

TOP DES

DESC. CHECK

BRIEFING.

DESC MDA CALLOUT 50 → 10

10-

FIRST OFFICER HEIGHT RUNWAY IN SIGHT.

R/A

LIGHT
↑
1500 + CHECK.

→ MDA.

X CHECK ANT. PRESS. (RADIO)

BULS. FIRST OFFICER DUTY.

* CHECK ERAP POSITION. ON TRANSCRIPT.

NOTE: Laronge Aviation
3 Hangar, Edmonton,
Tel: - L.W. Steele.
479-5946.

DUTIES OF F/E.

LOG ENTRY OF MAINTENANCE.

MEL.

LOAD

(1) *What*

F/E RESPONSIBLE FOR A/C ON SATOLITE
BASE.

CREW BRIEFING REG CHECK LIST.

F/E CALL OUTS.

CHACH SEATS

DON BLAMPED;

Mr. Athalash 3rd 2:30

Ch. Clement 1st 9:30

Binder 2nd 17:30

Peter Humble, - Newham. 1:30

Hines

Athalash	✓ Routhledge	} interviewed. -
Newham	✓ Phillips	
Hines	✓ Clements	
Humble.	✓ Binder	
	✓ Wilber	
	Weyman.	

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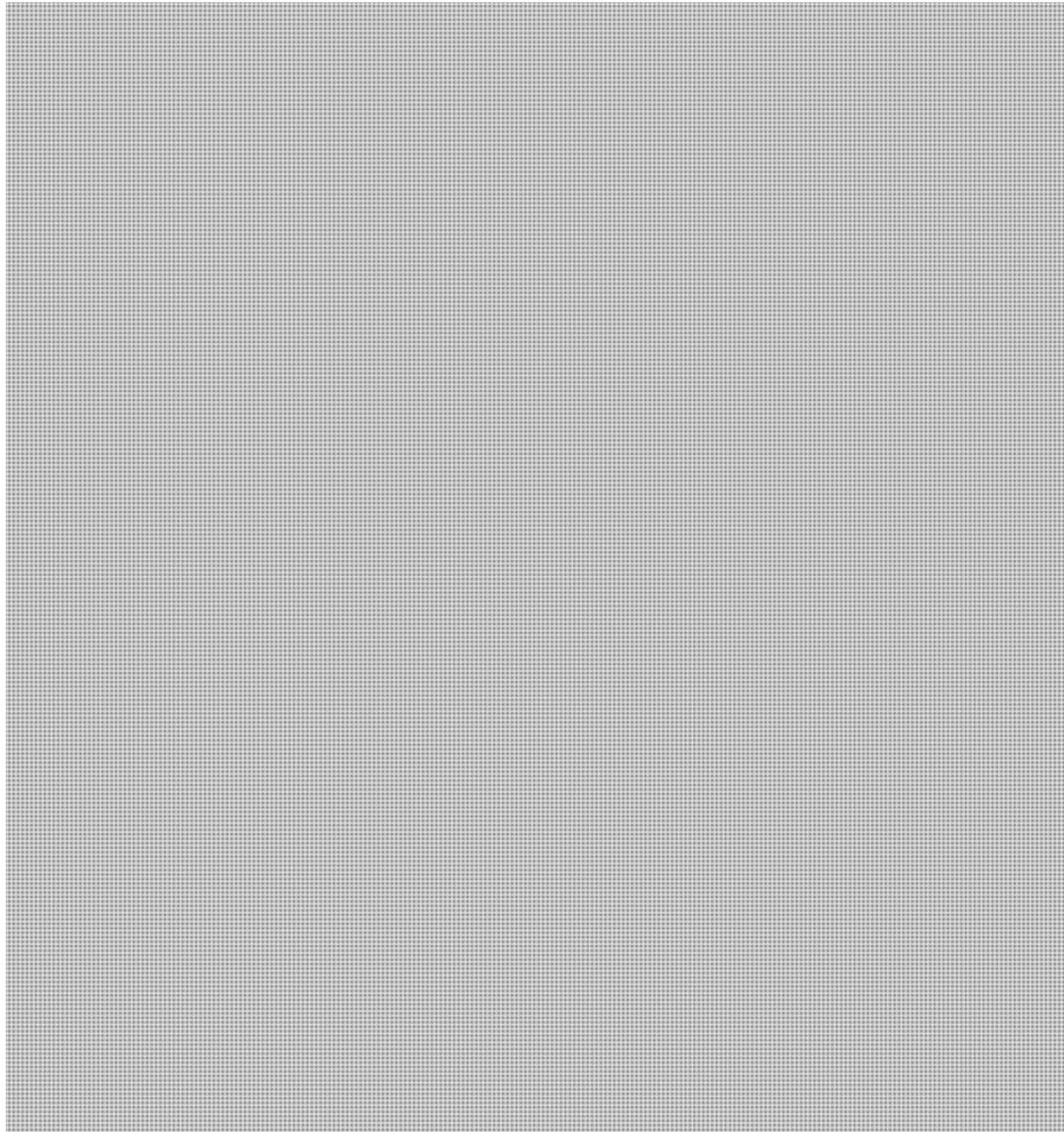
s.19(1)

WILLIAM LEROY WEBER



Q. CAN YOU GIVE ME A GENERAL OUTLINE OF YOUR AVIATION CAREER?

A.



Q. WELL WHERE DID YOU GET YOUR A.M.E. LICENCE?

A. IT WAS IN YELLOWKNIFE, IT WAS 1968, I THINK.

Q. DO YOU KNOW THE NUMBER OFF HAND?

A.



Q. DO YOU HAVE A FLIGHT ENGINEERS LICENCE?

A. NO.

Q. HOW OLD ARE YOU?

A. [REDACTED]

Q. SO GIVES YOU HOW MANY YEARS IN AVIATION?

A. SINCE I JOINED THE AIRFORCE THAT WILL BE 17 YEARS.

Q. YOU MENTIONED THEY SENT YOU ON A COURSE TO ANN ARBOR, NOW CAN YOU DETAIL WHAT YOU DID ON THE COURSE?

A. WELL WE PUT SO MANY HOURS AS CLASSROOM TRAINING ON THE ENGINES, AIR FRAME, ELECTRICAL AND I DID TAKE A BIT OF SIMULATOR TIME BECAUSE I WAS GOING TO BE A FLIGHT ENGINEER BUT [REDACTED]

[REDACTED]

THEY DID TAKE US OUT ON THE FIELD JUST TO SHOW US THE PRACTICAL END OF THE AIRCRAFT, AS FAR AS I AM CONCERNED IT WAS A VERY THOROUGH COURSE, I DON'T KNOW WHAT ELSE YOU REQUIRE.....?

Q. HOW LONG DID IT LAST?

A. IT WAS ABOUT A MONTH, I THINK IT WAS JUST A LITTLE OVER A MONTH.

Q. WHEN EXACTLY DID YOU TAKE THE COURSE?

A. IT WAS IN AUGUST.

Q. THAT WOULD BE AUGUST OF SEVENTY FOUR?

A. I THINK IT WAS THE MIDDLE OF AUGUST TO THE END OF SEPTEMBER, I JUST FORGET THE DATES RIGHT NOW.

Q. DURING YOUR TIME WITH PANARCTIC, WHAT WERE YOU MOSTLY EMPLOYED ON?

A. THE ELECTRA

Q. WERE YOU ON THE TWIN OTTERS AT ALL?

A. I WENT NORTH THREE TIMES IN THE YEAR AND HALF I WAS WITH THEM, THAT WAS THREE WEEKS STINTS SO IT WAS A TOTAL OF SIX WEEKS ON THE OTTERS THAT WAS ALL.

Q. WHO WERE YOU DIRECTLY RESPONSIBLE TO?

A. AL NEWHAM, ACTUALLY OR JOHN BINDER BUT THEN THEY HAD A BASE ENGINEER AT EDMONTON, MAURICE HOWSER HE WAS MY BOSS HERE.

- Q. YOU WERE BASED / A. IN EDMONTON/ Q. YOU WEREN'T BASED IN...
A. CALGARY...OR UP NORTH
- Q. YOU WEREN'T BASED IN EITHER CALGARY, EDMONTON OR.....
A. NO I WAS BASED IN EDMONTON I STAYED RIGHT HERE
- Q. IN EDMONTON THEN, YOUR DIRECT SUPERVISOR WOULD BE WHO?
A. MORRIS HAWSER.
- Q. HE DIRECTED WHAT YOU WOULD DO AND IF YOU HAD ANY PROBLEMS WHO
WOULD YOU GO TO?
A. I WOULD PHONE CALGARY TO AL NEWHAM, JOHN BINDER AND ASK THEM WHAT
ACTION THEY REQUIRED TO BE CARRIED OUT.
- Q. THIS WOULD BE IN....WHAT INSTANCES WOULD YOU CALL UP CALGARY?
A. WELL IF WE HAD A PROBLEM SAY AND WE'D TRY TO TROUBLE SHOOT IT AND
WHAT WE SUSPECT AND THEN WE'D CALL THEM, 'CAUSE THEY HAD MORE
EXPERIENCE AND JUST GET THEM TO VERIFY WHAT WE THOUGHT IT WAS - JUST
TO MAKE SURE WE WERE GOING AFTER THE RIGHT THING.
- Q. DID YOU DO THE CHECK ON THE AEROPLANE PRIOR TO IT LEAVING FOR REA
POINT ON 29TH OCTOBER?
A. NO, IT CAME UP FROM CALGARY THEREFORE THE DAILY INSPECTION WAS DONE IN
CALGARY. JUST LANDED HERE TO REFUELD LOADED TO GO NORTH
- Q. DID YOU HAVE ANY OCCASION TO LOOK AT THE AEROPLANE AT THAT INSTANCE AT ALL?
A. NO, IT WAS SERVICEABLE. I JUST REFUELED IT AND A WALK AROUND TO MAKE SURE
EVERYTHING WAS - NOTHING FALLING OFF.
- Q. I HAVE A COPY OF THE, A PHOTOSTAT COPY OF THE LAST ER JOURNEY LOG BOOK
FOR THE AEROPLANE AND BELIEVE YOU CONDUCTED A - I'LL SHOW YOU THE PAGE,
IT'S THE LAST PAGE, PAGE 19 OF THE JOURNEY LOG BOOK - AND THAT WOULD BE
VOLUME FIVE - AND THE DATE IS OCTOBER 28TH, 1974 AND THE ENTRY HERE IS
'NUMBER ONE CHECK CARRIED OUT, AIRCRAFT AIRWORTHY' AND SIGNED BY W.L. WEBER -
[REDACTED] THAT IS YOU?

- A. IS THAT THE SAME DAY? I THOUGHT IT WAS COMING FROM CALGARY THAT DAY - I DON'T REMEMBER NOW BUT ANYHOW.
- Q. IT CAME FROM CALGARY ON THE 29TH, THE DAY PREVIOUS THAT'S ON THE 28TH WAS WHEN YOU CERTIFIED FOR A NUMBER ONE CHECK. COULD YOU TELL ME WHAT THAT CHECK CONSISTED OF?
- A. WELL PANARCTIC HAS A CHECK CARD, AND THERE'S THREE CARDS ON THIS AND ITS AN M.O.T. APPROVED CHECK AND YOU JUST GO THROUGH THE CARDS AND CARRY OUT WHATEVER IT CALLS FOR AND SEE IF ITS SERVICEABLE AND SIGN IT OUT, SEE IF THERE ARE ANY SNAGS IN YOUR LOG BOOK YOU ALSO CLEAR THEM UP.
- Q. YOU WOULD HAVE OCCASION TO CHECK THE - WHICH LOGS WOULD YOU CHECK?
- A. THE FLIGHT LOG, TO SEE IF THERE ARE ANY PROBLEMS IN THERE WE ALSO CHECK THAT TO MAKE SURE THERE ARE NO PROBLEMS AND RECTIFY THEM AND ALSO GO THROUGH THE CARDS.
- Q. ON THAT NUMBER ONE CHECK THAT YOU DID ON THE 28TH, WOULD YOU HAVE OCCASION TO CHECK THE COCKPIT VOICE RECORDER?
- A. U-HUGH - WE USUALLY CHECK THAT BY THE TEST BUTTON.
- A. I REALIZE ITS GOING BACK A LITTLE BIT SO YOU'RE NOT GOING TO REMEMBER SOME INDIVIDUAL ITEM, COULD YOU DETAIL OR COULD YOU REMEMBER THE CHECK YOU DID ON THE COCKPIT VOICE RECORDER?
- A. AS YOU SAY ITS A LONG WAY BACK AND NORMALLY ON A COCKPIT CHECK, HE'S TALKING ABOUT A FLIGHT ENGINEER CARRIES THIS OUT, THERE'S THREE CARDS - WE CARRY OUT TWO AND THE FLIGHT ENGINEER DOES HIS CHECK AND HE SIGNS THE THIRD CARD SO I DO NOT REMEMBER IF I DID IT THAT TIME OR HE DID IT THE ONLY WAY I WOULD KNOW WOULD BE FOR ME TO GO BACK TO THE CARDS TO SEE IF I SIGNED IT OUT.
- Q. WHEN YOU DID A CHECK ON A COCKPIT VOICE RECORDER, WHAT WOULD YOU EXPECT TO FIND?
- A. NOW I BELIEVE ON THAT ONE IT HAD A LIGHT - THERE WAS TWO DIFFERENT TYPES, AND THE FIRST TEST THAT WE DID WAS PLAY BACK.

Q. DID YOU EVER DO A PLAY BACK ON THIS?

A. AHMM (AFFIRMATIVE)

Q. HOW FREQUENTLY WOULD YOU DO A PLAY BACK?

A. WELL DEPENDS IF I DID THE CHECK OR THE FLIGHT ENGINEER DID IT. I USUALLY I LIKED TO PLAY IT BACK, I LIKE TO HEAR MY OWN VOICE ON IT.

Q. SO IF YOU DID A CHECK YOUR PROCEDURE WOULD BE TO, TO HAVE A PLAY BACK.

A. YES.

Q. WOULD YOU BE RESPONSIBLE FOR CHECKING THE CARGO OR SUPERVISING ANY OF THE CARGO LOADING IN EDMONTON?

A. NO, LOADMASTERS AND EXPEDITERS ATTEND TO IT.

Q. JUST AS A GENERAL THING NOW, IF YOU FOUND SOME IRREGULARITY OR UNSERVICEABILITY ENTERED IN THE LOG BOOK WHEN IT ARRIVES AT YOUR STATION WHICH WOULD BE EDMONTON, WHAT PROCEDURE WOULD YOU GO THROUGH SO AS TO RECTIFY THIS?

A. WELL IF WE HAD THE SPARES WE WOULD RECTIFY IT, IF IT WAS SOMETHING TO - YOU KNOW - TO SERIOUSLY EFFECT THE SERVICEABILITY WE'D GROUND THE AIRCRAFT TILL WE DID GET THE PARTS FROM CALGARY IF THEY HAD THEM AND HAVE THEM FLOWN UP FROM CALGARY IF WE DID NOT HAVE THEM IN STOCK IN EDMONTON.

Q. YOU BEING A CERTIFIED ENGINEER, WOULD YOU HAVE THE FINAL SAY IN THE CERTIFICATION AND THE RECTIFICATION OF UNSERVICEABILITIES

A. IF I FOUND IT WASN'T SERVICEABLE - YES - I WOULDN'T SIGN IT OUT IF IT WASN'T SERVICEABLE.

Q. IS THERE ANY TIME THAT YOU HAVE BEEN OVER-RULED ON THIS?

A. NO - NEVER HAD OCCASSION. ANYTHING THAT EVER DID COME UP WAS EITHER SERIOUS ENOUGH OR IT WASN'T.

Q. HOW WOULD YOU DETERMINE WHETHER IT WAS SERIOUS OR NOT?

A. I'D SEE IF THERE WAS A GENERATOR WAS BLOWN OR SOMETHING LIKE THAT WE WOULD NOT SEND IT OUT AND REPLACE AND WE CARRIED SPARES HERE

- Q. WOULD YOU ALSO CHECK THE MINIMUM EQUIPMENT LIST FOR THAT AIRCRAFT?
- A. ER - FOR SURVIVAL YOU MEAN
- Q. NO, NO - THE MINIMUM EQUIPMENT, THE EQUIPMENT THAT HAS TO BE ON THE AIRCRAFT PRIOR TO DEPARTURE.
- A. (ANSWER NOT LEGIBLE)
- Q. BILL, WHAT MANUALS WERE AVAILABLE FOR YOU TO AID YOU IN CERTIFYING THE AEROPLANE IN EDMONTON?
- A. WELL THEY CARRY A SET WITH THEM IN THE AIRCRAFT, PLUS WE HAVE MANUALS IN THE SHOP BUT WE HAD A COMPLETE SET IN THE SHOP BUT I DO NOT REMEMBER EXACTLY WHAT WE HAD
- Q. WHEN YOU REFER TO A COMPLETE SET COULD YOU MORE OR LESS DETAIL THEM?
- A. YOU NEED MAINTENANCE MANUAL, PARTS MANUAL AND OPERATIONS MANUAL AND ALSO YOU HAVE COMPANY OPERATIONS ITS A SMALLER MANUAL AND THINGS LIKE THAT.
- Q. WHEN YOU CERTIFIED THE AEROPLANE ON OCCASIONS THAT YOU CERTIFIED THE AEROPLANE WHO WOULD YOU REPORT TO WITH REGARDS TO THE SERVICEABILITY OF THE AIRCRAFT?
- A. JUST THE EXPEDITOR AND TELL HIM IT WAS SERVICEABLE TO LOAD AND IF IT WASN'T SERVICEABLE THEN I'D NOTIFY CALGARY.
- Q. WOULD YOU COMMUNICATE WITH THE FLIGHT ENGINEER AS TO THE SERVICEABILITY OF THE AEROPLANE?
- A. OH YES
- Q. HOW WOULD YOU BE AWARE OF ALL THE DEFERRED SNAGS THERE ARE ON THE AIRCRAFT.
- A. IN THEIR FLIGHT LOG THEY HAD A LIST IN THE BACK OF THE BOOK AND THEY WERE NUMBERED AND YOU CAN LOOK THERE AND SEE WHAT WAS DEFERRED AND WHAT HAD BEEN TRANSFERRED AT CALGARY
- Q. WAS THERE ANY OCCASSION WHEN YOU WOULD LOOK AT THE SNAG LIST OR DEFERRED LIST ON THE FLIGHT ENGINEERS LOG AND DISAGREE WITH SOME OF THE DEFERRED SNAGS THAT WERE ENTERED?

- A. I DON'T REMEMBER ANY, I REALLY DON'T KNOW - NO I DON'T THINK SO ANYTIME THERE WAS ANYTHING THERE THEY SEEMED TO HAVE IT FERRYED TO CALGARY.
- Q. CAN YOU REMEMBER WHEN THE 'G' NET WAS TAKEN ON AT PAB.
- A. NO.
- Q. AS THE CERTIFYING ENGINEER IN EDMONTON DID YOU HAVE COMPLETE CONTROL OF THE AEROPLANE?
- A. I'M NOT QUITE SURE IF I UNDERSTAND THIS - IF I THOUGHT IT WAS TO BE GROUNDED I WOULDN'T SIGN IT IF IT WAS NOT SERVICEABLE.
- Q. NO, WHAT I'M REFERRING TO IS OTHER PEOPLE I TAKE IT WOULD BE WORKING WITH YOU ON THE CERTIFICATION OF THE AIRCRAFT, HELPING YOU TO DO THE INSPECTION.
- A. NO NOT REALLY, THERE'S JUST THE TWO OF US OUT HERE AND WE WORK TOGETHER IN THIS - WE SEE THAT THERE'S SOMETHING WRONG, THERE'S NEVER ANY QUESTION, YOU SEE NORMALLY IT'S STRAIGHTFORWARD IT'S EITHER SERVICEABLE OR ITS UNSERVICEABLE. IT COULD BE SERIOUS ENOUGH OR NOT SERIOUS ENOUGH TO.....
- Q. BILL, DID YOU WORK IN THE HANGAR AT ALL, AT CALGARY?
- A. YEAH. I WAS DOWN A COUPLE OF TIMES; IF THEY HAD A MAJOR CHECK AND WERE SHORT-STAFFED, ONE OF US GUYS WOULD GO DOWN FOR A WEEK OR SO TO HELP OUT.
- Q. AT ANY TIME DID YOU WORK ON THE AEROPLANE, CAN YOU REMEMBER ANY WORK BEING PERFORMED ON THE PITOT STATIC SYSTEM?
- A/ IT WASN'T THAT OFTEN THAT I WAS DOWN THERE. IT SEEMS TO ME I DO REMEMBER THEM CHECKING IT ONE TIME, BUT THAT WOULD BE QUITE A WHILE AGO.
- Q. WHEN YOU REFER TO CHECKING, WHAT DO YOU MEAN?
- A. NORMALLY, IN THE BLACK BOX WE DO IT PRESSURE CHECKING.
- Q. WHAT WE ARE MORE INTERESTED IN, THE PLUMBING DO YOU KNOW IF A CHANGE WAS MADE TO THIS SECTION?
- A. I NEVER WORKED IN THAT AREA, SO I REALLY WOULDN'T KNOW. THEY ONLY GIVE YOU A SPECIFIED AREA TO WORK ON, SO YOU DO THAT JOB, AND SOMEBODY ELSE HAS ANOTHER JOB.

Q. IF AN ELECTRICAL SNAG DEVELOPS, WHAT WOULD YOUR PROCEDURE BE?

A. THAT DEPENDS ON WHICH AREA. YOU KNOW, WE'D FIND OUT WHERE IT IS AND WHAT WAS REQUIRED, THEN WHEN YOU FIND OUT, REPAIR IT.

Q. SO, YOU WOULD BE DOING THE REPAIR OF THE...

A. NO, NOT IN CALGARY. I'M JUST TALKING OF THE AVERAGE GENERATOR REPAIR ON SOMETHING LIKE THIS. IN CALGARY, AN ELECTRICIAN LOOKS AFTER ALL THE MAINTENANCE.

Q. DID YOU HAVE ANY PROBLEMS WITH THE MAINTENANCE END AT ALL?

A. NO.

Q. OPERATIONAL, I'M TALKING ABOUT NOW.

A. NO, THE ONLY THING I DIDN'T LIKE WAS THE HOURS -- THEY WERE ODD. BUT NO I NEVER HAD ANY PROBLEMS.

Q. WOULD YOU MIND TELLING ME WHY YOU TERMINATED YOUR EMPLOYMENT WITH PANARTIC?

A. IT WAS MAINLY THE HOURS AFTER THE PAB CRASH. THEY CHANGED THEIR FLIGHTS FROM NIGHT FLIGHTS TO DAY FLIGHTS, WHICH MEANT I HAD TO WORK OUTSIDE AT NIGHT, EH, AND WE WERE OUT CHECKING ENGINES ON A 10-FOOT LADDER WITH A RADAR LIGHT IN ONE HAND. WE WERE OUTSIDE, AND THE CONDITIONS WEREN'T VERY GOOD, AND I THOUGHT IF I COULD GET A JOB IN A HANGAR SOMEPLACE, IT WOULD BE A LOT BETTER. THEY WOULD CALL ME OUT FOR MAYBE, 3 HOURS IN THE MORNING, AND 3 HOURS IN THE AFTERNOON, AND I WAS MAYBE WORKING 6 HOURS A DAY, AND FOR ME ITS QUITE A DRIVE. I END UP DRIVING ABOUT 120-130 MILES A DAY JUST FOR 6 HOURS OF WORK.

Q. YOU WERE BEING PAID BY THE HOUR, WERE YOU?

A. YEAH, WELL SALARY AND HOUR.

Q. IN YOUR ESTIMATION, WERE PROBLEMS ENCOUNTERED THEN BY LACK OF FACILITIES?

A/ WELL, IT'S NOT VERY PLEASANT WORKING OUTSIDE, AND THEY HAD NO HANGAR HERE. MIND YOU, MOST OF THE MAJOR WORK WAS DONE IN THE HANGAR IN CALGARY, AND ALL I'D NEED TO DO HERE WAS THE ENGINE INSPECTION, AND THE OCCASIONAL NUMBER ONE CHECK AND SNAGS.

Q. WHAT TIME ARE WE TALKING ABOUT THAT YOU WOULD TAKE TO DO A NUMBER ONE CHECK?

A. YOU MEAN HOW LONG? NORMALLY 8 HOURS.

Q. IT WOULD TAKE YOU 8 HOURS TO DO A NUMBER ONE CHECK?

A. WELL, USUALLY IF I FINISHED THE CHECK BEFORE THEN, I STILL WOULD FIND LITTLE THINGS TO DO. I TRIED TO PUT THE 8 HOURS IN.

Q. IN EDMONTON, YOU REALLY HAD NO FACILITIES THEN FOR CONDUCTING YOUR MAINTENANCE WORK?

A. IT DEPENDS ON WHAT YOU MEAN. AS FAR AS DOING A CHECK, WE COULD CHECK EVERYTHING WITH A LADDER AND A LIGHT, AND DO YOUR FUNCTIONAL TESTS AND ALL THIS.

Q. AT NIGHT TIME, WHEN YOU WERE DOING THE CHECKS OUTSIDE, WERE YOU DOING IT MOSTLY BY A RADAR LIGHT?

A. WELL, PLUS THE LIGHTS THEY HAVE UP ON THE BUILDING, BUT WHEN YOU GOT AROUND TO THE OTHER SIDE OF THE AEROPLANE YOU COULDN'T SEE THAT WELL. AND WHEN IT WAS DONE AT NIGHT (THAT WASN'T VERY LONG AFTER I LEFT, SO ACTUALLY IT WAS JUST GETTING DARK WHILE I WAS THERE.)

Q. SO, DID YOU TALK TO ANYBODY ABOUT THE PROBLEMS YOU WERE HAVING, OR....?

A. WELL, THEY WERE WELL AWARE THAT WE WERE WORKING OUTSIDE AND OF HOW WE WERE DOING IT.

Q. WHO DID YOU TALK TO?

A. WELL, JUST MY IMMEDIATE SUPERVISOR.

Q. WHATS HIS NAME?

A. MAURICE HONSER

Q. DO YOU KNOW IF HE HAD TALKED TO ANYBODY ABOUT PROBLEMS?

A. I DON'T KNOW IF HE HAS WENT ANY FARTHER OR NOT.

Q. WERE THERE ANY IMPROVEMENTS MADE AFTERWARDS?

A. WELL, YOU SEE I DIDN'T STAY. I LEFT THE COMPANY.

Q. WAS THERE ANY PROBLEM THAT YOU HAD TWO OR THREE BOSSES?

A. NO, NOT REALLY. IF I DID HAVE A PROBLEM I WENT TO MAURICE, AND IF HE DIDN'T KNOW WHAT TO DO, WE'D CALL CALGARY, AND WHEN THEY DECIDED WHAT THEY WANTED TO DO, THEN WE'D GO AHEAD AND DO IT.

Q. WERE YOU RESPONSIBLE FOR REFUELING THE AEROPLANE?

A. USUALLY I DID IT, AND THE FLIGHT ENGINEER. ONE WOULD DO ONE SIDE, AND THE OTHER WOULD DO THE OTHER SIDE, THEN WE WOULD CHECK WITH THE STICKS AFTER.

Q. WHO WOULD CONVEY TO YOU THE FUEL LOAD THAT WAS REQUIRED?

A. THE CAPTAIN

Q. THE CAPTAIN WOULD BE?

A. CAPTAIN OF THE FLIGHT. HE WOULD TELL THE FLIGHT ENGINEER OR MYSELF AND THEN WE WOULD REFUEL THE AEROPLANE.

Q. BUT THE NORMAL ROUTINE WOULD BE, WHO - WHO WOULD TELL YOU?

A. THE CAPTAIN WOULD, HE WOULD FIGURE OUT THE LOAD AND ADVISE ME.

Q. WOULD YOU NORMALLY TAKE A FUEL SAMPLE?

A. USUALLY JUST DRAIN THE SUMPS INTO CONTAINERS.

Q. WAS THIS HYDRANT FUELLING OR BOWSER FUELLING?

A. BOWSER FUELLING.

Q. WOULD YOU TAKE A SAMPLE FROM THE BOWSER?

A. NO, IMPERIAL OIL DID THEIR OWN CHECK.

Q. DID YOU EVER REQUEST A FUEL SAMPLE?

A. YES, I HAVE DONE WHEN I SUSPECTED MOISTURE I WOULD HAVE IT CHECKED.

Q. IT'S REED GLEN DIRECTING QUESTIONS NOW. BILL, YOU SAID YOU WERE DOWN AT ANN ARBOR LAST AUGUST?

A. AUGUST, YES

Q. WAS CAPTAIN THOMPSON DOWN THERE AT THAT TIME?

A. YES, HE WENT DOWN WITH US, FOR FLIGHT SIMULATOR TRAINING BUT HE DIDN'T STAY THERE, DURING THE PERIOD I WAS THERE.

Q. DID YOU KNOW BRIAN THOMPSON VERY WELL?

A. OH YES, PRETTY WELL. I DID KNOW HIM BEFORE I STARTED WITH PANARCTIC

- A. BUT WHEN YOU WORK FOR A COMPANY AND YOU SEE THEM WALK THROUGH ALL THE TIME, BUT HE LIVED IN LEDUC AYE
- Q. DID YOU EVER KNOW HIM SOCIALLY?
- A. NO, NOT REALLY, BECAUSE.....
- Q. LIKE, I MEAN, HAVING A BEER WITH HIM OR.....
- A. OH, WE'VE DONE THAT, GONE OUT AND HAD A FEW BEER AFTER WORK OR SOMETHING. NOT TOO OFTEN, BECAUSE HE'S QUITE A WAYS DOWN THERE, JUST NEVER GOT TOGETHER REALLY
- Q. COULD YOU COMMENT ON HIS DRINKING HABITS, THAT ER.....
- A. WELL I DIDN'T, I NEVER SOCIALIZED ENOUGH WITH HIM TO.
- Q. JUST THE ODD BEER AFTER WORK.
- Q. I USED TO GO DOWN THERE AND HAVE A COUPLE AND THEN I WOULD GO HOME OR VISA VERSA.
- Q. AMONGST HIS CREW OR ANY OTHER CREWS HAVE YOU EVER NOTICED ANY DISENTERMENT BETWEEN THE CREWS WHEN THEY'RE GOING THROUGH?
- A. NO, NOT AS FAR AS I KNOW, THEY ALL GOT ALONG GOOD.
- Q. NOW ON THE NORTHERN FLIGHTS, ER, THEY ALWAYS PICKED UP MOST OF THE FUEL HERE I SUPPOSE?
- A. YES.
- Q. HAVE YOU EVER HAD TO, ER, WELL YOU'VE PROBABLY NEVER HAD TO DEFUEL AN ELECTRA HAVE YOU?
- A. I NEVER PERSONALLY, THEY DID ONE TIME, THEY PUT TOO MUCH LOAD ON AND THE CAPTAIN, THERE WAS ANOTHER CHAP HE DOESN'T WORK FOR PANARCTIC NOW, HE HAD TO DEFUEL BUT ER, I WAS OFF THAT DAY SO I JUST HEARD ABOUT IT.
- Q. THIS WAS BECAUSE OF LOAD?
- A. YES, THEY PUT TOO MUCH ON IT, SO THEY HAD TO TAKE SOME OFF
- Q. HAVE YOU EVER HEARD THE CAPTAIN AND THE FLIGHT ENGINEER DISCUSSING ER LOADS, FUEL LOADS?
- A. JUST HEARD THE CAPTAIN TELL HIM HOW MUCH HE WANTED ABOARD.

Q. THEN THE FLIGHT ENGINEER WOULD GO TO YOU?

A. WELL BOTH OF US WOULD GO AND PUT IT ON.

Q. I SEE. OTHER THAN THIS HAVE YOU HEARD, HAVE YOU EVER HEARD THE CAPTAIN AND THE FLIGHT ENGINEER DISCUSSING FUEL LOADS AND ALTERNATES THINGS LIKE THIS, GENERAL FLIGHT PLANNING?

A. I NEVER PAID MUCH ATTENTION EH, USUALLY THEY GIVE YOU A SITE FOR LOADING FOR THE FLIGHT AND SO MUCH FOR THEIR ALTERNATE AND THAT WAS IT, BUT AS FAR AS DISCUSSING IT, ER, NO.

Q. WOULD YOU BE AWARE OF THE FUEL LOAD BEFORE THE AEROPLANE CAME IN? WOULD PANARCTIC DISPATCH TELL YOU OF THIS?

A. THEY WOULD GIVE YOU A FUEL LOAD.

Q. APPROXIMATE

A. BUT THE CREW ALWAYS TOLD YOU OF THE LOAD WHEN THEY FOUND OUT BECAUSE I KNOW QUITE OFTEN WE HAD TO WAIT ON IT TILL THEY GOT IT ALL FIGURED OUT.

Q. IN YOUR EXPERIENCE AT EDMONTON, ER DO YOU KNOW IF THE FLIGHT ENGINEER'S EVER PUT EXTRA FUEL ON THEMSELVES, WITHOUT ADVISING THE CAPTAIN?

A. NO, I DON'T THINK SO, MAYBE 50 LBS OVER ON A TANK.

Q. NO, I'M TALKING ABOUT A 1,000 OR 2,000.

A. NO.

Q. I SEE, SO NO ENGINEER'S EVER COME TO YOU AND SAID "I WANT AN EXTRA 2,000LBS ON BOARD".

A. IF HE DID IT, HE DID IT WITHOUT ME KNOWING BECAUSE I KNOW WHAT THE LOAD'S SUPPOSED TO BE.

Q. AND WHEN YOU PUT THE FUEL LOAD ON, SAY IT WAS 18,000 OR 20,000 LBS, OR WHATEVER, WHAT PAPER TRANSACTIONS ER, TOOK PLACE, DID YOU PUT IT ONLY ON THE FLIGHT LOG, OR WHAT, WHAT HAPPENED, WHEN YOU HAD 18,000 LBS.

A. NO ER, WHEN THE CAPTAIN FIGURED IT OUT, HE HAD IT ON HIS SHEET THERE.....

Q. YES

A. FLIGHT SHEET FOR THAT FLIGHT AND HE WOULD JUST TELL ME WHAT HE WANTED, HE

A. HAD TO PUT SO MUCH IN EACH TANK, SO HE JUST, THEY HAD A CHART TO TAKE IT OFF, AND YOU JUST SEE HOW MUCH IS REQUIRED IN EACH TANK AND PUT THAT IN.

Q. SO THAT IF YOU DID, SAY, PUT 18,000 LBS. ON, HOW WOULD YOU SHOW THIS - WHO WOULD YOU GIVE THIS INFORMATION TO?

A. WELL, LOOK I'D CHECK BY THE STICKS ON IT, AND THE FLIGHT ENGINEER WOULD CHECK, AND JUST TELL THE CAPTAIN THAT'S WHAT HE HAD ON.

Q. SO, YOU NEVER DID THEN GIVE SOMEBODY A PIECE OF PAPER 18,000 LBS HAD GONE ON.

A. NO.

Q. AND, ER, IF THE ENGINEERS HAD OF ASKED FOR EXTRA FUEL YOU WOULD KNOW ABOUT IT THEN?

A. YES, PRETTY WELL, BECAUSE THE TWO OF US WERE THERE REFUELLING AT THE SAME TIME.

Q. WELL THERE WAS A, WERE YOU AWARE THERE WAS A FUEL DISCREPANCY WELL YOU WOULDN'T SEE THIS IF YOU DIDN'T SEE THE FLIGHT LOG OR THE MANIFEST WOULD YOU.

A. NO. THEY'D JUST TELL ME WHAT THEY WANTED AND THATS WHAT THEY PUT IN; AND A LOT OF TIMES SAY IF I WAS BUSY, DOING SOMETHING ELSE, THE FLIGHT ENGINEER WOULD PUT THE LOAD ON HIMSELF.

Q. DID THIS HAPPEN VERY OFTEN?

A. NO, I DON'T THINK SO. IF I HAD A HERMAN NELSON SITTING OUT ON THE RAMP AND I WANTED TO GET IT OUT, THE WAY I'D GO AHEAD AND MOVE IT, YOU KNOW AND THE FLIGHT ENGINEER WOULD REFUEL.

Q. SURE.

A. BUT USUALLY WE WERE DOING IT OURSELVES.

Q. REFERENCE BRIAN'S QUESTION THERE, HE ASKS ABOUT WORKING CONDITIONS; DO YOU KNOW IF YOUR SUPERVISOR------(TAPE ENDS)

OVER:

Q. BILL I'LL JUST ASK THAT QUESTION AGAIN, ER WERE YOU AWARE IF YOUR SUPERVISOR

Q. EVER TOOK THIS UP AT THE CALGARY OFFICE ABOUT THE WORKING CONDITIONS WITH THE PLANE.

A. WELL I THINK HE REALIZED WHAT I WAS COMPLAINING ABOUT BUT ER BUT THERE WASN'T MUCH THEY COULD DO TO RECTIFY IT OTHER THAN GET A HANGAR SO.....
I DON'T THINK THEY WERE READY TO GET A HANGAR UP THEN

Q. DID YOU EVER HAVE OCCASSION TO USE THE WARD AIR HANGAR?

A. THE WARD AIR HANGAR.....?

Q. THAT'S THE HANGAR NEXT, DOWN THE LINE THERE.

A. WE USED IT ONCE, JUST FOR DE-ICING.

Q. RIGHT - I SEE

A. THAT I KNOW OF (PHONE RINGS - O. DO YOU WANT TO ANSWER THE PHONE?)

Q. DID YOU EVER HEAR THE FLIGHT ENGINEER'S DISCUSSING THEIR WORKING CONDITIONS AT CALGARY - LIKE I UNDERSTAND THEY SWITCHED FROM THE AEROPLANES TO THE FLOOR, BACK AND FORTH.

A. IF THEY WERE NOT BUSY ONCE IN AWHILE, THEY WOULD CALL THE FLIGHT ENGINEERS TO GO DOWN AND WORK IN THE HANGER THEY DIDN'T APPRECIATE IT, BUT THEY WEREN'T DOING ANYTHING ANYHOW SO.....BUT OTHER THAN THAT THATS ALL

Q. DID YOU EVER HEAR THE CREWS DISCUSSING THEIR PREFERANCE FOR DAY FLIGHT OR NIGHT FLIGHT?

A. YES, THERE WAS A BIT OF TALK ABOUT THAT, THEY WANTED TO FLY THROUGH THE DAYLIGHT HOURS, WERE AS THEY WERE USUALLY AT NIGHT.

Q. THEY'VE NOW SWITCHED BACK TO DAY TIME?

A. I DON'T KNOW.

Q. O.K. I THINK THAT'S ABOUT ALL.

(ASTON) Q. BILL, DO YOU HAVE ANY PROBLEMS CHANGING BACK AND FORTH BETWEEN THE ELECTRA AND TWIN OTTER?

A. WELL I NEVER SWITCHED THAT MUCH SO, AND I'VE WORKED ON THE TWIN OTTER LONG ENOUGH AND I KNOW THE MACHINE VERY WELL AND THERE WAS ONLY THREE TIMES I DID GO ON THE OTHER SO, ACTUALLY I WASN'T REALLY SWITCHING BACK AND FORTH.

- Q. HOW LONG WOULD YOU BE AWAY FROM THE TWIN OTTER BEFORE YOU WENT BACK ON IT AGAIN? CAN YOU GIVE ME A PERIOD THAT YOU'D BEEN ON THE ELECTRA, IN TIME?
- A. YES I WAS ABOUT 9 MONTHS ON THE ELECTRA AND THEN I WENT BACK UP NORTH ON THE OTTER.
- Q. GREAT. WELL, IF I UNDERSTAND YOU CORRECTLY, YOU HAD A PERIOD OF 9 MONTHS WHEN YOU DIDN'T WORK ON THE OTTER, WOULD THEY GIVE YOU ANY RECURRING TRAINING?
- A. NO.
- Q. WHEN YOU WENT BACK ON THE OTTER, WHAT WOULD YOUR DUTIES BE?
- A. I WAS CREW CHIEF, I HAD TWO MEN WORKING FOR ME AND MAINLY I'D DO THE BOOK WORK AND THEN GIVE THEM THEIR JOBS, AND THEN INSPECT THEIR JOBS AFTERWARDS.
- Q. WOULD THESE TWO MEN BE MECHANICS OR AIRCRAFT MAINTENANCE ENGINEERS OR WHAT WOULD THEIR.....
- A. ER, BOTH THE BOYS I HAD WITH ME AT THAT TIME WERE MECHANICS, EXPERIENCED MECHANICS, THEY ...BUT THEY WERE NOT LICENCED.
- Q. BUT THERE WAS NO RECURRING TRAINING?
- A. NOT FOR MYSELF, THESE BOYS WERE CURRENT ON THE OTTER, THEY WERE HAVING REGULAR ROTATION, YOU SEE I WASN'T.
- Q. HOW WOULD YOU AVAIL YOURSELF OF ANY DIRECTIVES, OR ANYTHING THAT HAD COME OUT ON THE PARTICULAR AEROPLANE?
- A. WELL I'D GET MY OWN FROM THE M.O.T. AND THE COMPANY ALSO, ANY THAT COME OUT, WE HAD A COMPANY MANUAL AND ANY DIRECTIVES THAT WERE SENT OUT WE WOULD GET THEM ALSO, SO WE WERE ACTUALLY GETTING THEM TWICE.
- Q. DO YOU KNOW IF THERE IS A MAINTENANCE MANUAL, A COMPANY MAINTENANCE MANUAL?
- A. YES, THERE IS.
- Q. DO YOU KNOW WHERE THEY'RE ALL LOCATED?
- A. THERE'S ONE IN REA POINT I KNOW, AND THERE'S ONE IN CALGARY, WE DIDN'T HAVE ONE HERE BECAUSE WE DIDN'T HAVE THE OTTERS HERE.
- Q. NO, I'M NOT REFERRING TO AN AIRCRAFT MAINTENANCE MANUAL.
- A. NO, NO, A COMPANY MANUAL YES, AND WE HAD OUR OWN, I DON'T HAVE MINE NOW, I CHUCKED IT OUT.

- Q. WOULD THIS MANUAL INCLUDE BOTH THE ELECTRA AND THE.....
- A. YES, THE ONE I HAD ANYWAY.
- Q. WHO WOULD YOU GET YOUR AMENDMENTS FROM?
- A. CALGARY OFFICE WOULD SEND THEM UP TO US.
- Q. HOW FREQUENTLY WOULD THE AMENDMENTS COME?
- A. WELL ANY THAT CAME OUT.
- Q. BILL, WHAT WOULD BE IN THE MANUAL, ER.....
- A. WELL, COMPANY PROCEDURES, WORKING RULES AND REGULATIONS
AND THEN THEY HAD COMPANY DIRECTIVES TO THE AIRCRAFT
AND THEN ANY NEW ONE THAT CAME OUT SAME AS COMPANY LETTERS
THERE WOULD BE A COPY.
- Q. DID YOU HAVE ANY OCCASSION, WELL WAS THERE ANY OCCASSION
WHEN YOU HAD DIRECT CONTACT WITH MR. KOWALICK?
- A. YOU MEAN WORK-WISE?
- Q. WORKWISE, YES.
- A. YES, HE'D BE FLYING THROUGH THAT'S ALL, JUST SAY HELLO ED, AND
THAT'S ABOUT IT.
- Q. WOULD YOU EVER GET ANY DIRECTIVES FROM HIM?
- A. FROM HIS OFFICE?
- Q. YES.
- A. WELL EITHER USUALLY HE'D PUT THEM OUT TO THE CHIEF ENGINEER AL NEWHAM
AND SAY THEY WERE COMPANY OPERATING RULES OR SOMETHING, HE'D SEND
OUT A DIRECTIVE TO EVERYBODY, OTHER THAN THAT NO.
- Q. IN REGARDS TO MAINTENANCE WOULD HE SEND ANYTHING OUT?
- A. NO, THAT USUALLY WOULD GO THROUGH MR. NEWHAM.
- Q. HOW OFTEN WOULD THE SUPERVISOR PERSONELL, I'M REFERRING TO MR. NEWHAM OR
MR. KOWALICK VISIT YOU?
- A. WE'D SEE HIM QUITE OFTEN, MAYBE COME UP.....ER, WELL MR. KOWALICK HE'D BE
FLYING IN SO WE SEE HIM ON HIS WAY THROUGH..... AND AL NEWHAM HE COME UP
IF WE HAD PROBLEMS HE'D COME UP AND ONCE IN A WHILE HE'D COME UP AND JUST

A. SEE HOW THINGS WERE GOING.

Q. DURING YOUR PERIOD WITH PANARCTIC WHEN YOU WERE ON A SATALITE BASE
HERE AND EDMONTON, DID ANYONE EVER ER, RUN A CHECK OR SUPERVISE
YOU AT ANY TIME?

A. WELL I HAD A SUPERVISOR RIGHT HERE, AND WE WORKED TOGETHER ALL THE
TIME SO, HE WOULD KNOW WHAT I WAS DOING HE'D SEE WHAT WORK I WAS
DOING IN CALGARY, AND EVERY TIME HE CAME HERE HE WOULD KNOW WHAT
I'D DONE SO.....

Q. WELL WHAT I'M GETTING AT, WOULD ANY OF THE SUPERVISORS ER, FROM
MAINTENANCE COME DOWN AND CHECK YOUR WORK?

A. YES, PETER HUMBLE HE'D COME UP A COUPLE OF TIMES, AND HE'D GO OVER
THE AIRCRAFT AFTER I'D DONE MY D.I., AND JUST HAVE ANOTHER LOOK AT
IT HIMSELF EH, AND MAKE SURE I'D DONE IT.

Q. WAS THERE ANY RECURRENT TRAINING FOR YOU?

A. WELL, I JUST HAD ELECTRA COURSE AND THEN I WASN'T THERE THAT LONG
AFTER THAT - IT REALLY WASN'T REQUIRED I DON'T THINK.

Q. I TAKE IT, DID YOU GET YOUR ENDORSEMENT THROUGH THE COURSE AT ANN ARBOR?

A. YES.

Q. WAS THERE ANY PERIOD WHEN YOU WERE UNDER SUPERVISION WHEN YOU CAME BACK
FROM ANN ARBOR?

A. I WORKED IN THE HANGAR FOR A WEEK UNDER THE PEOPLE THERE, AND I ALSO
WORKED IN THE HANGAR BEFORE I WENT TO ANN ARBOR.

Q. HOW LONG WOULD THIS CONSIST OF?

A. ABOUT A WEEK.

Q. AT EITHER END?

A. NO IN CALGARY, SEE BEFORE I WENT ON COURSE THEY CALLED ME DOWN THERE AND
HAD ME DOWN AND HAD ME WORK IN THE HANGAR ON THE MACHINE FOR A WEEK AND AFTER
I CAME BACK THEY CALLED ME DOWN AGAIN. AND HAD ME WORK THERE FOR A WEEK WHICH
I WAS UNDER JOHN BINDER, AL NEWHAM AND PETE HUMBLE.

- Q. SO THE TOTAL PERIOD THAT YOU WERE REALLY UNDER ACTUAL EXPERIENCE WOULD BE TWO WEEKS?
- A. NO, THEY HAVE CALLED ME DOWN BEFORE THAT, TO CALGARY TO WORK IN THE HANGER ON THE MACHINE TO GET TO KNOW IT, AND I THINK THAT WOULD BE THREE OR FOUR INSTANCES, ONE TIME IT WAS TWO WEEKS AND ANOTHER COUPLE OF TIMES MAYBE A WEEK AT A TIME, I JUST FORGET EXACTLY WHAT IT WAS NOW.
- Q. BILL, CAN YOU REMMBER ANYTHING OFF-HAND ABOUT PAB, WHETHER THERE'S ANY RECURRING PROBLEMS WITH IT?
- A. OTHER THAN THE A.P.U. NOT WORKING, NO, AS FAR AS I WAS CONCERNED IT WAS QUITE A GOOD AEROPLANE.
- Q. IS THERE ANYTHING YOU COULD, OR ANY SUGGESTION THAT YOU COULD MAKE, THAT YOU WOULD LIKE TO SEE THAT WOULD IMPROVE IT?
- A. OTHER THAN A HANGAR UP HERE, NO AND I'M SURE THEY'RE NOT GOING TO DO THAT.
- Q. DID YOU HAVE ADEQUATE EQUIPMENT HERE TO CARRY OUT MOST OF YOUR JOBS?
- A. ANYTHING I DIDN'T HAVE WE COULD GET RIGHT AWAY LIKE SPECIAL TOOLS AND THEY CAN BORROW FROM PACIFIC WESTERN OR IMPERIAL OIL OR THEY'D FLY IT UP FROM CALGARY FOR US, SO IF ANYTHING WE DID NOT HAVE WE COULD GET IT PRETTY QUICK.
- Q. LET'S TAKE AN INSTANCE IF YOU HAD TO INSPECT THE TOP RUDDER HINGE?
- A. NO AIR STAIRS FOR THAT THE ONLY WAY YOU COULD DO THAT WOULD BE TO GET AS CLOSE AS YOU CAN WITH FORK LIFT THAT IS ABOUT AS CLOSE AS YOU CAN GET, AND THAT'S ABOUT IT.
- Q. COULD YOU GIVE ME ANY OTHER INSTANCES WHERE YOU COULDN'T ACTUALLY
- A. ACTUALLY THE TAIL IS ABOUT THE PLACE, YOU KNOW THE TOP OF YOUR VERTICAL STABILIZER WAS ABOUT THE ONLY PLACE YOU COULDN'T GO. AS FAR AS YOUR BOOST PACKS YOU COULD GET IN THERE WITH LADDERS WE HAD AND WE'VE HAD INSTANCES WHERE WE'VE HAD TO DE-ICE THE HORIZONTAL STABILIZER AND WE'VE USED A FORK LIFT AND PALLET. THE ONLY PLACE YOU COULDN'T GET WAS RIGHT ON TOP OF IT.

Q. BILL, DURING YOUR TIME HERE IN EDMONTON, WHILE THE CARGO WAS LOADED AND I ASSUME MOST OF THE CARGO WAS LOADED IN EDMONTON?

A. YES.

Q. HAVE YOU EVER HAD ANY OCCASSION TO INSPECT THE LOADING OF THE CARGO?

A. USUALLY YOU'D TAKE A LOOK AT IT TO MAKE SURE EVERYTHING WAS TIED ON BUT THE FLIGHT ENGINEER AND CAPTAIN WOULD DO THAT ALSO; B'JT I HAVE SEEN THINGS THAT WEREN'T TIED DOWN AND I MENTIONED IT TO THE LOAD MASTER AND TOLD HIM TO PUT ANOTHER STRAP ON WHICH THEY WOULD DO.

Q. HOW OFTEN WOULD THIS OCCURR?

A. OH, VERY SELDOM, THEY WERE USUALLY PRETTY WELL TRAINED THEY WERE PRETTY GOOD THAT WAY.

Q. BILL, WHEN YOU WERE LOCATED IN THE EDMONTON OFFICE, DID YOU EVER HEAR ANY DISCUSSION, OR ANY DISENTION BETWEEN THE WEST CAN PEOPLE AND THE AIRCREW?

A. NO, I DON'T THINK SO. IF THERE WAS ANY IT WOULDN'T GO THROUGH ME ANYHOW.

Q. I SEE,

A. SO I WASN'T INVOLVED IN IT AT ALL, IT WAS STRICTLY OFFICE, AND I CAN'T REALLY EVER REMEMBER HEARING ANYBODY BITCH YOU KNOW.

Q. O.K. THAT'S FINE.

Q. WAS THERE ANY OTHER DISCUSSION BETWEEN THE BASE ENGINEERS AND THE FLIGHT ENGINEERS IN REGARDS TO THE AEROPLANE AT ALL?

A. NO, WE GOT ALONG PRETTY GOOD AND ER IF WE DID ANYTHING WE'D TELL THEM WHAT WE DID THEY'D HAVE A LOOK AT IT ALSO ER, WE GOT ALONG REAL GOOD, WE DID OUR JOB AND THEY WERE SATISFIED WITH IT, I NEVER HAD ANYONE COME BACK TO ME AND PUT DOWN OR ANYTHING SO.....

Q. A FLIGHT ENGINEER NEVER OVER-RULED YOU ON ANYTHING?

A. NO.

Q. DID YOU HAVE TO OVER-RULE A FLIGHT ENGINEER ON ANYTHING?

A. NO, I NEVER DID.

Q. WAS THERE ANY INSTANCE WHEN YOU HAD TO GO TO HUMBLE WITH REGARDS TO THE SERVICEABILITY OF THE AIRCRAFT?

- A. IF THERE WAS ANYTHING I WASN'T SURE ABOUT, YOU KNOW, I THOUGHT MAYBE THIS MAY BE WRONG, IF I WASN'T SURE, THEN I'D PHONE HIM AND ASK HIM WHAT HE THOUGHT OF IT, BECAUSE HE WAS SENIOR AND KNEW MORE ABOUT THE AIRCRAFT THAN I DID, HE WAS MORE EXPERIENCED.
- Q. BILL, JUST ONE MORE QUESTION, DID YOU EVER SEE A FLIGHT ENGINEER USING A CHECK SHEET TO COMPLETE HIS INSPECTION?
- A. YES, CAUSE THEY HAD THE CARDS EH, AND THEY DO THE SAME AS WHAT WE DO GO THROUGH THEM AND CHECK EACH ITEM OFF, AND THEN SIGN IT OUT.
- Q. NOW THIS IS HIS PRE-FLIGHT INSPECTION. YOU'RE TALKING ABOUT...
- A. YES,
- Q. YES, THAT'S WHAT I MEAN, PRE-FLIGHT INSPECTION WHERE HE DOES HIS WALK AROUND AND HIS COCKPIT CHECKS.
- Q. WOULD THEY BE INITIALLING THEM OFF AS THEY WENT?
- A. NO, NORMALLY THEY KNEW THEM OFF BY HEART, I THINK ANYHOW AND THEN THEY'D GO OVER THEM IF THERE WAS ANYTHING THAT THEY'D MISSED THEN THEY'D GO BACK, BUT THEY STAYED TO THEIR SHEET AS FAR AS I KNOW, I MEAN I DIDN'T FOLLOW THEM AROUND AND CHECK THEM ON EACH ITEM.
- Q. WOULD YOU SEE THEM CARRYING THEIR CHECK LISTS WITH THEM OR....
- A. AHM(AFFIRMATIVE) SOMETIMES, OR SOMETIMES THEY'D JUST LEAVE THEM ON THE DESK AND WALK BACK AND THEN HAVE A LOOK AT THEM AND THEN WALK BACK OUT.
- Q. THIS IS THE DESK IN THE SHOP?
- A. AHM (AFFIRMATIVE) IN THE SHOP
- END OF INTERVIEW.

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DAVID WAYNE HATTON

April 17, 1975

Before we begin I would like to state for the record that this is the third interview between the Ministry of Transport Aircraft Accident Investigation Branch as conducted with Mr. Hatton. The first was conducted November 1, 1974. On November 5, 1974 a statement was prepared by Mr. Hatton and given to the Ministry of Transport. On November 13, 1974 Mr. Hatton was again interviewed by a group of accident investigators and this recording will be the fourth statement or interview.

Quite right.

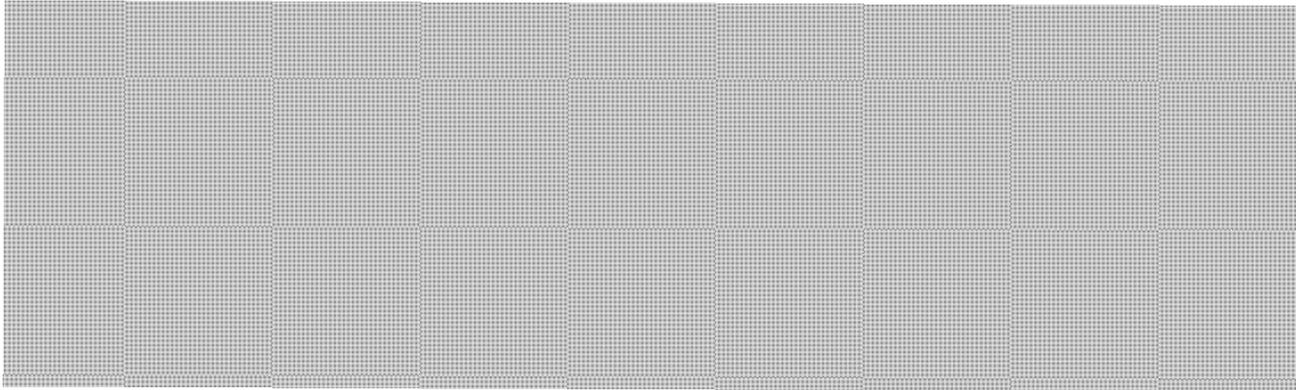
Q. Could you state your full name?

A. David Wayne Hatton.

Q. David, in the statement you have provided so far I don't believe you've given us a description of your work history. Could you do that now for us,

s.19(1) just briefly, that is from the time you started commercial flying.

A.



Then I went to Pan Arctic Oil.

Q. And what was your position with Pan Arctic at the time of the accident?

A. Twin Otter Captain and first officer on the Electra.

Q. Okay, could I turn the questioning over then to - who would like to start?

This is Jack Unger speaking to Dave Hatton:

Q. Perhaps we will probably be making reference to this. I'll just explain it roughly to you and then give you a moment to look at it. It's a cross-sectional profile of Rea Point. The distances are from the V.O.R. in feet here

point of impact and seconds from impact here and altitude over there. This is a flight data recorder profile and this is for what a normal profile would be more or less.

I see. This is off the actual flight recorder is it?

Yes, and I just thought it might be helpful to you if you had a pictorial display to kind of refresh your memory of certain aspects.

Yeah, thanks, this is the first time I've seen this.

I appreciate it's been a long time....

Is that the estimated _____?

No.

Q. My questioning, Dave, I would like to restrict it to the 6 mile D.M.E. to last you remember only and try to be as painless as possible and ask only what to the best of my knowledge has not been asked before. Would that be alright?

A. Okay.

Excuse me, is this altitudes in hundreds of feet here?

Perhaps you could explain it in detail to him, Jack, so he knows....

Yes, that is just a sectional profile, this is altitudes yes in feet. Okay?
and it reads backwards

This is in seconds here prior to impact, okay/and this is strictly in thousands of feet from the V.O.R. here and these are the D.M.E.'s.

Right.

Okay?

Okay, fair enough.

Impact was here just over the ice line. I don't want to take up too much of your tape - this is the ice line and you impacted right here. This is the shoreline. Okay? The O.X. beacon the O.R. and the start of the threshold right there. Alright. I won't be getting into specifics on altitude like right down to a couple of feet or anything like that.

Q. Okay, Dave, from a point at 300 feet _____ at 50 feet, what was the highest

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descent rate that you noticed on the V.S.I.?

A. Very _____, the uh, around 2,000 feet a minute. I know the V.S.I. needle was almost vertical inches, approximately 2,000 feet.

Q. Was it consistent or was that just the highest and it varied or

A. That was about the highest. It seemed that it increased as we went in on the final descent. It was quite high initially though. Quite a steep final descent.

Q. Did this high sink rate start after he binded the aircraft forward?

A. Yes. We were nicely stabilized at 300 feet and he reached over and apparently retarded the throttles. He was doing the power settings himself and Gary Weyman, the flight engineer was working the _____ throttles on my side and doing the fine adjustments to bring all this into line and he retarded the power and used the stick forward and there was quite a sudden descent initially.

Q. Just to make sure that we have this right, he pulled the power levers back to flight idle?

A. I'm not sure what the power setting was he tried

Q. He did pull them back?

A. Mm.

Q. Thank you. I'm trying to ask these in some kind of sequence here so just be patient. And would this be before or after he stated that he thought he saw a cloud and wanted to get under it?

A. This would be after. He mentioned a couple of times on descent that he thought there would probably be a cloud layer which he would have to descend under.

Q. Would you say Brian - I'm sorry Dave, as a qualified Electra first officer that this retarding the power levers and pushing forward would be consistent with breaking out visually?

A. Yes. It would also be consistent with initiating the descent to retard the ...

Yes.

Q. Okay. Dave, to the best of your ability during the final stages of the approach, to be more specific from 1,000 feet down, did you notice Captain Thompson looking out?

A. No, I think he was pretty well concentrating on the instruments.

Q. And, how about later on? Did you notice him looking out and if so often?

A. No. He appeared to be concentrating on the instruments. It's the first officer's duties to call out the number of air speeds, altitudes and so forth and to keep an eye out visually and the person flying the aircraft concentrates on the instruments.

Q. He must have looked out. Where did he get the idea that he had to get under the cloud then?

A. Well, when it was mentioned we got a weather report at top of descent and partially through the descent we talked a Boric Twin Otter which had taken off at Rea Point and we got the weather reports and it was then that Brian mentioned that uh, after we got word that there was a fog bank/south of the strip he said that there would possibly be a layer of cloud and we would have to get down under.

Q. Okay, Dave, regarding the radio altimeter, you, after you reached 400 feet your limits, what was your

A. 450

Q. No radio altimeter above ground?

A. Well in Rea Point bush flight ... Yeah I better cross check ...

Q. Well, _____ I see what you mean. Over water would be 450. Okay.

Yes, I see what you're getting at.

Q. Then you stated that you set your to 300 feet, could you give us your thinking on that - your reason for ...

A. Well, we were nicely stabilized at 450 and we began gradually descending out of 450 and it was on my own initiative I said to Brian I'm resetting my radio altimeter to 300 feet and I think he responded (I'm not sure the exact response)

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I think he said "check" or mines _____ or something like that. The reason being that I felt that since we were on an obvious descent out of 450, I felt that he was probably going to go to 3 and level out and stabilize at 300 and this had been done on occasion in the past and so this is why I reset it at 300.

Q. And could you describe whether the Captain then made a new altimeter bug selection?

A. I don't recall. I don't think he did. I believe he'd already had his set at that time. I don't recall him resetting it.

Q. Dave, we found the Captain's radio altimeter bug set at 150 feet.

A. Oh.

Q. Have you any idea why he did this?

A. I don't recall. He may have done that when I reset mine to 300 but I don't really know why he did that.

Q. You made reference to seeing an ice line. Is that correct? At one point and could you tell us what window you looked out when you saw this ice line?

A. It was out through the front windshield.

Q. Through the front right hand windshield.

A. And approximately at 3 B.M.E. and we were on instruments up to that time.

Then it became, uh, well it had verticaled, we had a dark area that came in sight and it was a line, it looked like the edge of the ice. And, as I say, we had been on instruments up to that time and I mentioned to Brian that I had vertical contact at this time and _____ as though we were coming up on the edge of the ice line. As I say this was about 3 B.M.E.

Q. At what point during the approach did you become concerned?

A. Well, I was, uh a little concerned when we left 450 for 300 and we did stabilize at 300. However, the airplane was being flown so well and we were nicely lined up on centerline - I wasn't really all that concerned, but as I say I had done that before on occasion - gone

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down to 300 feet. When I was really concerned was when we started the final descent after we left 300 feet, uh, the way it was initiated, and uh, I was concerned about going below 300 because we were already below minimums. However, I felt that perhaps Brian might have been going for 200, I don't know. I was first alarmed at about 300.

Q. And, on the chart there, now, when you said in your statement that "We're 300 feet and 3 B.M.E." uh, could you show us approximately where you would be here. Had you passed the 3 B.M.E., was it coming up, your call with the little digital B.M.E. was rotating at, had it gone by or was it . . .

A. I think it was just coming up on 3 - we have no B.M.E. on the co-pilots side on the Electra, it's on the Captain's side, and, uh, checking there for my own information requires that you kind of lean back and crane your neck to look over, it's kind of small but readable.

Q. I see. Yes, I'm familiar with it. Now carrying on from that point Dave, and you're becoming concerned now . . . Where were you tempted to take over control, or when were you tempted to take over control, and if so, at what point?

A. At read out 300 I was expecting him to stabilize at 200 at the very minimum. I was concerned when we left 3 but the airplane was being flown in a very competent manner at that time. I became really alarmed when the radio altimeter unwound to 200 and ^{we} continued the rate of descent. And, we had a high rate of descent and again gave Brian, in a loud and clear voice, our rate of descent, air speed and so forth, I turned to look at him and I shouted his name and said "Brian! We're through 200 feet, about 2 B.M.E.," and there was no response. He just continued this high rate of descent. And then I became very alarmed, the radio altimeter quickly unwound to 150 and 100 and Gary Weyman shouted "150, 100" I forget he shouted out the

altitude, and it was at that time, I couldn't believe that he wouldn't, having initiated this descent, that he wouldn't recover the aircraft. I gave him the benefit of the doubt. I mean, there's no response. So at that time I reached for the power levers on my side, Gary's hands were already on the levers, and I'm not sure, I think Gary may have been advancing the power. It was obvious then that something was really wrong. I put my hand on the power levers, tried to advance the levers and pull back on the wheel, but at that time the aircraft was in, you know, too high rate of descent, we were max _____ of course, and we just weren't able to recover. The whole thing just took seconds.

Q. Of course it happened very quickly. Dave, could you describe the Captain's posture the last time you saw him? How was he sitting?

A. Sitting? Upright in the chair, after reaching back and turning the levers with his left hand on the wheel, his other hand came up onto the column, and that's the way he stayed up to the last minute. Eyes straight ahead. No response to any verbal input I was giving him. Nothing at all.

Q. I have no further questions at this time. Thank you David.

Q. Mr. Clark again. Dave, I have a few related to the same area, if I could. And, uh, you indicated a moment ago that this rapid descent, I'm not using your words, I'm paraphrasing, but a rapid descent was started. / Can you described the initiation in terms of how you might have felt, did you feel lifted in your seat or anything like that so we can try to qualify that a little bit?

A. He pulled off the levers, for the flight control displaced, and he pushed forward on the wheel, and we did rise out of our seats somewhat and there was some negative _____ effect.

Q. Thanks...Had you at anytime in the past felt this same type of thing in the initiation of a descent?

A. Not really, although in training we had done some simulated cloud breaking procedures on final where we were offset, not lined up with the runway, and like we had to carve the airplane over and perhaps push the nose down a bit, but not quite to that same extent, and of course this is a training situation.

Q. Thank you. You indicated that you couldn't recall when the Captain might have set his altimeter to 150. Can you think of any reason why he might have set his altimeter to 150?

A. The only reason I can think of is that he might have intended to go that low. When we left 300 it was my feeling that he might have been wanting to go to 2. I would have thought to go below 2 would have been certainly too low. Actually with the weather conditions being what they were, normally you'd stabilize at 450 as this is the normal company operating procedure, to stabilize at 450 and to stay fairly high on final with a blowing snow situation until you can see the lights, visual, and then you might have to initiate a fairly stable descent to get down to the runway. But, this is only the second time I'd flown with Brian. I'd done one positioning flight with him before flying from Calgary to Edmonton, and each pilot has his own different ways of doing things. The only thing that really struck me as possibly a little unusual about the approach is that he seemed to be down a little lower than normal a fair ways back. However, I thought that this might perhaps be Brian's particular technique, uh, perhaps he wanted to get the approach and landing checks out of the way and get the aircraft stabilized at minimums, and uh, I didn't really question him. It seemed a little bit different.

Q. Right. Do you, and you related how at a very late stage in the descent you put your, uh, presumably left hand on the throttle on your side, and then you said, I believe you said something about holding the wheel. Do you recall any backward movement that you

might have made on the wheel?

A. I believe I was trying to pull the wheel back. I can't remember if I was able to pull the wheel back or not, and I can't even remember if there was any forward resistance on the wheel on Brian's part. I don't recall Brian making an attempt to recover the airplane. I just remember trying to get those throttles up and pulling that wheel back and to get us out of the bank.

Q. You also stated about your observation of the vertical speed, uh, can you recall the last air speed indication you saw?

A. I think it was about 160 knots as I recall.

Q. And that, in fact, does confirm what we have on the data read-out.

A. I see, this is the first time I've seen one of these and just looking at the descent profile here it looks a little more regular than I recall the airplane being flown, actually.

Q. I should caution you on that. Of course, the scale is inappropriate. You have to increase the vertical scale to give, get any kind of a picture to it, an illustrative quality to it, and the excursions that you see are not aircraft excursions. They're excursions in the readout itself, but this for instance, these that you see on here, you can't maneuver an aircraft that fast. You know, it won't respond so these can't be - we have some idea to what they might be. They're not untypical on read outs.

A. Yeah, I see. Just looking at the scale here I can see the very small movements too, maybe 20 or 30 feet. . .

Q. And you see the time train? In there, you see it's very short and you can't get an aircraft to do all that sort of thing in that time

A. Yeah. Just the first ____ looks a little . . .

Q. Yeah, right.

Q. (Preceding questioner) I can show you the airspeed profile. Carry on.

Q. Yeah, right. I'd like to refer now to your statement you gave on the

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first of November, 1974. Do you have a copy of it, Dave?

A. Yes.

Q. Now, at the, in the fifth paragraph, about halfway down there's a sentence that begins, well I'll read the whole sentence: "I think he may have seen the reflection of the aircraft lights in water, thinking them to be lights at the bottom of the runway." Can you recall, I know it's a long time, but can you recall what gave you that impression?

What made you think that?

A. Well, I don't recall seeing any reflections myself of lights in the water. What I was trying to do, speculation on my part, trying to think of a reason why the man would make this maneuver with the aircraft, and I was trying to think of a reason why he would have done this, and that was just something I was grasping at - perhaps he did see the lights, or perhaps he thought the ice line was a layer of cloud that he had in the back of his mind . . . it seems like a fairly weak arguments, but I'm just trying to think in my own mind the reason why a man would . . .

Q. Yes, I appreciate it. I thought there might have been something behind it as well, that's fine. And now the, another sentence just at the bottom of the page, a very short one. I think it's the second-last sentence on this page, "We pulled back on the stick." Who are you referring to?

A. By "We" I mean Brian and I, however there again I was speculating that Brian I assumed was pulling back on the stick with me, but, uh, I really don't know that he was.

Q. Okay. Now the next page, on page 2 at the top of the page is a comment and the question is somewhat along the line of the previous one there. I'll read the last sentence. "I think he may have mistaken ice for fall out and the dark shadow for edge of the runway going by."

A. To be quite candid with you, I don't recall making the statement about the edge of the runway going by, however I may have. I was in the hospital,

000283

I was in isolation at the time. . . There again, as I say, it was strictly speculation, I was searching for something in the back of my mind, trying to rationalize the whole thing.

That was certainly not the impression that I got at the time. Something may have . . .

Q. I have some questions regarding the weather. Maybe I'll leave that, and I may have to go back to this statement, and I'll try to group the weather questions in all together. We'll continue maybe this other area for the time being. There's another answer to a question here that's confusing to me, and the question is on page 2 about two-thirds of the way down, the question was put "What confirmation from Rea Point Station did you have as to lighting in operation?" And your answer there was "We asked at top of descent for weather check and viz, if having any problem with one way lighting to notify us then." The response, the question comes up in a second here that I have in mind. "Response, runway lights serviceable, assume vas is on, no remark, negative, assume strobe lights on, no remark, negative." That last portion is particularly confusing to me.

A. Well, I think it's lost something in the translation there. At top of the descent we requested the weather, of course, and usually Rea Point will advise you then if they're having any serviceability problems with any of the lighting on the runway. If they are having problems they will advise us. If they're not then they just don't advise us of it and we assume that everything is working okay. They're supposed to be out there checking all the lighting before the aircraft arrives. Since we didn't receive any comments on lighting we assumed they were working. That's probably what they mean by "negative" in the . . . "no response, negative".

Q. Okay. There's another question here that I'm . . . in answer to a

question that's a little confusing to me. That's the next question.

The question was "Radio altimeter functioning and settings for approach stage?" The answer was " I was confident in its accuracy.

I pressed the test button on descent. They both were at 2500 feet."

- A. Okay here's uh, I think something else has been lost here in the interpretation or in having this thing prepared. On descent we "press the test button" to make sure that they were working, and company procedure is to call the radio altimeters alive at reaching 2500 feet, which I did and which cross-checked with Brian's and so we assumed that of course both working at the same time and cross checking with the pressure altimeters that they were both working okay.
- Q. Okay, thank you. Oh, on the last page, we were speaking a minute ago a side bit on the voice recorder and the question on the last page was "How had the cockpit voice recorder been functioning lately?" and your response was "It has been working good." Can you tell me if you can recall how it was checked, and maybe you can relate to that specific flight.
- A. Well normally the voice recorder is checked as part of the flight engineer's preflight. We didn't - well I wasn't involved in the check of it this time personally, but we had checked them in flight on past trips and just played them back to make sure they were working and they were working fine. On this particular flight, like I say, I wasn't involved in the check of it but it is part of the flight engineer's duties to check on preflight.
- Q. Okay, I'll pass the questioning on if someone would like to continue questioning in this particular area. Mr. Laroux?
- Q. Yes, Laroux, directing questions at Dave Hatton. Dave, you've been asked alot of these questions here, but I want to try to establish a very small time frame here as to the actions of Captain Thompson, and that involves the time frame when you had visual contact with the water-

ice shoreline or the line, the time that Captain Thompson reduced power. Can you recall if the power was reduced at just prior to seeing the ice-water line or shortly after?

A. I believe it was shortly after, it was moments after I mentioned that I had vertical and that it looked like we were coming up on the ice. I just think it was then he reached over, retarded the power levers and pushed the column forward.

Q. At what point do you surmise that full flaps lowered?

A. It was a fair ways back, I don't recall exactly but we had been kind of dragging ourselves in. We'd had the landing checks done, we had full flaps and gear down. That was part of the thing that struck me as a bit unusual was the way that we had, you know, set up the landing configuration and had all the landing checks done and were using a fair amount of power to maintain our altitude and so forth. However, as I say, that may have been Brian's flying technique. He may have liked to get all those things out of the way before landing.

Q. And you verbally advised Captain Thompson that you had visual contact?

A. Yes, I said that I had vertical contact at this time.

Q. After Captain Thompson reduced power did he place his right hand back on the control column?

A. Yes. He eased back the power levers, his hand went up on the column.

Q. You mentioned that on occasion you'd gone down to 300 feet. Was this as first officer on the Lockheed Electra?

A. Yes.

Q. That's it for now.

A. This isn't an approved company procedure and we're certainly not trained that way. If a Captain elects to go below minimums it's at his own discretion and it is done on occasion. If it's done it's carefully calculated and can be done safely, I believe, on this type of approach under certain conditions with the aids we have up in Rea Point, with

the B.M.E., the B.O.R., the B-10 existing approaches over the ice, and so forth, no ___ obstacles are on. Those are not normal operating procedures.

Q. Okay, this is Mr. Clark again. I have a couple of more questions in this general area I'd like to ask. Are you aware of any problems with the B.M.E. equipment, that is the ground equipment, at Rea Point?

A. No, they did have ___ problems occasionally, but they're usually reported right away and the facility shut down while the aircraft advised and they're usually repaired right away and put back in service. They were functioning fine at this time.

Q. I'd like to speak a minute or so about the type of approach involved here, and I'd like to ask you is this type of approach, considering the conditions that existed, from your experience, is this a norm approach for the conditions that existed? That is, let's qualify that a little bit more. Normal up to before the last lap of descent from 300 feet, and I'm not worried about whether it's 300 or 400 or 450, I'm more concerned about the type of approach, whether it's a stabilized descent approach versus a stabilized level approach. Do you know what I'm getting at?

A. I'm not sure I know what you mean between the difference in a stabilized approach and the other kind you mentioned. Would you clarify that?

Q. Yes. What I'm asking is is it normal then to stabilize at some level at 400 or whatever or some other level at the Captain's discretion, stabilize and fly inbound from some position, either B.M.E. or something else, fly inbound to the beacon; or is it, is that normal, or is it normal to have a descending approach?

A. Uh, no, it's usually normal on a direct approach this way, where in the interest in an efficient operation you can eliminate the need for a procedure turn and all this sort of thing and do a direct approach with

these type of aids, uh, let down to your minimums, stabilize the airplane then fly it in until it's getting in station passage and then turn into on this approach.

Q. From your experience is this stabilized in some B.M.E. from the beacon, uh, out . . .

A. Yeah, as a general rule, maybe three or four miles out. It depends ___ on the captain.

Q. Right. I have a few questions relating to the weather. Now I don't see in this particular statement of November the 1st, but maybe if I ask you the question you'll recall. . . In one of the statements you said that uh, I'm not sure whether you said this. I'm sorry - I might have been confused, it might have been Mr. Weyman that said it, but there is some reference to someone yelling or making a comment about blowing snow and this comment was made in some statement or in some reference to it, that it was made at about 50 feet. Do you recall either Mr. Weyman making a comment like that or did you make a comment about blowing snow at this very low level?

A. Not that I can recall. Certainly at 50 feet we were much too busy to be commenting on blowing snow.

Q. Could you try to establish for us just how far the vertical visibility ascended? That is, how far back during the approach?

A. Well, it almost appears as though it was a hole or an open area. We had been stabilized at 300 feet and had been in total cloud or fog or whatever and we just came up on this open area, the open area over the water, so it almost appeared as though we'd come up on a break, an open area, a hole. It was very close to the ice. I think the B.M.E. was just ticking over about 3 miles.

Q. And can you give me an idea how big this hole was? I know you can see the ice, so it probably extended that far. Can you give me any idea of the extent?

A. It, we might have been able to see, oh, maybe a quarter of a mile at the

outside, it's kind of hard to tell. It came on quite suddenly and it was still quite obscure.

Q. Okay. What I'd like to try to determine, and of course this is important from our analysis of the weather . . . I don't know whether you can help me in this area, but, uh, I'd like to know how far the blowing snow that we know existed on the ground and from observations and so on, how far that extended, because from what you're saying now and from other evidence it seems that it was, perhaps it didn't exist too far out on the approach from the runway. Can you help us in this area at all?

A. I can't state for sure, but it's possible that the blowing snow from the land masses and the drifts around there was blowing out over the end of the runway and possibly had dissipated toward the end of the ice line. It was mostly frozen ice out there, very little snow and what snow there was was hard packed so whatever loose stuff there was may have been thinning out a bit towards the end of the ice line. That's just speculation.

Q. Right. Do you recall getting the 0 700 Greenwich weather?

A. I don't recall getting it specifically, I believe we must have.

Q. You say you got weather information. I'm just wondering weather 600 or 700 . . .

A. Yeah, we did get weather from the different bases we passed in route, and the last weather I recall getting was at the top of descent. But we had a pretty good picture of how the weather was progressing as we moved further north, we got reports from Byron Bay and Yellowknife and so forth as we went up.

Q. Were you aware that there were two sequences missing from Petter Point? That is the 0 700 and the, well you wouldn't know about the 800 obviously, but the 0700 sequence was missing.

A. I don't recall that off hand. We may have requested it in Rea Point. I think he may have said he tried to get it, but I really can't say for

sure.

- Q. Yeah, you wouldn't have corrected to 700, you would have, at latest you would have probably got the 600 weather and that was available, so you wouldn't, uh, that doesn't appear to be a very good question, you wouldn't normally be aware that that would be missing.
- A. No. The HF conditions were very poor that night, and they were having trouble getting some of the weather reports from . . .
- Q. Okay, I think that covers the questions I have. Have you got some questions?
- Q. I have one or two more. It's Jack Unger speaking to Dave Hatton. Dave, back down in the last few seconds here at the end, as best as you can recall. My first question is, when you started to apply power you were using, uh, this may sound a little silly, but naturally the right hand set of power levers. Is that correct?
- A. Uh huh.
- Q. And you or flight engineer Weyman felt, I've forgotten who felt whose hand. Was your hand behind his as best as you remember?
- A. Yes. Mine were on top of his. He already had his hands on them.
- Q. Okay, he already had his hands on the right side power levers, so that left the left hand power levers vacant. Now, can you help us in determining whether in fact they were vacant or whether Captain Thompson had his right hand back on the power levers?
- A. As far as I know, his hands, after he did the final power reduction prior to descent, his hands were on the column and stayed there. I don't recall in my glancing over at him and so forth, I don't recall his hand being back on the power lever. One small thing that is probably part of Brian's flying technique, uh, most of the captains on descent will call for
- tape turned over -----
- Brian was doing his own power settings and Gary Weyman was setting up predefined settings for the throttles on my side, just a small point.

Q. And did you recall, while Captain Thompson was doing this approach, that, except for / ^{interruptions} with his right hand to perhaps make a power adjustment, was he flying the aircraft with both hands?

A. Yes, I would say, primarily.

Q. Would you say this is a normal procedure, particularly in view of the turbulence that existed?

A. I would say so. The turbulence was a light trough, it wasn't a severe type of turbulence, it was probably mechanical turbulence we encountered at 300 feet, but I believe he had both hands on the column, that he was flying the airplane with both hands, and as you say moving them to the throttle from time to time to make adjustments.

Q. Alright, just one more. Now, in sequence as best you can remember, he pulled the power levers back, and applied pressure on the wheel forward. Did he, before he placed his right hand back on the control column, trim the aircraft?

A. I don't think so. I don't recall.

Q. So now we would have. . .

A. If a man is going to initiate a descent, it shouldn't really be necessary to retrim the aircraft when it's already trimmed out and stabilized to descend, a reduction in power would allow the aircraft to descend.

Q. So then, by easing off a little bit the aircraft would start to nose over on its own slightly, because it is now no longer stabilized.

A. Yeah, possibly, but it should essentially maintain the same trim. The reduction of power would initiate the descent and perhaps a slight _____ nose but it shouldn't really require much trim.

Q. Was he wearing gloves during the approach?

A. No he had bare hands.

Q. I have no further questions.

Q. Just for clarification purposes. Mr. Clark again. Jack, you said that

Dave said that there was pressure on the wheel, and Dave previously said that the control wheel was moved forward, and I'm . . . just for clarification purposes, Dave, is it correct to say that you did observe the Captain, Captain Thompson move the wheel forward?

A. Yes, there was a displacement in the wheel.

Q. Yes, thank you very much.

Q. Dr. Skjenna questioning the witness. Did you have your feet on the rudder pedals?

A. No, they were flat on the floor.

Q. You made no motion with them at all?

A. No.

Q. Alright. When did you first consider taking over the controls?

A. After we descended to 200 feet and he still had a high rate of descent and there was no attempt to recover, it was then that I made the move to take over the controls. I was anticipating that Brian would have taken over or made some sort of effort to recover the aircraft; when the descent continued, it was then that I was ready to take over.

Q. Alright. In your previous statements you mentioned that Brian Thompson actually mentioned twice that you were over a layer of cloud. Can you recall, perhaps using the profile there, when he said this and what his exact words were?

A. I can't recall exactly when he said it or what his exact words were. I remember the comment was, the first comment was probably halfway through the descent, as I recall. After getting the weather and we finished our approach, our descent checks and so forth, he made this comment. I think it was as we were intercepting the _____ radio or just after we had rolled out on it, I think he mentioned again that we may have to descend under a layer of cloud . . . we may have some clouds we have to get under - something to that effect.

Q. Okay, so this would be more than six miles out then.

A. Yeah.

Q. How long have you known Captain Thompson?

A. I've met Brian from time to time since I was first employed with Panarctic. I didn't know Brian that well. Until the last few weeks I was flying on the Twin Otters up north, but I would see Brian coming and going as he did the vertical trips on the Electra. That's about the extent of our social contacts.

Q. I see. What type of a person was he?

A. He seemed like a very easy going, amiable type, got along well with everybody, fairly gregarious character, a likeable guy.

Q. Was he good about letting you take the controls and so forth?

A. No, on the two flights that I did with him he did all the flying and I don't know . . . what I understand talking to the other first officers he was pretty good about splitting the flights and so forth. He certainly struck me as being very confident in his flight planning and did a beautiful job of flying this airplane.

Q. Would you consider him to be an aggressive person, or passive?

A. Oh, kind of hard to say. I didn't know him that well. I would say an average sort of person. Certainly the type that was very conscientious about his flight planning and conscientious about his job and I don't think he's the type to compromise.

Q. Did you have any conversations in the cockpit on the way up to . . . ?
the

A. Well, it was all very low key, a very relaxed atmosphere. It was/usual cockpit banter exchange, nothing, no deep involved conversations. A very relaxed atmosphere.

Q. Were you ever under the impression that he might be fatigued or . . .

A. I didn't get that impression.

Q. Have you ever had occasion to go to a pub with him?

A. Uh, we went out and had a few drinks one night. Several of the Panarctic

fellas met down at the Calgary Ski Club. I was a member there, and Brian, I think, uh, one night had done a positioning trip from Edmonton to Calgary and was over night there and a couple of fellas on the crew called me up and we arranged to meet down there and we had a couple of drinks. The only time I was out with him socially.

Q. Couple of drinks?

A. Yeah.

Q. Do you recall how many or when was this . . . ?

A. Uh, I don't recall offhand. We probably had several drinks. It's a Ski Club and they have kind of a discotheque type set-up. I don't recall offhand how many drinks we had.

Q. When was this? Approximately?

A. Uh, this was probably several weeks before the . . . maybe a month. I don't recall exactly.

Q. Alright. Do you have any questions?

Q. I have a couple. This is Mr. Clark again. And this is very, just routine, but uh, was the, were there any unserviceabilities on the aircraft on that flight, even of the minor nature?

A. I don't quite recall . . . I think there was a maintenance delay in Calgary before we left and I don't quite recall what the nature of the delay was. I believe it was some minor problems with the engines, they had to run one in the null position or something, but I don't really recall the details on that. Gary Weyman could probably recall.

Q. Can you recall the last power setting on the aircraft?

A. Uh, no I don't recall that, really. My duties were involved with calling out the flight data, and the Captain was calling out the power settings and Gary was setting them up, and I wasn't really paying that much attention . . . I don't really recall things like power settings.

Q. Would you recall them in the stabilized condition, or are you referring

to that as an area which you can't recall?

A. I don't recall that either. It would require a fairly high power setting because we were in a landing configuration with full _____ and we were fairly heavy, as I say we were _____ (Banks Island?).

Q. You said that earlier that you looked at Captain Thompson as you went to about 200 feet and tried to get his attention, you know you said . . .

A. I shouted his name.

Q. Shouted his name. I'm trying to of course get at anything in the area of the state of his health at this particular moment. Did you observe anything, obviously he didn't respond to you, did you observe anything unusual about his countenance or anything like that?

A. No, there was no outcry or stiffening that I can recall, he didn't slump over the controls or anything along that line. I remember the power reduction and the control column movement seemed to be a very deliberate planned action, you know, he was planning on descending the aircraft at a lower altitude. Nothing to indicate any physical problems. Of course we were at a critical phase in the approach and we were all quite busy, and I wasn't really looking for that sort of thing. Just sort of generalizations that I noticed, the way he did things and so forth.

Q. Did he, during this flight did he make any comment whatsoever about the state of his health?

A. No, none whatsoever.

Q. Did he have a head cold?

A. I don't think so. He didn't mention it.

Q. It didn't sound like it?

A. No. No sneezes or sniffles that I can recall.

Q. And this is just routine that I again am here indicating this, probably not the case, but did you observe him taking any kind of medication or anything other than normal food and drink?

A. Not a thing.

Q. I don't have any more questions. Dr. Hewson?

Q. Dr. Hewson addressing Mr. Hatton. Dave, I'd like to preface the question I want to ask with a minor one first, and that is are you aware of what we're talking about when, in aviation medicine, when we talk about incapacitation? Are you familiar with the term?

A. Yeah, I have a general understanding.

Q. Okay, so you have a sort of subtle incapacitation which may not render . . .

Can I suggest you're not using the _____ outline . . . and it might be of use.

Q. Well, we can consider a subtle incapacitation where a person is not necessarily rendered unconscious but their skills may be degraded by say, a severe headache or severe bellyache or they may have a partial loss of consciousness or any one of a number of things which can make a person less able to perform his duties, and you can define that as a subtle incapacitation as compared with a more overt type such as somebody writhing in pain and being completely unable to do anything or being unconscious or something.

A. I see.

Q. Now, with those preliminary remarks, you mentioned observing Captain Thompson as you went through 200 feet with both hands on the steering column and from that point on, as I recall, you did not see Captain Thompson show any signs of making any effort to recover from then on until the time of the impact?

A. Yes.

Q. And at approximately 150 feet you decided that corrective action must be taken, which is obviously a sort of decision one doesn't take lightly

when you're flying with a senior captain.

A. Yes.

Q. And I'm sure that you thought this over many times in your mind.

I'm asking you to express an opinion. Do you feel in your own mind that there is a reasonable possibility that Captain Thompson may have had some type of subtle incapacitation at that point?

A. Boy, that's a very difficult question. There was certainly nothing that indicated to me that he was in any pain or in any way incapacitated, but that may have been the case, as you say it was something subtle, you know, a pain or something, that may have been the case. I would think if that was the case he would have professionally recognized it and requested somebody to take over control at that time. One thing, the way the aeroplane was being flown up to that time - he was doing a beautiful job of flying the machine and the aeroplane was being flown exceptionally accurate. He was doing a real fine job and had he been having trouble maintaining altitudes or headings, this sort of thing, I might have been more ready to take over control but I can remember really admiring the fine job the fellow was doing of flying the machine as if we were on rails. It was beautiful! And so when he initiated this descent, you know, I assumed that the chap was doing this for a good reason; and if he did make a mistake, an error in judgment in overcontrol of the controls, just as surely the man is going to recover but he didn't. I gave the man the benefit of the doubt so I shouted his name to make sure he, you know, would be aware of what was going on. He had all sorts of good visual output and getting good audio input from myself. I expected him to respond to this information and there was no response.

Q. Thank you.

Q. I have a couple more then. Did you observe any fog during this approach?

Something you refer to as seat fog?

A. Yeah. We were in odd instruments until the momentary visual contact we had and it appeared as though it extended down to the ocean so I would think it would probably be a thick layer of ice fog, probably mixed with some blowing snow.

Q. Did you have the impression at all that he might have been in a wind shear condition during approach?

A. There was nothing to indicate that up to the time of the crash. We ran into some minor turbulence through 3,000 and it lasted for a few minutes, short length of time, something like chop and then as we reached 300 again I can remember a slight turbulence. Nothing really to indicate, you know, severe wind shear. The wind seemed to be holding fairly steady at Rea Point.

Q. Did jarring _____ factor to your bug speed?

A. Yes, the bug speeds are set at the normal bug speed setting, landing rate of the aircraft, at that altitude 141 and 126 and we were carrying 150 plus knots which gives us a nice cushion for a gust stop.

Q. Did you have this bug or were you just, was the Captain just flying the speed, the gust factor speed above the bug?

A. The plane hit above the bug. The bug
were all

Q. I assume that your bugs / set identical to the Captain?

A. That's right.

Q. There's a requiry in the manual to call vertical speeds in excess, I believe this to be correct and correct me if I'm wrong, call vertical speeds in excess of 800 feet a minute down at 500 feet or below.

Do you recall that in the manual Dave, or do you want me to get the manual?

A. I recall that.

Do you want me to look it up?

A. I recall that. Standard operating procedure. That's a good point.

Q. Yes, standard procedure then. I wondering did you make any calls during the

descent from 300 feet?

- A. Yes, I did. It's not a normal call, as I say, as it says in the manual. If your rate of descent is above 800 feet then you call it out and that's one thing that really struck me - was the high rate of descent. It wasn't as gradual as the aeroplane had been flown up to that time. It was quite high and when we left 300 I raised my voice because I was a little concerned. I said we're descending out of 300 feet air speed I believe is increasing slightly 160 and our vertical speed is, I forget, 1500 or 3000 or something like that. I remember the bottom dropped out of that V.S.I. and the meter swung right around. I shouted that out.
- Q. Right, I see, because you did refer to it as around 2,000 feet a minute before previously. I just wondered if that was a gradual build-up. From what you're saying now that was a very quick build-up.
- A. It was fairly quick. The needle swept around. You know it was probably down around 2 as we descended to 200 feet and it was at that time that I shouted his name. I said Brian, we're at 200 feet, our vertical speed is 1500 - 2000 a minute and we're still 2 D.M.E. I was waiting for him, you know, to respond.
- Q. Did you have a coach plate out yourself and did the Captain have one out?
- A. Yes.
- Q. And where were they located?
- A. There's a clip right on the column.
- Q. In this case who provided the information on where to set the air speed bugs. Did you provide the information?
- A. Yes, that's part of the, let see now, I just can't recall exactly how it is on the approach check or the descent check but it's the first officer's duty to look up the weights, temperatures and so forth and determine the bug speeds and call them out and set them and cross check 141, 126, etc., etc.
- Q. Could you describe the events that took place after you landed in Edmonton

on positioning flight and prior to the take-off on the final flight.

A. As I said there was maintenance delay here in Calgary so we were late arriving in Edmonton. And normal procedure is for Captain and first officer to go over to Arctic Weather Central at the main terminal and pick up a weather briefing and get a briefing however since there was a delay Brian had gone over himself and picked up all the material and got the briefing and when he came back to the terminal building he had all the material with him so we laid it all out and we discussed it all and I was really impressed with the way the flight was planned and fuel loads computed and so forth and it was very well done. Very thorough. That's about it. It was fairly routine. Meanwhile the ground crews loaded the aeroplane and so forth. Is there any more?

Q. I don't want to belabour this but this area could be significant. Was Brian upset about the delay in Calgary?

A. He didn't seem to be. No. He made a couple of off-the-cuff remarks like Great Scott but he didn't seem really upset. Prior to descent into Rea Point he had had difficulty raising Rea Point on the H.F. and it wasn't until we were fairly close in that we were able to raise them on V.H.F. and that loadmaster had been asking us for the fuel figures so he could get a rough idea for weight and balance purposes for our next lay out of Rea Point to B _____ Peninsula. And uh, we were finally able to get in touch with Rea Point and they didn't have the figures figured out and I remember Brian feeling a little angry at the people on the ground. I remember him mentioning you know, in future please have these things computed out ahead of time and so on and so forth. It was certainly nothing out of the ordinary.

Q. Yeah, that sounds pretty normal.

A. Yeah, he's certainly entitled to chew somebody out which would certainly indicate that he was planning an effective landing too. We need those figures so we can compute our own fuel load so the loadmaster can come off with his ballpoint figures.

Q. Did Brian have any concern about the weather. Was there any discussion to show any concern on his part?

A. No. He was just very conscientious about analysing the weather we picked up en route. He kept a close eye on it and kept cross checking with the previous hours weather and that was the latest and so forth. The weather that we got at top of descent wasn't really anything to become too alarmed about. You know 1,200 indefinite and I think it was 5 miles variable and experiencing fog patches to the south which wasn't really all that bad.

Do you have any questions?

Yes. Are you aware

Dr. Shannon? *SKJEIWAH*

I'm sorry. Are you aware of the testimonial that was given the at the _____
_____ regarding the pathological findings.

I indicated to Mr. Hatton that the autopsy report on the Captain's liver showed that the liver was apparently abnormal and was heavy or large and I recall that you mentioned that he had died by drowning and it wasn't as a result of impact.

I don't recall him every regaining consciousness after impact.

Did you explain is the tape on yes the tape is on now.

This is Dr. ^{Hewson}Huston talking to Mr. Hatton:

Q. This was the point that I had in mind when I was questioning you about a possible incapacitation was that it is possible from a medical point of view that Captain Thompson could have been sitting there and in a say a reduced state of consciousness due to an incident and you could have been unaware. He wouldn't necessarily have had to have suffered pain, he wouldn't necessarily have been able to communicate to you that he was in some sort of trouble.

A. He might not even have been aware of it himself.

Q. This is possible, you know, it's strictly conjecture but it is possible and this is why I asked the question in your mind, as I say I know that you must have gone over this many, many times. Has there been any thought or do you think

it is compatible with what you observed that an incapacitation might have occurred?

A. Yes, that entirely possible, especially if it's that kind of incapacitation.

You know it's the sort of thing that wouldn't be readily available. I've gone over it a thousand times trying to think of a reason, you know.

Q. Well then, thinking along these lines, is there anything further that you might add either to confirm this theory further or to detract from it, you know, one way or the other.

A. I don't think so. I just know what I observed and the action that I recall I can't think of anything else to add to it except that personally I feel a little bit better because here's a concrete possibility - an explanation - something that I've really been looking for.

Are there any other questions?

Yes, Leroux directing questions to Mr. Hatton:

Q. Dave, you mentioned a while ago the figures 200 and 2 D.M.E.

A. Yes.

Q. Can you clarify that?

A. Well I can remember when I first had visual contact at about 3 D.M.E. and then as we went into descent 1 through 2 I think as I looked over, I glanced at the D.M.E. and I think we made it a little further out than 2 but I think I glanced at it and saw the number flicking over or something and this is why I shouted this information to him. Certainly we were too far out to be you know, going down that far.

Q. What was was the plane _____?

A. Just about 2. About 2 D.M.E.

Q. And could you also clarify what the altitude was when Captain Thompson bunkered the aeroplane?

A. When he finally pushed

Q. Yes.

A. We were stabilized at 300 feet.

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Q. You were stabilized at 300 when the hunt occurred?

A. Yeah.

Q. How well can you recall actions prior to the flight of Edmonton. Can you recollect everything fairly well at this time?

A. Not really. There's a lot of small details that I, you know, really...I can remember general _____.

Be more specific Mr. Leroux.

Q. No, I just wanted to remember how well you could remember it because the following questions are going to be based on weight and balance. Now did you have anything to do with the actual weight and balance at Edmonton?

A. No. This was the job of the loadmasters. The loadmaster on the aircraft and the loadmaster on the ground who supervises the operation. This is part of the reason we have the loadmasters - it keeps the flight crew free to flight plan and go over it and just before take-off the load sheet is given to the crew and they usually go over it and have a look at it.

Q. Then you personally do not take a look at the weight and balance prior to _____?

A. No.

Q. Were you present when Captain Thompson gave the fuel load to the engineer?

A. Yes. But I don't recall what the figures were offhand. They were higher than the dispatch before we left from Calgary though. He was planning on taking extra fuel on. I'm just not sure whether he bumped freight for that or whether he had a fairly light load. The way he flight planned was from Rea Point or from Edmonton to Rea Point, we used Resolute Bay as an alternate plus _____ 45 minutes. _____ we carried an extra fuel load allowing us for more flexibility to _____ go from Edmonton to Rea Point to Pedder Point at normal cruise power settings, then at alternate power settings. From Pedder Point back over to _____ plus 45. But the point being that we had more than ample fuel, you know, if we were really being conservative as far as the fuel _____ out so, because the weather had been kind of

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up and down. The weather up in the part of the world can change very quickly.

Q. Were these the reasons that Captain Thompson gave to you for adding extra fuel?

A. Yes. Resolute Bay is used as an alternate quite often and it's fairly close to Rea Point and it has good facilities such as weather can change very quickly and this is why we were just sort of planning an extra out, giving us extra fuel to go to any of our other ^{sites} if necessary.

No more questions.

Q. I've just one more. I don't want to hold you any longer but do you know anything about Captain Thompson's activities on the couple of days prior to this flight while he was at Edmonton. Was there ... I'm just thinking that he might have indicated to you that he was engaged in some kind of activity or anything like that. Was there sometimes these kind of conversations go on.

A. The only thing that I can recall talking about was working around his farm he has there and he mentioned that the tax assessor had been around looking the place over. I remember him mentioning that. That's about all.

Q. One other question and is this you probably wouldn't be aware but would you know whether or not he had spent a night in the crew quarters or the facility there at Edmonton prior to his flight, either the night or two nights before?

A. I hadn't heard anything.

Thank you very much.

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This will be an interview with Mr. Al Newnham of Pan Arctic concerning the Aircraft accident to Electra CFPAB. Mr. Newnham do you have the statement to the witness has been read to you by your council whom you have asked to represent you and you understand the statements?

s.19(1)

A. I do.

Q. Very good. Will you start by stating your name and your address and telephone number.

A. Yeah, my name is Albert Richard Newnham [REDACTED]
[REDACTED]

Q. Okay. When Lockheed Electra we may qualify in the past with other witnesses Mr. [REDACTED], you have heard specifically in reference to uh CFPAB timefactors up to and including the thirtieth of October is it your intention to do that with this witness also.

A. Yes, if we refer to a period subsequent to that we will advise.

Q. Very well. When Lockheed Electra CFPAB crashed October 30, 1974 what was your position with the company?

A. My position at that time was the Superintendent of Aircraft Maintenance Pan Arctic Oil's Air Transport Department.

Q. Are you a licensed engineer?

A. Yes I am.

Q. Are you a licensed flight engineer?

A. Yes I am.

Q. Are both licenses current?

A. Yes they are.

Q. And were they then?

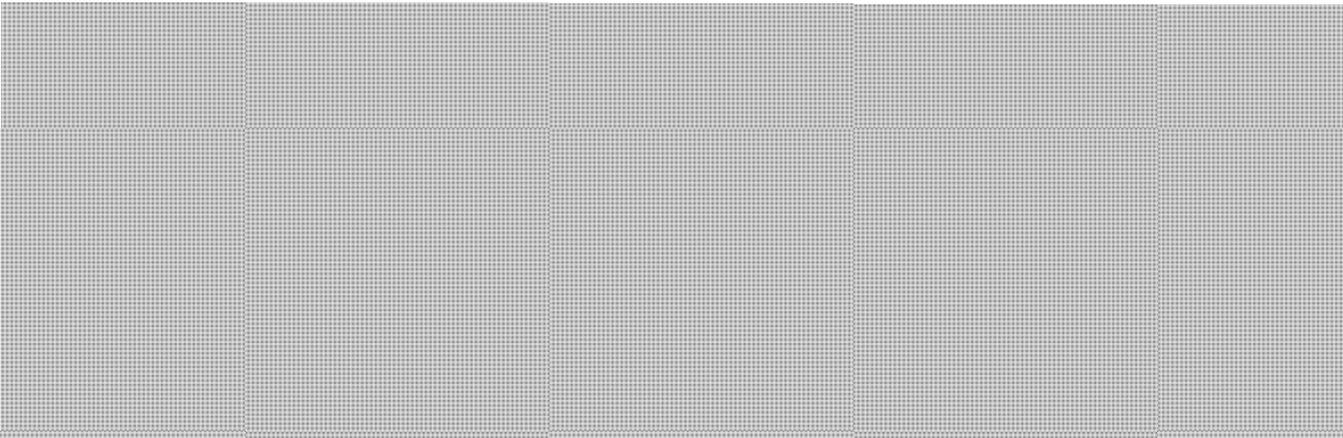
A. Yes they were.

Q. Please detail your aviation experience, name companies, approximate dates and your work and training experience.

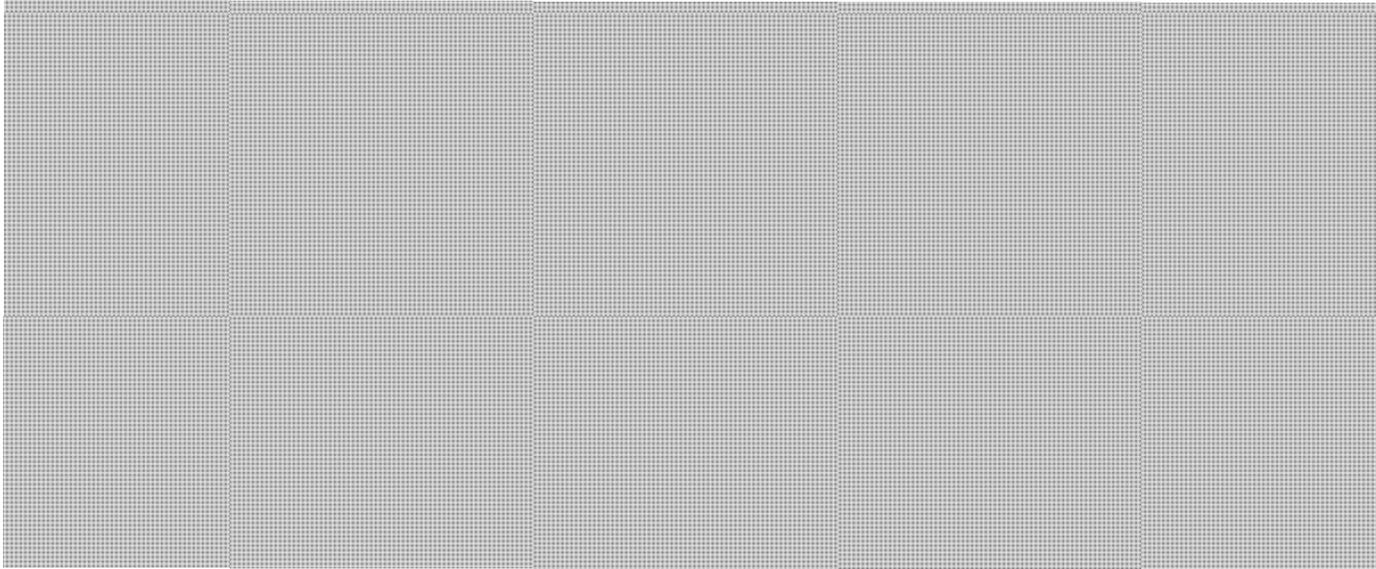
A. You want me to work from present backwards or any natural progression?

Q. Well, work backwards.

s.19(1)



I have been with the company either through contract negotiations or contract operations or directly operating with them since their conception in April of '68. I stand corrected on the dates I am not quite sure whether it was '68 or not.



Q. I note that you indicated that you have a or had a commercial license?

A. I hold a valid commercial engineer pilot's license,

Q1 At this time?

A. At this time.

Q. And during the time prior to the air crash.

A. It has never lapsed or been suspended.

Q. When did you first come into contact with the L-188 series aircraft?

A. I came in my first experience with the aircraft directly was with Pan Arctic Oil, and this was the time the operations were taken over from International Jet Air, just prior to being taken over by International Jet Air I had been directly with

Pan Arctic for two years at that time which at which time they had operated with Twin Otters and expanded into the Electra field and I believe that would be about '72 i guess as I recall.

Q. What type of formal training did you then get on the aircraft?

A. My training on the L-188 was carried out at what was Universal Airlines Academy in Michigan, consisted of a basic 160 hour course plus a simulated training plus some on the job training and also flight training. A total of approximately 6 weeks time was spent on it.

Q. Approximately how many hours have you flown as a flight engineer on the L-188?

A. Somewhere between 4 and 5 hundred hours. That's as an actual flight crew member.

Q. Looking at your Pan Arctic Organization chart, it is indicated that your Direct Line Supervisor is Mr. , the Air Transportation Manager of the Air Transportation Department.

A. That is correct.

Also from the chart I it is indicated that you have or you did assume total responsibility for maintenance of all Pan Arctic aircraft including the Twin Otters the L-188's.

A. That is also correct.

Q. In the course of your duties as the superintendent do you direct or did your direct flight engineers in any way?

A. I am not sure I understand your question.

Q. Okay how about training. Do you have any input into their training program.

A. My input into that was that I was directly involved in training the people simulator aspect of it also some aspects of the flight training initial flight training courses ect. were beyond my responsibility.

Q. Who's responsibility were the courses.

A. The courses were set up through Mr. Kowalick and also through the academy which is now an International Airlines Academy in Michigan. Mr. John Binder our check flight engineer put a direct input into the courses himself.

Q. Mr. Binder is the check flight engineer who reports to you?

A. Right.

Q. Then you didn't do or have or assign duty assignments to the Flight Engineer?
A. The only aspect that I had in assigning Flight Engineers the way you put it was to block out x number of personnel required to carry out the flight assignments for that month pass the names to Mr. Kowalick there after sorted out the names of the crews for the month is his responsibility to carry out all flight aspects. So it was an integral flight operation outside of our jurisdiction as far as programming went.

Q. Did you hire the flight engineer?

A. Yes I did. That possibly takes some qualification in that all of these people that we employ as flight engineers at the time we are referring to had come to us through having been employed on maintenance aspects first, purely maintenance aspects, and this gives us a chance to evaluate personnel etc. and a recommendation on my part and Mr. John Binder's part would be considered by Mr. Kowalick and subsequent to that he would decide whether the man was a candidate for flight engineer and we would train him.

Q. Most of your flight engineers that were selected were also licensed is that correct?

A. That's correct yes, they were all licensed

Q. In the organization did you have or know of any clearly defined duties and responsibilities of your position in writing?

A. I know that such a document probably exists downtown I had it read to me one time by my then supervisor which was Mr. Alexander but I have never had a copy of that was my personal copy or have I had access to one.

Q. There is a possibility that a personnel type manual did exist defining working conditions, hours of work.

A. I believe it does exist yes. I don't whether it defines hours of work it purely defines the job allocated to the person rather than defining hours of work etc.

Q. Have you had management training or supervisory training since you have been with Pan Arctic or prior to that?

A. Not since I have been with Pan Arctic, Part of the course at the Technical Institute

Was an industrial relations and that would be the basic or limitations of my personnel training in that field. We do get various publications sent out from our personnel manager Mr. Mike but it is purely at your own discretion to read and evaluate them the literature which is given us on a monthly basis. This is put out by the Canada Manpower Centre.

Q. Are you responsible for a maintenance budget?

A. Yes I am. The budget is not exactly one that is not one that it tight or have to operate 100% to it. It is a budget that we put together at the first of the year and I would call it more of an estimated budget than an actual budget. It is based upon past performance our estimated reserves, our estimated flying time for the year and then we try to operate to it or at least guage our use it as a yardstick to guage our progress during the year as to how our clocks are going to turn out we allow an escalation factor for inflation or what the market demands are for parts etc. which increase our costs. My aspect of the course is just purely on a maintenance basis, part of the total budget.

Q. Then you do have signing or approval authority on financial matters/

A. Yes I do.

Q. Is this to a specific amount.

A. In matters where it is an intial purchase outside of a reserve item, I'm limited to \$5,000.00 on my signature alone, but if it is a reserve item such as the overhaul of major components of the airplane then it is purely my own perogative to pursue what I see fit.

Q. It is noted your using a program card system of maintenance perhaps you would call it progressive maintenance what is your origin of that maintenance system you are using. Was it Panarctic's or.

No the aircraft was brought into Canada from the United States of America and formally operated by Northwest Orient Airlines and the initial operator, International Jet Air bought the airplane plus the maintenance program and continued to use the airline maintenance program.

I assume there were probably some small deviations from it to make it to fit their requirements.

A. At the time we took over the aircraft and the company commenced to operate it as an integral part of the Air Transport Department we adopted that same program or basic program to our system and the only real change in it has been the requirement to change some of the procedures to allow us to work in the Arctic and this would entail such items as getting follow-up information snags etc. of the Arctic which couldn't be done using the prior system because they relied upon different systems of communications etc. Basically we checks etc are exactly the same as what Northwest Orient used which was a progressive maintenance system based on a \$4,000 cycle.

Q. Any modifications to this system that you are talking about have they been approved by

A. They are aware of what we have done. It has been checked over on a yearly audit and in the case of major ones one that comes to mind right now being a change in the inspection cycle from 75 to a 100 hour basic implement, it is approved by the Ministry of Transport in writing etc.

Q. At the time of this accident of October 30 or prior to October 30 last year it is our understanding from previous witnesses that the company didnot have specifically Pan Arctic maintenance manuals. Is this correct?

A. I believe the manual referred to is the one which is the ENI manual refers to and that is correct we did not have a specific manual because no. 1 it was not required of us being a private operator no. 2 we hadn't reached the stage where we put it together yet. and that manual is in a rough draft at the present time it will be complete somewhere around Christmas time. It hasn't reached it's publication yet.

Q. You indicated that it was not required as a private operator it is it a requirement at this date?

Not to my knowledge.

Q. From that I assume that you are producing a manual for your benefit?

A. That is correct.

Q. You indicated that you have had maintenance audits prior to October 30 a yearly

audit is that correct?

Approximately this time of the year we used to get an audit primarily by Mr. Ray Scott, who looked after our aviation section I guess as far as the Ministry of Transport was concerned.

Were these audits helpful to you with their suggestions or criticisms were they valid?

I think that, first of all, I would like to say that relationship with them has been a good one with the people I normally work with and certainly have had to criticisms in some areas and I found that those areas were no. 1 justified or areas that we had overlooked and no. 2 that they helped us being able to rectify the outstanding item or situation.

Do you find that the maintenance that your doing at Panarctic are you having difficulty living up to some of the requirements or regulations ?

A. I could probably spend a day discussing that manual. Engineering and Inspection Manual. No.1 the thing is outdated, and No.2 if you are going an Engineering and Inspection Manual let's have a Canadian one and not half of Canadian and half Faa. It seems to me that someone is too tired to pick up their pen and write then they refer to the FAA part 121 or 123 or whatever which causes us a lot of problems in that we have to keep duplications of facts and statistics etc. In otherwords we have to have both the American and Canadian versions of their ordinance directory or directives, manuals or whatever going it means we have got more work to do and we can't afford to have people overlooking things that may be applicable to the airplane that the Americans have come up with and yet it still isn't even in the Canadian one.

Thank you for being so candid.

What happens to correspondance concerning the maintenance that Panarctic I refer specifically for example to service bullitens, service letters, special inspections that might be issued contractors, the manufacturers so on and so forth. Are they received directly in your office or would explain your communications system in that regard.

The company itself has progressed into a fairly operation at the time this instance happened in a very short period of time. Initially we did have a problem paperwork of this nature would arrive at the downtown office and then it had to be forwarded to the hanger through our daily mail delivery company delivery it resulted in delays and much to my dissatisfaction so I undertook an earliest date as possible to get this stuff to us. I would have to say that 99% of it now probably does arrive on my desk as a first contact with the company.

Would you consider that there has been an improvement in the very near past?

There has an improvement in that again you always have the outstanding onw or two people that end up sending it to the wrong address for past records etc.

but it has improved vastly it comes into our offices normally now, directly.

If an unusual circumstance occurred either one personnel or with your equipment such as an unusual setting or malfunction or a disagreement between personnel do you have full authority to deal with that problem.

That question is a loaded question you've asked about three in one perhaps it would be fair to the witness if you broke it down.

In an unusual circumstance if an unusual circumstance occurred with personnel such as a disagreement would you have full authority to deal with that.

It could be normal rather than unusual. Theproblem with it is it sounds like a hypothetical question to which there is an unusual circumstance if you are referring specifically grievance procedures and what the necessary complaint command are than that's fair.

If a disagreement occurred between some of your personnel you would have full authority to deal with it is this correct?

It would depend upon the nature of the grievance I would say. In otherwords to answer your question 100% correctly no.

It may go to a higher level?

That's correct.

If you couldn't satisfy both parties at your level.

I'm not following you 100%.

If you couldn't resolve the disagreement it would have to go to a higher level?

A. Well perhaps if you give me an example of what you are striving at I could come up with a better answer.

Perhaps I'll re-phrase it: Do you actually have control of your shop?

Yes, I do.

Now is there anything else arising out of that double barrell question Mr. that you want answered also?

No that's fine.

Q. I'm thinking of something here if I may, Al flight engineers work for you could be assigned by Mr. Kowalick too couldn't they? In this area if there was a conflict between the flight engineer take for instance a chap from who says I want to go back to flying again and you say no you are not going back to flying and yet he goes to Mr. Kowalick look I want to go back to flying. How would you resolve that problem?

No. 1 the situation would be brought to the attention of my immediate supervisor Mr. Kowalick and it would only be done through normal meeting or discussion between him and I. I have never personally come into a case where there was any problem. What I suggested is normally accepted and any real reason for hesitating on the whole question was that if I thought that it affected safety in the operation or directly reflected on the some other part of the operation then I wouldn't take it upon myself to fire a guy or whatever without consultation on a higher level.

Another question, many times we all are aware that friction may develop in an Air Transportation organization such as yours between the operational authorities and maintenance. As operations or was operations sympathetic to your needs or did they expect you to accomplish unreasonable target needs. Did they give you the time you needed to do the maintenance.

I would have to say that in all instances I have been able to operate almost entirely independent of flight operations. I have often had to fight for it but I have never been refused any specific request that I made that was a genuine one. When a new employee joins Panarctic maintenance staff, what type of to who would he be assigned for example, for duties.

A. Well I assume that you are referring to a line mechanic or apprentice something of this nature. He would normally be hired by myself during the initial interview I normally call in Mr. Binder or in his absence possibly Mr. Bell if the guy's going to be working on Twin Otters and based upon our mutual agreement we hire this individual. The first day he reports I assign him to one of the supervisors in this case it may be Mr. Binder or Mr. Bell, it would normally be Mr. Binder because ;we don't send a guy up north on a northern operation without first giving him some experience with the company operation or organization and we give him a book of memorandums etc, detailing his normal working hours, specific items we expect him to comply with this sort of thing.

Q. You do have a book of memorandums?

A. Yes we do.

Q. I was not aware of that. That would probably, would you call that the equivalent of a policy or procedures manual, or personnel manual?

These are memorandums that I myself have originated or put out I should say. They may have originated from another source maintenance operation but they pertain to items which we felt we everyone in the organization should be aware. They may even pertain to particular malfunctions we have found with aircraft systems, security of the hanger, fire hazards, you name it just about anything.

Q. Are the employees expected to read this and sign as reading.

A. We get them to sign an initial sheet when they come for the memorandums, keys, etc., sample signitures, but we have no guarentee that he is going to read it if you ask him to read it, and become aware of the memorandums we have published.

Q. Then in effect, there is such a thing in writing conditions of work and hours that they are responsible for.

A.

Q. You indicated that your due to the fact that you had no

That nod meant yes did it Mr. Newnham?

A. Yes it did.

Q. You indicated that due to the fact you had Northern Operations that NWA maintenanc-

system didn't fully fit that you had designed to your satisfaction, such things as snag sheets?

Yes we did. It became obvious that the paperwork required from the flight engineer aspect had to be somewhat changed. Provide us with a proper follow-up on snags, more accurate aircraft performance we designed a manual or book for that purpose it is actually a book I guess. Also we had to have some method of determining almost instaneously any snags that existed on the aircraft of a serious nature, in order to allow us ample time back at the main base in Calgary or Edmonton. Calgary normally for rectification when the aircraft came in. This is done by Telsac Communications system presently previous to that it was done by radio, and this allowed probably no further than 4 or 5 hours actual time away from the aircraft communication wise in knowing what was going on in flight problems were taking place.

Q. When in fact _____ occurred for example _____ is the flight engineer expected to rectify that if possible.

A. That's correct. The sole purpose of the flight engineer from my stand point and I completely divorce that from the flight operations in my remarks, is to insure that the aircraft could be brought safely back to a repair base if some mechanical problem did occur and he would normally undertake to either repair or get assistance to _____ repair.

Q. Was there any danger of losing a time sheet with a separate item in danger of losing this snag sheet at any time, sight of someones servicability?

Perhpas I would have to explain it briefly to you to answer your question. The system consists of two separate entires, one which is purely for snags and rectifications the other which is for fuel log and engine monitoring. It is a self carboning copy. The top copy is normally removed from the book by the ground engineer at this _____ base and his rectification for the snag is set and entered on the snag sheet and the snag sheet is then attached to the approach plate holder on the control column of the aircraft for the oncoming crew. This allows the

captain to monitor what the snags were on the previous and what rectification or defirmative had taken place. The yellow sheet below or the self carbon copy was a permanent record in that log book which is with the airplane at all times. The oncoming crew would remove the top cover or list which is on the approach plate holder would place it in their flight envelope for that trip so in fact we always retained both copies one would be a delay of about 24 hours because it had to come back through the mill the next day. On items that were deferred, by maintenance personnel, a separate sheet was placed in the back of the log book which showed the numerical sequence and also the deferment or item deferred. These were items of a nature which were could be carried on the aircraft. When you referred to log books last time we are referring to the flight engineers log book or the aircraft journal.

A. No the flight engineers log book in all cases.

Q. 9G cargo was not in TAB. do you know why?

A. Well there was two reasons basically why it was not in the aircraft, number one it had been removed by load masters initially because they had problems loading the aircraft due to the position of the net. After it had been removed maintenance including myself became somewhat concerned as to the aircraft flying without the net and I proceeded to pursue the matter with the people who had designed the floor structure and the cargo handling equipment. It was determined that this particular airplane had indeed sufficient structural integrity in the intercostals, floor beams, floor webbing and also in the tie downs and lock system to qualify for a normal 9G system as used in the other Electra. The only requirement was that we come up with a different type of pallet which was a structural airline type pallet which we did, and this allowed the cargo to be secured by nets and also by the 4500 lb. tie down straps to the pallets and to the tie downs in the floor which in effect negated the requirement for the net to the front end. To my knowledge there are only four Electras that ever used this. PAB was one, Imperial Oil was the second and there are two more in the, operated by _____ in South America. You must remember that this aircraft was a proto-type of the

CF model L188 and much of the design work was in its infancy and subsequent to doing these proto-type airplanes they changed their method of restraining, etc. To answer your question indirectly I guess that the 9G aspect was there.

Q. Right. Thank you. You have maintenance quantity control, an inspector etc.

A. That's correct.

Q. Would you elaborate some on that.

A. Well, our operation by necessity has to be reasonably small, we have one appointed inspector a Mr. Charles _____ who does nothing else but look after the inspection work or primarily the inspection work whenever the aircraft is in. In his absence we fall back on our supervisors or qualified man on the pipe to fill that slot. As I say this is necessitated by the size of our operation. The work is normally drafted out by our planning and or records department. The maintenance supervisor or acting maintenance supervisor picks up the work load and sorts it out, evaluates it and assigns his men to carry out the required work. The cards are then, after the work is completed the cards are returned to a work bench on the hangar floor with individual bins for the various sections of the aircraft and inspection picks up the cards which have been completed and examines the work done, and gives the authorization to close it up or whatever is necessary to complete the inspection Cards are then turned back in or picked up by the maintenance supervisor who checks for the appropriate signatures, inspections and any other incidentals that are required on them and they are turned back into records. That's a very brief description.

Q. Do you, did you have sufficient spares to maintain the aircraft or have any problem with maintaining spares.

A. Yeah I would say we had ample spares to maintain the aircraft and we did have a very good working relationship with other operators of this type of aircraft in Canada which allowed us to normally obtain any unusual parts or items that we didn't stock if the requirement arose. Our only real area of concern or

problem areas were, number one getting quality materials in and in this aspect I refer to most of the _____ compents that had gone out for overhauling or were being replaced on a time basis, we had a very large problem trying to get units that were reliable and also just generally serviceable units. The other area of course is the market tends to fluctuate on this type of equipment or parts of this type of equipment and have either a great demand for it or and a limited supply or you have a lot of it around and no demand. At the early stages we had access to a lot of parts now the market it somewhat dried up, it makes it more difficult to obtain the goods and of course greater _____ time etc. are required.

Q. What type of control did you have on your _____ and your time expired to shelf length items.

A. Are you referring to records control.

Q. Yes.

A. Well, each aircraft has its own time records book and its based on the ATA 100 system whereby each major section of the aircraft is broken down into chapters. Our records man Mr. Frank Routledge is assigned the duty of keeping the records up to date and also monitoring them. No this is just a work book his rough work book. The actual records book is a far larger book, has individual printed cards on it.

Q. I believe I have a copy of that.

A. I am sure you must have seen it. You did have the book for the aircraft in question.

Q. This takes care of lifed items. Aircraft lifed items.

A. Lifed items Sp's, AD's general inspection procedures etc.

Q. How about shelf life of items that come into stores. How do you determine whether or not an item may have sat on the shelf for five years and become time expired due to shelf life.

A. Well, fortunately we don't have too many on this particular aircraft that

are shelf life limited. We pretty well are confined to seals, this sort of thing and we just, when the item comes into stock or into the

Q. O.K. you indicated that when a part comes into the country,...

A. Our purchasing agent or purchasing officer if you want to call him that would remove the source documents, prepare all our company tag, file the source documents under the appropriate section and the item would go on the shelf. Should we run into an item which is shelf lifed it is the normal responsibility of the inspector who is going to consume that item to insure that it is a usable item.

Q. With your, why does your control inspector inspect all parts prior to being put on stock.

A. I can't say he would inspect all parts because there is some parts that you just, bolts and nuts and this type of thing that you never inspect. Some you don't even get source documents or at least the type that were specified anymore with them you get strictly a computer print of them. One of the engineering inspection manuals deficiency.

Q. Is your storeman, or your purchasing agent or whatever you call him, is he technically qualified in aviation or in supplying of stores.

A. Perhaps you would clarify what you mean by technically.

Q. Does he have any license or did he have any experience on the floor in maintenance or anything like that.

A. No.

Q. Who is your avionics specialist.

A. Well, I don't consider that we have a specialist as such the man is highly qualified if you wish to call him a specialist I guess that is your prerogative but Sam Attalah is the gentleman we use to troubleshoot our electrical and electronic problems.

Q. Would he be solely responsible for installing and servicing such items as the flight data recorder.

A. No.

Q. _____ recorder.

A. No.

Q. Troubleshooting those systems. Would he be expected to troubleshoot those systems.

A. Within his capabilities to do so as you are well aware this would take some specialized equipment and we don't have access to it in Calgary.

Q. We're not talking about say bench testing or overhaul or zero timing, would he be expected to open any of this equipment.

A. No. The only facility we have ever used in Canada in that manner is International Jet Air's Avionics shop. Well, I might qualify that a little bit, if its a case of replacing a flight recorder tape which is a normal maintenance function to me then he might indeed do that.

Q. For the time being that is all the questions I have.

Q. In the year previous to the accident on October 30 th, the year previous to that how much flying time did you get as a flight engineer on the Electra.

A. I couldn't tell you.

Q. Approximately. Fifty hours, ten hours.

A. It would have to be more than fifty hours. I honestly can't answer you.

Q. You may have explained this to Mr. Froler here before but do I understand that you have an input into the selection of your maintenance people to go on the flight engineer course.

A. That's correct.

Q. Do you have any criteria for selecting these people.

A. Yes we do its not written down as such, but I use my own basis I'm sure Mr. Biner has his format for it.

Q. It would normally be a decision between you and Mr. Binder?

A. At the level of recommending the individual for flight engineers training.

- Q. In your transportation department is there such a thing as a flight safety aviation safety organization.
- A. Well technically speaking as an organization, no, we do have monthly meetings in our maintenance group in which we discuss past problems, specific instances that have arose, this is where some of our memorandums develop from the memorandums being published to the employees.
- Q. Would you call this a safety type meeting.
- A. No I can't say that it would be classified as a safety type meeting it would be interwoven with general problems pertaining to this department.
- Q. As such then, has there been ever any _____ suggestions or recommendations coming across your desk, from the men in the organization.
- A. Oh most definitely.
- Q. What procedure do you use to rectify these or process them or pass them on.
- A. Well just as I previously explained we would discuss it number one, and if its a valid instance or valid point which is going to affect either safety and or cost the operation I would prepare a memorandum to all maintenance employees and flight crews if necessary and we would detail in the memorandum what we recommended, it would be passed out to our maintenance employees and one copy of it would be passed to Mr. Ed Kowlik for his evaluation and future use in flight crews or flight operations.
- Q. In these meetings Al, would the air crew be present other than flight engineers?
- A. No. We would purely have supervisory people and or people involved with the particular incident or subject.
- Q. Has there ever been any discussion in your organization about day night flight situation.
- A. Oh yeah most definitely, there was a lot of discussion on that particular aspect.
- Q. I understand that, was talking to Peter this morning that maintenance people would prefer night flight because then that gives you a chance to work in the daytime. Do you have any comment on that.

A. Well I think that's only natural thing to expect from anyone no matter whether they are maintenance or flight crews or floor sweepers. Could definitely provide you with an employee who is usually more efficient if he is working in the daytime than he is if he is on night shift.

Q. Have you ever had occasion to discuss this with Mr. _____

A. Yes I have.

Q. I understand now that they do mostly day flights. Is this right.

A. Yeah that's basically correct.

Q. In the maintenance organization have you ever been involved with any say conflicts between the air transportation department and the drilling exploration side of it.

A. No I have never had any personal involvement in any in fact right off hand I can't think of any particular items. If you get schmucked by a fork lift or something on the ground once in a while well we might do a little screaming about that.

Q. I'm thinking more of requirements coming out of the exploration drilling side of things and

A. You mean affecting the maintenance.....:

Q. Affecting the air transportation and responding to those

Q. Can I interject if I may? Are you speaking about pressures with respect to fly and maintain aircraft? Yes. Both at Calgary and at Rae Point, or throughout the operations? Yes. So I take it that the thrust of your question is do the operations people, be they drilling or otherwise put any pressure on the flight operations people unnecessarily to provide available aircraft and or maintain the same. And in turn that's reflective to Al's organization.

A. Well, using my definition of pressure, no. I mean certainly the requests exist from time to time and you mean if its a point where I got to get down to saying we're not going to do it, I'm going to quit sort of thing, no, I have never been in that position, fortunately.

Mr. Froehler speaking.

Q. It would be very wrong for us to assume then that the exploration department treat your aircraft as a trucker.

A. Well, I can't speak for all phases of the operation as you I'm sure appreciate but I'm speaking purely from maintenance aspect, and to answer your question I can't say that we have ever been right up against the gun where we had to do something and to do that that we jeopardized maintaining the airplane, or the safety of the airplane or anything else.

Mr. Glanigan speaking.

Q. In your position as manager of the maintenance now, and I don't know how you would compare this with another organization, but has there been any abnormal large number of personnel, flight engineer and maintenance personnel turnover in your organization. By that I mean leaving or being fired.

A. I think at one time we had an abnormal number of flight engineers leave the operation, didn't turn over maintenance personnel, with due consideration given to the area we operate in we of necessity are rotating people into the Arctic for periods of time. I would say it is less than the normal _____ rate, but we have certainly tried to provide all the amenities that would keep the people with us.

Q. I understand the airplane is down south now is that correct.

A. That's correct.

Q. Is that a PIK? What are they doing to it down there? Why is it down there.

A. Well the aircraft was going through routine inspection and it became a, there came an area in the aircraft fuselage section which was suspect to corrosion and subsequent investigation showed that there was corrosion present. It did not appear that it was beyond the limits laid out and there was about 651 on the particular airplane but in detail there required some rectification.

That particular work can best be done in the United States due to the requirement to machine out parts.

Q. You are probably more knowledgeable than I am but do you know how the other Electras are fairing under this corrosion, are they.....

A. Well this problem is something that is just recently came to light as far as we're concerned in the particular area that it happened I have no reason to believe that other operators have come up against it. The Dept. of Transport is aware of it we advised them etc. through the normal communication channels you would use.

Q. Where is this corrosion, in the fuselage.

A. It's in the lower left hand fuselage _____ midsection, right adjacent to the electrical service _____

Mr. Froehler speaking.

Q. Did you do any flight engineer check rides.

A. Yes we did.

Q. Did you, was this considered part of your regular duties.

A. Well, it was deemed a requirement of our operation to have at least two people capable of performing training and check rides and I did this in conjunction with Mr. Binder. I had been checked out with International Airlines Academy on their simulator and okayed by them to instruct and of course I try and keep myself valid here by doing the odd trip at least once a month.

Q. Have you yourself ever had a check ride by an MOT inspector or air carrying inspector.

A. Well, I have been on a flight on which air carrier inspectors were carried and acting as a flight engineer, crew member. I think that would be probably be in the neighborhood of a couple of years ago and of course I go down yearly and take my ride with International Airlines Academy in the simulator.

Q. I have a letter that was reportedly delivered to your operations manager

Mr. Ed Kowilik, referring to some anomalies with the _____ voice recorder and the flight data recorder as a result of an investigation into an accident that occurred with CF PAB on October 16, 1973. I would ask you to look at this letter and its attachments and tell me whether or not you have seen or are aware of its contents.

A. O.K.

We have produced to the witness a photostatic copy of a letter addressed from the federal building in Edmonton under the hand of W.J. Dick to Pan Arctic to the attention of Mr. Ed Kowilik the said letter being dated and I think that's been typed in again but looks like December 1973, is that correct, together with various enclosures and attachments.

Q. Have you seen this letter before.

A. No the letter you have presented to me is, has never been in my possession before, I have never seen it before, it is the first time I have ever read it in fact.

Q. You were not then aware that there were anomalies with the flight data recorder.

A. Not with the flight data recorder.

Q. Had you at any time taken any of the tapes out and sent them away for interpretation.

A. Possibly I should correct that last statement I made, I knew there was something wrong with that particular flight data recorder because I was present when the magazine was taken out of it and it was torn, but as far as the investigation went I was not aware of it.

Q. You are referring now to a torn tape specifically at Rae Point.

A. The tape that they referred to in the letter was viewed by myself at the time it was taken out of there so I knew there was something wrong with it. I did not know what the findings were.

Q. Were you, are you aware that the cockpit voice recorder tape was broken, had been broken on PAB at the time of the accident.

A. Which accident are you referring to here.

Q. The accident at Rae Point, on October 30, 1973.

A. No, I wasn't.

Q. This has not been brought to your attention since the accident?

A. I was aware after the fact, but I was not aware of it prior to the accident.

Q. Could you possibly account for the fact that the tape was broken and was missed on a preflight. Is this possible?

A. Well, my experience with both of these units has been that they are extremely poor under the best of conditions and secondly that placed in the Arctic for a sustained period of time, under extreme temperatures of cold they just fail to do their job. When the particular voice recorder tape broke I have no idea, of course I had no way of checking it prior to the flight I assume that the flight engineer did on his preflight.

Q. This is a normal requirement on a preflight?

A. That's correct.

Q. Who serviced your voice recorders, other than just replacing the unit in the aircraft?

A. We've had various facilities service them. They are a life item on our program and the manufacturer has overhauled them on occasion as in the case of the flight recorder that's shown on that letter, or indicated on that letter. I believe the particular voice recorder if my memory serves me right was last recorded by, or last worked on by International Jet Air, to the best of my knowledge.

Q. That's correct, your maintenance records indicate that.

Mr. Glen speaking

Q. As a private operator is there a requirement for to have a voice recorder and data recorder.

A. No there is not. Not a Ministry of Transport requirement. We try to keep things serviceable unfortunately I guess we didn't do too good a job at it.

P.O. Box 7
Toronto Dominion Centre
Toronto, Ontario
M5K 1A5

s.19(1)

February 16, 1976

5002-H40003

Mr. W. England
Coroner
Yellowknife,
North West Territories

Dear Sir:

Enclosed is a letter from [REDACTED]
[REDACTED] requesting information regarding his brother
who he thinks may have been a passenger on Panarctic
Oils Ltd. Lockheed L188 CF-PAB when it was involved
in the accident at Rea Point N.W.T. on October 30, 1974.

[REDACTED] letter eventually was delivered to this
section this date after being forwarded through several
Governmental Departments.

We have advised [REDACTED] that his letter has been
forwarded to you and that you could possibly provide him
with the information with regards to his brother [REDACTED]
[REDACTED]

Thank You.

Yours truly,

ORIGINAL SIGNED BY
V. H. McPHERSON

V.H. McPherson
Regional Superintendent
Accident Investigation

Encl.
BA/cw

s.19(1)

P.O. Box 7
Toronto Dominion Centre
Toronto, Ontario
M5K 1A5

February 16, 1976

5002-144003
~~5002-PAB~~

████████████████████
General Delivery
████████████████████

Dear Sir:

We received your letter today requesting information pertaining to the passenger list of Lockheed L188 CF-PAB when it was involved in the accident at Rea Point N.W.T. on October 30, 1974.

Please accept our apologies for you not receiving an answer before now. Unfortunately your letter was forwarded to several Government Departments prior to being delivered to this section.

Your letter has been forwarded to Mr. Walter England Coroner for the North West Territories. He is the one who would be able to provide you with the information requested.

Yours truly,

ORIGINAL SIGNED BY
V. H. McPHERSON

V.H. McPherson
Regional Superintendent
Accident Investigation

BA/cw

PROPERTY OF THE DEPARTMENT OF TRANSPORT OF CANADA

(This document is supplied to you by the Department of Transport of Canada for your information only. It is not to be made known to any other agency or person without the written permission of the Department of Transport of Canada).

Peter, I'm Al Fuller with the Ministry of Transport; Rick is Chairman of the investigation of the accident on the Electra CFTND on October 30th, 1974 in Rae Point. Beside me is Mr. Glenn, who is with the Operations Group.

Q. I understand that you have, that you are aware of the statement of two witnesses that we normally read to you, that are represented by your attorney.

A. That's correct.

s.19(1) Q. Respecting confidentiality of the statement and previous protection given to confidentiality of the statements given, which you've given to these investigators, and I have read you and I have appraised you of the Ministry of Transport's position in this regard?

Could you start out by giving us your name, address and telephone number?

A. OK. Peter K. Humble of [REDACTED]

Q. When L...Electra CFPAD crashed on October 30th, 1974, what was your position with the company?

A. I was the L 188 maintenance supervisor.

Q. Are you a licensed engineer?

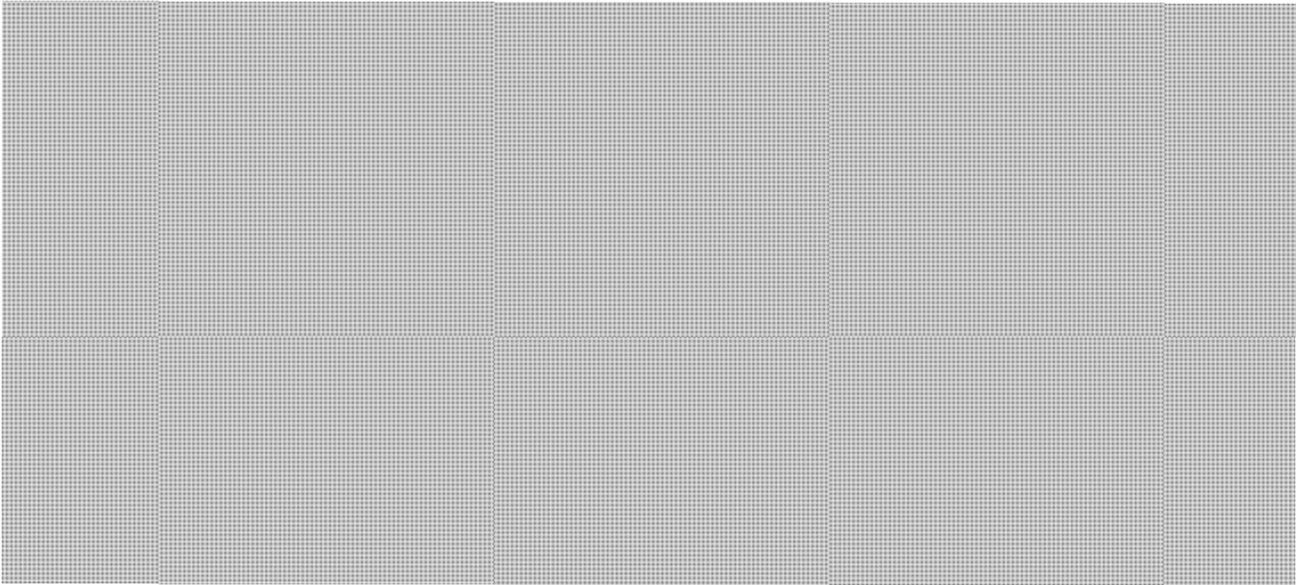
A. Yes I am.

Q. Are you also a licensed flight engineer?

A. Not at this time because my position with the company, my physical has lapsed at this time, however, at that time, I was current.

Q. Would you give us a brief outline on your aviation experience. I would ask you to name companies, approximate dates, your work and training, please?

A. OK. I've been with Panarctic since late January of 1973. [REDACTED]



Q. May I interrupt you for a moment, please. I think that you have preferably qualified yourself. One question in this area, I assume from all this past experience, that you have considerable Lockee 188 experience.

A. Yes. I originally was trained on the Lockee Electra as a flight engineer and qualified in approximately November 1968, as a flight engineer with initial grounds for cimilator training, etc. in Detroit, Michigan.

Q. Approximately how many hours did you have on / the Electra as a flight engineer?

A. Approximately 3200 hours.

Q. In the organization of Panarctic who was the immediate superintendent or boss?

A. My immediate is John Binder, the assistant superintendent in maintenance.

Q. Is that at this time or...?

A. Yes that is correct.

Q. What about prior to October 30th, 1974?

A. Mr. Binder.

Q. A note on the organization chart, you are listed as the maintenance supervisor of Electra aircraft. Is that correct?

A. That is correct.

Q. How long have you held this position?

A. Approximately one year.

total

Q. Do you assume overall/responsibility for maintenance in Panarctic Electra 188 aircraft?

A. No. Not total responsibility. Well, still working with/ⁱⁿthe organizational chart, as previously stated, so I would - certain situation I would not be the overall authority on it. I would still have to go to my superiors.

Q. And who is your superior?

A. My immediate superior is Mr. John Binder.

Q. Do you direct flight engineers in any way?

A. No, sir.

Q. While they were on the floor?

A. While they were on the floor, yes. But not in their capacity as a flight engineer, as an aircraft maintenance engineer, yes.

Q. I understand that it was customary that the engineers would work on the floor?

A. That is correct.

Q. What is the specific purpose of the flight engineer working on the floor?

A. Well, the specific purpose was that the flight engineer would remain ^{his}current as far as/maintenance responsibilities on the aircraft go. Would give him greater range, scope and experience; and secondly, for utilization of manpower.

Q. Were you involved in training of maintenance personnel in any way?
considered

A. To some extent, yes. In so far as it would be/on-the-job training.
licenses or apprentice
For the person or persons concerned, that is the / engineers.

Q. On duty assignments or work assignments on the Electra aircraft, were you responsible in this area? To assign the work?

A. That is correct.

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Q. Do you have crew foremen as well?

A. Crew foreman?

Q. Yes, crew foreman?

A. Not really because, being that one aircraft - small operation - or two at that time; one myself would be considered the foreman.

Q. Did you hire?

A. No, sir.

Q. Did you have clearly defined duties and responsibilities with regards to your provision in writing from the company?

A. No, sir.

Q. Have you had any management or supervisory training?

A. Yes, sir.

Q. Would you please elaborate, please?

A. Yes, sir. Ok. I was - for a period of time with Universal Airlines - when I was furlowed as a flight crew member, I worked as the company/representative at World Air Centre at Oakland, Calif. and was responsible for the electrical maintenance of searching aircraftprogressive overhaul ...through my maintenance.

Q. Approximately how many people did you manage?

A. About 50.

Q. Are you in anyway responsible, or were you in any way responsible with Panarctic, this question will refer prior to October 30th, 1974. Responsible for maintenance budgeting?

A. No, sir.

Q. Did you have any signing approval, that is, referring to financial matters?

A. No, I had no signature approval.

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Q. It was noted that you were using a program card system with maintenance. Was this developed by Panarctic?

A. Initially -- could you clarify that a little more, please?

Q. You have a card system, I assume it's a progressive type check system.

A. Yes.

Q. Where did this system originate?

A. The system originated from Northwest Airlines, originally. Basically it's a northwest system, however, with a few approved revisions because it's also cranked up to Imperial and, of course, the previous operators of the aircraft National Jet Air. Basically, for all intensive purposes, it was Northwest as the originator. And to the best of my knowledge, it was approved.

Q. In other words, I understand there were revisions to this program to suit your operation?

A. That is correct.

Q. They were done by Panarctic?

A. That is correct.

Q. Do you have specifically a Panarctic company maintenance manual?

A. No, sir. Not pertaining directly to maintenance. Now are you referring to the flight operations manual or the company maintenance manual?

Q. Company maintenance manual.

A. No, not at this time?

Q. Did you refer to any other company's maintenance manual?

A. Just the approved manual.

Q. Was this manual, to your knowledge, approved by MOT?

A. To the best of my knowledge, yes.

Q. Prior to October 30th, 1974, had you had a maintenance audit by MOT?

A. Yes, sir. We had one, I believe, to the best of my knowledge, for about --

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earlier on in the year we had an audit from MOT in Edmonton.

Q. Have you had subsequent visits - follow up action by MOT experts?

Subsequent to the follow up action by MOT ...

Q. Subsequent to this CFPAD crash or..?

Q. No, subsequent to this audit in particular?

A. As far as I know, now I am not in the hangar all the time, as I do a few trips to help out duties as a flight engineer whenever needed and to stay current, however, to the best of my knowledge, subsequent to the audit
No.

Q. You indicate earlier that your flight engineer's license was expired.
What time was this?

A. It expired in February of this year.

Q. You were a current flight engineer prior to that?

A. That is correct.

Q. Was the audit, do you recall, were there suggestions or criticisms helpful?

A. Yes. I found some of them helpful.

Q. And do you take any criticisms, if they were valid?

A. Yes.

Q. Accident MOT maintenance inspection services. Do you have any recommendations as to the improvement from that service?

A. You mean in our particular area now as far as maintenance?

Q. No. Did you find any difficulty with the engineering and inspection manual regulations or any other/pertinant to maintenance that may be causing problems?

A. Could you explain the problem?

Q. Do you find that there are areas that they may indicate that a certain work has to be done but is intolerable to live with or is causing any unnecessary or additional work or financial expenditures or whatever?

A. Well, my own personal opinion is that I think Northwest Airlines

000336

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hold and maintain their airplane if anything else. I just don't see how they make any money, but that is just my personal opinion. If you compare with, like another well known operation of Electra western airline.

Q. I see.

In other words, over maintenance?

A. Well, there is such a thing as over-maintenance. You can just keep taking things off and put them back together again.

Q. And because you've been reared to that system, you are also stuck with it, is that it?

A. That's correct.

Q. When a new employee joins Panarctic maintenance staff, to whom would he normally assigned to?

A. For supervision?

Q. Yes.

A. To myself.

Q. What type of training would he then get?

A. He'd get on-the-job training, naturally a new employee would get but how much depends on his experience, whether it be a first year apprentice or licensing or if he has had previous experience on an Electra. His training would depend upon these items.

Q. Are you also involved with the Twin Otter aircraft?

A. No, sir.

Q. To a new employee, where and what type of direction would be available as to company policy, hours of work, conditions of work, etc?

A. At this time, we don't have any - you are probably aware that we are having a company maintenance manual being built, which will be submitted for approval

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to MOT, however, at this time we don't have a manual as such that would encompass all the items that you refer to in writing form.

Q. Do you find the facilities that are available to you in Calgary here, for instance, suit the needs to properly maintain

A. Oh, yes. Definately.

Q. Service bulletins. Service letters, special inspections that may be originated by companies wanting an aircraft, for example. Do they come directly to your maintenance office?

A. Some of them come down to the downtown office. And then, of course, out to us.

Q. Who would process that...

A. Well, it would depend who it was addressed to - if it was addressed to Mr. Strain, then his secretary would process it, and foreexample, Mr. K....., his secretary would. This is assumption on my part.

Q. Am I right in assuming then that most of your mail goes to the downtown office?

A. I would say some, not most, but to what extent, I don't know. Percentage of it or portion, I'd really hate to just guess.

Q. Your use, what is normally known as a snag sheet for your L.....aircraft. Who designed that particular style of sheet?

A. Now, you are referring to the snag cards?

A. Yes, the snag cards, pardon me.

A. First of all, that was developed prior to my arrival here, so I'm really not sure how it was developed, except it is uniform procedure to use the snag sheets. Working on snags and recorded on these sheets.

Q. What I'd like to know is if the flight leaves Calgary and sometime during the flight, minor service dissability should crop up, and which did not cancel the flight, what process would take place in order to bring that snag to the attention of maintenance?

A. OK. The flight engineer would record in the flight engineer's log and when the aircraft did return to the maintenance station, at that time there would be a card originated from the snag written in the flight engineer's log. Then corrective action would be taken. Any parts replaced and then the snag card would then be attached with a complete tag and then forwarded to the department in Calgary.

Q. What about the deferred snags?

A. Deferred snags? If it does not effect the safety of the flight, and it comes within the minimum equipment list, then it would be entered in the deferred snag sheet.

Q. Who transcribes the snag sheets or cards?

A. In Calgary, it would be myself as a rule.
Or Mr. Binder, if I am not there.

Q. Did you employ the work card system at Edmonton for Rae Point or other points of interest?

A. Correct. Well, Rae Point , just a minute. Rae Point is not what we consider a maintenance base, per sa, it's basically a transit station. Twin Otter maintenance base, but not with 188s. So therefore, the item written in the flight engineer's log book would stand as such until it returns to Calgary. Edmonton or Calgary at which time it would be transcribed to a card, the item worked on and snag rectified and considerab le tags attached, whatever, and then channelled, of course, to our records in Calgary.

Q. You indicated that Rae Point was a Twin Otter base - maintenance base. Do you also have qualified 188 personnel people based there?

A. Yes. That is correct. Are you referring to licensed 188 qualified = or people experienced on the licensed AME but not necessarily qualified as licensed on the aircraft?

Q. Qualified.

A. Qualified? Yes. A vast majority of our people have now received the 188 endorsement or either the other of several experienced years on that aircraft and, of course, as far as sign off signatures are required, the flight engineers of course is always qualified 188 endorseed in AME as well as AFE.

Q. Referred to minimum equipment list for the L 188 aircraft. Do you recall what specific noteable items are on this list?

A. No, sir. I never attempt to remember that. I always refer to the flight operation's manual which is = well everyone has a copy, where this is specifically stated.

Q. Do you recall what were the most frequent - or reoccurring snags on the Electra aircraft?

A. No I don't. As far as reoccurring snags, I don't think there really are reoccurring snags frequently. In what period of time would you be referring to - a period of one month or ten days, two weeks or six months?

Q. How about propping - do they not give you considerable problems?

A. Propping - we do have problems from time to time on this. Has no effect on safety plane flying though.

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Q. Minimum.....

A. I wouldn't want to say at this time.

Q. Many times friction may develop in an organization such as yours between the operational authority and maintenance. Are operations sympathetic to your needs? Or do they expect you to accomplish unreasonable tasks?

A. No. There is no problem there as far as our relationship with operations.

Q. Do you do check rides?

A. No, sir.

Q. Were you involved with both?

A. No, sir.

Q. The 9G carbon was not in the TAB. Do you know why?

A. I'm sorry, I missed that.

Q. The 9G carbonite was not in the EAB. Do you know why?

A. Well, the way it has been explained to me, by the reason for it not being there is that the original installation did require a IGcarbonate because the pallot system, the lock system was not the type that was or would require a crash net. Now it was modified thereafter the the point where the increasedcapability versus the G low of a nature that a crash net would require.

Q. In other words they had a 5G tied or straps there?

A. That's right we had a stronger pallot locking system plus we had tie down straps, more than every required, for the higher G loading so therefore the crash net was taken out.

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Q. What check maintenance quality control do you have? Inspection crew?

A. That's right.

Q. And your chief inspector is Mr. Charles.....

A. Yes.

Q. Does he do random sampling, spot checks or does he?

A. He does full inspection of all work. All work, every item generated, whether it be a result of an in-flight snag, or an item that was found during inspection of one form or another. The card is generated through this, at which time it is rectified, signed by the mechanical engineer and is also signed by the inspector.

Q. Did you every experience any problems in supplies in that area?

A. Yes, somewhat.

Q. Is this late delivery?

A. Late delivery, slow overhaul times on units, sometimes poor overhaul. Because, for example, a unit is removed, a perfectly good unit and all that time for pulling it out and the unit you put in may not even check out there then or not even last a trip.

Q. Your indicating that you might take an item off the shelf and a low check servicable initially during the trip?

A. Yes, sir.

Q. Is this because perhaps because of exceeding shelf....?

A. No, sir. Definately not. That was not the problem, it was the fault of the overhaul agents. We've never had stuff on the shelf that long.

Q. Do you know what happens to the source documents that come with items that the overhaul or are overhauled by an outside contractor?

A. Yes.are held by our records department.

Q. In your records department?

A. That's correct. Panarctic servicable tag is there.

Q. Who would remove the source document and place the Panarctic identification tag?

A. That would be done by our storage man.

Q. Wouldn't the inspector be involved?

A. The inspector, if it's a unit that, of a nature that might have been damaged in transit, then yes.

Q. Would this item be then dated for shelf life?

A. Would be dated from the time that it was received.

Q. Who determines the needs of rotatable items?

A. You mean, the requirement for ordering?

Q. The needs. The planning ahead?

A. The planning on rotatables, that would be our maintenance planner. Mr. Frank Robins.

Q. Consumable items. Who is responsible for stocking in that area?

A. That would be again there our storage man for consumable requirements.

Q. Who would that be?

A. That would be Don B.....Blankeed./

Now he doesn't have sole responsibility with this. Should like Mr. Binder or myself see that there is a need for an order then we request it to be done.

Q. Is Mr. Blankett technically qualified in any way or?

A. He is just a storage man.

Q. That's all, thank you.

(Mr. Glenn directing questions here)

Q. Peter, as supervisor of maintenance in the organization, did you get much feedback from captain's about servicability of the airplanes?

A. Yes. A certain amount.

Q. Were some captains more than others.....

A. Oh, yes. Some more than others, yes.

Q. Did this present a problem?

A. No.

Q. Was there a level of acceptance from some captains - would some captains take an airplane where some others would.....

A. No. Not really. As far as sticking to the flight of the aircraft, I think, pretty well everybody felt the same way. Other than that some items might be more important to other pilots but certainly nothing different than any other operation has.

Q. Do you have such a thing as ansafety organization within Panarctic?

A. Not as such by the name terminology.

Nothing related, to my knowledge.

Q. Do you ever have any safety meeting within the maintenance or within the company?

A. None, that involve myself.

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Q. If you did encounter, what you thought, was a navigation safety problem, how would you handle it? Where safety flight was effected?

A. I made - I'd make my recommendation to my superior if I found that something in the operation seemed to be unsafe. I would definately bring it to the attention of Mr. John Binder.

Q. Do you ever have the occasion of having to do so?

A. No.

Q. As supervisor of maintenance, in some discussion with the pilots and what your organization in maintenance about day and night flights?

A. Yes.

Q. What did you prefer?

A. Well, actually we'd be in favour of the night flight because then we get to work in the day. Everybody likes that. Nobody is too happy about night life, by the same token, by the way we had it set up as it is now, there is no great consequence - the pilots are happy and we are which is nice.

Q. Was there ever any formal discussions within the company on this?

A. None that I was involved in. There were if there were, I was not involved.

Q. I understand now that you are on day flights.

A. That is right. With the exception of a flight, for example, might go out on Thursday night, a scheduldd plane to Calgary for maintenance . For Monday to Thursday we have at least a full shift available.? perhaps not for that length of time.

~~KKK~~ So if we spend all day Thursday on it then, of course, then they will fly it afterwards. So there may be the odd night flight.

Q. I understand that you did not do any Twin Otter operations - maintenance in Calgary.

A. No, sir.

000345

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Q. And this was done at or out of Rae Point?

A. Out of Rae Point, that is where our Otter operations are at and this will be continued.

Q. How many maintenance support people would we have at Rae Point?

A. Three, is normally the crew up there. That's for the two Twin Otters.

Q. Would they be able to assist on the other 188 operation?

A. Yes, sir.

Q. Did you know Captain Thompson?

A. Yes, sir, I did.

Q. Did you know him very well?

A. I'd have to put my relationship as casual because, well, for various reasons. I didn't fly with him very often and secondly, he lived in Edmonton.

Q. Would you have known him socially?

A. How do you mean socially?

Q. Well, did you ever go for a drink after work or ...

A. A couple of times, yes. Right.

Q. OK. I think that's all I have.

Q. In your answer to question regarding feedback from the pilots or captains of the aircraft. Would this come from the captain or the co-pilot, either one?

A. Well, you're speaking of verbal feedback, are you not?

Q. It was verbal, was it?

A. No, I'm asking you, because normal official feedback would be entered in the log book, right? But unofficial feedback, as we all know, is verbal. But there are - there is no other reason, if there was a snag that it was not written in the book, so really anything would just be a matter like discussion of something that may, to the pilots, may not be functioning right or something but not necessarily so if the pilots were not fully aware of the

possibilities of a minor malfunction that could be caused through, say, moisture.

Q. In other words, they may discuss an acceptable condition but they would prefer.....

A. Well, I think, my opinion as it is, is supposed to be that is if you have a problem you enter it in the log book. Cause you can't take verbal chit chat so my remarks are was if you feel you have a problem, then you write it in the log book. That way it's officially noted and can be corrected.

Q. Could you relate to work as a flight engineer, in which, I understand you didn't do too much of, for example, in Edmonton. Who determined the fuel loads for a vertical trip?

A. That was the pilots.

Q. Who did the refueling in Edmonton?

A. The maintenance man in Edmonton did the refueling in Edmonton with the supervision by an engineer who checked the fuel after fuel up. Physically check.

Q. Did you ever find any discrepancies in the load?

A. Not really, no.

Q. Could you outline, briefly, some of the duties of the flight engineer on the flight deck during the flight?

A. Well, the flight engineer has - referring to the flight operations manual - you, I'm sure, will find them in there. They would be basically the systems which include all ranges, hydromics, electrical, the monitory, obvious instruments, application of power, take off and all completely through the trip till landing.

Q. During this flight he would be recording instrument readings?

A. Yes, sir. There are readings that are required to be taken. Every leg fuel,

some engine instruments like, for example, turbine temperatures, engine oil pressures, reduction to the oil pressures or temperatures and, of course, horsepower.

Q. Do Panarctic maintenance personnel belong to the union or an association?

A. No, sir.

Q. Do you have your own local organization?

A. No.

Q. What happens if an employee in the business had an aggreviance, what is done?

A. Your asking what is done presently?

Q. Yes. Please.

A. Well, there is no set down procedure as such. If a man had something to complain about he would come to me and if I consider this situation beyond my responsibilities, then I would, there again, pass it on the the assistant superintendent of maintenance, Mr. John Binder.

Q. If it could not be solved at that level, then... ?

A. Then it would go to the Superintendent of maintenance.

Mr. Al Newnon.

Q. And further up the line?

A. And if he considered this that it was perhaps beyond his responsibility, it would go to his superior, which is of course, Mr. K....

Q. Is there a possibility that it would end up with Mr. Strain?

A. That's an awkward question because there is no saying that it wouldn't, but it would be unlikely and unusual.

Q. Well, do you know if it could ever?

A. I could possibly.

Q. Are you paid salary/^{by}hours or on a monthly basis?

A. Monthly.

Q. I just have one more question.

Q. Glenn, again?

A. Yes.

Q. On a vertical flight, Peter, as in position of a flight engineer now, is this extra fuel put on in Edmonton, how does the captain do this? Does he tell you as the flight engineer to do this?

A. He tells the flight engineer and it's his responsibility to do so.

Q. Your speaking of, they already have had a fuel load; now whether in fact, they have decided to take more fuel up, if they can, and stay within their limits....

A. OK. As far as the fuel loading, should there be any extra fuel required, then the pilot - captain tells the flight engineer how much fuel more should be added and then the engineer will either do it himself or supervise it to be done.

Q. When you get the fuel figures then what entries do you make with this?

A. When the final fuel load for computation for fuel as for the flight engineer's computations, that is entered in the flight engineer's log.

Q. What about the weight balance?

A. Weight balance is the responsibility of

Q. Would this fuel then be transmitted to the.....

A. That's correct.

Q. You, as an engineer, have received these weight balances?

A. No, sir.

Q. I think that's all I have.

Q. This is in regards to fuel. Do you recall at any time, that you were flying as a flight engineer, that you had to remove fuel and...?

A. No, sir. We've never had to defuel.

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Q. Does that include.....

A. Excuse me, I should say myself - not we.

Q. Does thatcargo tie-down responsibility and security in that;
who does that follow?

A. That was load master's responsibility.

Q. Does the flight engineer do any checking?

A. The flight engineer does - well is not specified as such - laid down that
the flight engineer would check, the tie-down. It's a matter of self-
preservation.

Q. And who did the flight briefing to the passengers?

A. The flight briefing is given by the captain over the PA system.

Q. Would this?

A. Now this also could be delegated by the captain to the load master also.
Might be involved in the pre-flight - prior to take off.

Q. I understand the load master had to doof Panarctic aircraft. That of
the flight attendant duties?

A. That is correct.

Q. Were you at all involved in any of these training requirements for load
master?

A. No, sir.

Q. Did TAB have life rafts or any rafts of a sort atall?

A. No, sir.

(The witness went on to state or qualify that no - by stating to his knowledge,
there was no requirement for such equipment.)

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Q. Subsequent to the exclusion of the hearing with the approval of Mr. Fuller and Mr. Glenn, a question was asked by Mr. Humble's council, whether or not he had any criticism of the MOT maintenance inspec/ as far as/related to his experience with the Panarctic Oils Ltd. and he agrees that my notes are correct in that he thought that the MOT inspectors should have on staff more people who would qualify on the operation and maintenance of specific aircraft type. He further qualified that - and went on to say that - he thought that government agencies and this respect type-lead that he was referring to the MOT/maintenance inspectors, should be to assist operational companies, not simply to monitor their operation. A question was asked by Mr. Maxwell in your opinion then, did the MOT maintenance investigators and supervisors; are they more monitory then assisting when they conduct their inspections of Panarctic Oils Ltd. and the answer to that was, Yes. A question was put by Mr. Glenn, he was asked specifically whether or not his relationship and experience with the MOT people in Calgary were good; his answer was, Yes. Good. Then I asked - well Mr. Maxwell asked whether or not his relationships with MOT personnel and inspectors from Edmonton were good; and his opinion was they were good. Then the hearing was concluded.

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CF-PAB

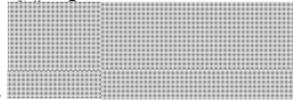
Edmonton, Alberta
University of Alberta Hospital
November 1, 1974 10:45 MST

CONFIDENTIAL

2

Statement of : Garry Douglas Weyman

s.19(1)



I am employed by Panartic Oil and have been for three years this coming November 11th. I started as an apprentice mechanic and got my license there (AME) 953. I had the Twin Otter course and worked on Twin Otters at Rae Point. A year ago August, I got my Flight Engineers ticket and then an Electra course at Ann Arbor, Michigan (Willow Run Airport) with International Airline Academy which used to be Universal. I have been Flight Engineer on Electra aircraft since August, 1973. I also hold a Private Pilot License with 300 to 500 hours, all on single engine aircraft. I have about 980 hours Flight Engineer time.

I did the trip the night before, Monday, October 28th, terminating back at Edmonton International on October 29, 1974 approximately 0800 MST to 08:30 MST. I had time off thereafter and went home to bed.

I reported for duty for the last trip at 18:00, October 29, 1974. The aircraft CF-PAB arrived from Calgary at Edmonton International at 18:45 to 19:00 hours, it was a little late. It had gone to Calgary for maintenance. The delay was due to completion of maintenance items. I do not know of any outstanding item. I did a walk around the aircraft, airframe, cockpit D1. I did this in a thorough manner as prescribed in the Maintenance Manual. An outstanding item that I had to attend to was No.1 engine heating system.

On the previous trip this could not be clarified. The fault is that it puts the power lever out of alignment with the other three levers in the cockpit. This defect is overcome by selecting the TDI Switch in the cockpit to the null position. Thereafter the operator of the engines manually controls the engine to attain the desired temperature. I cannot recall any other unusual items requiring my attention while the a/c was at EG.

For the above D1 and inspection there is an inspection card which is initialled off. This operation takes 30 minutes to 45 minutes. The card is left at the base which is at Wescan Terminal which is just next to Wardair.

continued. . . 2

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I refuelled the aircraft from an Imperial Esso truck. It was JP-4. The figure 28,400 lbs. is in my mind but I am not certain if this includes the three percent we add because of the fuel being JP-4. This is the total on board. We would plan on 6,000 lbs. arriving at Rae Point which is enough for an approach then climb to 12,000 and go to our alternate.

I did not participate in the loading. The loadmaster would make certain that everything is tied down. (Darrel Patton). A load planner, Ron Row, would have knowledge of the load as to weight and balance and where it is to be placed and he would be in charge of the loading. Ron Row works for Wescan.

The fuel is recorded in the engine log--the total amount, also called the FE's Flight Log. The Journey Log has been signed out in Calgary after the maintenance. Ray Lidgren had flown the a/c from Calgary and Dave Hutton was the first officer and Bill Hines was the Flight Engineer.

Before the start check, the recorders were set as usual. The check list is followed. The First Officer reads the list and depending on the item the Captain and the Flight Engineer reply to it. The load seemed to be comprised of average types of materials such as several spools of drill cable. I did not observe any items such as chemicals, bottled gases, corrosive substances, etc.

The start up, taxi out and take off were normal and uneventful. Brian Thompson was in the left front seat, Dave Hutton in the right front and myself in Flight Engineer position. There are no other duty positions in the cockpit. There was an observer seat but no one was in it for takeoff. The loadmaster uses it from time to time during the flight.

During the flight to Rae Point there were no en route stops and there were no unusual events. The only item was that we put No.1 engine in null. Before the levers were nulled, #1 lever was about 2 to 3 inches aft of the other three engine levers. After the null, there was only about 3/4 inch difference. The position varies with speed, power setting, temperature, etc.

We were at 18,000 or 21,000 for the early part of the flight and then I believe we went to 25,000 at Byron Bay. We did a descent check before starting our descent. The weather was checked by Dave Hutton. I think it was between one and three-quarters of a mile in blowing snow. I don't know its direction--pretty close down the runway. The temperature was -17 degrees.

continued. . . 3

. . . 3

We let down using 1,000 HP then as speed picked up down to 200 HP. I believe we levelled off at 2,000 feet but it may have been 1,000 feet. Dave Hutton would know better because he calls the speeds and altitudes. I was busy with other duties such as maintaining oil temperatures, power settings, etc. At the level off as stated above, he called in 6 miles final. We did not cross the beacon but there was a gradual turn toward runway heading, I believe, We could see open water and ice packs--there were floes. I did not observe camp lights or runway lights. I wasn't paying attention except for a glance out the left side window--this was possible as the aircraft was in a slight left bank. As everything seemed normal I made no attempt to see forward out of the aircraft to where the strip might be. I cannot recall if there was moon. I know we came down out of cloud. There was light turbulence during the descent but I don't know at what altitude. It seemed to be due to wind gusts. There was no heavy turbulence. Just light gusty conditions at the 6 mile out. At that time we had about 1,500 HP on. The captain had called for this power. He calls the figure HP desired. Once when I was reading the approach check, the captain adjusted power, which is an accepted procedure.

As the flight progressed from the 6 mile point the first officer's radio altimeter was set by him at 450 or 400, whatever the limits are there. The captain's radio altimeter was set at 300 feet. The limits were called by the First Officer--when it was reached. After we descended to 300 feet, the captain said, "I believe we are on top of a layer of cloud". He said it once. Minutes or seconds after, he again stated the same thing. At the same time he pushed the column forward. Then the 1st Officer called 100 feet then we both called 50 feet at which time and I'm not too sure either Dave or Brian went for the power levers. That's all I remember until I woke up. I don't remember hitting the ground or feeling it.

Q. Was there anyone else in the cockpit besides you three crew members as stated?

A. The loadmaster had been in the cockpit prior to descent but he left for the approach.

Q. Did the captain and 1st Officer continue to sit in the left and right seats for the last of the flight as stated?

A. Yes.

Q. Do you recall action regarding flap?

A. On approach check the flaps were set at 78% and then after going through the landing check they were set at 100%.

Q. Undercarriage setting?

A. The gear was down.

continued. . . 4

. . . 4

Q. What action regarding landing lights?

A. The landing lights had been extended but were not on due to blowing snow. The leading edge lights and alternate taxi lights were on. These latter were turned on at 10,000 feet. The alternate taxi lights point off to each side of the aircraft and forward. I only noticed that lights reflected from cloud as we descended from 10,000. I did not notice any light effect toward the last.

Q. Do you know any airspeed in the last few seconds of flight?

A. Procedure would be 190K and 150K when the flaps are set at 78% and 100%, respectively.

Q. What was the level of the cockpit and instrument lighting?

A. Low. There is a centre rheostat for the panel and overhead set by the captain. The check lists had been read and the cockpit lighting had been turned down, to normal red lighting.

Q. Can you describe the quality and nature of radio contact with Rae Pt?

A. Good radio contact. A proficient operator was on at the base. I recognized his voice and know him to see him but don't know his name.

Q. To clarify--who hollered 50 feet as observed and what radio altimeter was sighted by yourself?

A. The captain's--I was looking at it. Dave Hutton was looking at his radio altimeter. They both hollered at once.

Q. Can you describe the functioning of the pressure altimeters?

A. They were both set on the approach check to the barometric setting given from Rae Pt. I believe there has always been a difference between two of about 60 feet. I do know that the radio altimeters were right on--they both read the same. When at 1,500 feet the little yellow light for each one would come on.

Q. Does the radio altimeter caution light actuate also when the 400 or other low limit is reached?

A. The light comes on when the altimeter reaches the mark bug.

Q. Did you observe the radio altimeter caution lights on at any time upon the aircraft reaching the 400 and 300 limits which were set?

A. Yes. Both.

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Q. Please describe the quality of DME function.

A. We were confident in its accuracy.

Q. What do you believe caused the aircraft to be lower than would have been intended during the final approach?

A. I don't care to suggest.

Q. Was there any observed airframe icing?

A. No. Not to my knowledge.

Q. With regard to the crew do you have any reason to believe either pilot may have been incapacitated?

A. No.

Q. Was any food eaten on board?

A. Yes.

Q. Were there any noted ill effects from the food?

A. No.

Q. Do you know whether the captain ate prior to departure?

A. I don't know.

Q. Do you feel the captain was alert and his responses appropriate and prompt to the 1st Officer's remarks?

A. Yes.

Q. How did you manage to avoid getting frost bitten in view of the fact that the 1st Officer was so severely frost bitten?

A. I had taken clothing from others who didn't seem to need them anymore. I kept on the move. I kept Dave from dozing off. His clothes were frozen to his legs. I couldn't cut them off because I wasn't able to get a knife. I got boots.

Q. Did you feel the pilot's responses were appropriate throughout the period of the flight?

A. Yes.

continued. . .6

. . . 6

Q. I don't wish to dwell on this too long but I am repeating this for a good reason which I think you will understand.

A. Interviewer's Note: (acknowledgement by a nod of the head and non-verbal indication that witness understood.)

Q. con'td. You are sure that the pilot's responses were normal throughout the flight?

A. Yes.

Comment:

I came to. I undid my seat belt. There was no floor. Dave was in his seat. I saw Brian in his seat but his face was severely injured and he appeared to be dead. Dave was starting to go under but I pulled him out. There are blanks in my memory. There were five or six people alive on the ice and if there had been blankets perhaps they could have been saved.

We had been in a nose down attitude. Somebody had to have pulled back on the controls. Afterward I looked back but there was no cabin section. There were a few fires here and there. I didn't smell anything unusual like smoke or fumes prior to impact.

Information provided by:

Garry Douglas Weyman

Interview recorded in handwriting by:

W. J. Dick

Observed by:

W. L. Mullins

D. D. Pettit, M.D.

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My name is GARRY WEYMAN.

I am employed by Pan Arctic Oils Ltd. as a Flight Engineer.
I have been employed by Pan Arctic for 3 years; 14 months as a Flight Engineer.
I was a Flight Engineer on Pan Arctic Electra CF-PAB from Edmonton to Rae Point on Tuesday, October 29, 1974.
Brian Thomson was Captain and Dave Hatton was First Officer.
The aircraft was airworthy prior to departure from Edmonton.
We departed from Edmonton at approximately 8:00 p.m. local time.
The flight enroute to Rae Point was completely routine.
The Captain was flying and everything was normal throughout the entire flight.
The weather was checked every hour.
We contacted Rae Point just prior to descent and obtained local weather conditions.
We did a left hand straight in approach to Rae Point.
The First Officer reported 6 miles on final.
Rae Point radio reported the wind direction and speed.
At about 6 miles back I saw dark, black, open water.
The wind was gusty and there was light turbulence.
We didn't see any lights during the let down.
The First Officer called 450 feet.
The First Officer called 300 feet.
I noticed the light on the First Officer's radio altimeter which was set at 450 feet. The Captain's was set at 300 feet.
The Captain said that he thought that the aircraft was just on top of a layer of cloud and he pushed the controls forward.
The Flight Officer called through 100 feet and we both called through 50 feet.
My hand was on the power levers for the last 700 feet of the approach.
At 50 feet, I felt a hand on mine on the power levers.
There was no call for power before we hit.
The aircraft struck the surface and when I woke up I noticed that the cockpit had broken away from the rest of the aircraft and I helped the First Officer out of the water and helped him onto the ice.

This Statement is my complete recollection of the events leading up to and immediately following the accident of CF-PAB and is given at University Hospital, Edmonton, Alberta, this 5 day of November, 1974.

WITNESSES

[Handwritten signature]

[Handwritten signature]
GARRY WEYMAN.

COPY

University of Alberta Hospital
Edmonton, Alberta
November 13, 1974
10:30 MST

Garry Weyman

Witness was duly sworn in

INTERVIEW -- FLIGHT ENGINEER

Q. With reference to the flight of CF-PAB from Edmonton International to Rea Point, what was the fuel load based on with regard to time, route, alternate airport, etc?

A. I was not involved in the computations. Figures were given to me. I just put the fuel on.

Q. What total fuel was on board?

A. 28,400 lbs.

Q. What would the airspeed be at the cruise altitude of 25,000?

A. Usually around 240, indicated.

Q. At what distance from Rea Point was the initial descent commenced?

A. 25,000 feet, top of descent. Distance out, I am not certain of.

Q. What was the fuel reading at this time?

A. I don't remember.

*Refer to chart developed by Interviewers and recorded by J. R. Leroux, Appendix "A".

continued. . . 2

- Page 2 -

Q. What was the planned alternate?

A. I don't know. I can't remember.

Q. What was the weather at the alternate?

A. I don't know.

Q. At what distance from Rea Point (DME) was the aircraft levelled off from the initial descent?

A. Distance, I don't know.

Q. What was the altitude at this point?

A. Between 6,000 and 5,000 feet.

Q. At what distance from the VOR was 100% flap selected?

A. About 5 or 6 miles out, I guess.

Q. What was the altitude?

A. 450 feet, I believe.

Q. As the flight progressed toward Rea Point and after radio contact was established with that station what successive weather information was received?

A. Again, I can't tell you. I don't recall the sequences. I believe it was the same as top of descent and there wasn't any change.

continued. . . 3

- Page 3 -

Q. During the approach was there any indication that there was a change in the weather information?

A. Not to my knowledge.

Q. Was there a crew briefing on the type of approach that the Captain planned to conduct? What were the details? What action if a missed approach and overshoot?

A. Yes. Left hand straight in approach to Runway 33. I don't know what the further action would be.

Q. Why did the Captain set his radio altimeter to 300 feet?

A. I have no idea.

Q. Were you apprehensive at any time during the approach? What was your reaction?

A. Yes. After leaving 300 feet, I became uncomfortable or scared, or whatever you want to call it. I looked at the VSI and radio altimeter. I yelled at them, "We're at 50 feet", either Dave or I said, "Blowing snow".

Q. What was the state of the cockpit aft bulkhead after the accident? Do you recall opening or attempting to open the door between the cockpit and cabin after the accident?

A. It wasn't there as far as I can remember. The door wasn't there to open.

Q. Describe the attitude of the aircraft at or just prior to impact.

A. I can't describe attitude. All I can remember is that we were at 50 feet.

continued. . . 4

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Q. What head or hand movements of the Captain did you observe him to make to view or accomplish actions during the approach?

A. I don't recall details. When at 450 feet he looked out the left side window. This would be for a second or so. Then we descended to 300 feet, at which time he stated he thought we were on top of cloud. I looked out the left window and saw light and dark patches which I guess were ice and water.

Q. Was there any prelanding indication or discussion of the possibility that it might be necessary to fly the aircraft below minimums? Explain.

A. No.

Q. Was this a procedure which had been practised in the past?

A. Yes. Other Captains did by 100 feet or so.

Q. When did you last check the cockpit voice recorder in CF-PAB for service-ability or see this function accomplished?

A. The test should have been done in Calgary. I did the press to test button and the needle went over to the "good" indication. I did this at Edmonton International prior to departure.

Q. When did you last hear a replay of the cockpit voice recorder in CF-PAB?

A. I have rerun the unit using a headset but don't recall what date this was.

continued. . . 5

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- Page 5 -

Q. For the flight out of Edmonton will you state the several cruise altitudes and indicated airspeed at each level?

A. I can't state.

Q. How would you rate the piloting and aircraft handling skills of Captain Thompson?

A. Good. No problem. I had all the confidence in the world in the man.

Q. Were there conflicting views between Captain Thompson and 1st Officer Hatton? Explain.

A. No, there was no bickering back and forth, just Dave saying we are "x" number of miles back at a certain altitude. After 300 Dave brought this fact to the attention of Captain Thompson.

Q. What are your observations of Captain Thompson's social pattern while off duty and leading into duty time?

A. I knew him when we worked together on Twin Otters prior to going on Electras. He was not a heavy drinker. He would not show up for work after drinking.

Q. Please state the names of persons, such as acquaintances or other employees you observed with Captain Thompson as he arrived for duty and/or during preparation for the departure.

A. He was already there when I got there. He had no other acquaintances along. He dealt with Dave and myself, Bryce Meisner and Ron Row in preparation for departure.

continued. . . 6

Q. What did you observe regarding Captain Thompson's state of sobriety during the flight?

A. There was no indication of him being under the influence of alcohol. If there was, I wouldn't have been on the flight.

Q. Did Captain Thompson exhibit any signs of frustration, fatigue, anger, preoccupation, etc. at any time prior to or during the flight? Explain.

A. No.

Q. State the periods of time that Captain Thompson and 1st Officer Hatton each were on the alert and flew the aircraft.

A. Brian took it out of here and did the trip to Rea Point. He had the controls for the duration of the flight. The only exception to this might be if he got up to go to the bathroom. I don't know if he went or not.

Q. State the nature of rest or relaxation that each availed himself of during the flight.

A. Both flight crew members were awake for the whole flight and they both kept their respective seats except for possible brief absences.

Q. What food was eaten by each of you three flight deck crew members?

A. We all ate at between 21:00 and 21:30. This consisted of salad, steak, vegetables, potatoes, cheese and crackers. We all had milk. This food was a prepared plate for each from the CARA kitchen, Edmonton. Two were sirloin and one was filet. I can't recall who ate which type of meat.

continued. . . 7

Comment:

Please release copies of my previous statements given on November 1, 1974 and the current questions and answers of November 13, 1974, to myself. Please mail two copies of this information to:

s.19(1) Mr. Garry Weyman



Q. During the prelanding briefing did the Captain stipulate what minimum altitude he would be descending to?

A. I don't remember.

Q. Would you consider Captain Thompson as a strong-willed individual?

A. He would listen to what others had to say. He was not strong willed.

Q. Did you have an adequate rest period prior to this flight?

A. Yes.

Q. Do you recall if 1st Officer Hatton reported to Rea Point during final approach and at what distances and altitudes?

A. Yes, at 6 DME, I don't know the altitude.

*Refer to Appendix 2 to this statement, graph of approach profile--can you recall details of the approach and please state so that they can be recorded on the graph.

Q. Was power applied and did you have a sensation of the power being applied?

A. I don't remember.

continued. . . 8

- Page 8 -

Q. Was the descent of the aircraft irregular or fairly uniform from about 400 feet altitude to the crash?

A. From 450 to 300 feet it was gradual. From 300 feet it was a fairly abrupt descent.

Q. What did you observe to be the cause of this more rapid descent?

A. I didn't

Q. Was the Captain flying instruments or was he trying to establish visual contact?

A. I couldn't say.

Q. Can you state the horsepower indication at 300 feet or at any successive point in the approach?

A. 1,500 HP at 300 feet. I don't recall further HP indication.

Q. Do you have additional information to advance to this Board?

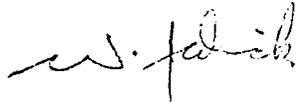
A. I don't think so.

Information provided by:

Garry Weyman

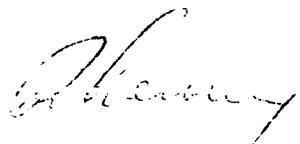
Interview recorded in handwriting by:

W. J. Dick



Witnesses:

J. R. Leroux



Dr. G. Skjenna

Observed by:

Donald I. Brenner

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The following is an enlargement on the survival aspect as provided to Investigators by Mr. Weyman on November 4, 1974 with reference to one question included in the initial interview of November 1, 1974.

Q. How did you manage to avoid getting frostbitten in view of the fact that the First Officer was so severely frostbitten?

A. We both got out. I had my own parka on then I had Brian's parka which I got Dave into. We both started walking toward the tail section looking for blankets or sleeping bags which we never did find. We kept walking back and forth along the wreckage. After about 45 minutes to one hour, Dave's back gave out on him at which time I got two seat cushions and laid him down behind an engine that was on top of the ice. I found one glove which I put on his left hand and a toque I put on his right hand and then put in his parka pocket. At which time I went looking for boots, blankets and parkas. I returned back to Dave with boots but I couldn't get his off--they were frozen to his feet. At this time I tried to get a knife out of my pocket to cut them off but was unable because of the ice in my pocket. Dave kept taking his right hand out of his pocket, laying it in the jet fuel beside the engine. After that I kept yelling at him and kicking at him to keep moving. That was about it until they came and picked us up.

We walked back and s. . . .

(Interviewer's note: The interview was broken off at this point by the sudden arrival of Donald Brenner, Panartic counsel who took Mr. Weyman away to his hospital room in his wheelchair. On the day following this interruption, Mr. Brenner provided Investigators with a one-page signed statement from Mr. Weyman).



W. J. Dick

November 6, 1974

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Statement of Flight Engineer Weyman

March 1, 1975

Mr. Weyman, I'd just like to read you this statement prepared for all the witnesses.

The purpose of this interview is to enable investigators to better understand the circumstances of this accident. I wish to emphasize that our investigation seeks out causal factors in order to provide information for accident prevention programs. Statements provided to investigators are confidential and will be given as complete protection in a subsequent civil, criminal or regulatory proceeding as the Minister can provide including an affidavit to any court in Canada claiming that revelation of the statement would betray a confidence, inhibit future witnesses and would thus not be in the public interest. Such claims have, in the past, been allowed. In spite of the foregoing investigators will not object to the presence of a representative of your choice and will provide you with a copy of your statement at your request. You are warned, however, if you wish to have a copy of your statement the Minister will not subsequently claim privilege for it unless you request him to do so and assure him in writing that the statement has been kept confidential by you. Do you wish to be represented?

Yes.

And who is your representative?

Don Brenner.

Okay. Do you have any questions either on this statement I've read or anything I've said in the preamble?

No.

Okay.

Could you please state your full name, address and phone number?

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Gary Douglas Weyman, [REDACTED]

Q. Could you state your age?

A. [REDACTED]

Q. Would you provide us with the number of flying hours and flying experience you've had?

A. 1,000 hours as flight engineer and 3 on private.

Q. Could you tell me what your present occupation is and your position in Pan-Arctic?

A. Flight engineer.

Q. Could you give us just a brief description of your work history?

A. As far as ...

Q. As it relates to aviation.

A. Not right off hand. I could give you the information you need but I haven't. ... as far as the last 4 years with Pan-Arctic and before that Chinook Flying Service, Great Northern Airways, Sam Hashman. Worked re-fueling aircraft for two years. That's about it.

Q. During this period the names of the companies you mentioned were you working as an A.M.E. or?

A. Apprentice.

Q. When did you get your A.M.E. license?

A. What date?

Q. Well, just roughly.

A. I should have it here. I don't know if there's a date on this or not.

Q. We don't have to know exactly, it's just a matter of getting, you know, a rough idea.

A. February 28th, 1973.

Q. Fine thank you very much.

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Q. In your position - may I call you Gary?

A. That's fine, yes.

Q. In your position, Gary, in Pan-Arctic, who do you report to?

A. Al Newman or Ed Kawalick.

Q. Do you receive instructions from people in the normal course of your duties....from people other than Mr. Newman or Mr. Kawalick?

A. Gateneau.

Q. If you're away in the Arctic for instance at Pea Point, would you receive instructions regarding your normal duties from anyone else there except the captain of the aircraft?

A. No. There is a co-ordinator there but he just schedules the aeroplane, not what we do. You know what I mean, he doesn't tell us what to do, it's just that the trip is here and that's where we go.

Q. Is this person referred to as an airlift co-ordinator?

A. He used to be. I don't know whether they still have them or not or the Arctic superintendent. I don't know whether they still got em or not. They used to have.

Q. Would this have been applicable at the time of the accident to PAR?

A. Yeah, they had co-ordinators.

Q. Of course, what we're interested in, Gary, is determining the procedures and so on in this line of questioning at the time of the accident. So I'll probably be referring to or someone else might be referring to the conditions that existed at that time.

Q. Can you tell me in a little more detail what the airlift co-ordinator function is? As you know it.

I'd instruct you not to answer that. Surely you should be asking the airlift co-ordinator a question.

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Q. Gary, you mentioned, I think maybe we'll play this back and get your response to the other question then and clarify this point. It's on now.

Airlift Co-ordinator was / ^{there to meet the} aeroplane, dispatch aeroplane and passenger on and off times. Fuel load and co-ordinate you between the two Arctic stations or between the Arctic and south as far as your off time - on time.

Q. Would you have complete responsibility for the serviceability of the aircraft while it's away from Calgary if you're acting as a flight engineer?

A. Yes

Mr. Clark: Okay, maybe we could pass the questioning along. Who would like to start?

Mr. Glenn: I can, I guess.

Mr. Glenn directing questions to Mr. Weyman

Q. Gary, on the ^{approach} / to Rea Point that night at the time of descent were you monitoring the radio transmissions?

A. I heard the transmissions, I wasn't monitoring them.

Q. I realize it's four months ago, but can you recollect the pre-descent and landing briefing that Captain Thompson gave you, or gave the crew.

As I mentioned earlier this happened four months ago so take all the time in the world to answer it. Think about it. We were discussing the briefing can you remember the details of briefing - the pre-landing, pre-descent briefing that Captain Thompson gave before the descent?

A. It's a check-list procedure and the only statement was that they were going to land at Rea Point.

Q. Did he discuss whether it was an ^{instrument} / approach or any details about

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the type of approach?

A. No.

Q. Is this normal practice then?

Brenner - Well I think you can properly ask him what he observed in his opinion with respect to normal practice is enough to be answered.

Clark - Just a minute, I want this on the record too. In my view it's relevant and appropriate that the witness be asked what is normal practice for him in his position as a flight engineer. It's quite appropriate, it's quite normal - we ask these kind of questions all the time. We're not asking for an opinion, we're asking for what the normal procedure is for a flight engineer and I suggest that the witness answer the question.

Well if you're asking for the procedure that he follows as flight engineer, that's an appropriate question.

Appropriate or inappropriate?

That's an appropriate question - he can answer that.

Q. Okay, we'll re-phrase the question. Give detail of your duties then from top of descent to the landing. In this case it was a missed landing but the normal duties you would do.

A. Maintain engine functions and de-icing. air framing engines, powers, H.P. indications. That's all.

Q. Well discussing power now, who calls for it and who applies it and what's your function there?

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A. The fellow, whoever happens to be flying the aeroplane is the guy that calls for the power or his co-pilot or the pilot, and they're to set the power that they ask for.

Q. Okay, how far on approach and landing do you handle the power? Do you handle it all the way into reversing.

A. Down to about, depending, usually about 300 feet...400 or not 400 ... 3 to 200 feet.

Q. And what's the commandor procedure for you to relinquish power to the captain?

A. Well, he gives the call for my power and takes it.

Q. Well okay, another question. On the night of the accident could you describe what you did from top of descent to the actual accident?

Brenner - I think he went through this didn't he?

Glenn - Well there are some areas we would like to ...

Brenner - Well if there are some specific areas I'd like you to address yourself to those specific areas. I don't want him, you know, running through this thing for the third or fourth time.

Clark - I think it would be appropriate perhaps if we refer directly to the previous statement ~~xxxxxxxixaxix~~ for amplification and Gary, of course should have a copy as well while we're doing this so that he's aware in detail of what the question is. Do you want to do that then?

Glenn - I guess so.

Q. Gary, do you recollect the latest weather information you received

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from Rea Point?

A. Yes, it was 3/4 of a mile to a mile.

Q. And, did the captain discuss this with the crew?

A. No.

Q. Once again, when you receive weather information like this, is it a practice for the captain to discuss the weather with the crew.

A. Yes.

Q. But it didn't happen on this occasion, on the night of the accident?

A.

Q. At what point during the approach, Gary, did you become apprehensive?

A. Oh, when we got to 300 feet we leveled at 300.

Q. And what was your reaction to this?

Well he said he was apprehensive.

Q. Did you do anything - did you say anything to the first officer and captain or ...

A. No, not really.

Q. On one of the - when referring to this statement here that the Captain says that he was above two cloud layers at the time.

A. Oh that's not correct.

Brenner - Where are you referring? Let's see the statements, which statement and which page?

Q. I'm sure we have three different statements.

Let's turn the tape off for a second.

Q. Page 4 - your statement. Refers to the hospital. You state that the captain said "I believe we're on the top of a layer of the clouds.

A. Correct. Not two layers of cloud - just one.

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Q. Did you - how do you think the captain - was he looking outside or how did he recognize this.

Brenner - I'll instruct the witness not to answer. He's not answer any questions or may not as to what the captain may/have thought. He can certainly tell you what observations he made about what the captain was doing at that time.

Q. But, did you hear the captain say this?

A. Yes, I did.

Q. What was your reaction to that?

A. I glanced out the left hand side.

Q. And you confirmed that you did come out of cloud.

A. Oh, we had come out of cloud, but I don't know, or I couldn't say, but he maybe seen the problem/^{that}when I looked out the left window and it appeared like water and ice. This is not uncommon.

Q. And just a little bit later in the statement you say that he put your control column forward. Could you give any reason for this or your opinion why it happened?

A. No.

Q. And I believe you were at 300 feet at that time. Can you recall the D.M.E. when this happened?

A. About three miles.

Q. Okay that's all. No, a few other questions. Do you consider this normal when the captain ~~was visual~~ goes visual like this? On an estimate approach?

Brenner- Witness not to answer. You're asking for an opinion.

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Q. Okay, you're a flight engineer on the crew. Do you understand what the duties of the captain and first officer are on the final stages of approach in so far as duties inside the cockpit and looking outside?

A. Yes.

Q. Could you describe to me what you think the captain's duties are?

A. Well that all depends whether he's flying the aeroplane or the co-pilot.

Q. Okay, we'll take an instance of the captain on the left seat, he's flying the aeroplane.

Brenner - Mr. Weyman's pledge here. I don't think he is required to know what the duties of the captain are.

Q. Oh, I think he knowsthe flight engineer and the crew.

Clark - Just a second, I think Mr. Weyman if he's familiar with his own duties, that's his responsibility as part of the crew. If you're interested in the co-ordination between and what the interface is between the captain's duties and the flight engineer's duties that might be an appropriate question if that is the area you're concerned with. But he is not required to know the captain's duties.

Aston - Can I make a comment on this. I will agree with Reid on this and you do know/^{what}the captain's duties are.....

Clark - Re-phrase the question - try to get the information another way.

Q. Well, describe to me then, Gary, what your understanding of the captain's

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duties are with the pilot in the left seat flying the aircraft. What his duties are. in the final stages of descent and approach, instrument approach. If you have such knowledge, if you don't you can say so.

A. His duties are to stay on the dials until visual contact is made.

Q. Okay. And what are the first officer's duties? The first officer sitting in the right seat not flying?

A. Speeds, altitude and out the window to establish visual.

Q. And when the first officer attains visual what are his duties then?

A. He advises the captain that he has visual - runway in sight.

Q. Okay. In your ~~Arctic~~ experience with Pan-Arctic have you ever been aboard an aircraft when the captain has went below limits?

Objection. Instruct the witness not to answer that.

Q. In referring to page 5 of the reference statement then, can you remember any other specific occasion?

~~XXXXXX~~ You have to read, if I may, if you could refer to it.

Let me just ask this one question for you and make an example in the reference here.

Q. Gary, in a previous statement, specifically page 5, of the statement taken November 13th at the University of Alberta Hospital a question was asked. "Was there any pre-landing indication or discussion

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of the possibility that might be necessary to fly the aircraft below minimums, and explain, and your response was "No", and then this next question, "Was this a procedure which had been practiced in the past?", and your response was "Yes, other captains did so, dit by 100 feet or so." A question in that regard, Gary, is can you remember any specific occasions when this occurred?

A. Not in specific, no, but it has happened.

Q. Would you have any idea of the frequency? Is this an extremely infrequent occurrence?

A. I wouldn't say extremely infrequent, no.

Q. Are you able, Gary, to put any kind of clarification or amplification in this area?

Brenner - Well you're asking him to guess, and I don't think that's appropriate.

I think he's been given his _____, his best information at the previous time and he can't remember any specific instance. I think he's been as full as he can with you.

Q. A point here, of course, was to determine whether or not this was normal practice.

Well . . . see if it's normal... All he said was that it had been done.

Q. Okay, thank you Gary.

There's a reference of statement here . . . uh, not work on the statements, but setting on radio optometers. Uh, do you recall the settings . . .

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Just a minute before you ask: A conflict between Mr. Weyman's statements, or statements from Mr. Weyman and some other person?

We have to make specific reference here

The captain's radio altimeter was set at 300 feet. Both statements bear this out.

Q. My next question is, can you recall if the captain reset his radio altimeter after that?

A. No, I don't.

Not that if he reset it, though.

It's Clark asking the questions at this time.

Q. Gary, in a previous statement you referred to the captain pushing the control column forward. How were you aware that this occurred?

A. From being pushed forward out of the seat, lifting up in the seat.

Q. Did you have your seat belt on at this moment?

A. Yes sir.

Q. Can you say whether you left the seat or did you just have a feeling of weightlessness?

A. No, I actually came away from the seat.

Q. In order for us to get a better feel for this, could you say that something of this nature, where you actually left your seat, occurred other times in flight, generally speaking, whether in turbulence or some such thing?

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A. No, I couldn't say that.

Q. Could you say this was a unique experience?

A. You might say that.

Q. Was your seat belt tight?

A. No.

Q. Gary, without making specific reference to a question, I do have a quote - at least to a statement - I do have a quote from a statement. Perhaps you can elaborate on this. Could you elaborate on your comment made in a previous statement "Somebody had to pull back on the controls". Perhaps I could find the specific reference if you'd like. Gary, I'll withdraw that question and go onto something else. It might have been a misquote. Are you right or left handed?

A. Right handed.

Q. Which hand did you have on the throttles just prior to impact?

A. Right hand.

Q. Was the digital read-out clock operating during this flight?

A. Yes.

Q. Have you at any time, or have you observed anyone at anytime while you were acting as a flight engineer, stop the digital clock read-out, the presentation?

A. Just to zero it for elapsed time or for procedure clearance and so on. Zero it and start it running on just the seconds kicking off instead of the read-out of the time . . . the flight time.

Q. Were you ever - I don't want to badger you on this - but were you ever asked by a captain or a first officer to stop the read-out, because I understand you can, in fact, remove the read-out part of the digital clock. It will still, of course, be recording the time, but the presentation won't be visible. Were you ever asked to?

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A. No.

Q. Thank you. I have no further questions at this time. Would someone else like to . . . Do you, Olaf, or anyone else . . . Jack, I know you're going to get very specific . . . do you wish?

Dr. Skjenna- I have a couple of questions. A little while ago we verified that the statement you had made where the captain observed or mentioned that he had observed the layer of cloud. Can you recall the exact words which he used?

A. I believe 'We're on top of a layer of clouds'.

Q. Did he say that more than once?

A. Twice.

Q. Was his voice normal conversational voice or otherwise at the time?

A. I'd say it was normal.

Q. Did he say the words as fast as you just repeated them, do you think?

A. I would say so, yes.

Q. How soon after he made the second remark did he push forward on the controls?

A. Maybe a second, two seconds.

Q. Two seconds, thank you. Earlier on you mentioned that the captain had not briefed you regarding the instrument approach. In your observation, was this a normal procedure?

Brenner - I think that's already been answered once. I think we've already gone over that.

Q. It was, I'm sorry, I didn't, uh . . .

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I don't think he said that wasn't any briefing. I think he said the captain said there's going to be an approach at normal 31 at Rea Point.

Q. I see, I missed that. You have mentioned that on previous occasions you have made approaches to , below the published minimums at Rea point. On this occasion you mentioned that you became concerned at the level off at 300 feet. Why did you become concerned on this occasion?

A. Because of the distance out.

Q. So this was a departure from previously experienced procedures?

A. Yes.

Q. Going back for a second to when the captain pushed the controls forward and you left your seat, what was your reaction at this point?

A. Well, perhaps what did he say or what did he do?

Q. Yes.

If anything.

Q. Did you become more concerned at this point?

A. Scared.

Q. Did you react in anyway at this point? Did you make any movements?

A. Not any movements. Just stated that 300 feet, I can't really pinpoint the exact D.M.E., but 4 or 3 miles or something like that.

Q. At that time you say you called 300 feet?

A. Yeah, we were at 300 feet.

Q. How long, in your estimation, how long was it afterwards that you reached for the controls? the throttles?

A. I had my hand on them at that time.

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Q. At that point.

A. And previous to that time.

Q. And previous.

A. It's our procedure to keep our hands on the throttle from 700 feet down.

Q. When did you feel Mr. Hattan's hands on the controls? How long after the push forward?

A. Well, as close as I can recollect, between 100 and 50 feet.

Q. Did you have your hands on the controls at the time of impact?

A. I believe so - on the throttles, yes.

Q. Did you have any hand injuries, for example bruising, or . . .

A. Yes.

Q. A bruise on your hand?

A. Yes, on the left hand.

Q. On the left hand ? I see. What about your right hand?

A. No.

Q. Did you experience any other sensations before impact, for example. . .

A. No.

Could we turn off for just a second please?

Q. Do you recall your specific statement which you made, specific statements which you made on the calls as you sent it from 300 feet to impact point?

A. Yes, uh, I think you mistated, the first officer called through 100 feet, we both called through 50 feet, and in that length of time between 100 feet and 50 feet, I remember either me saying or both of us saying that 'We're blowing snow'. It's a

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? 50 feet that was the last thing _____.

Q. At your call through 50 feet what were your exact words?

A. 50 feet. We're at 50 feet.

Q. Which one? We're at 50 feet, or . . .

A. No, we are at 50 feet.

Q. We're at 50 feet. And then you said "blowing snow".

A. That was stated prior to, you know, somewhere between 100 feet and 50 feet.

Q. Do you recall the attitude of the aircraft just prior to impact? Just in the final seconds?

A. The only thing I remember is the impact, shaking on the control column. I remember looking at him.

Q. Shaking on the control column. Was he trying to pull back?

A. Yes, I would say so.

Q. You observed that he was having difficulty pulling back on the control column?

A. Correct.

Q. Can you describe the movements on the controls in more detail?

A. Well I really couldn't tell you if there was movement or not. Like I said, all I saw was that he was having trouble because if you're exerting yourself to do something, you start to get to the point where you're shaking.

Q. Did you observe Captain Thompson at the same time?

A. No, I can't really say I did.

Q. Your attention was directed towards the first officer?

A. More or less, yeah.

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Q. Why had you directed your attention toward the first officer?

A. Because I felt his hand go on top of mine on the throttle.

Q. Fine. You've had a fair amount of experience flying in the electras and flying up in the north, and you've ridden with quite a number of captains and quite a number of crews. Was there anything in your observation unusual about the relationship between the captain and the first officer on this particular flight as compared to other flights?

A. No, nothing . . . this was the first trip that Dave had done with Brian, but nothing unusual.

Q. Have you ridden with Captain Thompson on other flights to the north?

A. Yes, I have.

Q. Have you ridden with him on instrument approaches to a point?

A. Yes.

Q. Have you ever observed him on previous occasions to look out the window or comment on conditions outside of the cockpit?

A. I couldn't really say for sure.

Okay, does someone else have questions then? Uh, does anyone have questions related to this specific area that we're speaking of?

Q. Perhaps, and I know this has been asked before, but before I finish my questioning I would like to ask, Mr. Weyman, are there any other comments regardent to the final seconds of the flight which you have not previously told us for one reason or another?

A. I don't believe so.

Q. Alright. That's fine.

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Okay, do we want to continue with this area? Jack, do you have specific questions related to this area?

Sure, anytime.

- Q. Okay, Gary, my questions are really trite and alot of these we've asked you before, . . . but perhaps if you'd give this consideration as calling it an application of something that's been asked, would that be satisfactory?
- A. Ask the questions.
- Q. The first ones are rather general. From top of descent to time of impact, was Captain Thompson flying the airplane?
- A. Yes sir.
- Q. You made reference to having your hand on the power levers.
- A. Yes sir.
- Q. To clarify it for the records, you are now referring to the right hand side power levers, right? The flight officers' power levers?
- A. Yes sir.
- Q. And, from this you then deduced that it was the F.O.'s hand that you felt behind yours on the power lever?
- A. Not behind, on top.
- Q. On top. Because you were using his set of power levers.
- A. Correct.
- Q. So then, could you, or did you possibly observe where Captain Thompson's hands were?
- A. No I didn't.
- Q. You did not. You couldn't even say whether he had both hands on the wheel, or his right mlts on the power levers?

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A. Not at that time.

Q. Okay. While we're on that, could you, the last time you noticed, could you describe to the boys his approximate position? That's a rather difficult question. Was he forward, was he back? Demonstrate if you have to. Hands here - down there . . .

A. Both hands around the column.

Q. Both hands around the column the last time you saw him?

A. The last time I saw him, yes.

Q. And it was turbulent,

A. Yeah,

Q. And he probably had his hands full-wheeling the beast then.

Okay, down to specifics. I don't like asking these, but I'm trying to ask them a little different way, and my first one is:

What was the Captain's radio altimeter mark bug set to the LAST time you saw the warning light come on?

A. 300 feet, I believe.

Q. I should have asked one previously. From your position could you see the mark bug clearly?

A. Yes.

Q. And how do you prefer to have your engineer's seat during the approach and landing?

A. Up as far as it will go.

Q. Up as far as it will go . . .

A. And down as far as it will go.

Q. And down as far as it will go. This is so you can get at the panic handles and stuff like that?

A. Well, it gives you a better look at the instrumentation.

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- Q. I understand. Then from where you were sitting, if you'd like to visualize a little bit, the radio altimeter would be just about on your left hand side, eh?
- A. Yeah.
- Q. And off a little. So your view is not too bad if you're actually looking at it.
- A. It's the same on the right, it's just as . . .
- Q. Okay. Another repeat, Don, and I'm quite prepared to pass this one, when then did the captain set his mark bug to less than 300 feet?
- A. Like I stated before, I didn't see him readjust it, or never paid that much attention to it.
- Q. I can't do anymore on that one, Al. I put that up there for you, you know, to kind of refresh your memory. From 300 feet and 3 D.M.E. until time of impact what was the maximum descent rate that you observed under the S.I.?
- A. 1700 feet a minute.
- Q. Thank you. During the last stages of the approach from the same position until impact, did you observe the captain looking out frequently?
- A. No.
- Q. I have a couple of purely academic, and I don't mind telling you to establish what's par_____, and one is from top of descent in your statement you referred to going back to 200 h.p., were you N.T.S.ing?
- A. No.
- Q. Okay then. Did you, not you - was the aircraft, your T.D. system in the aircraft, was it in the normal control position or was it in the locked in position?
- A. No.
- Q. Normal control.

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A. Yes sir.

Q. While on flights - no - that would imply that this was your first flight with Captain Thompson . . .

A. No sir, it wasn't.

Q. On any previous flights have you seen Captain Thompson use it in the locked in position right down the lining?

A. No.

Q. No. No further questions.

Lash, do you have some questions in this . . .

Q. Yes, I have a couple of questions, one referring to Dr. Skjenna's (?) previous question as to any comments he had not previously related to us. I wish to go a little further to the post-accident time. Gary, after you were assisted back to the camp at Rea Point were you administered first aid?

A. Yes I was.

Q. Who administered first aid to you?

A. I don't know who it was. All that was done was a dressing was wrapped around my head.

Q. During this period of time did you make any comments to this gentlemen about the accident?

A. I can't remember. I might have, yeah.

If you can't recall, you can't recall, and don't guess.

Q. During your flight southbound, who other than Doug Murdof, I believe the private ambulance medic, who else accompanied you on the flight?

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A. I believe there was two others. I don't know what their names are. Well, Doug Murdof; one big guy, I don't know what his name was; and one of the radio operators, Doug Metcalf, I believe was his name.

Q. Did you make any comments about the accident to either one of these gentlemen?

A. I couldn't tell you.

Q. Gary, at any time during the approach did the captain call for control of power?

A. No sir.

Q. At the top of descent, you recall what the weather was, do you recall if First Officer Hattan made any comments about the weather?

A. No.

Q. Referring to Mr. Unger's question about rate of descent of 1700 feet per minute, did that rate of descent change at anytime prior to impact?

A. I don't know. All I saw was 1700 feet - it may have changed it may have not.

Q. Were there any changes of the aircraft's attitude during that short period?

A. Not to my recollection.

Q. Can you recall the posture of Captain Thompson? Was he sitting upright? Was he leaning forward?

A. Slightly forward.

Q. Gary, you indicated that the last time you observed the vertical speed indicator it was about 1700 feet per minute down. Can you amplify this to indicate at what point either in time or related to other events? Gary, was it after the time the captain . . .

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excuse me, let me rephrase that question. Can you relate this to a height above ground, even in broad terms, between, for instance, one height and another?

A. Somewhere between 200 and 300 feet, I would guess.

Q. That's fine, thank you very much.

Okay, do we have other questions now?

Q. May I ask him the next question? Gary, these are mostly to deal with the technical side, the operation of the plane, and they refer to this particular flight and the start of it. What type of inspection did you do on the plane prior to departure?

A. Normal walk-around procedures as in the book, _____ with D.I.

Q. Do you use a check list for this?

A. No, it's laid down procedure in the operations manual.

Q. Do you carry this around with you, or do you know these?

A. No, it's routine, established routine.

Q. Right, but what I'm getting at, do you actually use a check-list or do you do it by memory?

A. By memory.

Q. Do you have to sign, or did you certify, for the walk-around inspection?

A. No sir.

Q. You didn't. As you know we've had, or there was a problem with the C.B.R. Just to keep you in here's a photograph of the . . .
It's the tape on the C.B.R.

A. C.B.R. what is it?

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Q. Cockpit Place Recording.

A. C.P.R.

Q. Sorry.

Can you tell me the check you did on that?

A. Yes, pressed the guest button to obtain whether we had a good indication or not.

Q. Alright. What position did the needle actually go to?

A. It went to the good position in the green.

Q. Did you do a playback on it?

A. No.

Q. Would you normally do a playback on it?

A. No.

Q. Gary, were you responsible for fueling the airplane?

A. Yes I was.

Q. Did you call for a fuel sample after fueling?

A. No sir.

Q. What check did you do on the flight data recorder?

A. Set the date and the trip pump.

Q. Once again we'll go to flight and also to bring into the picture what we found. Do you refer to your tivel charger as a tivel charger or an engine driven compressor?

A. Engine driven compressor.

Q. You're referring to them as the E.D.C.

A. Well, we've been referring to them as the E.D.C. all the way through.

Q. Gary, from the hardware that we recovered, we found number 2 E.D.C. was in the dump position.

A. This is normal.

Q. It's normal?

A. Yes, it is.

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Q. You go on one?

A. ____ final when your differential is down below one inch you can dump one so that you don't get the, when the weight odd switches, or maybe you don't get the rapid or pressure differential change.

Q. Okay, so this is normal procedure for us to find the number 2 E.D.C. in the dump position?

A. Number 2 or number 1, as long as one is dumped.

Q. You went to manual controlling of the heat, is that right, the heat you went into manual?

A. Uh, cabin?

Q. Cabin, yeah.

A. Yeah, cabin is always running manual.

Q. You always run it manually, eh? So this is normal company procedure to go to one E.D.C.?

A. Yes, it's the same as taxiing. You put one E.D.C. on the line, after the wheels are off you engage the other one.

Q. Gary, do you always carry a minimum equipment list with you?

A. You mean spares?

Q. No, for the aircraft minimum equipment for departure from . . .

A. Yes.

Q. Does this vary between main base and a satellite base?

A. I couldn't really answer.

Q. Is this the same flight manual as you use? And we'll identify that as manual equipment.

A. I would say so, yes.

Just add a point. The witness is making reference to a flight manual that - Northwest Airlines Aircraft Maintenance Manual.

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I suppose preferably he could not identify the one in use unless he read the entire manual, whereas _____ this obtained from Panarctic.

I'd better leave it off, because if you're going to be, you know, basing some of your . . . from that manual we should know where it came from.

That is a Northwest Airlines Manual identical to the aircraft that was involved in the accident. Some of the emergency procedures were changed by National Jet Air, and it is the identical manual used by Panarctic except in two instances - in the normal operating procedure they switched to flat retraction at 400 feet as against 1100 feet, and to the best of my ability I went through both of them and it's an identical manual. The minimum equipment list is the same in both manuals.

The sections that we will be referring to is the pre-flight check, minimum equipment list, and things like that, for the record.

- Q. Gary, on your training, were you trained to do crawl outs?
Like speed, altimeter settings, at least not settings, but altimeter.
- A. No heights.
- Q. You weren't trained for that?
- A. No.
- Q. Have you ever been requested to do that?
- A. Yes.
- Q. Do you do it quite frequently, or is it just . . .
- A. Radio altimeter call outs.

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Q. Were you doing call out on this one?

A. No, that was the first officer's job.

Q. Gary, I do have your last log, affixed the log book, the flight engineer's log, which includes the flight to Rea Point. You've got some notifications on the synco system. Was there any other problems with the airplane at all?

A. No. That was on a T.D. system, did you say that?

Q. Yeah.

A. No.

Q. With the windshield heat - uh, what position was the windshield heat on?

A. Low.

Q. It was on low?

A. Yes.

Q. Again I'll probably have to refer to photographs. We did find it on hot.

A. Ahhh, it should be on, it's on low.

Q. Do you have any recollection of it going to the high position at all?

A. No sir.

Q. I'll show you some photographs and maybe it would - I hope I can find them - it would be hard to rationalize that they were placed in this position on impact.

A. I can believe these, but I've never yet seen a requirement for them to be on hot.

Q. It's identified as the windshield heat panel, and as you can see, you know the set up and Eric can put it here, the two forward windshields were in the high position, the switch right in the centre was in the low position. I'll think you'll agree with me on this point that if

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impact forces had caused this, this one would also have been in that position.

Well, he's not in a position to tell you that. He's only in a position to tell you what he can recall.

Q. Right, I'm explaining it to him . . .

A. I'll have to agree with you on that on account of being base-bole switches with indents and so on and so forth.

Q. But you have no idea when they went into this position?

A. No. I turned them on low, on the pre-flight in the cockpit, they were turned to low, and I never saw them changed from low to high.

Q. You weren't experiencing any problems with visibility out of the windshield then?

A. Not myself because I wasn't looking out.

Q. Gary, on this flight did you do all the check list, do you call it, the check list?

A. Not all the check list, no.

Q. You didn't. Did you always get - the ones you did you got a reply to?

A. Yes.

Q. Did you have to compute the pump speed at anytime?

A. No.

Q. Just to clear up a couple of points, in the F.E.'s log when you get a discrepancy in flight do you enter it right away, or . . .

A. What kind of discrepancy?

Q. Let's say a major discrepancy or some problem that you can't rectify by trouble-shooting in the airplane, do you?

A. Yes.

Q. You do, eh. Did you have any problems with the boosters at all?

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A. No.

Q. On the approach you didn't witness the booster lights on then?

A. No.

Q. I think we asked you who you reported to, and you indicated it was Mr. Newman and Mr. Clark. If you have or develop a major problem in a satellite base what is the procedure then? When I refer to a major problem I'm talking about with the airplane, not, uh . . .

A. Call if we're needing some help.

Q. Are you responsible to rectify the unsensibility on a satellite base?

A. Depending on the nature, if it occurred, we'll go straight to the maintenance facility, if it poses no hazard or problem, it can be rectified and done at the satellite. If not, it's done when it returns to the sub.

Q. I think you've cleared up most of my questions.

Does anyone else have any questions?

Yes, I do. This is Dr. Skjenna.

Q. I think you already answered this question. Did the captain respond to the check list calls on the descent?

A. Yes.

Q. When altitudes are called during the approach, is it a normal procedure for the captain to make some sort of response to these calls, verbal or otherwise?

A. Could you repeat that question?

Q. When you call altitudes, etc. on the approach, like "300 feet", "400

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feet", for example, is it normal procedure for a captain to make some sort of response to the controls, calls rather.

A. Calls, yes.

Q. On this occasion, did Captain Thompson make any response to these calls?

A. I can't really remember.

Q. That's it, thank you.

Does anyone else have any further questions for Mr. Weyman?

Q. I just have one more question here. In going through the manifest, weights and balances, we discovered some discrepancies in fuel loads. Are you aware of this?

A. No I'm not. What discrepancies are you referring to, Mr. White?

Q. Discrepancies between weight and balance, and the engineer's, the flight engineer's, log.

Is that with respect to this flight, or some other flight?

Q. This flight.

Well, if you don't mind a discrepancy, perhaps Mr. Weyman can clear it up.

Can you refer him to the document at this time, please.

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Q. Gary, on this particular flight were you aware of a discrepancy of 1300 lbs. of fuel between the weight and balance and the flight engineer's logs?

A. No sir.

Q. My next question, on other flights in the past are you aware of any discrepancies in weight and balance and the flight engineer's logs reference fuel logs?

A. Not that I can remember.

Other questions?

Q. Yes. Gary, did you check the load on the airplane's

A. For tie down?

Q. Yeah, for tie down.

A. Yeah we had one.

Q. It was tied down to your satisfaction?

A. Yes sir.

Q. Was the G-net installed?

A. No.

Q. One other question in this regard, Gary, is it normal to have the G-net installed, or was this a departure from the normal procedure?

A. No the G-net was taken out, I don't know how long before, it had been out for quite some time.

Q. I just have one more question. In the chain of command in a normal crew complement, is the load master responsible for you, or is the captain?

A. Just the captain.

Q. Okay that's all I have.

Any other questions? Thank you Gary.

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s.19(1) Notes taken during the second Interview at the International Hotel in Calgary

Chairman - Mr. Brian Aston

Investigators - Mr. Paul Andoney

- Mr. J. R. Leroux

Witness - Mr. John Binder

Counsel - Mr. Eric Lane

- As in the previous interview Mr. Lane preambled again and requested that Brian produce a copy of Mr. Binder's statement. Mr. Lane also requested that Mr. Aston "lay the letter on him" (referring to letter requesting Mr. Binder to appear). Lane told Brian he had to issue a letter and [REDACTED] as the group down the hall (referring to interviews conducted by Mr. Clark, Mr. Glenn and Mr. Unger). Mr. Aston asked Mr. Lane for an explanation before signing the letter. Lane refused until such time as the letter was issued and never did answer why. Lane took off with verbal diarrhea as to wherefor, whereas and why not.

- Lane stated he would not allow his witness to answer twice.

- Mr. Aston commenced with his questions during which time Mr. Lane busied himself with reading Binder's previous statement, therefor was quiet for 10 minutes.

- Lane had never met his clients and had to be introduced to them. This was applicable to both Mr. Clement and Mr. Binder.

These short notes were taken by Mr. J.R. Leroux during the two interviews.

This is Mr. Aston speaking. This shall be an interview with Mr. J. BINDER, and prior to the interview commencing, Mr. Eric Lane has requested a request to appear, letter to be issued to Mr. Binder, and I have now signed the letter to request him to appear, and I'm now handing / him a copy.

The board that's convened here today, made up of Mr. Aston, Mr. Andoney, and Mr. Leroux, Mr. Aston's from the Toronto Regional Office, Mr. Andoney from the Montreal Regional Office, and Mr. Leroux is from the headquarters in Ottawa. The three of us duly authorized accident investigators, authorized by the Minister. The remainder of people in this room at the time, Mr. J. Binder and Mr. E. Lane. Now I'll read a statement to the witness.

The purpose of the interview is to enable investigators to better understand the circumstances of this accident. I wish to emphasize that our investigation seeks out cause related factors in order to provide information for accident prevention programs. Statements provided to investigators are confidential and will be given as complete protection in any subsequent civil, criminal or regulatory proceedings as the Minister can provide, including an affidavit to any court in Canada claiming that revelation of the statements would betray a confidence, inhibit future witnesses, and would thus not be in the public interest. Such claims have in the past been allowed. In spite of the foregoing, investigators will not object to the presence of a representative of your choice, and will provide you with a copy of your statements at your request. You are warned, however, if you wish to have a copy of your statements, the Minister will not subsequently claim privilege for it unless you request him to do so and assure him in writing that the statement has been kept confidential by you.

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Q. Mr. Binder, do you wish to be represented by

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Yes he does, and he wishes me to represent him and my name is
Lane, E.M. Lane, and for the record my address [REDACTED]

Q. Mr. Binder . . .

Lane: And in accordance with our prior arrangements, I have for you
a letter directing you, Mr. Aston, signed by Mr. Binder, directing
you to make available a copy of a verbatim transcript of these
proceedings to me at my office at that address as soon as you
are able to transcribe these proceedings. Sign it right there if
you wish, please John. By signing one copy of this letter of
direction and returning it to me . . .

Q. I'm now signing it. I'm retaining a copy for my own records.

Lane: Alright, Mr. Aston before you start with your questions I'm making
clear on this record that Mr. Binder is here in accordance with a
written summons delivered to him by you pursuant to section 830,
part 1 of the Aeronautics Act, where you as an aircraft investigator
require his attendance, and that I'm referring to that letter which
I have before me which in its threatening and intimidating manner
threatens Mr. Binder with prison for 6 months or a fine of \$1,000
if he doesn't comply with your written request. Now I have that
letter before me. It's in that particular context that Mr. Binder
is now prepared to answer those questions which in my view I consider

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to be relevant and material to this case.

Q. I'd like to make one statement for the record, that this letter was issued under duress. We'll now go ahead.

Not duress. You can ask him questions only if you gave him the letter and I made that clear. You wanted to ask him questions so you gave him the letter.

Q. We'll now go ahead. Mr. Binder, you made a previous statement and we have a copy of the previous statement here,

Lane: That particular previous statement was made by Mr. Binder on the fifth day of November, 1974. In essence, whether or not it can be called a statement is very questionable. It appears to be a series of questions and answers. Questions asked by an A.J. Fuller that apparently were answered by Mr. Binder, and a Reed / ^{Glenn} was apparently a witness to that. I understand that the arrangement was at that time that Mr. Binder would be provided with a copy of those proceedings as soon as a copy of it could be made available. For the purposes of this record may it be shown that until a specific request for it was made just now it wasn't produced. There now is produced to us a five page photocopy of a document that is not signed, which Mr. Aston has represented to be his copy of that particular document entitled "A Statement of John Binder" and we're going forward using this copy based on my undertaking to Mr. Aston that I will take it away with me and copy it and give him back the original this afternoon.

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Q. Mr. Binder, I'll try not to repeat questions already asked on the statement . . .

Lane: You'll have to because I won't let him answer questions twice.

Q. Mr. Binder, in your position with Panarctic, do you control the operations of the flight engineers under you?

A. No.

Q. Who does this?
Newham's

A. Al / the chief of maintenance and he covers both of us.

Q. Mr. Binder, would you speak up just a little bit, we've only got the one tape recorder.

A. Al / ^{Newham} and myself.

Q. Do you make out the duty roster list?

A. No.

Q. Who does this?

A. Operations.

Q. And by operations you mean . . .

A. The duty pilot or operations downtown.

Q. I understand that you are responsible for the training of the flight engineers.

A. Partially.

Q. Could you clarify that for me please?

A. Myself and Newham do the flight engineer training.

Q. Do you have a set schedule for recurring training?

A. Yes.

Q. Is this laid down in some company manual?

A. I don't know.

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Q. How do you select your flight engineers?

A. We select the most qualified engineers we have on the floor.

Q. By qualified . . .

A. Their past ability as a maintenance engineer.

Q. I take it then that these would be licensed Electra engineers?

A. They would be licensed engineers.

Q. Not necessarily Electra?

A. No.

Q. Do you do / checks with the Electra flight engineers?
route

A. Yes.

Q. How frequently do you do /checking?
route

A. One /-check a year.
route

Q. With each . . .

A. Flight engineer.

Q. What would a route check consist of? Let me - do you have a laid down procedure for doing a route check?

A. Yes.

Q. Where would I locate this document?

A. I have a copy at the hangar, and, uh, I have the most current copy at the hangar.

Q. Is it in some other manual or is it . . .

A. No, I don't think so.

Q. Briefly what would you - what does a route check consist of?

A. Well, if I had the format I could go through it all, but briefly we're checking for his appearance, punctuality, his knowledge of preflight exterior and interior, emergency equipment, and use of checklist, crew coordination, if he follows standard company procedures, and there anything that's related to him being a flight engineer, use of fuel logs, discrepancy write-ups, licensing,

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Q. Do you accompany them on their preflight?

A. Yes.

Q. With regards to fueling of the airplane, what is the standard procedure for flight engineers?

A. Standard procedure is to use the dipsticks as probably the most accurate method, and the gauges, and the amount of gallons you board to make sure you've got the proper amount of fuel aboard.

Q. You're as check flight engineer, what is the directions or what is the procedure for the flight engineer to obtain his fuel loading?

A. The procedure is to get the fuel loading from the captain.

Q. Is the flight engineer authorized to accept fuel loading from anyone else other than the captain?

A. No.

Q. During your route check or during write down procedure for a flight engineer to abide by, is there a clause in the directive or in instructions that permits him to accept fuel loading from other the primary crew members, and when I refer to primary crew members , either captain or the first officer?

A. To answer that I'd have to say on occasion you do fuel the airplane to a lesser value and then when the captain makes the final decision you fuel to the captain's requirement.

Q. So the direction is that the fuel loading is . . .

A. By the captain.

Q. What is the procedure for the cockpit voice recorder on a preflight?

A. On a preflight? You push the test button for five seconds, and if the needle goes on green indicating good it's acceptable.

Q. Is there any requirement for the flight engineer to do a playback from the C.V.R _____.

A. Only occasionally.

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Q. With regards to the flight data recorder, what is his procedure?

A. The procedure is to turn on the switch if the power indicating the light goes out, it indicates that it's functional you can read the amount of tape left and that's acceptable.

Q. What about trip and date?

A. Trip you punch that in, well, on the auto preflight you can set the trip and date prior to turning it on.

Q. Binder is there a checklist for the flight engineers?

A. There's one in our company in the operations manual.

Q. Other than what's in the company operations manual, is there a document to sign after completing his preflight?

A. No.

Q. What is his procedure with regards to differed snags, and by this I refer to passing the information onto the remainder of the crew.

A. Differed snags. Differed snags. The differed snags are in the differed snag list in the F.E.'s log book. There's snags that are not no-go items, and any current snags are posted on the captain's control column, if they've been differed for that particular day, flight.

Q. Does the flight engineer post them on the control column, or . . .

A. The flight engineer or the engineer.

Q. Does the flight engineer have to check any document with regards to the differed snag list, other than his own log?

A. I don't quite understand.

Q. No, would there ever be an area or an instance where differed snags would not be entered in the F.E.'s log?

A. No.

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Q. Snags are done by numbers?

A. Snags are done by numbers.

Q. What is the accepted routine for the flight engineer to carry out with regards to handling the power, from what position on take-off to what position at termination of the flight or to when he relinquishes power to the pilot or co-pilot, whoever's flying the airplane?

Lane: That question was asked and answered on page 3 of the Statement of John Binder. ...He says "At take-off the flight engineer handles the throttle _____ adjusts the power to the captain's request. Prior to that he calls out the _____lights are out, the _____ are closed. _____ after the approach check is completed, the flight engineer is setting power, normally he's had a briefing from the captain as to what he wants to do. Sometimes the captain may ask you to call out the radio altimeter. The flight engineer handles the power lever to just over the threshold when the captain or the first officer, whoever is flying, takes over. He will say "My power", or "My power lever"."

Q. Mr. Binder, which power levers does the flight engineer normally use?

A. The ones opposite the pilot flying.

Q. What documents would you as check flight engineer would you check the flight engineer that's being route checked, expect to have him carry on board?

A. I would check to make sure that he had his F.E.'s license and a valid medical.

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Q. And the remainder of the documents?

A. He has an A.M.E.'s license . . .

Q. No no, I mean, I don't mean his license as such, but manuals or what have you . . .

A. Oh yeah, I check his bags to see he has his manual and it's up to date, and whatever I've got on my list of things to check.

Q. Mr. Binder, does the minimum equipment list, is it the same from main base as it would be from terminal point, satellite base?

A. No.

Q. Would you check the flight engineer anything like this, for his knowledge of it?

A. There's not too much to check, if you have an item that's failed you bring the minimum equipment list and do it according to instructions.

Q. Mr. Binder, has, or do you require, the flight engineer to make note - let me rephrase that question - when would you expect the flight engineer to make his notification in his F.E. log for malfunction that's occurred on the airplane?

A. This is not . . . during flight?

Q. During flight.

A. After you've established what the malfunction is and determined to the best of your knowledge what it is, you write it down, at that time.

Q. Mr. Binder, during your route check, are you also checking to see if - Strike that last question. On a route check, would part of this check consist of how a briefing was conducted?

A. A briefing by whom?

Q. The captain . . . or . . . the flight engineer has to respond to briefings. Let me - Would you check the flight engineer as to his response to a

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briefing? And this I . . .

Lane: I'm not sure I understand what you mean by a response to a briefing, so you're going to have to put up with me and tell me.

Q. Normally, and maybe I can explain it this way, prior to takeoff a captain or whoever's flying the airplane will have a briefing of what his standard pro-or what his procedure is going to be. Prior to landing, the captain of the airplane or whoever is flying at that time, would also detail what his procedure is going to be with regards to overshoot, power, things like this.

Lane: I'm following you. What's the question?

Q. The question is, do you check the flight engineers as to their response to the briefing?

Lane: Well, first of all I think you have to establish whether or not there is by practice any response required by the flight engineer to such a briefing, or is he required to sit still, keep his ears open, pay attention and do what he's told?

Q. Okay, let's . . .

A. If you have me in between here . . .

Q. Is there a response from the flight engineer to . . .

A. I'd check to make sure that he does do as briefed.

Q. Is there always a briefing?

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A. Yes.

Q. At what positions is the briefings carried out?

A. On the check list.

Q. Could you elaborate that?

Lane: A. As preclear the check list calls for a briefing at positions A,B,C, and D and that's where they give them.

Q. Which check list are you referring to?

A. The company check list.

Q. I have an operations manual here. This one was loaned to us by Mr. Ian Johnston, check pilot for Panarctic. He maintains or he confirms that this manual is up to date with all the amendments in. Could you identify this manual?

Lane: We take your word for it, Mr. Aston. What's the question?

Q. Can you show me the area that dictates what briefings will be carried out?

Lane: You mean you want the witness to look at the check lists in the flight manual? I'll have him look at the check lists in the flight manual. ^(Binder) /This one isn't marked, it may take awhile to find it. ^(Lane) . ./Why don't you go on? The check lists are all at the front here, eh? Well, okay, I'll find it while you're going on. ^(Binder,) . ./Crew briefing is carried out on a before takeoff check, first item, and on second-last item, on the descent check.

Q. Mr. Binder, have you ever been doing a route check when a briefing wasn't carried out? that you have just previously described?

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A. No.

Q. As flight engineers - is it permissible for a flight engineer to carry out silent check lists?

A. You caught me there. You mean the whole check list?

Q. The whole check list.

Lane: I'm not sure what you mean by a silent check list, but if you mean is it permissible for a flight engineer to perform the functions required on one of the check lists silently, the witness has answered no to that.

A. Well, that's not quite the question that I answered.

Lane: I'm sorry, I'm sorry. I thought you didn't know.

A. Well he said the whole check list . . .

Lane: And the answer is no to the whole check list.

Q. Do the flight engineers compute bug speeds?

A. No.

Q. Are they route checked on calling out air speeds and height altimeter?

A. No.

Q. If a flight engineer has a major snag at a satellite base, what is his procedure?

A. You'd have to clarify a 'major snag'.

Q. Well, if he's got a snag that he can't rectify at a satellite base.

A. You'd check the local items check list and proceed accordingly, or,

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we have communications with the south, you can talk with.

Q. Who would he contact in an instance like this?

A. AlNewham., myself, Pete Humble, Chuck Clement .

Q. I take it then that one of these individuals would be on duty at the time.

A. Yes.

Q. Is there always an engineer on duty?

A. There's always one of us four on duty.

Q. Mr. Binder, we did find that the, a, one engine ^{driven} / _____ compressor, number two to be precise, was in the dump position. What is the procedure for the flight engineer with regards to prelanding and maintaining pressurization?

A. Normally we do dump one E.D.C. prior to landing.

Q. What is the reason for this?

A. Because the airplane's pressurization / ^{system} has the habit of bothering your ears slightly. As the pressure gets lower it's not as sensitive, therefore we dump one E.D.C. to make it more comfortable for the passengers.

Q. Is this a laid down procedure?

A. I don't know what you mean by laid down.

Q. Well, is it laid down company procedure?

A. It's a procedure we use for a flight engineer, yes.

Q. Where does he get this procedure from?

A. That particular procedure he probably got from me.

Q. So it's not, as such, detailed in one of these check sheets?

A. No, it's not on the check list.

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Q. Mr. Binder, from your experience, and I'll clarify this one for you too, and what we found, so it brings you entirely in the picture, the windshield heat on the forward windows were in the high position. Maybe you can - or from your experience -

The switches were in the high position.

Q. The switches were in the high position, were in the high position. From your experience, have you ever seen them go to hot?

A. No.

Q. On your preflight, what position do you put them in?

A. Always low.

Q. Has the light indication for the switch position or the required heat, have you ever seen it require to go to the high? And I think on this system the light, the speed of the light, indicates what position you're . . .

A. The speed of the light, no. It's the fact that if you put the thing to high you're going to break the window, so you don't go to high on it.

Q. In route, have you ever gone to high?

A. No.

You just threw me.

Q. During your route checks, if the position was on low, I'm referring to the windshield heat here now, would it a function of the captain to request high to the engineer to make the change in selection?

A. I've never seen it done, but I would say yes.

Q. Would the flight engineer be responsible for making all the changes in selections pertinent to operation of the airplane?

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A. You mean on the same subject?

Q. No,

A. Windshield heaters . .

Q. Windshield heat or whatever.

A. I'd say yes.

Q. Correct me if I've already covered this subject, but what does the recurring training consist of, Mr. Binder, and with this I'm talking about flight engineers?

A. We go down there for one week, and each time they usually get three days of ground school and two days in the simulator, which amount to on the average a minimum of eight hours of simulator training and possibly more depending on the amount of engineers we have present.

Q. Would the recurring training, would the flight engineer have an opportunity to be positioned in one of the other two seats to become familiar with the operation?

A. I would have to say that we have had flight engineers flying the airplane for training purposes because we were using all flight engineers in the initial training phase.

Q. But under normal recurring training would this be . . .

A. We have done it, yes.

Lane: Are we talking about the flying the simulator down in Ann Arbor?

Q. Yeah.

Lane: Please don't call it an airplane. Someone might misinterpret . . .

Q. Alright, our referring is to training.

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Lane: Yeah, but you called it an airplane and then we've got flight engineers sitting in the pilot's seats flying the airplane on the record and I hate to see that quoted back at me in some newspaper someday fine. I don't mind flight engineers flying simulators . . .

Q. Well, yes, if it's going to be quoted back in the newspaper sometime, you've released the statement, I haven't.

(pause)

Q. Mr. Binder, during your route checks, does the flight engineer have to display a knowledge of cargo tie down to you and this freight that's on board?

A. I would say no, he doesn't have to display a knowledge, I mean we've all done it and it's a fairly simple function.

Q. Would you be checking him to see that he actually did an inspection of the cargo lashings?

A. We go through and we do check to see that the freight is properly tied down, if there is freight on board at that point. It's not something that you get hung up on.

Q. Would the flight engineer have authority to override the load master if he thought there was a lacking in lashing the freight down?

A. I'd say yes. Anyone could, any member of the crew could override that.

Q. Mr. Binder, do you know why the G net was removed from P.A.B.?

A. I don't know how to answer that question.

Lane: Q. The best way is either yes, no, or I don't know

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A. I can say yes.

Q. What was the reason?

A. I remember the reasons.

Q. Could you give me some please?

A. The net hinders the loading of freight in that area when you're hauling small freight and with the lock system and the tie down system they had it was not really required.

Q. Mr. Binder, is there such a thing as a manual you've compiled for directions of the flight engineers?

A. There's the company operations manual and we send them bulletins on any changes which they all receive.

Q. They all have this manual?

A. They've all been sent the material.

Q. Would that be another manual that they carry on board?

A. The operations bulletins plus, I'd say . . .

Q. Are all the flight engineers under your direction all licensed A.M.E.'s on the L 188C?

A. Yes.

Q. Are they required to do any additional work?

A. Yes.

Q. What would this actually consist of?

A. Maintenance on the aircraft.

Q. Well, what I'm referring to, would they be called back in to do a certain amount in a period of time.

A. There's no specified amount, but we try to keep them current on the maintenance aspect of the airplane as well.

Q. When they do come on the Electra as flight engineers do they remain on the Electra in most instances or could they switch back and forward

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between the twin otter operation and . . .

A. I'd say in most instances they'd stay on the Electra operation.

Q. Leroux, do you have any questions?

Yes I do.

Q. Leroux. I have some questions for Mr. Binder.

Mr. Binder, does a pilot who is acting in capacity of first officer keep a fuel log?

A. Yes.

Q. Who is responsible for computing the landing weight?

A. The co-pilot.

Q. Who computes the top of descent fuel?

A. Co-pilot.

Q. Does the co-pilot request any fuel information from your flight engineer's log?

A. Do you mean at top of descent or . . .

Q. No, to compute the top of descent fuel.

A. No.

Q. No more questions.

Aston: Q. I just have one, Mr. Binder. When you're on a route check have you ever had anyone or the engineer in the position that you're route checking say that he, or confirm that he couldn't see the radio altimeter?

A. No.

Q. From your experience as a flight engineer, have you had any _____ that your vision was obstructed from the right and left side?

A. No.

Q. Just as a matter of interest, how do you position your seat when

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you're flying?

A. Forward and up

Lane: Let the record show that Mr. Binder is shorter than his counsel,
which is why the "up".

Q. I have one question. Andoney here questioning Mr. Binder. When
your flight engineers, for one reason or another, are reverting
back to the twin otters, and from the twin otters reverted back
to the Lockheed 188, do they get any training or recurrence
training or whatever you would call it?

Lane: Just to be sure we have the basic ground work for the question
to be answered accurately, Mr. Andoney, has there ever been such
a reversion route in flight engineers to your knowledge, Mr. Binder?

A. We haven't at present, I don't think, reverted anyone from the twin
otters back to the Electra. We refer them the other way.

Q. I see. Thank you.

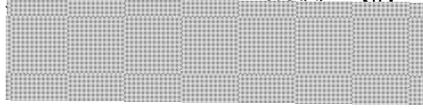
CF-PAB

Calgary, Alberta
November 5, 1974

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Statement of: John Binder



Ali coby

(John Binder is Superintendent of Flight Engineers at Panartic and Assistant Maintenance Supervisor. Mr. Al Newham is his Supervisor as Superintendent of Maintenance.)

I have been with Panartic 3½ years. I have a current Flight Engineers license, [redacted] and AME license [redacted]. I've been in Aviation approximately 11 years. I am 24. Experience has been with Amoco, Great Northern Airways, Banff Oil and Field Aviation. I had some experience in the Electras at Field and the remainder here at Panartic. Training on Electras included the full course engine and airframe at Universal Airlines at Ann Arbor (Willow Run Airport) in Michigan, also simulator training there. As well I do the F/E simulator check outs there with either Jan Johnson or Ed Kowalic.

Duties and responsibilities here are as far as the hangar goes is I'm in charge of the floor, that is, look after the maintenance on Electras along with my assistant Peter Humble. He is the Electra Maintenance Supervisor. As for the Flight Engineers, I do the simulator training and the flight training as well as Al Newham. We share the job. Also, there is another person involved, Abe Williams, from Zentop, he works for the International Airline Academy.

Our Flight Engineers are generally all from the floor except for one. They all have an "M" license before we train them as Flight Engineers. Generally, engineers from the floor that do the best on their Electra training are given the opportunity to become Flight Engineers. Normally all our people who go to Ann Arbor will go through the simulator regardless, as it is considered good training.

Q. Do your Flight Engineers get any other related training such as Flight Attendant or Loadmaster?

A. No. Not as a Loadmaster or Flight Attendant. They've had training in making up a load sheet or I should perhaps say familiarization would be better.

Q. Do you do check rides on Flight Engineers?

A. We give them one simulator check ride once a year and at least one route check. In addition they get one ground school refresher at the time they get a simulator check ride.

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Q. Do you dispatch Flight Engineers?

A. I used to but Kowalic does that now. The reason for that was that it was easier for him to schedule them. We have enough Flight Engineers to cover the work adequately.

Q. How much flying do you do as Flight Engineer?

A. In the beginning I did quite a bit but now its one or two trips a month. They will generally be verticals and occasionally a week perhaps on shuttles. My trips are generally VIP trips.

Q. Do Flight Engineers work on the floor in maintenance?

A. Yes. To keep them current and familiar with the aircraft. We try to get them out on all the ground runs and trouble shooting if there in the hangar. This is good experience. Because they have to do the initial trouble shooting in the Arctic and if they are current and familiar with such things as starter changes it makes it a lot easier.

Q. How would you split their time--Flight Engineer's duties and maintenance?

A. Well they're scheduled for so many days flying and so many days off. If they have any time left over they will do maintenance. So it depends entirely on the flying activity.

Q. Can you tell us something about their working conditions? Are they satisfied in their job?

A. Basically, yes, they are. Conditions do vary. I'd say basically they are happy. They are not overworked.

Q. How are your working conditions?

A. I'd say they are good.

Q. How do the Engineers feel about night flight?

A. I would say in general they would prefer day flights. As far as maintenance is concerned we prefer it as it is although as the aircraft are scheduled we could probably handle day flights just as easily.

Q. The Flight Engineer keeps a Flight Engineer log. What is its purpose and how is it used?

A. The purpose is to record all snags during the flight, keep accurate fuel consumption check. We don't use gauges for this we use actual burn figures from fuel flow indicators, monitor engine performance and condition. Its also a snag record for the airplance. The log is in booklet form, there are two copies, original and duplicate yellow. The white copy is perforated so a portion can be separated. The snag portion (white) stays

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in the book until it arrives at a maintenance base. There the snag is transcribed to a maintenance card. After that is accomplished, the white copy is clipped to the control column for the next flight crew to see. Any deferred snags are recorded and listed on a separate sheet. Depending on what the snag is, this may be rectified at Rea Point for example if it occurs on the flight up. We have maintenance people at Rea Point. Fuel consumption figures are entered in the log every hour and the hour starts at top of climb.

Q. Describe a Flight Engineer's trip work and duties.

A. He has a monthly schedule which shows him the trips and provided there is no delay, he will probably not need a call out. The duty pilot will also give him a call if there are changes. He is required to be at the aircraft at least one hour before departure for his pre-flight inspection. This pre-flight consists of normal walk around complete check of the aircraft and cockpit, systems, etc. It's a pretty thorough pre-flight.

Q. Does he have to sign for this check?

A. No. We haven't got the check on paper as such to sign, though there is one written up as a guide and everyone has one in their book or briefcase. What we do is teach them all the same standards for a pre-flight. This area is also checked in the check ride. On an intermediate stop, the flight engineer is required to fuel the aircraft and also do a general walkaround.

Q. What flight duties are involved in the cockpit?

A. Starting from the beginning, he monitors the engines on starts, and on the first start of the day he records the TIT and acceleration to 10,000 RPM. This gives us a check on the TD system and generally tells us the condition of the engine. We start the engines in low ground idle. They stay at that RPM until they get to the end of the runway when we get to that point RPM on the check list. The Flight Engineer calls some of the items on the check list in normal situations. In the event of an emergency, the First Officer reads the checklist and then Flight Engineer performs it.

At take-off, the Flight Engineer handles the power levers after VI and adjusts the power to the Captain's request. Prior to that he calls out that the Beta lights are out and that bleed valves are closed. During the approach, after the approach check is completed, the Flight Engineer is setting power. Normally you've had a briefing from the Captain as to what he wants you to do. Sometimes the Captain may ask you to call out the radio altimeter. The Flight Engineer handles the power lever to just over the threshold when the Captain or First Officer, whoever is flying, takes over. He will say, "My power", or "My power lever".

Q. If the Captain asked you to call radio altimeter, what would he say?

A. Hard to say. He may request call every 50 feet or whatever.

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- Q. How closely do you monitor flight instruments on approaches in IFR conditions?
- A. On the landing check, we call instrument flags and need a response from both the Captain and First Officer. After that, depending on the weather we might be rotating quite closely. Of course one of our prime concerns is the power settings as requested by the pilot flying.
- Q. Would switching No. 1 engine TDI to null give some additional work for the Flight Engineer on approach?
- A. No. Not on approach.
- Q. Would the Captain under some conditions ask you to watch out for the runway?
- A. He might, but that's not normal procedure.
- Q. Who computes bug speeds?
- A. Co-pilot or whoever is not flying.
- Q. Does he require any information from you? ie. fuel load?
- A. He already has that information and verifies that from me. The First Officer also does his own fuel consumption check during the flight.
- Q. Have you done any trips with Brian Thomson?
- A. Yes, a fair amount. Both as a First Officer and as a Captain. Also flew with him when we were on the twin Otters. I've known him at least five years.
- Q. Have you ever been in any emergency situations with him?
- A. Nothing, really.
- Q. How did you consider him as a pilot?
- A. I always considered him alert and always ahead of the situation. I always thought he was very thorough.
- Q. Have you ever been involved with decision making with Brian; ie. go, no go items or weather? Is he positive in his decision making?
- A. Yes, I believe so. I consider him so. As for weather, you know it changes every minute up there. I think he'd have a look at it before deciding to divert.
- Q. Does the Captain ever take over power during approaches?

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- A. Yes, sometimes in severe turbulence he may. They will always tell you they have power when they take over.
- Q. Would both pilots get identical meals?
- A. No they don't.
- Q. What kind of beverages are served?
- A. Coffee and there are juices on board.
- Q. How much experience has Brian got concerning Rea Point?
- A. He's probably been in and out of Rea Point more times than any other pilot we've got. He's flown the twin Otters out of there as well as the Electra.
- Q. We note on some of the Flight Engineer logs, they are not complete and some have a notation "off the charts".
- A. We have the temperature charts for altitudes and in some cases the chart's range doesn't include the temperatures we're experiencing, that's the reason for that. We don't require that Flight Engineers sign their logs. Their name does appear though on the top of the sheet.

Taken by: A. J. Froehler

Witnessed: Reid Glenn

Interview by Mr. Glenn, MOT and Mr. Froehler, Accident Investigation Division,
Calgary

File: 5002 - H-40003 (CF-PAB)

Panartic Oil Limited Lockheed Electra Accident at Rea Point, N.W.T.

*Reid's
copy*

s.19(1) The following statement was made following an interview with Mr. John Binder, address: [REDACTED]
Current licences: [REDACTED] Mr. Binder serves as a maintenance supervisor with Panartic Oils. He is also a Flight Engineer leader. In the company organization he works for Al Newnham. In the organization Newnham works for Jim Strane^{line} who is vice-president, operations. Also under Strane^{line} is Captain Ed Kowalik who looks after the aviation side of things. Binder has been three and one-half years with the company, has been in aviation eleven years and is 29 years of age. [REDACTED]

Mr. Binder participates in the Flight Engineer training program. He has had the full course at the Universal Airlines at Ann Arbor, Michigan. He did the complete simulator training and ground school, and he does the Flight Engineer checks at the school along with Captain Johnson, the check pilot and Captain Kowalik.

His duties and responsibilities included being the second in charge of hangar maintenance and he is in charge of the Electra maintenance along with Peter Humble who is the L188 (Electra) maintenance supervisor. He participates in a Flight Engineer training program by doing the simulator training and the flight training of all new Flight Engineer personnel. Together with a Mr. A. Williams of the Aviation Academy, Ann Arbor, Mr. Williams is now with Zantop Airways but he instructs at the Aviation Academy throughout the year. (That is he works there part time.)

All potential flight engineers come off the floor, they are initially screened by Binder, except for one who was here before, that is Peter Humble. All flight engineers have their maintenance license before being trained as flight engineers. They all have had various Electra courses that is, on the airplane hydraulics, electrical, general servicing and general maintenance courses on the airplane. Most all of the top people in the ground maintenance staff for Panartic will get and opportunity to be-

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come a flight engineer, in fact there is quite a competition and only the top few are chosen. Most of the maintenance personnel get some sort of simulator training at Ann Arbor because it is considered an excellent way to get to know the aircraft. When they attend the simulator sessions they get instructions on the various ground school courses on the Electra. However, they do not get any flight training as such. However, the flight engineers that get onto flight training are made aware of the duties of the loadmaster or flight attendant so that they are very much aware of the other air crew duties. As a flight engineer leader Binder is responsible for route checks and simulator rides. There is easily two sessions a year for both the flight engineers and the ground maintenance people. It is generally split up into the slack periods of the year. When the flight engineer graduates he is given two rides a year; one is on the simulator at the Academy and the other is a normal route check. They generally occur as closely as possible to a six month interval. After the route check is performed it is written up and they are forwarded to Captain Kowalik and then kept on file.

Mr. Binder explained that he used to do the dispatching for the flight engineers; that is, match the flight engineers up for the trip but now Captain Kowalik does it. This seems to be a better arrangement because the *available* number of flight engineers to do a certain number of trips, the engineers are available and they go on rotation and therefore it is just as easy for Captain Kowalik to do it. In fact, I assigned them it would just be a duplication of duties and this seems to be a good working arrangement. As far as flying goes, I got a fair bit at the start of the operation that is, a couple of years ago, but not because of my supervisory duties, it has backed off quite a bit. Generally I do about two trips a month *north/south* and *Arctic shuttles* ~~settles~~ and ~~the~~ spend some time in the Arctic just to stay current. *North/south shuttles* ~~settles~~ are interspaced with the week doing trips in the Arctic.

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Peter Humblé is also a flight engineer. He spends time in the Arctic also to help me out. But as I mentioned my job is more supervisory than anything else and requires a considerable amount of time. Many of the flight engineers also work on the hangar floor and this keeps them current on the aircraft. They don't complain about this, because the floor work also means they are quite current with procedures and with the various aircraft systems, because when they are in the north they have to do the maintenance work themselves in the Arctic, and although there is ^a maintenance assistant provided they have to have an infinite knowledge of the system. The floor work then means that they become very familiar with the aircraft systems and if something does go wrong in the north they can fix it.

When questioned about how do you make an equitable split for the engineers between maintenance and flight duties, Mr. Binder explained that it entirely depends on the flight schedule. If you are on flight duties and you can't be scheduled for a maintenance ~~then~~ vice-versa. If the total flying increases then both the work load of maintenance and the engineers also increase. Half of our personnel are normally scheduled as far in advance as possible and certainly at least 30 days.

Insofar as working conditions are concerned both maintenance men and flight engineers seem happy with the working situation at present. Mr. Binder is not aware of any apparent problems and the personnel seem satisfied. Although there has been a turnover of some maintenance ^{and} ~~in~~ FE personnel he doesn't think in all cases due to working conditions; that is, probably family life had quite a bit to do with it.

Insofar as the flight engineers are concerned they would naturally prefer the day flights to the night flights, because if you had your choice they day flights would be more appealing. However, since joining the company Mr. Binder has stated that it has ^{been} ~~ever~~ thus. Night flights have been a fact since the operation commenced. However, in the mix of maintenance and flight engineers the night flights mean that the maintenance personnel are off-duty when the aircraft are away and this means of course that they do most of their work in the daytime. There is no complaint here because the maintenance personnel prefer it this way. He mentioned however, that there had been some

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discussions and rumours that these flights would start again, however there has nothing firm on this that he knows of .

During normal -- or all flights -- the flight engineer log is completed this contains fuel consumed, engine power settings, torque and other instrument indications and various maximum and minimum pressures and readings on all systems. They are completed at the end of every flight and turned into him. These logs are normally used to monitor engine performance conditions, and to have ^{the} permanent snag record. They are left on the aircraft until the book is completed. The flight engineer log is in booklet form--three copies; two white and one yellow, and are used to keep a maintenance (servicing record) of the aircraft.

The snag portion of the booklet stays in the aircraft until it arrives at a maintenance base. The snags are then transferred onto a work sheet, or a work card, the white copies are copied out, put on the control card and if any snags are deferred then they are put on a deferred list. As a matter of interest Calgary and Edmonton are our only main maintenance bases. Rea Point could also be ^{called main base normally} ~~cause~~ a maintenance however, we only do light maintenance there. Mainly because of the facilities and lack of hangar space. Because of these limited facilities and extreme weather the major work generally done down south at Calgary or Edmonton.

Entries in the flight engineer log are normally done at top of ^{slip 6} ~~slam~~. The ^{first} ~~early~~ sequence of them starts at top of ^{slip 4} ~~slam~~ and every complete hour thereafter for the flight, the log is filled in, complete with all other instrumentations, readings, temperatures, and pressures, etc.

Mr. Binder went on to describe a typical flight engineer trip. ~~But~~ ^{before} he talked briefly about the ^{crew} notification system. Normally the flight engineer ^{is} ~~has~~ programmed a month in advance and he is notified at least 24 hours in advance if the flight is on or not. If there is a delay he will be notified. If the flight engineer does not phone in to ops to inquire himself then the duty pilot advises him by phone. So that you are generally notified one day ahead. However, on the day of the flight he now only reports for duty for his pre-flight inspection at least one hour before takeoff time. If the flight is delayed or held up he is also notified of this.

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The flight engineer does the walkaround as per the operations manual, cockpit area and it is generally a very thorough pre-flight check. He knows that he has to fly the plane into the Arctic and back again so he is very concerned about the inspection. He mentioned that they have modified the Northwest Airlines manual but that they do have the checklist written up and each flight engineer carries one in his bag. At the start of the flight it is a very extensive pre-flight check, this is a very important item on a flight engineer's route check. On intermediate stops, there is not the same pre-flight check because the flight engineer knows the condition of his aircraft. When doing his stops the flight engineer does the refueling and is responsible for coordinating the fuel with the captain as to fuel amounts in connection with the cargo, etc. On a normal start up the flight engineer's duties include the monitoring of the normal start functions, on the first part of the day he records the start TIT, acceleration to 10,000 RPM. Which out of interest takes about 20 seconds. The start is always made in low speed ground idle and they carry on that way until they are ready for the run up check. After start up he normally checks out the various systems through his panel. Before the pre-start check the first officer calls out the checklist, however, from then on the flight engineer calls out and the first officer and captain reply. In an emergency the first officer calls out the check list and the captain and flight engineer accomplish the item. This is due to the inherent design of the cockpit and the controls ^{that} are set up for the captain and the flight engineer to do all the items. On takeoff the captain puts the throttles over the ramp and handles the power lever until V1 is reached. The engineer then takes over controls of the throttles and ~~and~~ makes final minute adjustments for torque and horsepower. The engineer handles the throttles throughout flight until on final approach he keeps ^{setting} ~~holding~~ the power at the captain's request while the first officer, or whoever is flying, ~~can~~ ^{and they take over control of power} generally over the threshold.

The pilot flying says I have control of the power handles. When the engineer continued. . .6

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is handling the throttles he uses the opposite levers to the pilot flying the aircraft.

Some times on final approach the captain may ask you to call out the radio altimeter if the right hand radio altimeter is unserviceable. This means that you are relaying the information to the captain because he can't see the first officer's panel. This only occurs if the indicator is unserviceable. On an instrument approach, on final, the engineer calls out the instrument flags if they should appear and we are concerned with power engine instruments on final. So after the final landing check all the flight engineer has to do is monitor the engine instruments in front.

The only known snag on PAB was that no. 1 ~~engine~~ ^{TIT} system was null. According to Mr. Binder this does not create any excessive work load on the flight engineer during the final approach. Some captains will ask for the flight engineer to look out for the runway ⁱⁿ ~~and~~ IFR conditions. ^{IN} ~~The~~ VFR conditions ^{we} are also asked to lookout for other aircraft in high ^{density} traffic areas.

Insofar as bug speeds ^{and settings} are concerned the pilot who is not flying the aircraft computes the bug speeds and passes them on to the other pilot and to me. When the bug speeds are computed, we discuss it; that is, myself and the two pilots and the two pilots set on the various bug speeds. Because the first officer carries a fuel load he is also aware of the all up weight of the aircraft, and this is why he is able to calculate the bug speed for landing.

I have done some trips with Captain Thomson. I did considerable flying with him both as a first officer on Electras and captain and then as a captain on the twin Otters when I was a flight engineer on the Otters and I have known him for at least five years. To my knowledge there is no known problems with him, I have always thought of him as a good pilot. I have not had any emergencies with him except that we had a three engine ^{ferry} ~~failure~~ out of the Arctic at one time. I would consider him an alert pilot, always ahead of the situation, and would consider him a real nice guy. Mr. Binder mentioned that any time there was a decision to be made about alternates or weather, or fuel, Captain Thomson always involved the other crew members in any of the decision making process. In such cases he would try to make up his mind as

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early as possible and then stick with the decision. In the case at Rea Point where the weather is up and down as it normally is, he would likely go and have a look at it before proceeding to his alternate. On final approach if a moderate to severe turbulence and there was problems adjusting the power to air speed the captain normally takes over the power handles and says it's his power. But generally we handle the power up and until over the threshold. Brian did not seem to have any bad habits--he smoked cigarettes but to my knowledge no cigars or pipes. Generally on final approach he did not smoke or drink beverages such as coffee or Coke.

In general, operations on final approach the captain ~~gives a briefing~~ normally gives an extensive briefing on the particular approach procedure, he discusses the headings, the altitudes and air speeds and the minimum altitude for his approach. If there are any questions the first officer and myself always ^{ask} for a further explanation. In the flight engineer logs, sometimes there were no entries shown in some of the columns this is because of extreme low temperatures at altitude in the Arctic, the temperatures are off ^{the} scale and therefore there is no point in recording them. In relation to the flight engineer logs, he does not normally sign them because as far as we are concerned, it is just a maintenance record anyway, but we find them extremely good for general trouble shooting.

End of statement by Mr. Binder.

Mr. Glenn, Accident Investigation, Calgary

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This will be an interview with Mr. C. Clement. It is spelled Clement. Yes. Mr. Clement, I'll introduce you to the members of the investigation team- it's Mr. Leroux from Headquarters, Ottawa, Mr. Andoney from Regional Office , Montreal and myself, Mr. Aston from Toronto Regional Office. We're all duly authorized accident investigators.

The purpose of the interview is to enable the investigators to Better understand the circumstances of this accident. I wish to emphazise that our investigation seeks out cause related factors in order to provide information for accident prevention programs. Statements provided to the investigators are confidential and will be given as complete protection in any subsequent civil, criminal or regulatory proceeding as the minister can provide, including an affidavit to any court in Canada claiming that revelation of the statement would betray a confidence, inhibit future witnesses and would thus would not be in the public interest. Such claims have in the past been allowed. In spite of the foregoing investigators will not object to the presence of a representative of your choice, and will provide you with a copy of your statement at your request. You are warned however, if you wish to have a copy of your statement, the minister will not subsequently claim priviledge or if you request or unless you wish him to do so; and to assure him in writing that the statement has been kept confidential by you.

Q.Do you wish to be represented?

A. Yes, I do.

Q. Please name your repretative.

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A. My name is Eric M. Lane.

and in accordance with the documents delivered to you Mr. Aston, I understand that you by signing, it have undertaken to provide me with a verbatim transcript of these proceedings as soon as the proceedings are concluded and you have them transcribed.

You will be provided with a copy as soon as they have been transcribed, Mr. Lane.

To get it on record, Mr. Clement, was not served with a request to appear.

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Lane: That's a letter that threatens people with a fine of \$1,000 or imprisonment for six months, if they don't report to follow the request of the designated accident investigator. Is that the letter you are referring to?
(Mr. Lane talking re above)

Mr. Aston- that's the letter I'm referring to.

Mr. Lane- I understand that you have one for Mr. Clement and you are prepared to give it to him but that if we're prepared to have Mr. Clement answer these questions voluntarily without threat of such letter, that you are prepared to ask the questions without using that threat?

Mr. Aston- I'm prepared to do this.

Mr. Lane- Finally we, both understand each other that this is an investigation conducted by designated accident investigators pursuant to the provisions of the air regulations specifically 826 through 830?

Mr. Aston- That is correct. Would you like our numbers?

Mr. Lane- Nope- that will do fine. If I didn't know you, I wouldn't let you sit here.

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Q. Mr. Aston- Mr. Clement could you give me your full name please?

A. Charles Leonard Clement.

Q. Your address please?

A. [REDACTED]

Q. And the telephone number?

A. [REDACTED]

Q. What is your position with Panarctic?

A. My position with Panarctic is Electra Maintenance Inspector and Flight Engineer.

Q. You have a current Aircraft Maintenance Engineer licence?

A. I do.

Q. What is the number, Mr. Clement?

A. [REDACTED]

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Q. Do you know when this was issued?

A. Not without looking.

Q. You also have a flight engineer's licence?

A. I do , sir.

Q. Do you remember the number of the flight engineer's licence?

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A. 

Q. How much flying time do you have?

A. I don't know.

Q. Roughly speaking?

A. I couldn't even guess.

Q. When did you get your flight engineer's licence?

A. I don't know.

Q. Is all your flight engineer time on an Electra?

A. Yes sir.

Q. Mr. Clement who are you directly responsible to with Panarctic?

A. Albert Newham.

Q. And he is the....

A. The director of Maintenance, for aircraft operations.

Q. Do you have individuals work for you, as such.

A. No.

Q. Maybe you can, well detail, or give me a brief summary of what your job consists of.

A. Which job? He's got two. (Mr. Lane speaking)

Q. The job as chief inspector for Panarctic- I believe you referred to it as Chief inspector.

Mr. Lane- he called it an Electra Maintenance Inspector.

Q. Then, an Electra Maintenance Inspector,

A. In detail, it would be to inspect work carried out by other Panarctic maintenance personnel at the time of inspection, at the time of component

changes and at the time of snag rectification or also at the time of any 000444

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major repairs to the aircraft.

Mr. Aston- Can I break this up for just a minute?

Q. Mr. Clement what does your job entail as Flight Engineer with Panarctic?

A. Being Flight Engineer on an Electra?

Mr. Aston-----

Q. Do you take regular runs on this or - in regards to this job?

A. No.

Q. Mr. Clement, could you detail your inspection system to me with regards to your job as Panarctic Electra Engineer?

Lane: A. No, how do you mean detail it? (Mr. Lane- surely we don't want to test the witness's memory of complicated procedures that are set forth in various maintenance overall repair manuals. Ask him about a specific point and if he remembers, I'll let him tell you.)

Q. Mr. Clement, does your job as Electra Engineer, do you visit Satellite sites?

A. When I refer to Satellite sites, let's just use as an example , Edmonton and Rea Point.

Lane: That's in his position as an Inspector? (Mr. Lane)

Mr. Aston- as an Inspector, that's right.

A. As an inspector, no.

Q. Would you have any knowledge of the minor snag that developed on PAB on the 29th prior to departure from Calgary to Edmonton?

Mr. Lane- which one was it? Tell us which one it was. Which minor snag or were there any minor snags?

Mr. Aston- I don't know that's why I'm asking. There was one- it was delayed one hour for a snag- a maintenance snag .

Mr. Lane- do you know what that snag was?

Mr. Aston - no I don't know, that's why I'm asking.

Mr. Lane- O.K. your're asking him about the snag that delayed them for one hour. 000445

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Mr. Lane- do you know what that snag was? Tell him.

A. The snag that delayed the flight for one hour was malfunctioning propeller alternator which controlled the propeller sink system and we felt that we would like to change the alternator and get the sink system working again, properly.

Q. Mr. Clement, as your job as Inspector Engineer on the Electra, do you routinely check the FE's logs?

Mr. Lane- this is now as an Inspector as apposed to a Flight Engineer?

Mr. Aston- that's correct.

Mr. Lane- alright- as an Inspector. Say it again please.

Q. As the Inspector for the Electra do you routinely check the flight engineer logs?

A. No.

Q. How do you become aware of deferred snags on the airplane?

A. Mr. Lane- all these questions are in relation to his position as a Maintenance Inspector?

Mr. Aston- that's correct.

A. Basically through inspecting the rectified snags, that have been written up on the cards and rectified.

Q. In other words then, you wouldn't actually defer snags, you would only certify them after they have been rectified?

A. In some cases. Not always.

Q. Would you ever defer snags as your position as the Inspector?

A. Yes.

Q. Mr. Clement, the airplane had two major repairs done down in Loughheed factory, did you do the acceptance on them when they returned to Canada or --

Mr. Lane- identify the repairs for the record. When were they done and what were they?

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Mr. Aston- well I don't have the documents- the one following the damage at Ice Island.

Q. Did you - I believe it was September 1973 that it was repaired, now the date I'm not sure of the date on that one. You remember when it suffered major damage on Ice Island? where the barrels _____.

A. I did not.

Mr. Aston- you did not. O.K.

Q. Mr. Clement, I have a letter here that was addressed to Panarctic and dated December 7, 1973 and it's from Mr. W.J. Dick, in Edmonton, he is superintendent of accident investigation. Following the occurrence at Ice Island,

Mr. Lane- when was the letter addressed?

Mr. Aston- I just read it out. December 7, 1973.

Mr. Lane- to whom?

Mr. Aston- Panarctic Oil

Mr. Lane- to anybody's attention?

Mr. Aston- to Mr. Ed Kowalick.

Mr. Lane- do you want to ask the witness if he's ever seen the letter and if he hasn't then obviously questions to the witness about what the letter says or doesn't say -

Mr. Aston- that's what I'm getting at Mr. Lane.

Mr. Lane- Have you ever seen that letter that was addressed to Mr. Kowalick before

Mr. Clement?

A. Negative

Mr. Lane- Alright.

Q. Mr. Clement did you ever see the laboratory report as referred to in this letter?

A. No sir.

Q. To clear the record this letter we're referring to at the present time is in

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regards to and the first paragraph of the letter details the time of the accident and I'll refer- just read the first paragraph- this refers to the accident involving Loughheed L-188 C aircraft Canadian Civil PAB which occurred October 6, 1973.

Mr. Lane- alright, just keep sitting back in the chair. What's the question?

Mr. Aston- I've already asked the question.

Mr. Lane- alright, I forget it, you had better ask it again.

Mr. Aston- The question was: have you ever seen this letter before?

Mr. Lane- He answered that and the answer was no.

Mr. Aston- that's right. The second question was: did you ever see the lab report.

Mr. Lane- he answered that too. The answer was no.

Mr. Aston- well you just asked me to repeat the question, again.

Mr. Lane- O.K. alright . I just asked you to repeat the question that's presently pending, if there is one pending.

Mr. Aston- obviously if he hasn't seen it , he has no knowledge of it.

Mr. Lane- yes, that's right.

Q. Mr. Clement, the cockpit voice recorder on this airplane at the time of accident at Rae Point.

A. R.F. - P.A.B.

Q. CF.PAB right- Serial Number 1698 and it's on your document- Panarctic's document as being installed on June 27, 1974 -these are exact copies, photocopies of your work documents?

Mr. Lane- have you shown the witness the documents you wish to ask him some questions about? Mr. Aston?

Mr. Aston- that's correct.

Mr. Lane- I mean that's the reason for showing him the documents? Alright go ahead with the questions.

Q. Mr. Clement did you inspect the recorder following installation at that date?

A. Mr. Lane- either from recollection or reference to the pre-additonal work shee000448

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documents or the two additional worksheets documents in the installation data document that Mr. Aston has laid before you, Mr. Clement can you tell either from your memory or from these documents whether or not you installed that particular CVR ? Here's an install by signature.

A. yeah, but - Mr. Lane- here's some initials, but that's the signature-

But that's not mine though. Mr. Lane- right, then the answer is no.

A. No.

Q. As your position you held as Inspector, with on the Electra would you have any knowledge whether this was the last time it was installed or had it been out following this installation?

Mr. Lane- Would you give these records Mr. Aston because you've taken all Panarctic's records away. I took you at your word that these records were the latest documents in Panarctic's possession, the most recent documents in Panarctic's possession that you obtained that deal with this CVR.

Mr. Aston- that is correct.

Mr. Lane- alright, then the question can be answered by looking at these records and if these records indicate that this was the last time the CVR was taken out and reinstalled, then it was the last time it was taken out and reinstalled.

Mr. Aston- I would like to ask the question- the same question as I've just put .

Q. To best of your knowledge was it ever out following this installation?

A. I don't know.

Q. Mr. Clement I have a photostat copy of the journey log book for CFPAB with and it's regards to Volume 5 and it was opened on May 24, 1973 or 1974 correction and it was up to the time of the accident at Rae Point. The last entry from Calgary, when it was in Calgary, there's an entry in- Number 1 check carried out aircraft airworthy. There is no certification at all that-a certified engineer did not sign it.

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Did you know who carried out the certification?

A. If you want to turn off your tape and save it- we're going to be a minute (Mr. Lane). Alright we've spread out before us a photostatic copy of the page that shows on top of it TAL 30469- there is no where on the page that indicates that this is a portion of the PAB log book - Mr. Clement from looking at it can you confirm for me that it is a page from PAB's log book? Mr. Clement- No. Mr. Lane- well, Mr. Aston, we're not really doubting you and if you say that you got this from the last page of PAB/s log book - for the moment I'll have to have the witness answer questions about it, on the assumption that you're right. The question was- can the witness by looking at this entry at this page see who or tell who made the last entry/ and I gather the witness has answered -no he can't tell who made the last entry, or can you? (Mr. Clement- is this referring to the last entry?) Mr. Lane- right. 29 October 74, Calgary total airtime-29353.6 Number 1 check carried out - the aircraft airworthy. It's not in writing- it's printed. (Mr. Clement- you want me to answer whether I can identify that?) Mr. Lane- yes.

A. Yes.

Mr. Lane- alright, whose is it- whose printing?

A. Frank Rutlidge.

Mr. Lane- alright, Thank you. Next question.

Q. Do you know who the responsible person would be for certifying that entry?

A. Mr. Lane- if you know tell him. Do you know what he means by certifying the entry?

A. Yes, I know that but, (Mr. Lane- O.K.- is that the signature that should have gone at the end?)

A. Yes. (Mr. Lane - is Rutlidge not that person?)

A. No sir. (Mr. Lane- O.K.- who in the ordinary course of business would have

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certified that entry in the signature's column- had the accident not occurred?)

A. It could have been any one of us that's licenced on the L-188.

(Mr. Lane- and you could have been one of those people?- had the accident not intervened.)

A. I could have, yes. (Mr. Lane- alright,)

Q. Mr. Clement- procedure with Panarctic when they receive components in after overhaul- and correct me if I'm wrong here- I believe that the source documentation is removed and the Panarctic label or tag is installed - serviceability tag is installed and I think they are called serviceability tags.- (Mr. Lane- you have to speak up, you can't nod, they can't get a nod on the mike.) Mr. Clement- O.K. yes.

Q. Mr. Aston- do you have any or do you do any inspection on the parts to check the compatibility with the source documents?

A. (Mr. Lane- compatibility with what- or between what?)

Mr. Aston- between when the component comes back after overhaul it would be accompanied by sourced documents.

A. Yes.

Q. The source documents are removed and placed on file?

A. Yes.

An identification is put on them by means of a Panarctic tag which is installation data and removal information.

A. Yes.

Q. Do you as a inspector, check the source documents prior to the Panarctic installation tag being installed?

A. No.

Q. Who does this?

Lane: Or, put the question in another way, does anyone do it? Is it done as a

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matter of Panarctic's practice?

A. No.

Q. Who puts the installation tag on it?

A. State that one again, please.

Q. I am sorry that it is a little bit confusing on this because there is no description of the tag we are referring to. It is the installation data and removal information. Who actually fills that tag out for the serviceability of the component after removal of the source documents?

A. Normally the storesman.

Q. Do you have a name for this person?

A. Don Lampead.

Q. Do you know if he is a licensed?

A. No he is not.

Q. Do you, in your normal routine, check the source documents?

A. No.

Q. I would like to ask you some questions in regards to flight engineer's duties now and I think we will just for to clarify the record we will continue on flight engineer's duties and we will not mix them up between the two. What, in your case, and I would like to stick to you only, and not like to bring everyone in on it, what documents to you carry?when you are on duty as a flight engineer?

A. This is on the Electra?

Lane: On the Electra, yes.

This a Company practice not with respect to any given trip?

Lane: This is general practice. Can you list all of the books and documents,

if you carry books and documents, as a part of your job as a flight engineer on a given trip, can you list those publications and books for these people?

A. Well, the first thing that I carry is my license.

Lane: Just keep going right down the list if you would.

The flight office manual, that's it.

Q. Mr. Clement I have a manual in and to clarify the record, I acquired this manual from Captain Johnston, check pilot for Panarctic. Is this the manual that you carry with you?

A. Yes.

Q. What would your procedure be for a pre-flight inspection on the Electra. And I don't mean to go into every . . .

Lane: A. Well, I suppose generally, the answer is that pre-flight inspection procedure on the Electra is that as set forth in the various check lists in the document. You obviously don't want him to read those entries on the old record because you have them in the book that we have loaned to you.

Lane: Specifically, what questions do you want to ask about what he does or doesn't check on that, briefly.

Q. Now, I would like to know what he does on the pre-flight.

Lane: A. He does what the book says to do.

Q. How do you check the cockpit voice recording?

A. Press the test button. In five seconds the needle should go to the green.

Q. Would you be in a habit of doing a play-back?

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A. On the cockpit voice recorder?

This is on the pre-flight.

A. No.

Q. Do you know where to locate the MEL list?

Lane: That is a minimum equipment list, for the record.

A. It is in the operations manual.

Q. Does the same list apply out of main base as satellite base?

A. No.

Q. As your duty as a flight engineer, would you do most of the call out of the check list?

Lane: We haven't established that he does any of the call out of that check so be specific, Brian. Talk about one check list at a time. If you know that he does a call out on one check list, start with it and, be specific.

On pre take-off, do you call out check list call out?

A. Yes.

Q. Approach check list, do you call out?

A. Yes.

Q. Have you ever been requested to do a silent check list?

A. No.

Q. Would you, on approach, call out air speeds and heights?

Lane: You mean, if he was specifically requested to by the captain, or as a part of his duties as a flight engineer?

Q. Part of your duties as a flight engineer.

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A. No.

Q. Have you ever been requested to do it by individual captins?

A. Which part?

Q. To call out for the air speed and height?

A. One yes and the other no.

Q. Do you ever fly with Captin Thompson?

A. Yes.

Q. Did he request this?

Lane: Which?

Q. The call out?

Lane: Which call out?

Q. The air speed.

Lane: Did you ever get a request for an air speed call out from Captin Thompson when you flew with him?

A. No sir.

Lane: Did you ever get a request for an altitude call out from Captin Thompson when you flew with him?

A. I don't know.

Q. Do you compute the bug speeds?

A. No sir.

Q. If you have an unserviceability in flight, when would the entry be made in the FE's log?

Lane: What kind of an unserviceability?

I could sit here for two days and read them out.

(Lane)

Q. We could sit here for two days and give you answers. / There are all kinds of unserviceabilities and there are various types of things done with them depending on what kind they are. If you want to go by example give him an example and I will let him answer the question.

Q. Uh, if you dropped a generator out of the system, what would your procedure be?

Lane: This is in flight?

In flight.

A. To see if I could restore the generator. If I was unable to restore the generator, make sure that it, the buss that it was carrying was picked up by one of the other generators and continue the flight.

Q. Mr. Clements, uh, as a flight engineer, would you normally drop one of the TC's off the line prior to landing?

Lane: I don't know what a TC is and you are going to have to put up with that by telling me what it is.

A. I don't know either.

Q. Why an EDC then.

Lane: I don't know what that means either.

Q. Engine Driven Compressor.

A. Say the question again, please.

Q. Normally, when you are acting as flight engineer, on the Electra, would you drop or dump an engine driven compressor of the circuit prior to landing?

A. It depends on what altitude.

Q. Say 10,000 feet below.

Lane: The point of the question, Mr. Clements, is that of the three switches

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that were found, and I understand this is from very imperfectly, the configuration was two on the on and one on the off position and that indicates that, which I understand has been the practice in the past, that one of the two parts of the system is dumped or closed at some time during the landing check phase at some low altitude so as to, I am not at all sure why, that's a Panarctic practice with respect to the pressurization system, but I believe that Mr. Aston has a valid question, there was a switch configuration that troubles the people and they are asking about it and we would like to help you find the problem or to answer the question of why the switches were configured the way you found them, if we can. That's why I am putting all of this out so carefully, because it is your job to find these things out and we would like to help.

A. Well I would like . . .

Lane: If those switches are properly aligned that way then you are on a wild goose chase.

Q. Can I . . .

Lane: Now don't go off the let the witness put the answer to him right now.

Q. Can I . . . I can show you the photographs to help you.

Lane: I think he knows, do you?

A. Below 400 feet, normally when EDC is dropped.

Lane: O.K.

Q. Is there any preference made on which one would be dumped?

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A. No sir.

Q. Is this procedure a standard. Is it contained in some manual that this procedure will be adhered to?

A. Not to my knowledge.

Q. Mr. Clements, we also found the windshield heat on high. Both forward windshields on high.

Lane: Or at least you found the switches on high.

Q. Switches on high.

Yeah.

Q. Uh, this, uh, there is no doubt that they weren't put in this position by impact forces.

Lane: You have concluded that in your laboratory study.

Q. That's right.

Lane: O.K. We will accept that.

A. Run that one by again.

Lane: The laboratory people are extremely adept at taking switch positions and running back through curcuitry so that to enquire whether or not that switch position was set before impact or was knocked to that position on impact. And my experience with the laboratory people is that they very rarely make mistakes. Therefore, Mr. Aston represents to us that the switch positions on these heater switches were in the on position and that the laboratory examination has indicated to them that they were not knocked to that position on impact. That would appear to have been the fact. And I will say that much for the lab. Yeah, go ahead.

A. That they were in that position before impact.

Right.

Q. My question, Mr. Clements, is that in your experience as a flight engineer, and I only want to refer to your experience and not somebody else's experience, uh, would you normally see these on high position.

A. Never.

Q. With your experience as a flight engineer, would a change in selections on the controls been a function of your operation?

Lane: A. Which selections on which controls?

Q. If the captin requested a change of controls and we will use the windshield heat ones, they are normally on your pre-flight, correct me if I am wrong here, you go to low position and they remain low unless the severe conditions exist?

A. Yes.

Q. If the lighting indicated that you had to go to high position, would this be a flight engineer's duty to change it?

A. Yes sir.

Q. Have you ever been on board when someone else has changed this particular position?

A. No.

Q. And here again I am referring to the windshield heat.

A. No.

Q. Mr. Clements, do you have to fill out on a pre-flight, after you have completed your pre-flight, is there a form or an inspection sheet or anything signed out?

A. No sir.

Q. I would like to go to pre-flight again. Your position, again, as a

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flight engineer on a particular flight, do you have the responsibility of refueling the airplane?

A. Yes.

Q. Who do you get the instructions from on load to place on board?

A. The captain.

Q. Would there ever be any instances when someone else other than the captain would give you instructions on what load to place on board.

Lane: This is fuel load?

Q. Fuel load, right.

Lane: I assume you mean that it would be the captain's instructions that might be communicated by someone else, if the question is appropriate I think and I will let him answer it, if in fact that is what you mean Mr. Aston, as to whether or not he has ever permitted someone else to say to him, "I have just come from Captain Jones and Captain Jones tells me that he wants you to take on X amount of fuel". Is that . . .

Q. I don't want anything further with the captain.

Lane: Oh well, then put the question to him directly. Has he ever in his experience taken the fuel loading instructions from anyone other than the captain?

Q. That's what I asked. Just ask him.

A. Yes.

Q. Who would this person be?

A. The first officer.

Q. Other than the captain and the first officer?

A. Uh, yes.

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Q. Who would it be?

A. That I can't answer.

Q. Has there ever been a discrepancy between what you were told by some other than the captin or the first officer in the fuel load?

A. Run that one again.

Q. Has there ever been a time to your knowledge, when someone else has told you to put on so many pounds of fuel and then the captin has come out later and said that it was the wrong load of fuel?

A. I can't answer that one properly.

Lane: I am prepared to have you help these folks in this area if you can. Uh, have you ever got instructions on fuel loading from anyone other than the captin and first officer?

Yes.

Lane: O.K. What was his position?

A. In the company?

Lane: Yeah.

A. Chief of operations or whatever it is.

Lane: Yeah. O.K., now then, Mr. Aston has very appropriately asked you whether or not instructions that you ever got from anybody other than the captin or first officer have ever later been countermanded by a captin or first officer, or ever have appeared to have been at a varience with the subsequent instructions given by the captin or the first officer?

A. Yes, they have.

Lane: Alright, then the next question Mr. Aston wants to ask is what do you do when you find yourself in a position where you have varying instructions?

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A. Conflicting?

Lane: Conflicting.

A. One says we got to have this and the other guy says we got to have that?

Lane: Right.

A. Now which one do I believe?

Lane: Right on. Which one do you follow. Whose instructions do you follow if there -- has there ever been such a conflict, that's the first question.

A. No.

Lane: Alright, there has never been such a conflict. That ends that.

A. No.

Q. Do you do all your refueling when you are a flight engineer?

A. No sir.

Q. Who else would do it?

A. The base engineer at Edmonton.

Q. Under whose authority would he do it.

A. Mine.

Q. Who would tell him the load to put on?

A. Both myself and the captin.

Q. Who is responsible for the fueling at Rea Point?

A. The flight engineer.

Q. Mr. Clements, do you or have you ever requested a fuel sample at satellite bases?

A. Other than Rea Point?

Q. Well satellite - Edmonton, Rea Point.

A. Uh, yes I believe I have.

Q. Before after refueling?

A. Both.

Q. Mr. Clements, as . . . Mr. Clements, I will repeat that last question. When you are acting out your duties as flight engineer, is part of your duties to check the load. And by load I am referring to tie down, securing of the freight load?

A. No.

Q. Even though it wasn't your duty, have you ever had an instance where you have been unhappy with the load tie down?

A. Yes.

Q. Could you tell me what you did about it? The corrective action you took.

A. Informed the load master and indicated to him what I was unhappy with.

Q. This would be unhappy with regards to lashing?

A. That's true.

Q. Mr. Clements, when was the G net removed out of PAB?

A. I don't know.

Q. Have you ever had a, just refer to your experience, a load shift of any kind?

A. To my experience -- no sir.

Q. Mr. Leroux, do you have any questions?

Yes, I do. Mr. Leroux directing questions at Mr. Clements.

Mr. Clements, the questions I will present to you are based on your position as flight engineer on vertical or northbound trips. Mr. Clements, are you familiar, or do you see the aircraft dispatch a message from Calgary relating to fuel cargo load and the loading for your particular flight northbound?

A. Yes.

Q. On fuel loading at Edmonton, what devices do you use to determine the exact

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fuel load.

A. The drip sticks.

Q. Is this the fuel load that you enter on your flight engineer's fuel log ?

A. Yes.

Q. Where you ever aware of a difference between your actual fuel load and that load dictated on the dispatch message?

Lane: Well of course you have to be a little bit careful that, if I recall this matter was discussed at some length yesterday and it appeared that the personnel and the other half of the investigative group inquiring the pilots were under some misapprehension as to how the various means or methods by which fuel was measured in Panarctic's operations, and just so we won't unnecessarily beat this subject to death with the flight engineer, that evidence clearly indicated that there were, as a matter of Panarctic's practice, two separate and distinct methods used in order to compare them because of the differences in load carried at different temperatures. Fuel was dip sticked on the one hand and a certain set of records were taken based on flow rates thereafter and on the other hand gauges were used and a certain set of records a computations were made based on a flow rate after gauges and comparisons were continually monitored. But there always were, depending on which set of records, which set of computations you looked at, there were always differences. This was a system that was designed to check those differences at all times.

Leroux: Now, I would still like an answer to that question I presented.

A. Could we have the question again please.

Q. The question was, were you ever aware of the difference between your actual fuel and that load dictated on the dispatch message?

Lane: Well, by definition, what is the actual fuel load? The load that he dipsticked as opposed to the load that was on the dispatch message, if you want to put it that way I will let him answer it.

Q. The comparison between the load that you dipsticked and entered on your flight engineer's report, and that figure as dictated on your dispatch message?

A. Yes.

Thank you. No more questions.

Q. Mr. Clements, I just have two or three general questions. Would you at any time have any recollection, and I checked the logs and I can't find any so I am just asking you to go on your recollection, if there was any work or maintenance done on the pitotstatic system other than the regular pressure checks that are called up and things like that?

Lane: Do you mean was there work done that wasn't entered in the logs ?

Q. Well, of course there could be work associated to the / ^{pitot} static system that wasn't directly related to it that you would have to get into the system to get at something else. As you all can realise, to do one job on an airplane, you may have to do another one.

Lane: You are not saying that they did work that they did not put in the log , what you are saying is that they may have done work that was properly entered in the log which work required them by the nature of that work, to get close to the / ^{pitot} static system.

Lane: I will let him answer that if you know. Do you know?

A. No. There wasn't.

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Q. One further question, Mr. Clement. How long does it take to do a number one check, roughly, without any major problems to rectify? Just a routine number one check.

A. For how many men?

Q. Well, let's use it on . . . let's do man hours.

A. About two hours.

Q. When was your last recurring training on the Lockheed Electra?

A. It will be a year ago in June.

Q. This is for flight engineer duties. What did that consist of and I am talking about the recurring training now.

A. I am afraid that I can't answer that question.

Q. Well, maybe I can help you. Uh, with regards to simulator, or so on and so forth.

A. Yes. We were given simulator training.

Q. How many hours would this consist of?

A. Again, I can't answer that question.

Q. Who conducted the training and was it

A. I can't answer that one either.

Q. Was this done in Ann Arbor?

A. Yes.

Q. Can you remember during this recurring training, whether you, as routine, sat in the captain's seat?

A. No sir.

Mr. Leroux . No more questions.

Mr. Lane. Thank you.

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PHILLIPS

Statement: the purpose of this interview is to enable investigators to better understand the circumstances of this accident. I wish to emphasize that our investigation seeks out course related factors in order to provide information for accident prevention programs. Statements provided to investigators are confidential and will be given complete protection in any subsequent civil, criminal, or regulatory proceedings, as the ministry can provide, including an affidavit to any court in Canada claiming that the revelation of the statement would betray a confidence, inhibit future witnesses, and would thus not be in the public interest. Such claims have, in the past, been allowed. In spite of the foregoing, investigators will not object to the presence of a representative of your choice and will provide you with a copy of your statement at your request. You are warned, however, if you wish to have a copy of your statement, the minister will not subsequently claim privilege for it unless you request him to do so, and you assure him in writing that the statement has been kept confidential by you. Do you wish to be represented?

A. Yes.

Q. Please name your representative.

s.19(1) A. It's Donald L. Brenner.

Q. Would you give us your full name, address, and telephone number, please?

A. It's Gordon Lane Phillips, [REDACTED]
[REDACTED]

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s.19(1) Q. How old are you Gordon?

A. [REDACTED]

Q. Do you hold an aircraft maintenance engineer's license?

A. Yes I do.

Q. Do you know the number off hand?

A. It's [REDACTED]

Q. Do you have a flight engineer's license?

A. Yes I do.

Q. Do you know the number?

A. I'll have to look. . . [REDACTED]

Q. Gordon, when was your A.M.E. license issued?

A. A.M.E. license? I wrote that down on a piece of paper.

You can approximate it.

A. I can't remember.

Q. Do you know the year?

A. I have to count back. I think it was '71.

Q. When was your flight engineer's license issued?

A. Last year.

Q. What endorsements do you have on your A.M.E. license?

A. I have the twin owner, L 188.

Q. What endorsements do you have on your flight engineer's license?

A. Just the L 188.

Q. How many hours do you have?

A. Just about 900.

Q. All of it on 188? L 188?

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A.

The witness answered all of it was on 188.

Q. How long have you been with Panarctic?

A. It's just over 2 1/2 years.

Q. What is your position with Panarctic?

A. Flight engineer.

Q. Do you do any work on the hang-up _____?

A. Yes I do.

Q. How much would this involve?

A. It varies. . . I haven't been flying since the beginning of the year, but before that I'd been approximately a week every month.

Q. Who were you directly responsible to? Who was your immediate supervisor?

A. John Binder.

Q. Do you have dealings with anyone else?

A. I don't understand.

Q. Does anyone else supervise you?

A. Al Newman.

Q. If you had problems who would you go to?

A. John Binder.

Q. You are still a current flight engineer?

A. Yes.

Q. Gordon, maybe you can detail your training for this position.

A. Well I initially took the training course as an engineer, and it was about two months later that I went back and took the flight engineer's training on a simulator.

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Q. When did you take the initial training course?

A. It was, uh, August, of, uh, '73?

Q. Subsequent to that you took the flight engineer's course?

A. Yes.

Q. How much, what was the period of time from taking the ground
A.M.E.'s course to taking the flight engineer's course?

A. Approximately a month and a half.

Q. Maybe you can tell us the training celibus for the engineer's course.

A. I don't understand what you mean.

Q. Well, uh, what did you do during your training period?

To the best of your recollection.

A. Just the uh, I was on the engine course/ in Indianapolis/
for two weeks,
the engine and propellor course, and then immediately after that we
went to Ann Arbor for the other portion of the course.

Q. How long did that portion last?

A. I think it was 2 and one half weeks.

Q. And, uh, on the strength of the course you got your endorsement?

A. Yes.

Q. Did you have any prior training on the Electra before you went on the
or, did you work under someone's supervision prior to going down to
B.M.E.'s _____?

A. Just in maintenance.

Q. How much would that consist of?

A. It was approximately a year on twin-otter and the Electra, it was
divided up.

Q. What did the flight engineer's course consist of?

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A. The course, mainly simulator training to fly with the knowledge you learned in the course.

Q. How long did this course last?

A. The flight engineer's course was a week.

Q. How many hours simulation did you get?

A. I don't remember exactly.

Q. Who conducted it?

A. Al _____ conducted the course that I had, and Ian Johnston was also there, and Ed _____.

Q. So the course was conducted by Panarctic personnel.

Did you tell me when this course was taken?

A. Yes, it was in August of '74?

Q. Have you had any further recurring training since that time?

A. Yes I have.

Q. What did this consist of?

A. In June of last year we took, I forget how many hours, of simulator.

We were there for approximately a week.

Q. Did you have any exam to write?

A. No.

Q. Who conducted the recurring training?

A. It was, uh, John Binder, and Ian Johnston.

Q. How many routechecks have you had?

A. I think I've had one route check after I received my license.

Q. When was the route check carried out?

A. I don't remember exactly. It was last winter.

Q. You're off flying now, are you?

A. Yes.

Q. What are you doing now?

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A. Twin otter maintenance, and also Electra maintenance, in Calgary.

Q. When you were being employed as a flight engineer on the Electra, did you have to switch back and forward between otter?

A. No.

Q. Do you go north on the otter?

A. I do now, yes.

Q. Are you off the Electra now altogether, or?

A. We've been taken off, there's two of us who've been taken off for six months.

Q. When you go north on the twin otter, what is your position?

A. It's crew chief.

Q. How long were you off the twin otter before you went back on it?

A. Uh, about a year, just over a year.

Q. Do you have any recurring training before you went back on the twin otter?

A. No.

Q. Did you go directly north as a crew chief?

A. Yes.

Q. What does the crew chief entail?

A. It's to distribute the duties and take care of the paper work.

Q. How many personnel would you have working under you?

A. Two.

Q. What would the status of these two individuals be?

A. It varies. The last time I was up I had two apprentices for a week and then two engineers, both of them had twin otter _____, so it varies depending upon whose turn it is to go up.

Q. Who is your immediate supervisor now?

A. For twin otters, it's Bob Bell.

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Q. When you go north who do you report to?

A. I don't quite understand what you mean.

Q. Well, who is your immediate supervisor when you go north to a satellite base, and I take it when you refer to the north it's Rea Point?

A. Yes. It would be, on twin otters, it would be Bob Bell.

Q. Is he based at Rea Point?

A. Bob Bell?

Q. Yeah.

A. No, he's based in Calgary.

Q. Do you have daily contact with him?

A. Yes.

Q. Gordon, I'd like to back to your flight engineer's duties now, and the questions we ask you related to that will be with regards to or up to the time of the accident, not following the accident - but up to the accident. Can you detail your duties as a flight engineer on the L 188?

A. It's, uh . . .

Q. I'd like to, please to start prior to the flight, and what you do prior to the flight, and so on, and so forth.

Gordon, summarize as best you can. You're not expected to be able to restate your manuel or anything like that.

A. Okay, duties before we leave. Pre-flight the aircraft and fuel it, make sure we're ready to go, and uh, after that our duties are reading check lists, help in starting the aircraft, just setting the power.

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Q. We'll start at the beginning of your duties. Uh, refueling the airplane - who do you get your directions from to refuel the airplane?

A. The captain always gives you the amount of fuel that's required for the flight.

Q. Would anyone else convey this information to you?

A. The First Officer may.

Q. Other than the two flight crew members you mentioned, would anyone else?

A. No.

Q. Following refueling, would you request a fuel sample taken?

A. No.

Q. Have you ever requested a fuel sample?

A. Yes, at Rea Point I have.

Q. From a base south?

A. No.

Q. Why would you at Rea Point?

A. We were having some problems with water in some of the fuel, we were taking samples before we fueled and after we fueled, for water contamination.

Q. Where were you taking the samples from, Gordon?

A. Right from the nozzle.

Q. Were you checking filters at all?

A. Which filters?

Q. In the fuel line filters . . .

A. In the fueling system?

Q. In the fueling system, yeah?

A. No, they're normally a noble filter. If there's any water that gets in it prevents the flow.

Q. When you do a before flight check, a pre-flight check, do you use a check list?

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A. No, not on a pre-flight.

Q. You don't use a check list on your walk-around or a pre-flight.

What would your procedure be to do a pre-flight?

A. There is a procedure set up in the book that we follow all the time.

We do the same thing every time.

Q. In the book. Which book would you be referring to?

A. The operations manual.

Q. I'll show you a book, and I'll identify this book as Northwest Airlines Aircraft Operation Manual. Do you recognize it?

A. Is that a Panarctic manual? Is this taken from Panarctic? Is it the same one?

Q. Yeap. It's the same one as they're using. Can you identify the book at all, Gordon?

A. Was this taken from one of the aircraft?

We'll strike the question from identifying the manual. The check list that you follow is in the operations manual, Panarctic's Operations Manual?

A. I believe so.

Q. What does it call up for on the copy voice recorder?

A. The voice recorder is just, press the green button and make sure you get the needle moves into the green indication for five seconds.

Q. Would this be checked on every flight?

A. Just on pre-flight, yes.

Q. How do you compile your fuel load? Where do you take your figures from?

A. Do you mean as to differential fuel?

Q. That's right.

A. Yes, we have a sheet that's taken from the manual too.

Q. Do you take your fuel quantities by dipstick or gauge readings?

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A. I always use the dipsticks.

Q. Do you do a cross-check between your gauges and your dipsticks?

A. Yes.

Q. Do you check the load, and I'm talking about a freight load now, after it has been placed on board and secured?

A. Yes I do.

Q. Have you ever had to request additional tie downs put on the load?

A. No, I don't think so.

Q. You have flown P.A.B.A.?

A. Yes.

Q. Was the G net installed when you . . . ?

A. It was. I'm not sure if it was taken out or not

Q. Do you know where to locate the minimum equipment list for the airplane?

A. It's in the operations manual.

Q. Are the same requirements for the minimum equipment list applicable at Edmonton as would be at Rea Point?

A. No.

Q. When you're flying, would you operate with two E.D.C.'s or T.C.'s, I don't know which one you call them, operating all the time?

A. Could you repeat the question please?

Q. When you're as crew on the airplane, when your duties are flight engineer on that particular flight, would you ever drop any D.C. or T.C. off the line?

A. Uh, not normally.

Q. Have you ever done that?

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A. Yes, when we broke shaft.

Q. That was a disconnect when you did that?

A. Yes.

Q. What about a dump?

A. The only time I ever dumped was on short file, I dumped one E.D.C. load 4500 feet off the ground to help relieve the pressurization.

Q. On all flights of . . .

A. Normally.

Q. Normal. When you're flying as crew, do you normally do the check list?

A. Yes.

Q. Do you always get a reply to your challenge?

A. Yes.

Q. Have you ever been requested to do a silent check list?

A. No.

Q. You know what I mean by a silent check list?

A. Yes sir.

Q. Do you, or, part of your duties was to calibrate bug speeds, bug settings?

A. No.

Q. Do you do call outs?

A. What do you mean by call outs?

Q. Air speed, altimeters,

A. Radio altimeter call out if it's requested.

Q. In other words, sometimes you're requested it and sometimes you're not requested it, is that right?

A. Yes.

Q. How would you know when to do it, when not to do it?

A. Usually in the crew briefing, it depends on which captain, he'll request

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the flight engineer to call out the radio altimeter, instead of the first officer.

Q. What is the situation in regards to crew briefing?

A. Crew briefing? Could you explain what you want a little more?

Q. When would you get a crew briefing?

A. Crew briefing is right on the descent check, on the check list.

Q. Do you get this all the time?

A. Yes sir.

Q. What about take off?

A. It is also on the check list.

Q. What would the crew briefing on a descent consist of?

A. Well generally just the procedure he's going to do, and runway and any special requirements that he wants.

Q. Have you every flown with Captain Thompson?

A. Yes I have.

Q. Did Captain Thompson give you a crew briefing?

A. Yes.

Q. Would he request call outs?

A. I don't remember.

Q. Okay, if you had an unserviceability develop in the airplane in route, what would your procedure be?

A. Well, it would depend upon the situation.

Q. Okay, let's take two situations. One minor, and one that you can't rectify. Let's take the one that you would normally trouble-shoot, and well, you take it from there.

A. It's all sort of vague. Well, any small problem that we have that could we/continue with we do trouble shoot, such as an r.p.m. indicator, by swapping instruments to determine the problem. If the captain

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doesn't like you to swap instruments in the air he'll say, and we'll swap on the ground at one of the _____ stations, and then check it out at that point.

Q. Would you make a notification in your F.E.'s log that you had done some minor changes?

A. Yes.

Q. What would you do for a major unserviceability?

A. It's hard to say . . .

Q. Well, let's take a generator out.

A. Generator . . . would be no problem. The generator just quit and went off - there's always a spare.

Q. When would you enter the discrepancy or the malfunction in the F.E.'s log?

A. In the F.E.'s log? Well, if the problem can't be trouble shooted right away, then I'll enter it, but if I can trouble shooting then I'll do that and then enter it in the log.

Q. If you developed an unserviceability up at Rea Point, what would procedure be to?

A. Try to repair it at Rea Point, if possible. And normally phone south too, to _____.

Q. Who would you talk to south, if you had a problem?

A. Well, normally there's a duty engineer , so call the duty engineer.

Q. Have you had any instances where either you had been overruled on a discrepancy or?

A. No.

Q. When you're making your entry in the F.E.'s log with regards to fuel, how would you make it out, and I'll show you a copy of the F.E.'s log.

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A. You mean a _____ chart?

Q. How goes it , right.

A. I normally just start out and write the ramp fuel in after we fuel, and, uh, allow, subtract the _____ and taxi fuel, and then write the take-off fuel here, and put over there the take-off time and your top of climb, and that's 1,000 pounds a minute, and subtract and get your top of climb fuel, and that top of climb, I don't take a reading at top of climb. I do take a fuel full reading but I don't use it, I give it to the first officer and he uses it. And, uh, I'll record the hours remaining at top of climb, and then start every hour after that and record the fuel flow and subtract the total left to burn and get the balance and then calculate the time.

Q. What about on descent?

A. On descent normally the, I don't normally do one on top of descent, however it's done. The first officer does the calculation on top of descent.

Q. Does some . . . disregard that. Were you trained not to do one at top of descent?

A. Yes.

Q. When you handle the power, can you tell me where you start to handle the power and where you _____ push control of the power?

A. Set take-off power and normally control the power settings all through the climb, and cruise, and the captain will take over the power on landing. Some of them take over sooner than others.

Q. Can you recollect when you flew with Captain Thompson, when did you fly with Captain Thompson last?

A. I didn't do very much flying with Captain Thompson. It's, uh, I can't remember.

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Q. When, uh, how do you know what power to apply on take-off?

A. It's called out by the captain or the first officer, whoever's flying.

Q. Which controls do you use?

A. The one's opposite the one, whoever's flying.

Q. Where do you put your seat? Where do you like it?

A. To take-off, and landing?

Q. Landing.

A. All the way forward, I guess.

Q. Up or down?

A. Not all the way up and not all the way down. A little bit further down, I imagine.

Q. In your experience as a flight engineer, can you see the, both radio altimeters, both right and left, from the position you're sitting in?

A. Yes.

Q. Have you ever been requested to put the bug on the radio altimeter?

A. No.

Q. Do you call out when the lights come on?

A. On the radio altimeter?

Q. Yes.

A. No.

Q. Have you ever had to disconnect the booster?

A. To loose the controls? Only in training.

Q. Getting back to your pre-flight, there is no, I understand that you say there is no card to fill out inside. Is that right?

A. No.

Q. What documents do you carry as a crew member?

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A. As a crew member? An operations manual, and I always carry my study guide and I have a trouble shooting guide on the _____.

Q. Has anyone else ever done the fueling other than you? I'm talking of you as a crew member now.

A. Uh, yes, in our south base.

Q. Who would do this?

A. It would be one of the other engineers.

Q. Would he do this under your direction or someone else's direction?

A. Under my direction. I usually supervise it if he's going to do it.

Q. Any instances where you wouldn't? Supervise it?

A. No.

Q. Has there ever been a discussion on fuel loads between you and the captain?

A. Well, uh, that's a pretty general one - relating to quantities, or?

Q. Yes, relating to quantities.

If you can recall. If you can't, just say so.

A. Only, they might ask what gauges didn't seem to be working properly or something after they recorded the quantity.

Q. Would anyone else direct fueling, other than the three crew members?

A. As to what?

Q. To the load you put up.

A.

Q. Lash, do you have any questions?

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Q. Yes, Gordon, in a previous statement you mentioned that . . .

Do you want to identify yourself?

Q. Yes, this is Leroux. Question's to Gordon Phillips. You mentioned that you dipped the fuel.

A. Yes.

Q. How accurate would the fuel gauges be when you compared it with your dip figures?

A. Normally comparatively close.

Q. Aircraft moving north of Edmonton. Are you familiar, or have you seen the fuel cargo message from Calgary here taking the fuel load to be put on?

A. Yes.

Q. Have you ever been present when the fuel load actually entered on your log differed from that fuel load stipulated by Calgary?

A. Yes.

Q. Can you give me a reason why that fuel load would differ?

A. Normally it's because passengers didn't show up and we could put extra fuel on. We can take extra fuel, it's cheaper out of Edmonton and _____.

Q. Have you ever been present when the fuel load was in excess of the space available?

A. No.

The witness is replying no to that question.

Q. No more questions.

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- Q. This is Astan again. Gordon, have you had any problem switching back and forwards between Electras and twin otters?
- A. What kind of problems?
- Q. Well, maintenance problems. Not so much familiarization (the word I'm looking for). Have you had any?
- A. No. I found that I picked up - I was off twin otters for a length of time, and I didn't find I had any problems remembering the procedures in the book.
- Q. As you well know, there's many instances where A.W.E.'s directives, serviceabilities, one thing or another comes out, can you tell me where you would locate these?
- A. We have a book of service rules at Rea Point, and also all the service books put out by Havelin for the twin otters are put in a book that the crew chiefs have, and there's a list of the ones in there also. We take that book with us all the time.
- Q. Is there any company document that you'd have to sign for saying that you had familiarized yourself with the changes?
- A. No.
- Q. That have occurred since the last time you read it?
- A. No.
- Q. Does anyone check to see if you have familiarized yourself with them?
- A. Not that I'm aware of.

This concludes the interview with Mr. Phillips.

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Page 1.

This will be in regards to a statement you will be making Frank . I'll read it word for word from the thing.

The purpose of the interview is to enable investigators to better understand the circumstances of this accident. I wish to emphasize that our investigations seeks out cause related factors in order to provide information for accident prevention programmes. Statements provided to investigators are confidential and will be given complete protection in any subsequent civil, criminal or regulatory proceedings as the minister can provide including an affidavit to any court in Canada claimant revelation of the statement would betray a confidence inhibit future witnessess and would thus not in the public would not be in the public interest. Such claims have in the past been allowed. In spite of the foregoing investigators will not object to the presence of a representative of your choice and will provide you with a copy of your statement at your request. You are warned however if you wish to have a copy of your statement the Minister will not subsequently claim priviledge for it unless you request him to do so and to assure him in writing that the statement has been kept confidential by you.

Q. Do you wish to be represented?

... Mr. Brenner

Q. Frank just to start off will you give us your name address and telephone number?

s.19(1)

A. A. F. Routledge ,

Q. How old are you Frank?

A.

Q. Frank can you give us a brief outline of your Aviation Career?

A.

Panartic Oils Ltd.

Q. Frank do you have an Engineer's license?

A. I do.

Q. Do you know the number off hand?

A.

Q. Do you have a flight Engineers license?

A. Negative.

Q. When was the license issued Frank?

A.

Q. What endorsements do you have on them?

A. Twin Otter.

Q. Do you have the Electra endorsement?

A. Negative.

Q. Frank what is your job with Pan Artic?

A. Maintenance Planning and Technical Records.

Q. Can you give us a brief resume of what this entails?

- A. Planning, Programming and Maintenance work on the aircraft owned by the company providing the maintenance superintendent with a forecast of maintenance requirements to satisfy air worthiness requirements. Getting the feed-back from the work done, recording it, and using that data to further forecast these requirements.
- Q. Does your job entail planning when items are coming up for change or when checks are going to be due or soon on and so forth?
- A. Yes.
- Q. I see. How do you get this information. How do you arrive at this?
- A. While when the aircraft goes into service there is a listing of life items, there's TBO's on engines, propellers, APU's other components. TBO stands for Time Between Overhaul of course. This is a recorded and it's just a matter of forecasting ahead and then correlating that to the time your plane flies or has flown, and which came from the journal.
- Q. Do you get this information on a daily basis?
- A. Broadly speaking yes. There are exceptions. Basically it's updated daily.
- Q. What would the exceptions be Frank?
- A. If the airplane was away from base and communications are out, and be away from base I mean in the Arctic Islands, and the communications are out, we can lose a day of reporting.
- Q. Frank I have a manual here and it's entitled CFPAB's Workbook, MSN 1141, and it's got your name at the bottom of it.

Is this your manual?

Yes. Just what the names implies, a workbook.

Maybe you could describe it and what it includes.

Loose-leaf binder with dividers, records the daily time landings on the aircraft, inspections done and due, component changes as they occur taken from the records as they come back to me. Overall time log from the time the airplane came to Canada showing engines, propellor changes, total landings, total times. The section which is updated is the superintendent maintenance wants it, showing the status of engines, propellers, inspections. Section covering the power plants, the airlife components, same for propellers.

Sort of a work log on the APU, record of oil added which is necessary for our soap inspectamatic oil analysis program. Life development section where we report to MOT on any unscheduled removals, unusual failures and thus we can estimate the failure per thousand hours or whatever. Then some information sections where I keep copies of the C of AC of R Radio License. In this case certificate of Airnon and Sainess when airplane came to Canada. Statistics on the aircrafts, mainly from my own information and how to answer questions on times flown in any one month or any one year. And a bit of garbage at the back for anything I've thought was important enough to keep a record of. Frank, I've been through the book and I think it's an admirable book I wish a lot of people kept books like that. It would save me a lot of time effort and work and you have to be complimented on that book.

A. Thank you,

Q. Um there is one or two problems that maybe you can help sort out. One of them is on the flight control, particularly the elevator booster, there was no problem with the aileron and rudder. These are photo-stat copies of your own record. Can we determine and I'll show the traditional work sheet it was Jet-Air's work sheet and also your work sheet, and just determine which one was actually on, they have been as you can see the serial number off was changed from 12 to 24. Now on the tag itself, the number was changed around a little bit and I can't make out the first number the second number was 12 and then it was on 24. And then serial number off was 24 so it's a little bit confusing right now.

Brenner: Do you recognize this sheet?

A. Yes.

Q. I don't think you'll ever get an explanation of that. Who's packages are serial numbered as a unit and then they are serial numbered by component. Whereas the manufacturer puts on a usually a metal tag bearing part number and serial number stamped in. Different companies use their own serial number system. Northwest Airlines serial number their materials by using a small round decal just stuck on. Carrying the NWA code and so on. Western Airlines use their different decal and they use their code numbers. Eastern Airlines do likewise. When the aircraft comes to Canada they have a variety shall we say of these numbers on them, in the case of this

aircraft, it came from Northwest Airlines and therefore carried their code numbers. These decals are not proof against Hydraulic oil thinners or any number of solvents that can be introduced into the working area and the decals come off. When the mechanics work on the units they see a decal and they will make a note of the number. It could be the assembly number, it could be a component number, particularly if the assembly number has got washed off. The quantities of spares used by any company not being that great, the same numbers will show up, in other words it could be an actuator for the boost assembly serial number 24 or 12. The same number could show up on the boost package frame in another aircraft but with the same number. So you could have the Actuator serial number 24 in one aircraft and the boost package frame serial number 24 in another aircraft. It's not satisfactory but it's a fact. Now when these things went through going back to IJA, there was a change from a now defunct airplane that went back to the States in pieces, registers as IGM. It was sister ship of PAB put there was a change in Boost regulator or boost package in those two aircrafts, and there was confusion in the serial numbers. I tried to sort them out, I even was in the tail end of PAB trying to get the serial number without success. So I don't think you ever could possibly identify the serial number, the only thing you could say there is the record of changes or the number of times it was changed, which would be on the cards in that big book.

A. I have tried.

Brenner: Just tell them if you have had any involvement.

A. Negative.

Q. Frank, do you ever have any problems with the work cards being completed? Maybe we should explain the procedure prior to asking that question. I believe your routine is that when work is carried out on the airplane, the individual carrying it out completes the work card. Can you take it from there and describe what happens?

A. The work cards come back through the main supervisor and checked for completeness, accuracy, to their satisfaction, they pass it to me as a recording function from the maintenance supervisor and then I record immediately progressively on the work form. component history cards for the further forward to forecasts.

Q. How does this system, your describing the system that down at Calgary now at the main base, how does it work on a satalite base and let's refer to a statlite base as Edmonton, Rea Point?

A. The same thing applies in Edmonton. The maintenance card, the work cards, check cards are passed from the base engineer to Calgary by the maintenance supervisor and come into me to for recording. They work at Rea Point comes in through the Twin Otter maintenance supervisor in the all the same manner.

Q. Do you is it your responsibility to check the FE's log to see there is numerous changes made out in the field and entered in the FE's logs?

- A. I have done this recently heretofore it has been the maintenance supervisors.
- Q. I am referring to the time up to the accident and not since the accident.
- A. Maintenance Supervisor.
- Q. Okay. The components changed by the electrician is this the same system followed?
- A. Yes.
- Q. Kay. any questions Paul?
- A. Yes one question. Paul andoney here, questioning.
- Q. Only one question that I'm really interested in whether or not any carry over items, snags, discrepancies, are you being advised of that for your records? You know, I don't mean major problems because naturally you are but I mean you know normal routine stuff say for instance?
- A. Deferred snags are usually handled by the Maintenance Supervisor.
- Q. And he is sole responsible for that?
- A. Yes. Until they come back through on record.
- Q. I see.
- A. To be recorded, I might not be aware of it.
- Q. But normally they do channel back to you though I mean for record purposes.
- A. For record purposes yes.
- Q. For record purposes?
- A. Yes.

That's all I have then.

Q. Then what system are you using for your TBO's on your components?

A. Well there is an approved TBO list in the Maintenance Manual.

The approval comes from the region MOT, in Edmonton.

Q. Frank, what manuals do you have available for you....

A. Well that's a pretty long list.

Q. No strictly for the Electra, not ?

A. Well there's the recommended list of manuals from Lockheed, consists of Arborating instructions, maintenance manual, parts manual, service bullitens, air worthiness directives, lubrication manual, corrosion manual, repair manual, overhaul manual, then there's the standard ministrey of transport manuals such as the EN1 manual, ANO's air regulations, Canadian AD's types certificates. Then there's maintenance manuals on the type originating from Northwest Airlines, oh plus a host of accessory and other manuals.

Q. Frank, when a check is completed, your checks are progressive is that right?

A. That's correct.

Q. When a check or a portion of the check is completed under the progressive maintenance system, do you get the check sheets?

A. Yes, from daily inspection right through to a 1000 hour check.

Q. Is it your responsibility to check and see if their complete?

A. Only in an occursary manner. The maintenance supervisor has already vetted them to his satisfaction before they come to me.

Q. Do the flight engineers use a check list?

A. I presume so.

Q. You have no involvement with them?

A. I don't handle that end of it, I get the DO sheets with them signatures on them so.....they must use them.

Q. When theyve completed the DI or pre-flight they sign a ckeck sheet?

A. The DI form No. 1 check

Q. And do you get these?

A. Yes. Pre-flight No. Number one check yes.

Q. Where does the pre-flight go?

A. I don't know.

Q. Frank would you have any involvement at all with the CVR, cockpit voice recorder?

A. Not at all other than as a change an item change.

Q. Do all the release notes come to you?

A. No. That's a function of the inspection and stores.

Q. For the benefit can you describe the cards that are are attached to components? Wht I mean by this the system that is involved in placing Pan Artic's card on the component itself.

A. It isn't part of my job. I know happens but it it isn't part of my job.

Q. I understand that you have no involvement on this part.

A. No, not really. I know what happens and I when it needs a kick in the arse but.....

Q. But maybe you can describe it to us then if you know the eystem.

A. Well, an item comes in, inspect, course documents checked

company serviceability tags raised, attached to the item, source documents are removed and married to the store's paperwork and then filed. From there on the item is identified by the company serviceability tag until it's installed. When it's installed the serviceability tag is attached to the work card and channels back through the maintenance supervisor to me where I record the component change and then file the company serviceability tag. Any queries on the item say a failure, which warranty item is being considered, identify the time and so on of change from my records, go across to the stores, pull the stores' documents and then go back to the facilities to claim warranty for whatever.

Q. The sales documents have been retained by some other person than yourself?

A. Correct.

Q. Who is this person?

A. The purchasing agent.

Q. Do you know his name?

A. Dave Builder, up to the time of his illness, now Don Lampied is filling in. Up to the time of the accident it was Dave Builder. If you find him now, he might be down in Arizona.

Q. Are the source documents held in your office?

A. They are filed in the same office in which I work.

Q. Do you have a cross reference system? For your cards as to the source documents?

A. _____ serviceability tags, the serviceability tags shows the source of the work order under which it was certified as a release note, number or whatever.

Q. Frank, have you had any problem with getting the cards back to you to keep your records up to date?

A. Nothing too serious. Sure, there's the odd one that I chase but nothing serious enough to lose a job over or anything like that.

Q. Well, this will conclude the interview with Mr. Frank Routledge. I would like to thank you very much, Frank.

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CF-PAB

Edmonton, Alberta
University of Alberta Hospital
November 1, 1974 10:45 MST

Statement of : Garry Douglas Weyman

s.19(1)



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I am employed by Panartic Oil and have been for three years this coming November 11th. I started as an apprentice mechanic and got my license there (AME) 953. I had the Twin Otter course and worked on Twin Otters at Rae Point. A year ago August, I got my Flight Engineers ticket and then an Electra course at Ann Arbor, Michigan (Willow Run Airport) with International Airline Academy which used to be Universal. I have been Flight Engineer on Electra aircraft since August, 1973. I also hold a Private Pilot License with 300 to 500 hours, all on single engine aircraft. I have about 980 hours Flight Engineer time.

I did the trip the night before, Monday, October 28th, terminating back at Edmonton International on October 29, 1974 approximately 0800 MST to 08:30 MST. I had time off thereafter and went home to bed.

I reported for duty for the last trip at 18:00, October 29, 1974. The aircraft CF-PAB arrived from Calgary at Edmonton International at 18:45 to 19:00 hours, it was a little late. It had gone to Calgary for maintenance. The delay was due to completion of maintenance items. I do not know of any outstanding item. I did a walk around the aircraft, airframe, cockpit D1. I did this in a thorough manner as prescribed in the Maintenance Manual. An outstanding item that I had to attend to was No.1 engine heating system.

On the previous trip this could not be clarified. The fault is that it puts the power lever out of alignment with the other three levers in the cockpit. This defect is overcome by selecting the TD1 Switch in the cockpit to the null position. Thereafter the operator of the engines manually controls the engine to attain the desired temperature. I cannot recall any other unusual items requiring my attention while the a/c was at EG.

For the above D1 and inspection there is an inspection card which is initialled off. This operation takes 30 minutes to 45 minutes. The card is left at the base which is at Wescan Terminal which is just next to Wardair.

continued. . . 2

I refuelled the aircraft from an Imperial Esso truck. It was JP-4. The figure 28,400 lbs. is in my mind but I am not certain if this includes the three percent we add because of the fuel being JP-4. This is the total on board. We would plan on 6,000 lbs. arriving at Rae Point which is enough for an approach then climb to 12,000 and go to our alternate.

I did not participate in the loading. The loadmaster would make certain that everything is tied down. (Darrel Patton). A load planner, Ron Row, would have knowledge of the load as to weight and balance and where it is to be placed and he would be in charge of the loading. Ron Row works for Wescan.

The fuel is recorded in the engine log--the total amount, also called the FE's Flight Log. The Journey Log has been signed out in Calgary after the maintenance. Ray Lidgren had flown the a/c from Calgary and Dave Hutton was the first officer and Bill Hines was the Flight Engineer.

Before the start check, the recorders were set as usual. The check list is followed. The First Officer reads the list and depending on the item the Captain and the Flight Engineer reply to it. The load seemed to be comprised of average types of materials such as several spools of drill cable. I did not observe any items such as chemicals, bottled gases, corrosive substances, etc.

The start up, taxi out and take off were normal and uneventful. Brian Thompson was in the left front seat, Dave Hutton in the right front and myself in Flight Engineer position. There are no other duty positions in the cockpit. There was an observer seat but no one was in it for takeoff. The loadmaster uses it from time to time during the flight.

During the flight to Rae Point there were no en route stops and there were no unusual events. The only item was that we put No.1 engine in null. Before the levers were nulled, #1 lever was about 2 to 3 inches aft of the other three engine levers. After the null, there was only about 3/4 inch difference. The position varies with speed, power setting, temperature, etc.

We were at 18,000 or 21,000 for the early part of the flight and then I believe we went to 25,000 at Byron Bay. We did a descent check before starting our descent. The weather was checked by Dave Hutton. I think it was between one and three-quarters of a mile in blowing snow. I don't know its direction--pretty close down the runway. The temperature was -17 degrees.

continued. . . 3

We let down using 1,000 HP then as speed picked up down to 200 HP. I believe we levelled off at 2,000 feet but it may have been 1,000 feet. Dave Hutton would know better because he calls the speeds and altitudes. I was busy with other duties such as maintaining oil temperatures, power settings, etc. At the level off as stated above, he called in 6 miles final. We did not cross the beacon but there was a gradual turn toward runway heading, I believe, We could see open water and ice packs--there were floes. I did not observe camp lights or runway lights. I wasn't paying attention except for a glance out the left side window--this was possible as the aircraft was in a slight left bank. As everything seemed normal I made no attempt to see forward out of the aircraft to where the strip might be. I cannot recall if there was moon. I know we came down out of cloud. There was light turbulence during the descent but I don't know at what altitude. It seemed to be due to wind gusts. There was no heavy turbulence. Just light gusty conditions at the 6 mile out. At that time we had about 1,500 HP on. The captain had called for this power. He calls the figure HP desired. Once when I was reading the approach check, the captain adjusted power, which is an accepted procedure.

As the flight progressed from the 6 mile point the first officer's radio altimeter was set by him at 450 or 400, whatever the limits are there. The captain's radio altimeter was set at 300 feet. The limits were called by the First Officer--when it was reached. After we descended to 300 feet, the captain said, "I believe we are on top of a layer of cloud". He said it once. Minutes or seconds after, he again stated the same thing. At the same time he pushed the column forward. Then the 1st Officer called 100 feet then we both called 50 feet at which time and I'm not too sure either Dave or Brian went for the power levers. That's all I remember until I woke up. I don't remember hitting the ground or feeling it.

- Q. Was there anyone else in the cockpit besides you three crew members as stated?
- A. The loadmaster had been in the cockpit prior to descent but he left for the approach.
- Q. Did the captain and 1st Officer continue to sit in the left and right seats for the last of the flight as stated?
- A. Yes.
- Q. Do you recall action regarding flap?
- A. On approach check the flaps were set at 78% and then after going through the landing check they were set at 100%.
- Q. Undercarriage setting?
- A. The gear was down.

continued. . . 4

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Q. What action regarding landing lights?

A. The landing lights had been extended but were not on due to blowing snow. The leading edge lights and alternate taxi lights were on. These latter were turned on at 10,000 feet. The alternate taxi lights point off to each side of the aircraft and forward. I only noticed that lights reflected from cloud as we descended from 10,000. I did not notice any light effect toward the last.

Q. Do you know any airspeed in the last few seconds of flight?

A. Procedure would be 190K and 150K when the flaps are set at 78% and 100%, respectively.

Q. What was the level of the cockpit and instrument lighting?

A. Low. There is a centre rheostat for the panel and overhead set by the captain. The check lists had been read and the cockpit lighting had been turned down, to normal red lighting.

Q. Can you describe the quality and nature of radio contact with Rae Pt?

A. Good radio contact. A proficient operator was on at the base. I recognized his voice and know him to see him but don't know his name.

Q. To clarify--who hollered 50 feet as observed and what radio altimeter was sighted by yourself?

A. The captain's--I was looking at it. Dave Hutton was looking at his radio altimeter. They both hollered at once.

Q. Can you describe the functioning of the pressure altimeters?

A. They were both set on the approach check to the barometric setting given from Rae Pt. I believe there has always been a difference between two of about 60 feet. I do know that the radio altimeters were right on--they both read the same. When at 1,500 feet the little yellow light for each one would come on.

Q. Does the radio altimeter caution light actuate also when the 400 or other low limit is reached?

A. The light comes on when the altimeter reaches the mark bug.

Q. Did you observe the radio altimeter caution lights on at any time upon the aircraft reaching the 400 and 300 limits which were set?

A. Yes. Both.

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Q. Please describe the quality of DME function.

A. We were confident in its accuracy.

Q. What do you believe caused the aircraft to be lower than would have been intended during the final approach?

A. I don't care to suggest.

Q. Was there any observed airframe icing?

A. No. Not to my knowledge.

Q. With regard to the crew do you have any reason to believe either pilot may have been incapacitated?

A. No.

Q. Was any food eaten on board?

A. Yes.

Q. Were there any noted ill effects from the food?

A. No.

Q. Do you know whether the captain ate prior to departure?

A. I don't know.

Q. Do you feel the captain was alert and his responses appropriate and prompt to the 1st Officer's remarks?

A. Yes.

Q. How did you manage to avoid getting frost bitten in view of the fact that the 1st Officer was so severely frost bitten?

A. I had taken clothing from others who didn't seem to need them anymore. I kept on the move. I kept Dave from dozing off. His clothes were frozen to his legs. I couldn't cut them off because I wasn't able to get a knife. I got boots.

Q. Did you feel the pilot's responses were appropriate throughout the period of the flight?

A. Yes.

continued. . .6

Q. I don't wish to dwell on this too long but I am repeating this for a good reason which I think you will understand.

A. Interviewer's Note: (acknowledgement by a nod of the head and non-verbal indication that witness understood.)

Q. con'td. You are sure that the pilot's responses were normal throughout the flight?

A. Yes.

Comment:

I came to. I undid my seat belt. There was no floor. Dave was in his seat. I saw Brian in his seat but his face was severely injured and he appeared to be dead. Dave was starting to go under but I pulled him out. There are blanks in my memory. There were five or six people alive on the ice and if there had been blankets perhaps they could have been saved.

We had been in a nose down attitude. Somebody had to have pulled back on the controls. Afterward I looked back but there was no cabin section. There were a few fires here and there. I didn't smell anything unusual like smoke or fumes prior to impact.

Information provided by:

Garry Douglas Weyman

Interview recorded in handwriting by:

W. J. Dick

Observed by:

W. L. Mullins

D. D. Pettit, M.D.

The following is an enlargement on the survival aspect as provided to Investigators by Mr. Weyman on November 4, 1974 with reference to one question included in the initial interview of November 1, 1974.

Q. How did you manage to avoid getting frostbitten in view of the fact that the First Officer was so severely frostbitten?

A. We both got out. I had my own parka on then I had Brian's parka which I got Dave into. We both started walking toward the tail section looking for blankets or sleeping bags which we never did find. We kept walking back and forth along the wreckage. After about 45 minutes to one hour, Dave's back gave out on him at which time I got two seat cushions and laid him down behind an engine that was on top of the ice. I found one glove which I put on his left hand and a toque I put on his right hand and then put in his parka pocket. At which time I went looking for boots, blankets and parkas. I returned back to Dave with boots but I couldn't get his off--they were frozen to his feet. At this time I tried to get a knife out of my pocket to cut them off but was unable because of the ice in my pocket. Dave kept taking his right hand out of his pocket, laying it in the jet fuel beside the engine. After that I kept yelling at him and kicking at him to keep moving. That was about it until they came and picked us up.

We walked back and s. . . .

(Interviewer's note: The interview was broken off at this point by the sudden arrival of Donald Brenner, Panartic counsel who took Mr. Weyman away to his hospital room in his wheelchair. On the day following this interruption, Mr. Brenner provided Investigators with a one-page signed statement from Mr. Weyman).


W. J. Dick

November 6, 1974

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February 26, 1975

Aircraft Accident Investigation
Pan Arctic CF PAB Accident, Rea Point, N.W.T.

Interview by Glen/Unger with an anonymous witness

Q. Did you know a Brian Thompson?

A. Yes I do.

Q. Very well?

A. Reasonably well, yes.

Q. Did you know him socially?

A. Slightly, yes. Again, our acquaintance was quite short as Brian wasn't here in Edmonton all that long but we did

Q. How would you describe his temperament?

A. Brian to me was a very easy going guy. He enjoyed people. I think he valued his friends highly and he liked to be on just a very casual basis with people and he just liked to keep things that way from my knowledge of him.

Q. Could you describe his drinking habits?

A. Again, in the amount of time I spent with Brian we had casual drinks just on a casual basis he was just a social, he would accept a drink socially just more or less as I classify myself.

Q. Has he ever gone through here he was the captain and you were on duty and indicated he had a bad hangover or anything like that?

A. Not to my knowledge, no.

You may step down, thank you very much.

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- Q. When you were loading the aeroplanes and in charge of load control and service of the whole Electra, now during those days you and I know that there was conflictive bickering about the company wanted a lot of freight and less fuel and the pilots wanted more fuel and more freight. Okay? Okay. So after that time, or let me put it this way, since Pan Arctic took over loading their own aeroplanes, did you every hear or witness the crew and Pan Arctic expediters having an argument or disagreement about freight versus fuel. In other words the pilots wanted more fuel and the expediters wanted to put on more freight? Probably a difficult question to ask you.
- A. The only thing that comes to my mind here were possibly the cut back of or were directly the cut back of pay load, I can think of only a couple of occasions which this was caused by Arctic where the conditions were they lost sometimes 1,000 to 1,500 lbs. which created a problem for the expediter. Possibly a momentary questioning of why such a cut back in pay load should be but generally otherwise not. No. I didn't get really that much involved with that operation. This was usually carried out in the competence of their own offices and I was not usually present or can't recall being present when any of this was hashed over other than a couple of occasions where there was a considerable cut back and there seemed to be a darned good reason for it causing quite a delay here in Edmonton which of course the local expediters were concerned with. Other than that not, Jack.

- Q. You didn't hear any repercussions from these incidents where the crew were criticized or where the crews came back and bitched to you about it?
- A. No, I think, actually I think there were possibly some disappointments from some of their own people as there captains were, we're again speaking generally, very very critical with regards to having exact giving an example if the offered pay load was 22,010 lbs., I can remember many instances when it was a point was made of it to be that where he would not accept a last minute piece of something that have come along that would have changed this exact offered load. I think there were disappointments on behalf of the expeditors here on several occasions with regards to not getting the advantage of possibly a few pounds here or there but to my knowledge that's about the extent of it.
- Q. Then how about pressuring the crews for taking less fuel and more of a pay load. Did you ever witness any of that?
- A. Again, not that I can recall. On a few occasions I had overheard conversation where there was possibly questioning done by an expeditor with regards as to why in this particular instance a pay load wasn't greater but and of course it was always explained and backed up by whoever, whichever member of the air crew had called for this decision and usually that was about the extent of what I had overheard or what I've taken note of. I'm not aware of anything other than that.
- Q. Okay Rod. Now this was the same aeroplane which you are very familiar with. Could you care or would you care to give us some maximum load figures either way minimums and maximums that they would normally put on.

A. I don't honestly think I could. I didn't really follow it that close, Jack, I didn't. Figures, I had overheard figures but I didn't really pay that much attention to actual figures with regards to loads and this type of thing.

Q. To your knowledge did they ever go out of here on a non stop flight with a total load in excess of 25,500 lbs?

A. No.

Q. No, meaning you don't know or they did not?

A. Not to my knowledge, not that I know of, Jack.

Q. And were some captains more obliging in taking bigger loads than others? And if so how did Thompson fit into it?

A. Brian, from my observations here again Brian got along very, very well with not only his cohorts being the flight crew themselves but also going to the people here in expediting. I don't ever recall a scene or an occasion whereby he was questioning or causing a comotion over something that he felt was too much of a pay load. No, I don't recall such an occasion. Brian, from my remembrance got along very well on the flights that he flew. To my memory things went pretty well generally. The cooperation from all ends was good.

Q. Did you ever hear the crews complaining about preference for day or night flights like in the past they've been doing all night flights leaving here around 7 o'clock at night. Did you ever hear the crews discuss this?

A. I think the crews generally from conversation with them, I think they would have preferred morning flights. I always attributed it to it more or less tied in with their social life or their general working conditions. Other than that, I think they would have preferred morning flights, yes. In this way they did not have to

be up working in the night time and waste a lot of their day time catching up on sleep.

Q. And probably trying to sleep during the day time.

A. Yes. Yes. I think generally from conversation I had with several of the captains and crew members, they would have preferred morning departures.

Q. You didn't have anything to do with Pan Arctic in the tie downs and things like that? That was done by the

A. We supplied labor which did tie down under the supervision of Pan Arctic load master. If, at the completion of loading, tie down was not sufficient and needed to be altered in any way, Pan Arctic's load master was the man that made the final decision or requested for more tie down or alteration in any form. Our crews are very knowledgeable and this is basically all they do but from time to time with other pieces the load master would sometimes request a few extra straps or something he felt should be done and this was always done.

Q. Was there ever any discussions between the load master and the captain or in other words was the captain like the load master responsible to the captain. Did the captains ever complain to you about tie downs or anything?

A. No, not to my knowledge. Again, that I don't ever really recall a problem there. No.

Q. Rod, one more question on fuel. Excuse me, John. Can you describe any curfuffle about the crews after the offered load was put on and the crew then decided to throw on more fuel on their own?

- A. No. Again, here Jack, the only there have been a few instances which are outstanding in memory which resulted in delays but they were major changes whereby cargo was major load changes took place and cargo was taken off in large amounts and extra fuel was put on. Other than that, no I don't.
- Q. One question and maybe you can clear it up. You didn't have anything to do with the weight and ^{BALANCE} bounds then, that was the load master's responsibility.
- A. No. He drew the weight and ^{BALANCE} bounds prior to the loading of the aircraft and took this weight and ^{BALANCE} bounds with him into the cabin and called for his designated cargo as he wanted it loaded and that's how it was brought by our people and our equipment to the airport. In whatever order he wished it to be put on.
- Q. One other thing. Was the expediter in Calgary, does he normally get in touch with you or how do you?
- A. Calgary's expediting department converse with Edmonton's Pan Arctic expediter and they co ordinate the cargo coming from Calgary and then they balance things out amongst themselves. Basically the major end of it thats involved as far as actual figuring or doing any of the weights and balances our boys don't get involved in any of that at all.
- Q. Here's one more Rod. Would you have any knowledge, if so would you describe how Pan Arctic's maximum loads out of here for the north compare with other operators, Electra operators such as for example Jet Air or Imperial Oil?

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A. My knowledge again is limited there but I would say generally I personally attribute the reason to Pan Arctic's that / particular aircraft being heavier but Jet Air's loads averaging with one particular aircraft, usually we're a little more. Not by a great amount, but slightly higher.

Q. Would you care to give us the registration in that event so that I can identify the weight?

A. Yes, it's I.K.B.

Q. I'm thinking of Western Airlines.

A. Yes.

Q. Just one more question. One of the reasons for doing the night flights as opposed to the day flights is that it's easier for the other cargo to get here in the evening than in the morning. Would you comment on this?

A. Yes. I think that was one of the major reasons that they stayed to the evening departures. It assisted drilling a great deal in that drilling from time to time in my limited knowledge of their operations in drilling would possibly with a two or three hour notice require, urgently require some special item which during the night is usually much harder to acquire. In the day time a lot of these suppliers or all of these suppliers have staff on duty and transportation available. This was one of the major reasons they preferred evening departures and the other was to allow, again I think it was the drilling contractors and all the sub contractors that pushed it. It was for greater convenience of the personnel to be able to arrange things for themselves and find it much more convenient to get out for an afternoon or early evening departure rather than a morning departure because some

of them travel a great distance and come from many, many points of the province. I think those were two of the major factors involved.

Q. Rod, is there anything else that you might know of that might help us in some way in this investigation? If so would you tell us about it?

A. Nothing really that I can pinpoint.

Q. Have you heard any rumours around here about the cause of the accident or there's probably been a discussion. Have you heard anything that would seem to you to be reasonable cause?

A. No, I haven't. No. Things have been very quiet as a matter of fact.

That's good.

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1st November 1974 14:00 MST

The following notes were taken during an interview with:

Mr David Hatton

s.19(1)

We were at 250. It was a normal approach. Followed standard company operating procedures. Flight uneventful. Brian Thompson was flying aircraft from left seat. He was planning a direct approach to runway 33. We were taking our distance to Rae Point off the DME and we were several miles out. Brian slowed the aircraft to flap speed 78% and gear speed 190. He called for flap 78 and approach check. He called to put the gear down. At this time the aircraft was lined up on the 153 radial which would be final approach course for runway 33. Both ADF's were tuned to Rae Point OX Beacon and identified.

We had received Rae Point weather at the top of the descent and had received the wind at about 5 miles out. I gave DME 5 miles out for runway 33 and he gave me the wind check. I think around 340-350, 25 gusting to 40. We ran into some turbulence at 4000 ft but it smoothed out then we ran into moderate turbulence at about 300 ft.

Rae Point WX were calling about 5 miles about 1200 ft ceiling, obscured, blowing snow.

The final approach course to runway 33 limit is 450, I think 1 mile. I set this on my radio altimeter. We both set them on our own sides. Initially they had been set at 1500. Then when Capt calls for flap 78 approach check the altimeters are set at minimum. Both are set at the same minimum.

We continued our descent and reached our minimum. Just after I received Rae Point wind check calling for 5 miles. Then Brian elected to go down to 300 ft and he felt that he was on a layer of cloud. I told him we were through minimums. This was out over frozen ocean. At the time I was calling the air-speed 150 and altitude 300. At that time I looked at DME and said we still have 3 miles to go and at 300 ft. I think he may have seen the reflection of the aircraft lites in water, thinking it to be lights at the button of the runway. Things happened fast. I recall calling out 50 ft we were in rapid descent. We pulled back on the stick. I put my hand on the power levers and I think I felt Garry's hand on the power levers. There was chop during the last 300 ft.

COMMENT:

It is speculation on my part that Brian saw reflection on water. I saw a dark curved area out over the windshield edge with ice beyond. I think he may have mistaken ice for fog and the dark shadow for edge of the runway going by.

COMMENT:

Up to final - perfectly normal with no mechanical problem with aircraft.

Q. What lites were on?

A. Nosewheel, navigation lights; Capt may have turned them on momentarily and then off.

Q. Was snow coming at windshield?

A. No it was obscured. I talked to Otter pilot Steve Penek - Borek construction who said there seemed to be a fog bank at the south end of the runway.

Q. What visual cues did you have during approach?

A. No visual cues outside aircraft. No runway lites, no glow.

Q. Did you have illusions similar to what you theorized for the Captain?

A. No. When I saw the dark area, which probably was open water with an ice line at the edge, I had just done a DME check - 3 miles.

Q. Were there any momentary restriction to visibility during approach? Describe.

A. We didn't have much vis during approach. We had vertical. There was the dark area I referred to before. There had been open water during previous trips but I hadn't been there for a few days.

Q. At what level did you break out of cloud during descent?

A. We didn't break out of cloud. It was obscured in ice crystals.

Q. What confirmation from Rae Point station did you have as to lighting in operation?

A. We asked at top of descent for weather check and vis, if having any problem with runway lighting to notify us then. Response, runway lites serviceable. Assume VASIS on - no remark, neg. Assume strobe lites on - no remark, neg.

Q. Radio altimeter functioning and settings for approach phase.

A. I was confident in its accuracy. I pressed the test button on descent. They both were on 2500 ft.

Q. What was the state and level of cockpit and instrument lighting?

A. On about medium, on white lite, had been turned down to half power. We could still look out and would have been able to see.

Q. What were the physical responses of Captain Thompson to your conversations and challenges during latter part of flight and approach?

- A. He seemed to respond and understand what was going on. He remarked twice he thought we were on top of a layer of cloud and would have to get below it. There was moderate turbulence at 300 ft.
- Q. In what manner were the pressure altimeters set for the approach?
- A. The local pressure was given to us by Rae Point. I don't recall the figure given to us. We confirmed our pressure altimeter settings every 5000 ft during descent and were confident of good cross checks.
- Q. Do you have any feeling that Captain Thompson was feeling ill or incapacitated during last of flight?
- A. No, he seemed perfectly alright. That was my first vertical trip with him. I had done one trip from Calgary to XD.
- Q. Recent flying activity?
- A. Hauling fuel - shuttle with Electra, one week from Resolute Bay to Cape Fleetwood and some from Johnson Point to Ellef Ringnes, supplying rig sites. Recent vertical flights - one about a week ago with Ray Lidgren. I had been on shuttles with Ray. Then a trip to YC with Ray and then to Rae Point and for further shuttle then return to YC.
- Q. Where is your personal log book?
- A. It is back in my apartment.
- Q. Please relate briefly your experience with Panarctic and Electra operations in the Arctic.
- A. I started with Pan Arctic August 73 and I flew Twin Otter for Pan Arctic in the Arctic. In July 74 I went to Ann Arbor for ground school and simulator training on Electra. I started Flight Training on the aircraft August 15/74. Ian Johnson, the company check pilot did the initial flight training. I did some training on the line with Ed Kowalik, Chief Pilot.

COMMENT:

I have been quite impressed with Pan Arctic operations. All Company operations and procedures seemed very good and very competent flight and maintenance personnel.

COMMENT:

We hit with a bang. The cockpit was dark. Water rushed in. I undid my seat belt. I tried the cockpit window-it was jammed. I started to sink. I was swallowing water. Garry saw me and heard me. He pulled me out and onto the ice. He found a parka. He saved my life. There were small fires - most in tail. I could see the rudder and elevators. Others were crying and moaning and crying out for help. One fellow was strapped in a seat upside down, he was hollering. It was heavy and we couldn't lift it. Not able to help him. A number of people were alive and might have been saved. If help could have come sooner, Garry banged me around and kicked me and kept me going.

C P recorder has been working good, last check by Dave Hutton about 2 trips ago

COMMENT:

I hope they get the cockpit recorder - it might give what we said.

Q. How has the cockpit voice recorder been functioning lately?

A. It has been working good.

Q. Could it be played back?

A. Yes.

Q. When did you check it last?

A. About two trips ago. The Flight Engineer would include that in his check.

Information provided by:

David Hatton

Interviews recorded in handwriting by:

W. J. Dick

Observed by:

W. L. Mullins

INTERVIEWER'S NOTE:

Investigators returned to the hospital just after noon November 4/74 with the intention of letting Mr Hatton see the information he had provided. The investigators were balked in this procedure by the presence of Donald Brenner Panarctic counsel, who said that he would have a signed statement for the M.O.T. On November 5/74 during a subsequent attempt at visiting Mr Hatton, Mr Brenner provided a one page statement of Mr Hatton.



W. J. Dick

6th November 1974

My name is DAVID HATTON.

I am employed by Pan Arctic Oils Ltd. as a First Officer.
I have been so employed for 14 months.
I was the First Officer on Pan Arctic Electra CF-PAB from Edmonton to Rae Point on Tuesday, October 29, 1974.
Brian Thomson was Captain and Garry Weyman Flight Engineer.
The aircraft was airworthy prior to departure from Edmonton.
The aircraft departed from Edmonton at approximately 8:00 p.m. local time.
The flight enroute to Rae Point was completely routine.
The Captain was flying and everything was normal throughout the entire flight.
We did a routine descent to Rae Point.
We did a direct approach to Runway 33 using the DME. The DME operated normally throughout the approach.
We set our radio altimeters to 450 feet, the minimum descent altitude.
We encountered turbulence below 3000 feet.
The approach check was done and several miles back, the landing check was completed with flaps set to 100.
The weather was not as good as reported.
We went to 450 feet with no visual contact with the runway or the lights.
The Captain said that he thought we were on top of a layer and continued descent.
I called altitudes and airspeeds.
At 3 miles on the DME the aircraft was lined up with the runway centre line. The Captain initiated a rather abrupt descent to lose more altitude.
I called 50 feet and 3 miles and attempted to apply power.
The control column was pulled back just before we hit.
Just before the aircraft hit the surface I recall that the curved area where the water and ice met created the visual impression of a cloud layer.
The last portion of the descent happened very quickly.
After impact, the water was coming in quickly; I undid my seat belt and got out of the cockpit through the rear. I saw the Flight Engineer who pulled me onto the ice, picked up a parka and put it on me.

This Statement is my complete recollection of the events leading up to and immediately following the accident of CF-PAB and is given at University Hospital, Edmonton, Alberta, this 30th day of Nov., 1974.

WITNESSED

Bob Maxwell

David Hatton

DAVID HATTON.

COPY

David Hatton:

Witness duly sworn in.

Counsel advised that the patient is under sedation and consideration is requested.

INTERVIEW - FIRST OFFICER

Introductory Comment:

The details of aircraft CF-PAB's preparation for the flight and up to top of descent for Rea Point have been gathered from flight planning and flight following information. If you have information which you wish to provide to this Board up to the beginning of the descent to Rea Point, please do so at this time.

Response:

The early part of the flight was routine. There was nothing out of the ordinary.

Continued . . . 2

- Q. For the flight, Calgary to Edmonton, will you state the cruise altitude and indicated airspeed?
- A. I believe it was 16,000 but this could come from our flight plan. The ISA temperatures were around 0. The airspeed would be within the profile for the aircraft.
- Q. For the flight out of Edmonton will you state the several cruise altitudes and indicated airspeed at each level.
- A. I cannot recall these accurately. I believe 18,000 at first but you would have to check with ATC.
- Q. Will you please describe the flight upon leaving cruising altitude?
- A. On leaving cruising altitude of 250, I can't recall any more than the statement I previously released. I was under sedation that day and I still am under some sedation. The entire flight and descent and lead up to approach were entirely ordinary. The checks were done carefully and accurately. There was no attempt to joke. All the crew members were functioning well and there was no sign of stress on Brian's part. Garry had done a trip the day before but he seemed to be functioning well. This was the first vertical flight with Brian. I had done one before with him YC to XD. I was being especially accurate as I believed Captains may submit reports on other crew members on their performance. I recall about an hour before Rae Point, Brian and I were working out some fuel figures for Bjorne Peninsula. We had Resolute as an alternate. We tried to establish contact with Rae Point but HF radio was poor then. We wanted to work out what our freight return load could be. By the time we were within VHF range Rae Point did not have a freight load worked out for us so we were unable to accurately work out what our fuel load would be.
- Q. With reference to the flight from Edmonton International to Rea Point what was the fuel load based on with regard to time, route, alternate airport, etc?
- A. As I recall it was normal cruising 18,000 to start with 230, ultimately 250, I believe it was Pedder Point the WX was better there. We were using normal cruise power setting rather than reserve power, to give us more fuel.
- Q. At what distance from Rea Point was the initial descent commenced?
- A. I can't recall exactly. I believe it was 65 miles we started our descent.
- Q. What was the fuel reading at this time?
- A. I remember I took the top of the descent fuel at that time but I can't recall the figure. We were in good shape. We had ample for our reserve. We cross check with the Flight Engineer. If the flight log can be recovered from the aircraft, we had all that written down.

- Q. What was the Rea Point weather when you first made radio contact with Rea Point?
- A. Relying on memory I recall I believe he was calling 200 obscured and 5 miles with fog banks or fog patches to the south. It was obscured with blowing snow, with winds to 40 gusting to 45.
- Q. At what height was the aircraft levelled off from the initial descent?
- A. From what I recall, I would estimate about 3,000 ft to level out and lose some airspeed and get our flap speed and gear speed.
- Q. At what distance from Rea Point?
- A. I am uncertain.
- Q. At what distance from the VOR was 100% flap selected?
- A. I would estimate about 4 miles we were a fair ways.
- Q. What was the altitude?
- A. Conjecture 1000 to 1200 ft.
- Q. As the flight progressed toward Rea Point and after radio contact was established with that station what successive weather information was received?
- A. I called in - the last call 6 mi. final, weather thin obscured wind gusty there appeared to be fog banks off to the southeast of the airport. It was here that Brian first mentioned that there appeared to be a bank of fog that we would have to penetrate. We were approaching on runway 33 using the DME. This was routine and the usual runway to be used.
- Q. Was there a crew briefing on the type of approach that the Captain planned to conduct? What were the details? What action was to be taken in event of missed approach and overshoot?
- A. Yes. He was going to do a direct approach on to runway 33. A standard missed approach. A climbing right turn and return to the Rea Point Beacon. I would have to refer to the approach plate for the details.
- Q. Why did the Captain set his radio altimeter to 300 feet?
- A. As I recall the setting on the radio altimeter was set on 450 feet.
- Q. What was the minimum setting that you are aware of for each of your radio altimeters?
- A. 450 feet was the initial setting on the radio altimeter. I called the radio altimeter alive when we reached 400 feet. I previously called 1500 then 1000 and I called 450 which was where the light came on. I said to Brian I would set mine to 300 ft. I recall that Brian said we were on a layer of cloud. I distinctly remember he said this twice. I called off the airspeeds and altimeter readings as we proceeded on the approach. I was a little concerned that the approach was a little shallow - a slow descent but nicely lined up on the runway. I was calling the DME at this time. It was about this point, 3DME we were at about 300 ft. We had no visual contact. Brian initialed an abrupt descent.

About this time we approached a dark ice line which seemed to give an illusion of cloud. It all happened very abruptly. I was very alarmed. Garry was too. I shouted at Brian we are at 50 ft and we are 3 miles back. Garry called out loudly verbal notice that we were in trouble at that point. I tried to apply power. Garry was trying to apply power too. I tried to pull back but we hit. The only thing unusual was the long gradual descent trying to pull ourselves in. We encountered some turbulence between 3,000 and 1,000 ft. We began to get some buffeting.

Q. What was your evaluation of the weather conditions at 300 ft?

A. We were still on instruments, still obscured. The first sign of contact was when we saw the edge of ice and water as a hazy line. Our airspeed on approach was about 150 K. At no time did it get below.

Q. Did the Captain descend gently to 50 feet or was it an abrupt movement? Explain.

A. It was an abrupt movement. Any movements up to that time were very smooth and very gradual.

Q. Was this about the time you had vertical contact with the ice?

A. Yes just shortly after. Just a moment after.

Q. When you reached 50 feet, was it an automatic action on your part to apply power and climb?

A. It was just a reflex action. Our rate of descent was such, that some action had to be taken. It took both Garry and I by surprise. The flight had been very smooth to that time.

Q. Was the Captain flying instruments or was he trying to establish visual contact?

A. He was on instrument and was wanting me to call visual. I was looking out the window, and I was calling DME and altitudes and airspeeds. We have found up there that gusting and shear conditions are unique. I have experienced it at Sherrard Bay and Drake Point. The winds can have sudden changes in direction and velocity.

Q. What instruction did you receive during your training on taking action to deter a Captain from descending below established limits?

A. Company policy was to descend to company or MOT limits. I was to announce loudly to the Captain that minimums had been reached. There was no glide slope at OX so we would descend to minimum and proceed to the VOR. The Company was very strict on minimums. Possibly an individual Captain might elect to go a little lower. It would be at his discretion if ceiling and visibility were appropriate. He might go 50' lower to pick up the runway. It would have to be an exceptional situation and be very carefully monitored. It was not approved Company policy. In the interest of getting the job done the exception is sometimes taken.

Q. Was the crew as a unit willing to descend below established minimums?

A. Yes, I think we were willing to descend another 100 ft in this case. The Captain didn't directly come out and ask us if we were willing.

But we recognized that the approach was going smoothly. It was not done recklessly.

- Q. Were you aware that the fuel load on this flight was calculated on the basis of Resolute Bay as the alternate even though Pedder Point was the alternate indicated on the flight plan?
- A. I can't recall. It seems that RB was filed as the alternate. RB had the aids, but Pedder Point wx was better. By carrying Pedder Point fuel it gave a better reserve for RB.
- Q. Why was Pedder Point selected as an alternate? Did you consider acceptable to use an airstrip as an alternate that did not have a forecast?
- A. Yes, I did. Our official alternate was RB which had full approach aids. The reason for Pedder Point, there was no forecast but the WX was better there. This offered an extra alternate over RB.
- Q. In what manner was a weather briefing received at Edmonton International prior to departure and by what member (s) of the crew?
- A. Brian had gave over to the wx station at EG and picked it up. There is a prepared briefing for the crews. I had ferried the aircraft from YC. We had experienced a delay out of YC due maintenance. I didn't go to the wx office. Brian brought the weather to me and we went over it together.
- Q. What crew restraint is provided in the cockpit?
- A. We have normal lap belts and shoulder restraining inertia reel harness.
- Q. Was shoulder harness being worn by any of the crew for the landing at Rea Point?
- A. I don't think any of us were wearing it. I wasn't myself. Most of the company personnel don't use it. Everyone uses lap belts. I shall use it hereafter because I think it could have reduced the injury to my back.
- Q. Can you give any information on why the Captain started to descend below 300 ft at 3 DME?
- A. I have no idea why. I can't say definitely why. I refer to my statement where Brian mentioned twice, "We seem to be on top of a layer." We were on runway centre line. We had just passed the ice water line and this may have caused him to descend.
- Q. What was the last power setting (horsepower) that you can recall and at what altitude?
- A. We had a fairly high power setting at 300 feet we had flap on.
- Q. Who was responsible for watching for the approach and runway lights on final approach?
- A. That was my responsibility. This is company policy. The person flying the aircraft watches instruments and the other person keeps a look out and calls speeds and altitudes.

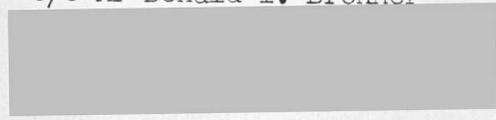
- Q. Do you think the descent to 50 feet was intentional or was the Captain's attention distracted?
- A. It was very abrupt. I don't know if he intended to descend as low as 50 ft. I think he intended to go below minimums but not as far as we went. I would say the ice water line would be a distraction. I mentioned that we seemed to be coming up on an ice ridge and that we had visual.
- Q. Would you agree that the Captain must have gone visual instead of remaining on instruments?
- A. I don't know.
- Q. Describe the attitude of the aircraft at or just prior to impact.
- A. It was a decided nose down attitude initially. It was left wing down. I don't know if we had time to level the aircraft or pull the nose up before we struck.
- Q. Did you observe head or hand movements of the Captain for him to view or accomplish sequence or actions during the approach? Explain.
- A. No. I was busy watching my own instruments and looking out the window. He was concentrating heavily on the instruments of course.
- Q. When did you last check the cockpit voice recorder in CF-PAB for serviceability or see this function accomplished?
- A. This is part of the F/E preflight of the aircraft.
- Q. It is understood that while you were a Captain on Twin Otters that you ran into weather problems after deviation from the original itinerary. Please explain the reasons for this deviation.
- A. I believe that this was reported to the Ministry. The aircraft involved was CF-PAT.
- Q. Describe your flying and duty activities with rest periods over the past 3 days prior to the accident.
- A. I had had 3 days off, prior to going on the accident flight. I believe I had 4 or 5 days off. The company would have records.
- Q. How would you rate the piloting and aircraft handling skills of Captain Thompson?
- A. I would say excellent. He was exceptionally smooth.
- Q. Were there conflicting views between you and Captain Thompson? Explain.
- A. No. None whatsoever.
- Q. What are your observations of Captain Thompson's social pattern while off duty and leading on into duty time?
- A. I didn't know Brian that well. I didn't know him while on Twin Otters. I had only flown with him on one other short trip. He was an easy going chap and confident in his job.
- Q. What landing lights were on during approach?

- A. Initially auxilliary taxi at 10,000 feet. Then later were turned off towards final alone because of interference with forward vision and glare.
- Q. Was power applied?
- A. Yes.
- Q. What sensations were felt?
- A. The aircraft hit at almost same time.
- Q. Did Captain Thompson pull out yoke?
- A. I don't recall.
- Q. Can you think of any reason for the wing being low?
- A. (speculation) Perhaps he thought that the iceline was the hangar. (HORIZON?)
- Q. In descent if power is applied, what happens?
- A. The aircraft climbs; the airspeed stays the same.
- Q. Did you have adequate rest prior to the flight?
- A. Yes. We normally try to sleep during the day when there is a night flight. It is sometimes difficult to get proper rest, especially with back to back flights. Garry had done flights previously.
- Q. What sort of mood was the Captain in?
- A. Friendly, amiable, tolerable.
- Q. Medical release?
- A. Yes.
- Q. When is the last meal?
- A. 10:30-11:00. All three had steaks. Sirloin fillet for Brian, the rest of the meal was all the same.
- Q. Did Captain respond to warnings of 300 ft?
- A. Yes. Said "check 300". 50 feet and 3 miles.
- Q. Is there additional information which you wish to provide to this Board?
- A. I can't think of anything else to add.

COMMENT:

Will you please provide a copy of my statement of November 1/74 which I provided to the MOT, together with this statement, to be forwarded to:

Mr David Hatton
c/o Mr Donald I. Brenner



s.19(1)

Information provided by:

Information hand-written by:

David Hatton

W. J. Dick