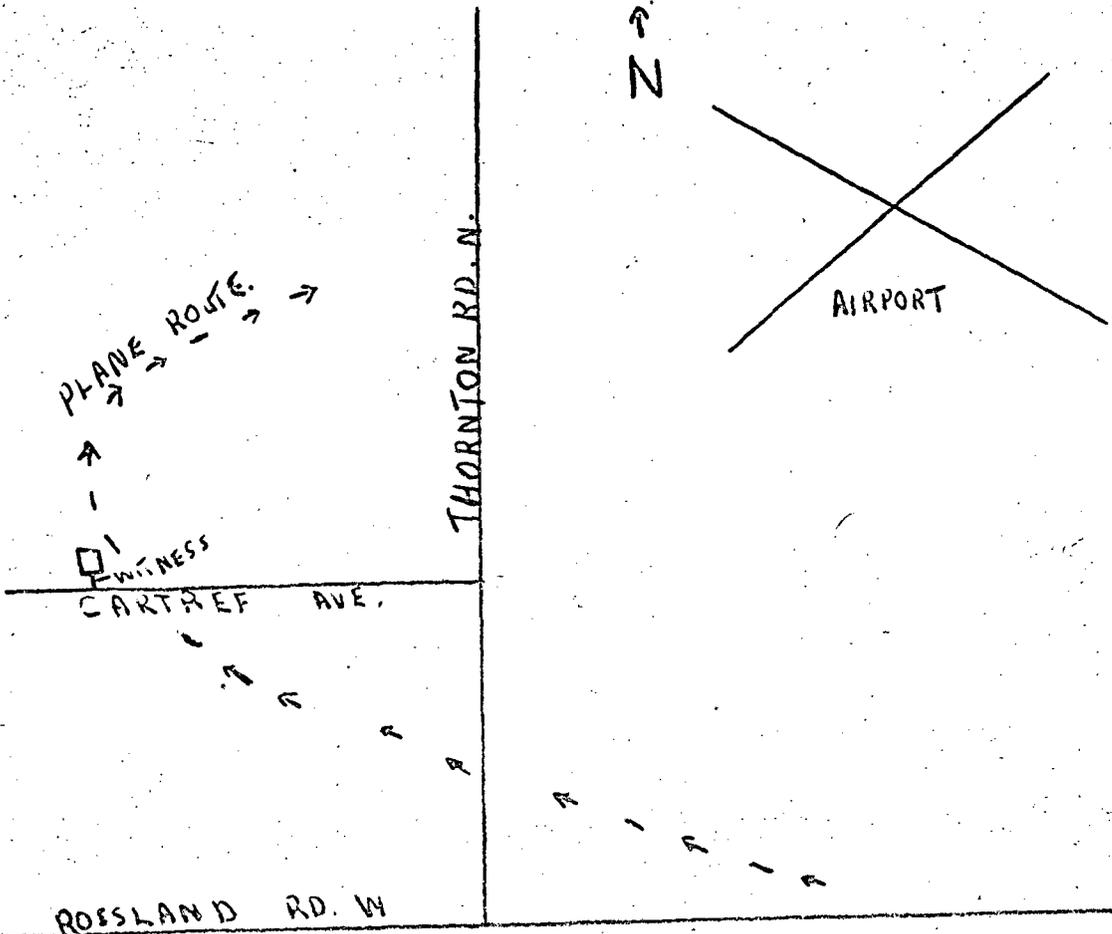
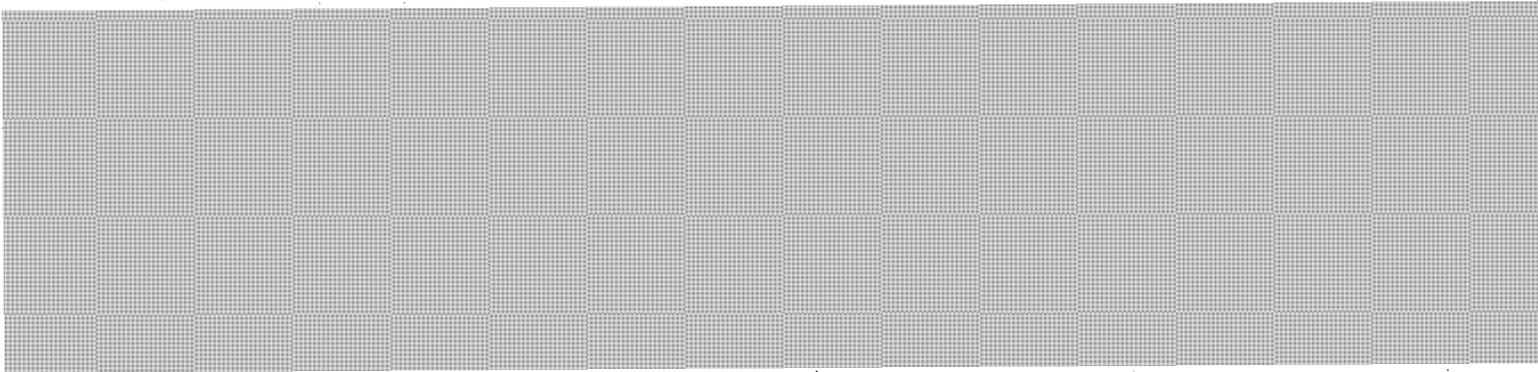
TIME

PAGE

OFFENCE — Plane crash. Plane # N9812R.

PLD: 25

Witness.



James W. Power 000086

MONTHLY SAR STATISTICS SUMMARY

AIR TRANSPORT COMMAND TRENTON SAR REGION
CAF SEARCH AND RESCUE OPERATIONS - RESCUE CO-ORDINATION

MONTH Feb YEAR 1971

Page 5 of 11 pages

SERIAL	DATE	CAT- EGORY	CAF SAR AIRCRAFT USED		CAF AIRCRAFT OTHER THAN SAR USED		AIRCRAFT OTHER THAN CAF USED		MARINE CRAFT USED		REMARKS - GENERAL AREA AND BRIEF NARRATIVE, RESULTS, ETC.
			(d)	(e)	(f)	(g)	(h)	(i)	(k)	(l)	
25	14	CS									141500Z: CF-YWY Bell helicopter 47GA overdue from North Bay to Ottawa. Helicopter located at Shirley Bay DRB facility.
26	15	CS									160300Z: CF-XCO PA28 "Cherokee" overdue from Ottawa to Pembroke. Aircraft located at Peterborough.
27	16	CS									162130Z: CF-OUY Cessna 172 overdue from Rockliffe to Watertown NY. Aircraft located at Rockliffe. Had returned due radio problems.
28	17	DA									171744Z: "SAR BRUNTON" At 1744Z Toronto ACC reported N9812R Beech 35 Bonanza, pilot and one passenger on board, overdue from Buffalo to Oshawa. At 1723Z Oshawa tower reported a red and white Bonanza flying very low in the Oshawa control zone. At 1747Z 424 Sqn was alerted, but were unable to proceed due to below-limits weather and icing in cloud. At 1800Z Oshawa OPP advised Oshawa tower that an aircraft had crashed and burned approx two miles north of Oshawa airport. At 1752Z 450 Sqn Uplands was alerted, at 1800Z Cobourg and Whitby OPP were requested to assist. At 1805Z Whitby OPP confirmed that N9812R had crashed two miles due north of the airport, was still burning and that there were no survivors. Toronto ACC and AID were informed.

5004-01901(CAIO)

Ottawa, Ontario,
March 25, 1971.

Gulf Oil Canada Limited,
477 Mount Pleasant Road,
Toronto 7, Ontario.

Attention: F. E. Egan

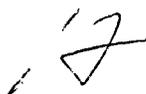
Dear Sir:

Re: Accident Beech 350, N9812R
February 17, 1971
Near Oshawa Airport, Ontario

This is to acknowledge your request for a copy of the above noted accident.

The accident is still under investigation, however, we enclose a copy of a preliminary report. A copy of the final report will be sent to you as soon as it becomes available.

Yours truly,



W. M. Howes,
for Chief, Accident Investigation,
Civil Aviation Branch.

Encl.

WTH:JC



5004-01901



GULF OIL CANADA LIMITED

477 MOUNT PLEASANT ROAD, TORONTO 7, ONTARIO • TELEPHONE 487-4343

March 17, 1971

19930

CA10

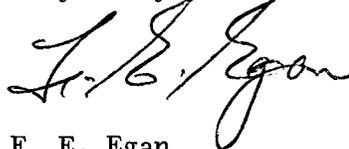
Chief Aircraft Accident Investigation
Department of Transport
No. 3 Temporary Building
Ottawa, Ontario

Dear Sir:

I would appreciate receiving a copy of Summary Report of Aircraft Accident to Beechcraft 35U of February 17, 1971 near Oshawa Airport. The Toronto Office File No. is 5002-1901.

Thank you.

Very truly yours



F. E. Egan
Representative
Product Application

FEE/bi



Aircraft Accident Investigation Division

AIRCRAFT ACCIDENT MESSAGE

ACTION SLIP

Annotate file cover:

FILE NUMBER 5004-Ø1901

SUBJECT AIRCRAFT

SUB-SUBJECT ACCIDENTS - GENERAL

FILE TITLE N9812R BEECH 35U 17 FEB 71

NR OSHAWA AIRPORT, ØNT

Make photocopies, and send copy to:

<input type="checkbox"/>	CARL Aircraft licensing
<input type="checkbox"/>	CARL Pilot licensing
<input type="checkbox"/>	CARI
<input type="checkbox"/>	CARO

DEPARTMENT OF TRANSPORT

MESSAGE FORM

FILE NO. 5004-01901 (CAIO)

DATE February 17, 1971.

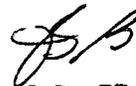
COMPLETE THIS SECTION FOR
COMMERCIAL MESSAGES ONLY

CHARGE

DCA 175 - 416115

CHARLES O. MILLER,
DIRECTOR, BUREAU OF AVIATION SAFETY,
NATIONAL TRANSPORTATION SAFETY BOARD,
DEPARTMENT OF TRANSPORTATION,
1825 CONNECTICUT AVENUE,
WASHINGTON, D.C., 20428, U.S.A.

CAIO - 55, (A) ACCID (B) BEECH 35U N9812R (C) D.C. BRUNTON (D) AS ABOVE (E) FEBRUARY 17,
1971, 1730 GMT (F) OSU (near COLUMBUS OHIO) TO OTTAWA, ONT. (G) NORTH OF OSHAWA, ONT.
AIRPORT (H) ONE CREW AND ONE PASSENGER KILLED (I) ENCOUNTERED ICING OVER LAKE ONTARIO,
REQUESTED INSTRUMENT APPROACH TO OSHAWA, OBSERVED PASSING OSHAWA WITH NO FURTHER RADIO
CONTACT - STRUCK HILLS NORTH OF AIRPORT AND BURNED (J) UNDER INVESTIGATION (K) HILLSIDE
(L) PARTICIPATION UNNECESSARY.



J.S. BRAY,
for A/Chief, Accident Investigation.

send notification to NTSB

*CAI
JA*

OTTAWA
AERADIO

FEB 18 19 02:71

5004-01901

15535

MAK034 181903

JJ CYHQYG

181855 CYYZYK

CAI OTTAWA

OCAI 154 FOLIO 5004-1901 APPENDIX 1 ICAO ANNEX 13 REFERS-

A. BEECH 35-U BONANZA NOVEMBER 9812 ROMEO *N9812R*

B. OHIO STATE UNIVERSITY, OPERATED BY SENSOR SYSTEMS INC., COLUMBUS, OHIO, US

C. DR. D. C. BRUNTON

D. FEBRUARY 17, 1971-1725 GMT

E. DEPARTED BUFFALO 1641Z, 5,000 DIRECT STIRLING TO OTTAWA, ONTARIO

F. 2 MILES NORTH WEST OF OSHAWA AIRPORT 43 DEGREES 58 MINUTES NORTH;

78 DEGREES 56 MINUTES WEST

G. TWO PERSONS ON BOARD FATALLY INJURED

H. ENCOUNTERED ICING CROSSING LAKE ONTARIO. REQUESTED INSTRUMENT APPROACH AT OSHAWA. AIRCRAFT WAS OBSERVED PASSING NEAR AIRPORT WITHOUT FURTHER CONTACT. AIRCRAFT BURNED FOLLOWING IMPACT WITH GROUND

I. ACCIDENT UNDER INVESTIGATION

J. LOCALE-ROLLING HILLS, URBAN AREA

K. PARTICIPATION OF STATE OF REGISTRY NOT REQUIRED.

OCAI TORONTO

*copy to Nat Rev.
ll
222*

Y



TO - À
A510
Attn: Mr Tapp

FROM - DE
GSR1-14

File No. - N° de dossier 5002-0907 ✓ - 01901 ✓ - 00801-1 - 00005-H.A.	Vol. No. - N° de vol. - W1009 - W0083	Subject - Sujet Accidents - General	Period - Période	
			From - De	To - À

Scheduled Retention Period - Durée de conservation prévue
5 yrs - Subject to Review Consult Archives

Disposal Authority - Autorisation de disposition
TP-111

Security Classification - Classification de sécurité
Confidential

Signature
Jean Zito
Date
April 28/76

ATTACHED IS SUBMITTED TO YOU FOR REVIEW. PLEASE INDICATE DISPOSAL ACTION TO BE TAKEN AND RETURN AS SOON AS POSSIBLE.
IL EST EXAMINÉ LES DOCS CI-JOINTS ET NOUS RENVoyer LE TOUT AUSSITÔT QUE POSSIBLE.

W1009
W0083

[Handwritten signature]
Date
7-5-76

0907 - Retain for analysis
01901 - Destroy
~~00001~~
00801 - Destroy
[Handwritten signature]
Date
7-5-76