

PHOTO COPIES NOT TAKEN OF THE
FOLLOWING FLIGHTS

FLIGHT	383	SEPT	6	1974
"	382	"	5	"
"	9381	"	4	"
"	381	"	3	"
"	9379	"	1	"

CNA / ASSURANCE

MR. GEOFFREY DARBY
160 BLOOR ST E.
ONT.

CF - PAR

ACCIDENT REPORT

COPY HANDLED TO ABOVE

3-11-75



CANADA MINISTRY OF TRANSPORT AVIATION SAFETY INVESTIGATION DIVISION				
ACCIDENT REPORT				
AIRCRAFT MAKE AND MODEL Lockheed L188C	REGISTRATION CF-PAB	DATE/TIME 30 Oct., 1975 0016 M.S.T.		
PLACE Rea Point, Melville Is NWT		LATITUDE 75°22'N	LONGITUDE 105°42'W	
<p style="text-align: center;"> Following a flight from Edmonton, Alberta an instrument approach was being made to the runway of Rea Point. The aircraft slowly descended to 100 ft below the authorized minimum descent altitude. At about 3 miles from the runway a sudden steep descent was initiated and the aircraft struck sea ice about 2 1/2 miles short of the runway. </p>				
CREW PASSENGERS OTHERS	TOTAL 4 30	FATALITY 2 30	SERIOUS INJURY 2	MINOR INJURY

"This accident was investigated to provide guidance toward the prevention of a recurrence. The content of this report is confined to cause-related circumstances and is published for accident prevention purposes only."

HISTORY OF THE FLIGHT

Lockheed L188C Aircraft CF-PAB referred to as flight 416 departed Calgary International Airport at 1805 hrs* October 29, 1974. The aircraft was on a routine positioning flight to Edmonton with a Captain, First Officer and Flight Engineer on board. The 30 minute flight was uneventful with no unserviceabilities reported by the crew. The aircraft was prepared for the continuing flight north with the loading of 20,000 lbs of baggage and freight and 21,000 lbs of jet B fuel. The aircraft Captain and Flight Engineer were replaced by those scheduled for the Edmonton to Rea Point leg.

The Captain received a weather briefing; an IFR flight plan was filed to Rea Point, via direct Fort Smith, direct Contwoyto Lake, direct Byron Bay, direct Rea Point at an initial cruising altitude of 18,000 feet with Pedder Point as the alternate. The estimated time enroute was 4 hrs 12 mins.

After loading 30 passengers and a fourth crew man, the load master/flight attendant, the aircraft departed the Edmonton International Airport at 2004 hrs. The flight proceeded uneventfully, cruising at 18,000 feet to Fort Smith where it was cleared to flight level 210. The aircraft reported over Byron Bay at 2304 hrs with an estimated time of arrival at Rea Point of 0016. About 100 miles* north of Byron Bay the aircraft was cleared to flight level 250.

Radio contact was established with Rea Point about 150 miles out and a descent was started for a straight-in VOR/DME approach to runway 33. The descent was smooth except for some turbulence at 4000 feet. The aircraft levelled at 17 miles DME from Rea Point at 2000 feet for a period of 1 minute 45 seconds. The aircraft then slowly descended to about 875 feet asl at 6 miles DME. A call was made to Rea Point advising them of the DME range on final. There was light turbulence. Fifteen hundred horsepower was selected on the engines; both the VHF navigation radios were selected to 111.2 MHz, the Rea Point VOR frequency; and both ADF's were selected to 396 KHz the Rea Point OX nondirectional beacon frequency. Both cockpit barometric altimeters were set to 29.91 inches of mercury, the latest Rea Point setting. The airspeed was indicating 150 knots which, with a 30 knot headwind component, resulted in a ground speed of 120 knots. The pre-landing check had been completed, 100% flap selected and the landing gear was down. The landing lights were extended but were off; the wing leading edge lights as well as the alternate taxi lights were on. Glare had been experienced from external lights early in the descent from 10,000 feet, but not thereafter. There was no pre-landing briefing conducted by the Captain.

The Flight Engineer was able to see what appeared to be open water below with ice floes. The First Officer set his radio altimeter warning to 450 feet and the Captain set his to 300 feet. When the warning light illuminated on the First Officer's radio altimeter, he advised the Captain. As the descent continued through the minimum descent altitude of 450 feet, the First Officer reset his radio altimeter to 300 feet and so advised the Captain. The aircraft was still in a shallow descent. At 300 feet radio

altitude the First Officer checked the DME reading as 3 miles, saw a dark area of open water and an ice line and reported to the Captain that they seemed to be approaching an ice ridge and that they had visual contact. The captain reset his radio altimeter to about 150 feet. Also, close to this time the Captain said he believed they were on top of a layer of cloud, repeated the statement, following which he retarded the throttles and pushed forward on the control column with sufficient force to produce perceptible negative G.

Because of the small time frame the sequence of events during the final descent could not be established with certainty. However, the rate of descent increased rapidly to between 1700 and 2000 feet a minute. The First Officer recalled that he shouted at the Captain reporting their descent through 200 feet at 2 miles DME but there was no response. The Flight Engineer's recollection was that the First Officer called through 100 feet and they both called through 50 feet without an observed reaction from the Captain. The First Officer reached for the right side power levers and found the Flight Engineer's hands already on them. The First Officer was observed to have his hands on the control wheel just prior to the impact.

On impact, the cockpit area broke away from the remainder of the fuselage and with the cargo continued along the ice surface for 900 feet. After the cockpit came to rest the Flight Engineer, who did not remember the impact, undid his seat belt and saw both the Captain and First Officer in their seats. The First Officer although injured was able to undo his seat belt and the Flight Engineer pulled him onto the ice before the cockpit section sank completely. The Flight Engineer found a parka for the First Officer and kept him awake until assistance arrived.

EVENTS ON THE GROUND AT REA POINT

At about 2330 hrs the flight was in communication with Rea Point on 122.8 MHz concerning load and routing and confirming the arrival estimate of 0016 hrs. The flight was provided traffic information and the 2400 hr weather observation which was: ceiling thin obscured, visibility 1 mile in blowing snow, temperature - 11°F, wind 312° at 30 gusting to 38mph, and the altimeter at 29.91 in. of mercury. At 0015 hrs the flight advised that it was 6 miles out on final approach and the radio operator gave the current wind and visibility. (It was later determined that the anemometer was in error and the actual wind speeds were 25% lower than indicated.) One or two minutes later the radio operator's attention was attracted by sudden increases in wind velocity to over 50 mph. He observed the visibility to be less than 1/8 of a mile and occasionally less than 50 yards. This sudden reduction in visibility was transmitted but there was no response. Further contact with the aircraft was attempted on various frequencies but without success.

The senior company official at the site was advised by the radio operator that the aircraft was 11 minutes overdue and after consultation with the site foreman a decision was made to search for the aircraft. A Twin Otter pilot was alerted, briefed on the circumstances and took off from

runway 33 at 0135 hrs for a search of the approach area. The pilot reported that the visibility was about 1 mile in blowing snow during the take-off roll but was unlimited above the blowing snow. At 800 feet altitude during a left turn toward the approach area, he saw two small fires south of the airport. During a low pass with landing lights on, he saw a person standing in an area strewn with wreckage. After a brief aerial examination of the accident site 2 1/2 miles south on the extended centreline of runway 33, he returned to the airstrip. A ground party departed the camp at about 0150 hrs and guided by the Twin Otter circling over the accident site, arrived there in about 30 minutes. Three survivors; the First Officer, Flight Engineer and a passenger were located and taken to the camp by about 0250 hrs.

FINDINGS

The approach was continued below the company approved minimum descent altitude.

The Captain reacted inappropriately to a visual cue and suddenly initiated the final rapid descent.

Partial incapacitation of the Captain was a factor in the failure to recover from the high rate of descent.

Crew coordination in the cockpit in the final stages of the flight was inadequate.

No company Flight Operations Manual or similar document was available to adequately prescribe the aircraft crews duties and responsibilities.

This operation was in the private category and was not operated or required to operate to the established commercial standards.

The established aerodrome emergency response procedures were inadequate.

CREW INFORMATION**CAPTAIN****Flying History**

The Captain, age 30, held a valid Airline Transport Pilot licence endorsed for single and multi-engine land and sea up to a gross weight of 12500 lbs as well as Lockheed Electra aircraft. His class I instrument rating was valid to January 1975. He had accumulated a total of 8143 hrs of which 3600 hrs were flown on Twin Otters and 1792 on the Lockheed Electra including 907 hrs as Captain.

The Captain obtained a commercial pilot's licence in 1964 and for the next 10 years progressed through various flying positions to that of a Captain on a large 4 engine turbine aircraft. His first instrument rating, a Class II, was obtained in 1968. In January 1970 he began his employment with the Company as a Captain on Twin Otter aircraft. During 1971 he took his initial ground school and simulator training on Lockheed Electra aircraft at a commercial school. This was part of the upgrading process from a Twin Otter Captain to an Electra First Officer. The training was completed in December 1971. Training reports indicate he experienced problems with IFR approaches and in adapting to the flight director system. After flying as First Officer for about 7 months, he was given an instrument flight rating recheck by an MOT inspector who reported problems with cockpit management as well as the use of the ADF, (Automatic Direction Finder). His next instrument check about 6 months later revealed only a problem in altitude control. In June of 1973, he took simulator and flight training for upgrading from First Officer to Captain. During an MOT instrument flight rating check in the same month, his procedures were considered to be "somewhat unorthodox". In July 1973 he was upgraded to Captain on Lockheed Electra aircraft. In December 1973, he successfully passed a MOT instrument flight rating recheck the report of which contained a comment of; "some confusion" relating to the assigned runway for approach. Approximately 6 months later, an instrument flight rating recheck by an MOT approved Company check pilot reported that the Captain should give more attention to the detail of clearances and approach charts, but the test was successfully completed. His last proficiency check of any kind prior to the accident was on August 24, 1974, in a Lockheed Electra simulator. Comments included by the company check pilot were: preparation for ILS poor, not holding altitude to glide path intercept; slow initiating descent on ADF approach; speed high on missed approach. The Captain had not flown in the eleven days before the accident flight. During this period he worked as duty-pilot on normal working days.

Physiological Aspects

Pathological evidence indicates possible extension of the left leg at impact. There was a fracture of the left hand of the type commonly associated with the hand being positioned on a control wheel at impact. There was a 50% compression fracture of the L1 vertebrae indicating vertical acceleration in the area of 25g with an onset rate of at least 300g per second, and a duration of about .1 seconds.

The liver was found to be considerably enlarged with a very severe degree of fatty change. This condition is associated with metabolic disturbances such as a lowered amount of potassium in the blood as well as other blood chemistry changes including lowered blood sugar, changes in heart rhythm that could result in incapacitation and/or sudden death. The degree of fatty change noted in the liver, in an otherwise healthy individual, was considered by consulting pathologists to be almost certainly associated with the excessive intake of alcohol. Patients with fatty liver diseases but without clinical evidence of heart disease can exhibit an abnormal heart rhythm in response to stress and consequent incapacitation to any degree, including death. No evidence of recent alcohol or drug ingestion was found in the tissues. In addition, June 19, 1974 a cardiological assessment was requested due to flattening of the T waves in the Captain's electrocardiogram. The cardiovascular report was negative although in retrospect it can be seen the T wave flattening may have been due to a lowered serum potassium.

A heterophoria (eye convergence or divergence) of between 6 to 8 diopters was noted on the Captain's medical records. While this condition would not normally be a problem it can result in an increase in the time to transition from instrument to visual reference under conditions of fatigue.

Psychological Aspects

This pilot had spent most of his flying career on light aircraft up to and including Twin Otters. During all of this time he would have been the only pilot on board with no requirement for coordinated crew procedures. While he had held an instrument rating during the four years up to and including 1971, flight deck procedures during the approach phase would be markedly different from those employed in a high performance well equipped, large, two-pilot aircraft. His total experience on two-pilot aircraft was in the Lockheed Electra starting in about January 1972 for 12 months as a co-pilot and the following 14 months to the time of the accident as a captain. Many of the problems associated with proficiency checks on this pilot relate to flight deck management and instrument procedures.

The Captain had been initially well motivated towards flying but had been increasingly dissatisfied and frustrated during the year prior to the accident with this type of flying which he considered to be hazardous. The manifestation of his dissatisfaction included a desire to change jobs or to leave flying completely. There is evidence of chronic fatigue in the few months prior to the accident which may have been partially caused by his liver condition and amplified by the frustration and anxiety which was developing.

FIRST OFFICER

Flying History

The First Officer, age 32, held a valid Airline Transport Pilot licence endorsed for single and multi-engine aircraft up to a gross weight of 12500 lbs as well as helicopter and Lockheed Electra. His Class I instrument rating was valid to 1 March 1975. He had accumulated about 5100 hrs of flying of which 1583 hrs were on Twin Otters and 160 hrs on the Lockheed Electra. Of the 1583 hrs on the Twin Otter, 665 hrs were experienced on Arctic operations out of Rea Point.

He commenced flying in 1966 and in 1970 obtained a Class II instrument flight rating. About 1 year later he had an instrument flight rating recheck by an MOT inspector which renewed the Class II rating with problems showing up in instrument procedures but one month later he was upgraded to a Class I. He continued to successfully pass instrument proficiency flying rechecks to a Class I standard with no outstanding problems. In July and August 1974 he successfully completed classroom, simulator training and a flying proficiency check on the Lockheed Electra aircraft and began flying in the capacity of a first officer. He had not flown during the six days preceding the accident and had not previously flown with this Captain.

FLIGHT ENGINEER

The Flight Engineer, age 26, obtained a Private Pilot Licence in 1969. After serving an apprenticeship he received his Aircraft Maintenance Engineers Licence in 1972. In June 1973 he successfully completed flight engineer Lockheed Electra ground training and a service training course on Allison Turbine Engines in August of the same year. During the same month he successfully completed Lockheed Electra simulator and flight training and obtained a Flight Engineer's Licence.

LOADMASTER/FLIGHT ATTENDANT

The loadmaster, age 22, had been flying in this capacity with the company for about 1 year. During flight time he was to fill the role of a flight attendant combined with his pre- and post-flight loadmaster duties.

AIRCRAFT

The aircraft was a Lockheed Electra model L188C, powered by four Allison 501-D13 engines driving constant speed Aeroproducts A6441 FN 606 hydromechanical propellers. The Federal Aviation Agency Type Certificate Data Sheet was issued 22 August 1958. The aircraft came to Canada in 1969 under an FAA, Certificate of Airworthiness for Export issued 29 December 1969 when the airframe had accumulated 19133.4 hrs. The Ministry of Transport issued a Certificate of Airworthiness for CF-PAB on 30 December 1969 and on 2 January 1972 reregistered for the company involved.

The form used to calculate the weight and balance position of each flight had been in use for only a few weeks prior to the accident. This form included aircraft compartments that were not in the basic weight and balance document.

The weight and balance form made up prior to the flight to show the load and C of G position at a maximum take-off weight of 114580 lbs was calculated on the basis of 20009 lbs of cargo and 5270 lbs for 31 male passengers. There were in fact 30 male passengers with a corresponding passenger load of 5100 lbs. The burn off or enroute fuel was calculated to be 18930 lbs to provide a maximum landing weight at Rea Point of 95650 lbs. The total fuel for take-off was indicated to be 26530 lbs and the C of G was shown as 26.7% MAC. The Flight Engineer's fuel log from the aircraft

showed the fuel at take-off to be 27860 lbs or 1330 lbs more than indicated on the weight and balance form which would have resulted in an overweight landing. Other discrepancies existed on the weight and balance sheet and despatch documentation however none would have had a direct bearing on the accident circumstances.

Two significant points in the cockpit instrument presentation were noted. The altimeter while of an approved type was of the three-pointer type known to induce perception errors. The only DME read-out was on the Captain's panel even though it was used as a primary approach aid. The First Officer would be hindered in his cross checking of this and other instruments with the DME read-out in this position.

OPERATIONAL CONTROL

When the Company proposed its L188 operation it was ruled by the Canadian Transport Commission as non-commercial. The effect of this decision was to render the issuance of an Operating Certificate by MOT inapplicable, and consequently the Company became responsible for selecting and applying its own safety standards to some of its aviation operations. Although the MOT standards applicable to Companies holding Operating Certificates were available for guidance, the Company was under no obligation to apply them. Similarly, the application of some standard of safety to its air routes, navigation and communications facilities, aerodromes etc., is a Company responsibility.

The Company in response to these safety responsibilities created an Air Transportation Department embracing flight operations, aircraft maintenance and airlift coordination. The remaining aviation functions were not given department or section status in the Company's organization structure.

Thus this flight was conducted in accordance with a mixed set of standards: MOT standards for crew qualifications, aircraft certification, flight procedures (i.e. all those aspects covered by Air Regulations and Air Navigation Orders applicable to private operations) Company applied standards for flight despatch, flight following, crew procedures, passenger safety, facilities, aerodromes, air routes, etc. The items in the former group are subject to MOT routine surveillance for compliance but those in the latter group would not be, under the particular circumstances of this operation.

METEOROLOGICAL INFORMATION

Synoptic Situation

The meteorological conditions over the Arctic Islands north of 70° latitude from 1700 hrs on October 29 to 0500 hrs on October 30 were influenced by a 978 millibar low that existed in Baffin Bay at 1700 hrs on the 29th and a ridge of high pressure extending from Gladman Point to Northern Banks Island with a surface low that moved to the vicinity of Thule by 2300 hrs and began to fill. A new low pressure centre developed northeast of Alert by 0500 on the 30th. The ridge of high pressure remained stationary through the period. A broad cyclonic flow of continental

arctic air prevailed over the arctic islands with the maximum northwesterly surface gradient occurring in a northwest/southeast band over eastern Melville Island.

There was a trough embedded in the northwesterly flow which moved southeastward at an estimated speed of 30 knots; passed Rea Point at 2000 hrs on the 29th and Resolute Bay 3 hrs later. Weather reports at Resolute and Rea Point indicate that overcast layer cloud prevailed ahead of the trough and decreased to scattered cloud one hour after the passage of the trough. The Resolute Bay radiosonde at 1700 hrs on the 29th showed a saturated layer between 2000 and 9000 feet asl. This indicates that sufficient moisture existed to create overcast merged layers ahead of the trough. However, the surface weather reports at Resolute Bay near 1700 hrs indicated only scattered to thin broken layers. Rea Point reported overcast clouds ahead of the trough with an estimated base of 1000 feet above ground level. One hour after the passage of the trough (at 2100 hrs on the 29th) Rea Point reported 1/10 of altocumulus.

Maximum surface winds and the lowest visibility occurred ahead of the trough. Winds abated slightly and the visibility improved to 1 mile, behind the trough. However, the wind reached a second peak with gusts to 28 mph at 2400 hrs on the 29th.

Forecast

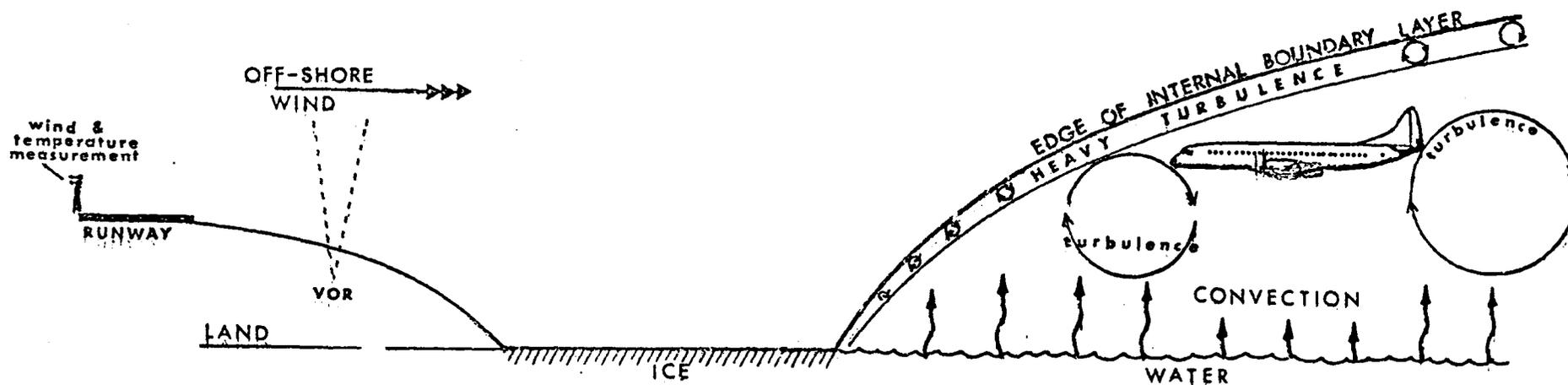
The terminal forecast for Rea Point issued by the Arctic Weather Central forecast office in Edmonton at 1530 on the 29th valid for 12 hours from 1600 to 0400 hrs on the 30th was included with the general weather information provided to the Captain prior to his departure from Edmonton. This forecast indicated; scattered clouds at 1500 feet with a broken ceiling at 8000 feet, conditions variable to partially obscured and a broken ceiling at 1200 feet; a visibility of 3 miles obstructed in ice crystals and ice fog variable to 3/4 mile in light snow and ice fog; the surface wind 300° True at 25 mph with gusts. The surface weather observation at Rea Point taken at 2400 hrs on the 29th, about 16 minutes prior to the accident, was; a partially obscured condition of blowing snow with an opacity of 2/10; the visibility 1 mile in blowing snow and occasionally higher; the surface wind 312° True at 22 gusting to 28 mph.

Alternate

Pedder Point had been filed as the alternate although contrary to the requirement for filing alternate airports no terminal forecast was available. The only weather available for Pedder Point would have been the last hourly sequence which at 1800 hrs was; sky clear, visibility 10 miles in ice crystals. Hourly weather observations continued to be taken with the 2400 and the 0100 observations missing. The 2300 hrs observation was; "sky partly obscured in blowing snow with an opacity of 2/10 with scattered altostratus clouds at 10000 feet; visibility 3 miles in blowing snow; wind 320° True at 17 mph".

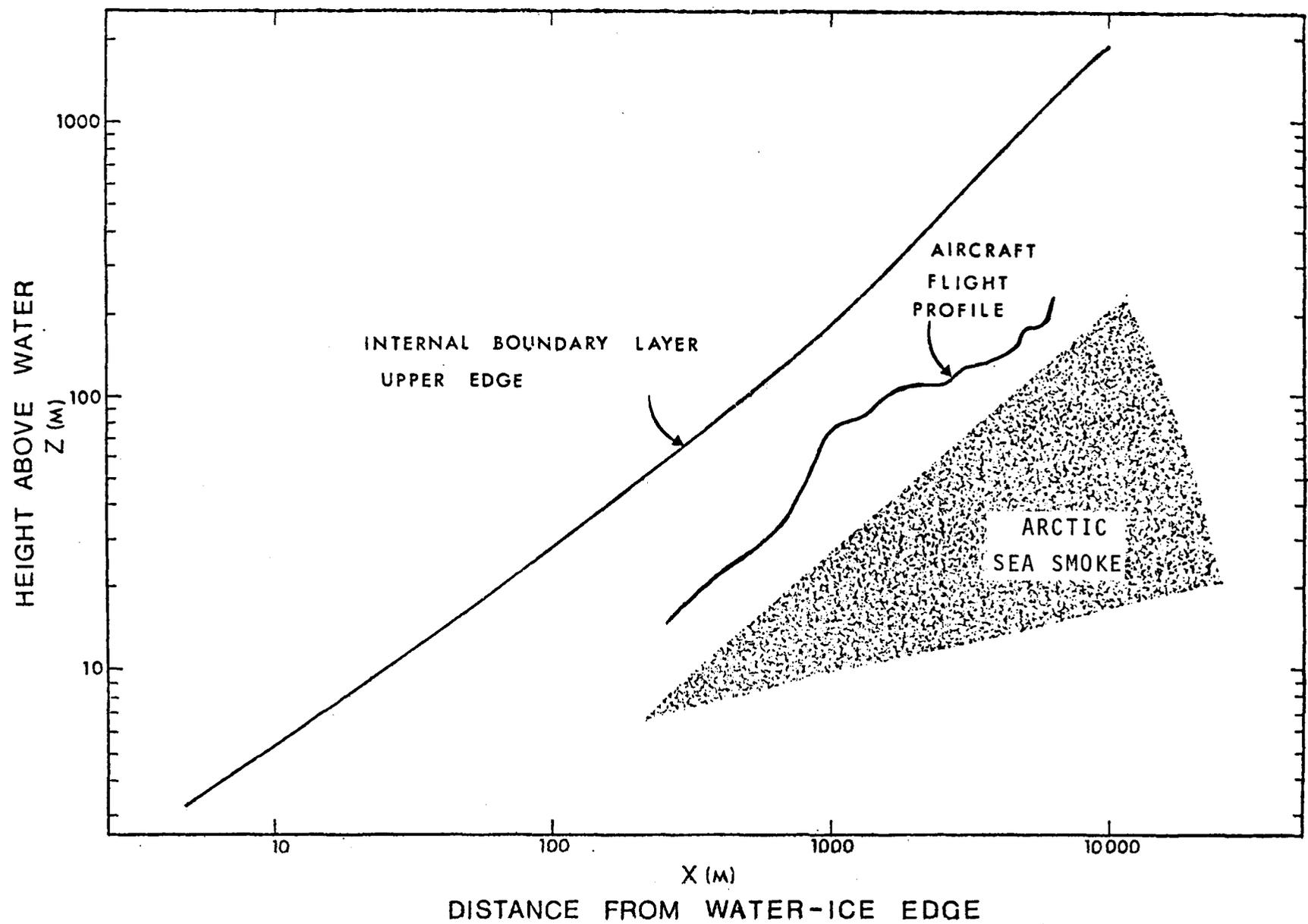
Observations

The weather observed by the surviving crew members included moderate turbulence at 4000 feet and turbulence again at 300 feet; some surface detail was visible vertically up to and during the early stage of the



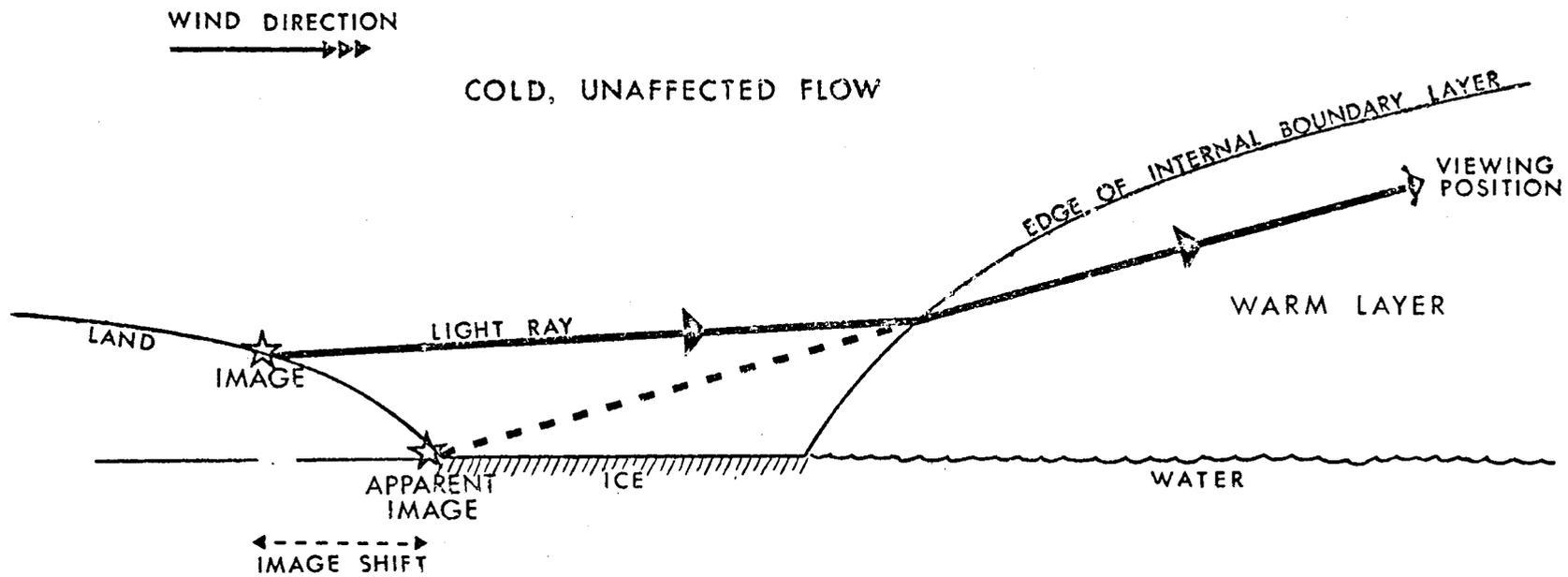
Cross-section of local meteorological situation (or internal boundary layer) associated with cold flow from land over 'warm' open lead offshore.

prepared by Dept of Environment



Position of aircraft and of upper edge of internal boundary layer.

prepared by Dept of Environment



Pictorial demonstration of image shifting due to internal boundary layer

prepared by Dept of Environment

approach and just prior to the sudden descent; no lights on the ground were observed at any time. When the Twin Otter took off from Rea Point at 0135 to search for the aircraft the pilot observed the weather to be; visibility of about 1 mile in blowing snow up to about 100 feet above ground and unlimited conditions above. Very low fog of perhaps 10 feet in height appeared to be streaming out over the open water caused by the wind blowing off the ice.

Facilities

The observing stations at Rea Point and Pedder Point as well as other arctic sites that are primarily used by private oil drilling operations are manned by radio operators employed by the drilling company involved but under contract to the Department of the Environment on a no cost mutual benefit basis. As well as taking weather observations these operators have other duties including communication with aircraft and ground stations. They are not required to take special weather observations. Six days after the accident the weather observing equipment and capability were examined by an inspector of the Department of the Environment. The inspection revealed that the observations were satisfactory with one exception, the wind speed detector was found in error and consequently all measured wind speeds required a correction factor of -25%.

Micro-Meteorological Considerations

There was a strip of open water of at least several miles width over which the aircraft flew immediately prior to the accident. An atmospheric structure analysis based on physical modelling and numerical computation indicates:

- (1) the extreme contrast in temperature as the airflow from the land and sea ice moved over the open water creates an internal boundary layer;
- (2) within the internal layer the flow would have an increased turbulence due to the convection originating from the "hot" open lead;
- (3) development of sea smoke mixed with ice crystals from blowing snow originating several hundreds of meters from the edge of the shore-fast ice and the open water, thickening with distance to dimensions suggested on the diagram; and
- (4) the position of the aircraft at the point where an abrupt descent was initiated corresponds closely to a position where optical shifting of surface images (mirage effect, foreshortening) would have been at a maximum.

AIDS TO NAVIGATION

A nondirectional beacon, OX (Rea Point) on 396 KHz is located .79 nautical miles from the threshold on the extended centreline of runway 33. A VOR/DME located on the same extended centreline .19 nautical miles from the end of the runway. There was no indication of an unservicability at the time of the accident.

FOR COMPANY USE ONLY

panarctic oils ltd

VOR-ADF RWY 33
REA POINT

No control. Contact RADIO on 131.0 Before Commencing Descent.

RADIO		NO TOWER	ELEV. 50'
131.0	5411		
122.8	5281.5		
	111.2T		

MIN ALT WITHIN 25 NM 2400
EMERG SAFE ALT 100NM 3000

MISSED APPROACH
CLIMB RWY HEADING
TO 2000 RIGHT TURN
TO OX NDB

6,300' x 200'
SAND SURFACE

CATEGORY	A	B	C	D
STR. IN	450 (400) 1		450 (400) 1	
CIRCLING	* 550 (500) 1/2		550 (500) 2	

* NOTE: ALL CIRCLING TO THE EAST OF AIRPORT.

OX TO AIRPORT .79 NM					
Knots	75	105	120	130	160
Min:Sec	:41	:30	:28	:24	:19

ALTERNATE 800-2
TAKE OFF 300-1

Aerodrome 75°22'N-105°42'W

CHANGE: THRESHOLD RWY 33 MOVED

VOR-ADF RWY 33 28 SEPT. 1974

COMMUNICATIONS

The radio operator at Rea Point did not hold a licence as required by the Radio Regulations of the Department of Communications. He was communicating with the flight on 122.8 MHz. There were no indications that any problems existed in the ground or aircraft installations. However, due to the multiplicity of communication duties he could not give full attention to the inbound flight. Apparently, priorities had not been well established.

AERODROME AND GROUND FACILITIES

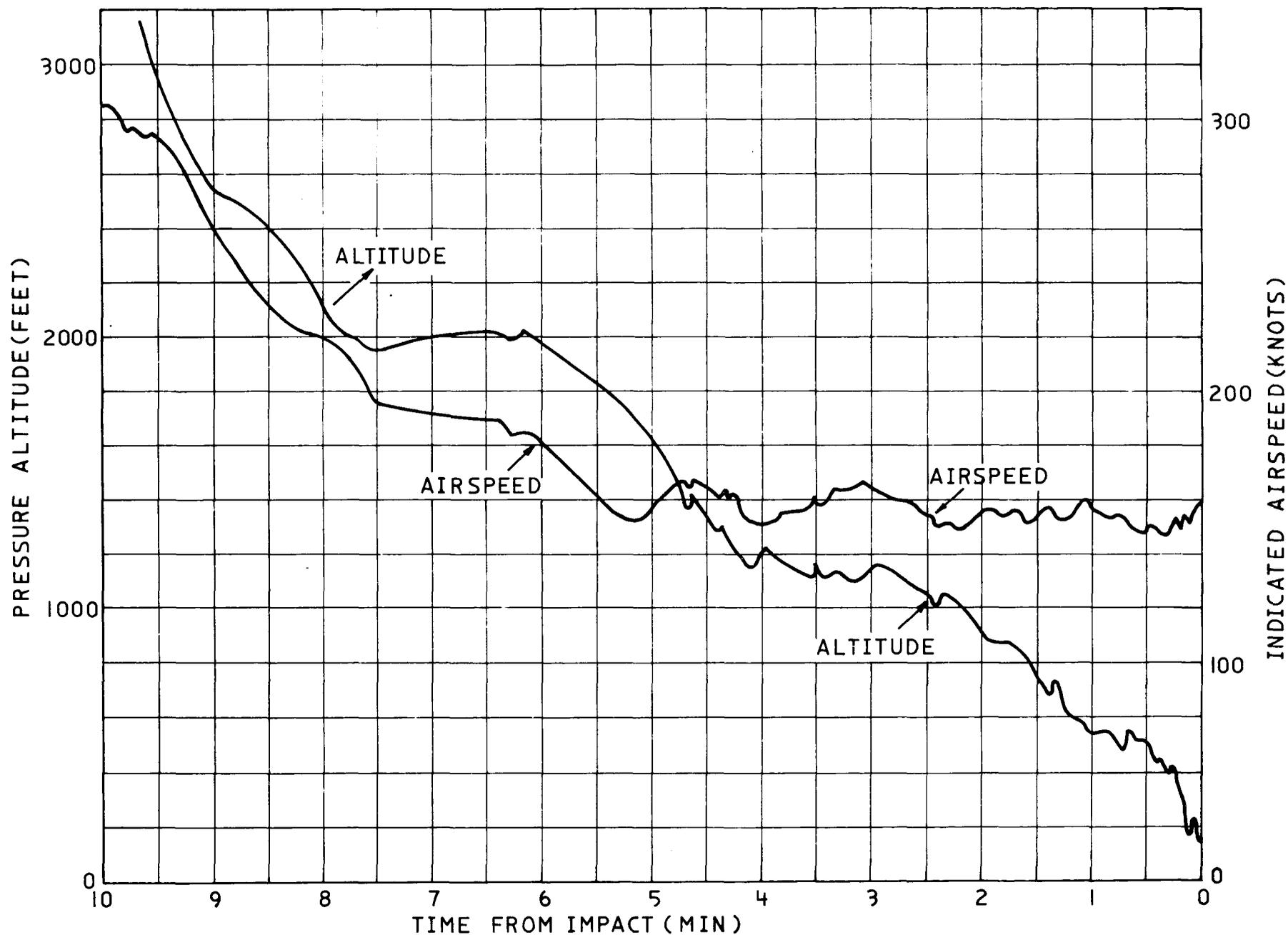
The airstrip at Rea Point oriented 333° true is located on Melville Island (75° 22'N, 105° 42'W) about 1 mile from the shoreline of Byam Channel. It is a firm level sand surface 200 feet wide and 6300 feet long. There were 2 standard red obstruction lights on top of the NDB and VOR towers with a "T" pattern approach lighting system. This comprised nine 50 watt amber lights across the runway direction followed by 4 similar amber lights leading into the runway threshold spaced about 200 feet apart. The threshold was marked with 10 green lights of 50 watts with white runway lights of 50 watts spaced at 200 foot intervals. If this lighting system met MOT or ICAO standards it would have extended at least 400 ft further from the threshold.

The fire fighting equipment consisted of four 350 lb dry chemical reel type extinguishers; two positioned on the aircraft ramp, one in the main garage and one in a heated area. There are also numerous small fire extinguishers located throughout the camp. The reel type extinguishers are mounted on elevated platforms to provide for mobility by use of a pickup truck.

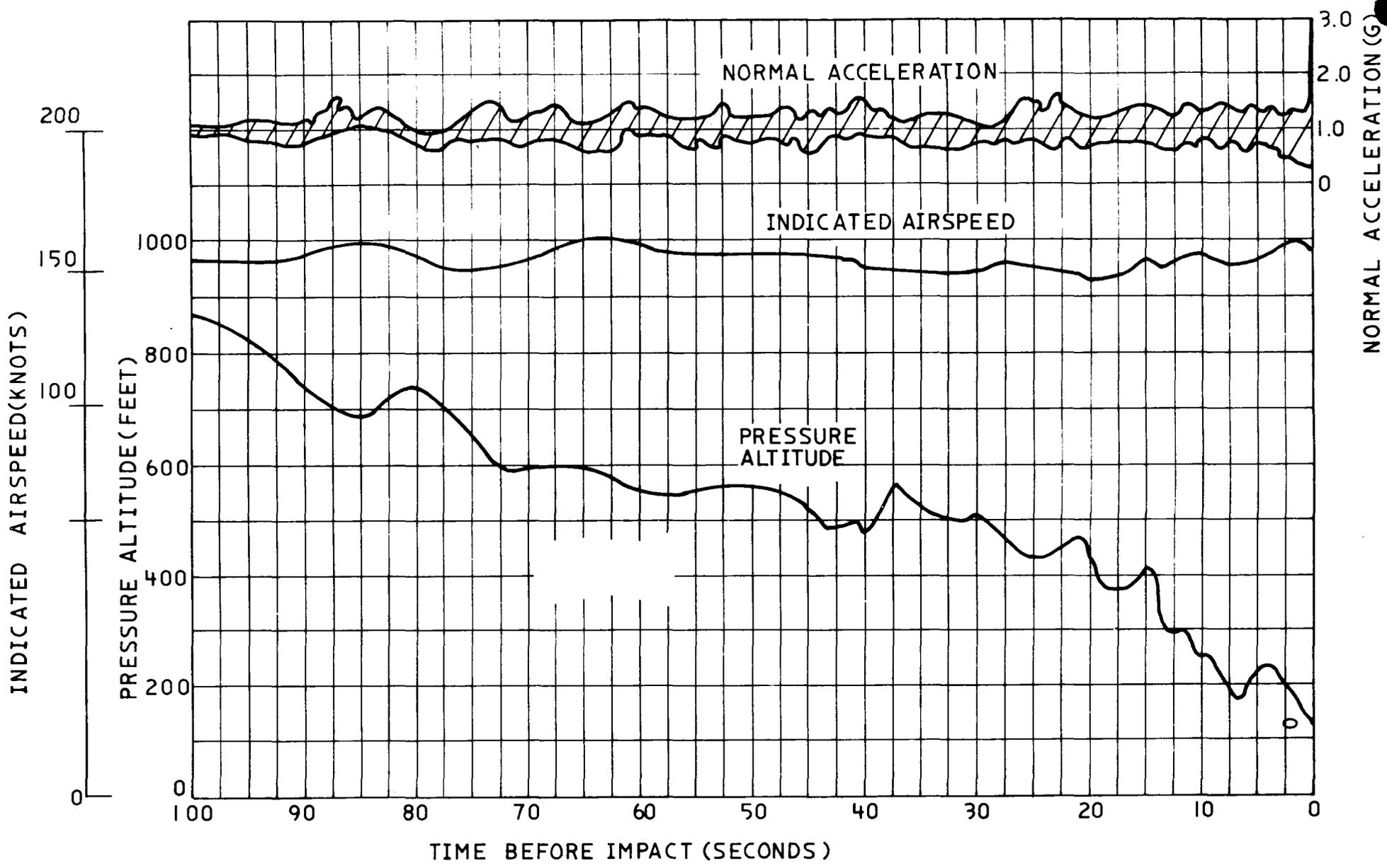
The planning for a disastrous aircraft accident was inadequate and there was no off-airport vehicle on standby for emergency use.

FLIGHT RECORDERS

The aircraft was equipped with a Fairchild A-100 cockpit voice recorder serial #1698 and a Fairchild 5424-221 flight data recorder serial #1301 although carriage of Flight Recorders is not required of a private operator. The rear section of the aircraft containing both recorders sank to the bottom of Byam Channel in about 100 feet of water. The recorders were subsequently recovered without any damage from the accident or the immersion in sea water. However, the cockpit voice recorder was found to be unserviceable due to a failure of an incorrect tape splice and the data recorder was found to have an inoperative heading stylus and reversed pitot and static pressure connections. The company had been advised of the reversed connections subsequent to a previous accident. Time histories of



ALTITUDE & AIRSPEED DATA OVER LAST 10 MINUTES OF FLIGHT



TIME HISTORIES OF FLIGHT RECORDER DATA OVER LAST 100 SECONDS

altitudes and airspeeds were derived but with a reduced accuracy that resulted from the reversed connections. The accuracy of the acceleration data was poor in the final stages of the approach due to vibration from turbulence. The data derived for the last 10 minutes of flight as well as an expanded version of the last 100 seconds is included.

The fluctuations in the derived pressure altitude over the last 40 seconds of the accident flight were studied in order to try and explain their presence and resolve why the final recorded altitude was at least 110 feet above sea level. It was obvious that the fluctuations were too rapid to represent genuine flight variations. However, there is no obvious explanation for the variations and no satisfactory corrections could be found to reduce them to a more realistic value. Since the altitude had to be derived from a combination of the altitude and air speed stylus positions, there is a combination of measurement errors that degrades the accuracy.

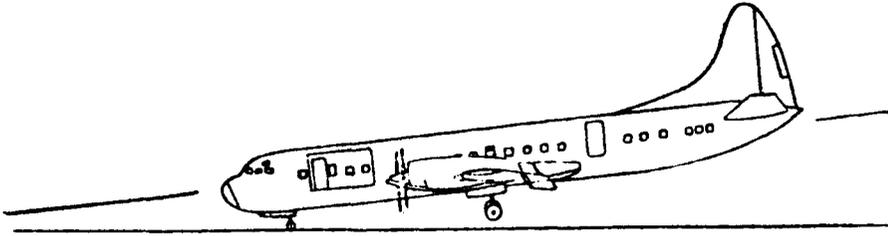
WRECKAGE

All major surface wreckage was located and identified. The major portions of the wreckage under water were located and identified with the use of under-water video and divers. Without exception the fracture characteristics of the identified items were typical of instantaneous overload failure. Some 200 other unidentifiable fragments also showed instantaneous overload characteristics.

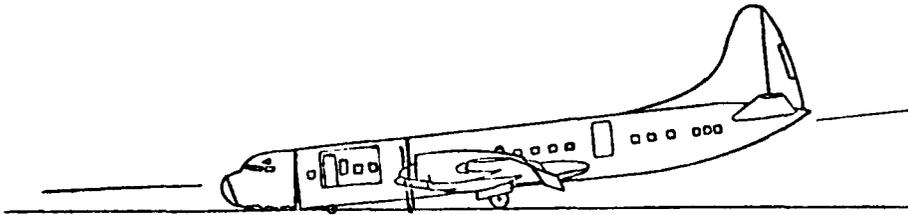
The aircraft struck the 8 inch thick sea ice on a heading of about 321° true with about a 2° crab angle to port. The wings were level or slightly left wing low with a nose down attitude in the order of 7°. The break up sequence is shown on the following page.

The burnt part of the upper rear portion of the fuselage indicates that it was partially immersed in water for some time prior to sinking. The rear main passenger door was in the open position during the time the surface fire was burning. Underwater examination showed that the emergency recessed T-handle used to operate the door manually had been pulled and the door was moved to a nearly fully open position. No satisfactory explanation was found for the position of the door and emergency handle as all passenger seats had been ejected through the front of the passenger compartment at the time of the aircraft break-up. This resulted from the passenger compartments being exposed to decelerations in the order of 16 to 20g.

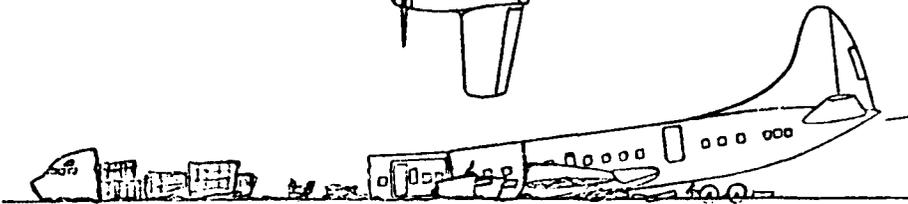
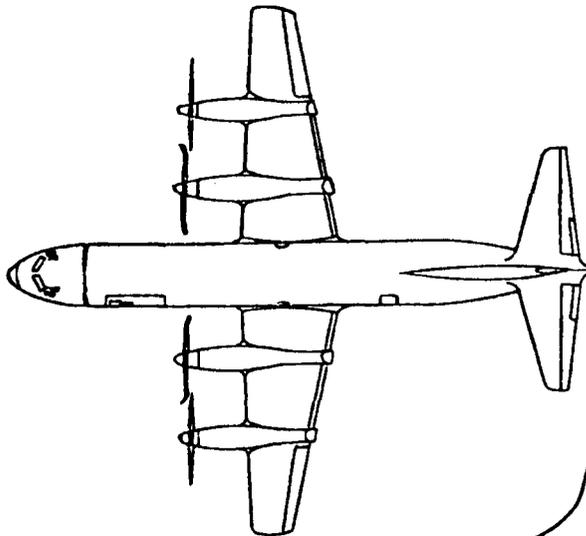
The examination of pressure sensitive instruments did not reveal any significant witness marks or indications; however both altimeters were set at the latest altimeter setting provided by the ground station of 29.91 inches of mercury. Significant electrical instrument indications included the single DME indicator on the Captain's side showing 2.3 nautical miles and the radio altimeter also on the Captain's side indicating 27 feet with the altitude warning set at 160 feet (it is believed the intended selection was 150'). The First Officer's radio altimeter was indicating 35 feet and the altitude warning was set at 290 feet (intended selection 300').



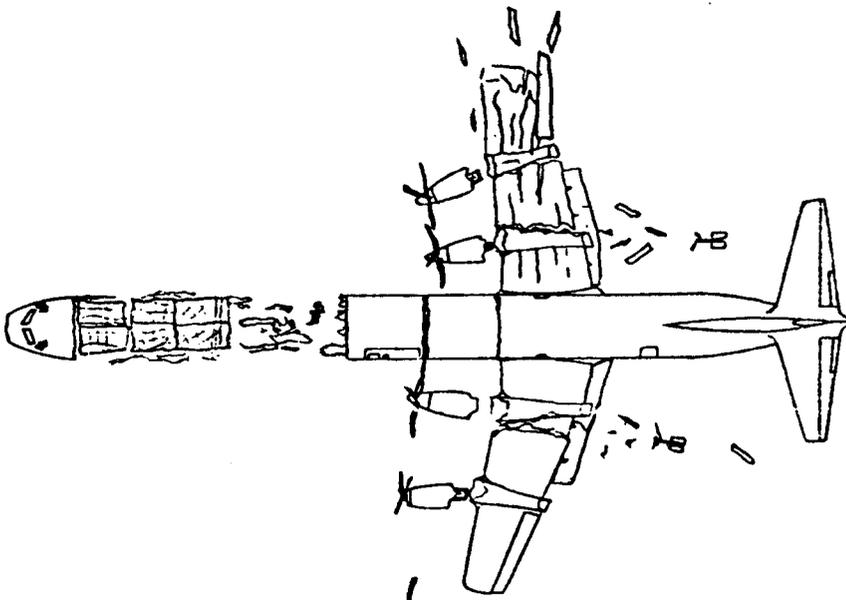
The Electra at impact with nose oleo fully compressed and about to punch through the ice.



The main gear penetrates the ice, the outboard propellers begin to slash the ice and the nose gear truss girders and shock tube tear out with the fuselage rupturing at FS 200.



The nacelles and wing center box contact the ice, the propellers, gearbox and engines separate from the wings, the fuselage ruptured at FS 570, the right wing exploded outboard of WS 170, the left wing separated intact outboard of WS 170 and the center wing box disintegrated. The cockpit and bulk cargo slid ahead of the decelerating structure, and the passengers, seats and emergency gear cabinet broke free within the aft fuselage.



The engine power indications showed turbine inlet temperatures of 742, 755, 748 and 718 degrees centigrade, and horsepower of 2835, 2725, 2720 and 2445 for engines 1 to 4 respectively. The oil pressures and fuel flows showed appropriately similar indications. The fuel quantity gauges read 3210, 3680, 1790 and 1930 pounds at impact.

The warning light bulb indications of the aircraft's major systems of hydraulics, electrical and fuel as well as control boost were examined. With the exception of the landing gear down indicator bulbs which were on at impact, all warning indicator bulbs were found to be off.

The number 1 engine was found on the ice surface and examination showed it to have been functioning normally at the time of impact. The fuel coordinator was found to have been set at 70 degrees at impact and the test of another engine with a similar setting, revealed a turbine inlet temperature of 756 and a horsepower of 2300. The remaining 3 engines sank to the bottom and although observed on an under-water video camera, were not recovered for more detailed examination. However, all propellers indicated substantial power was being developed at impact. Fuel samples taken from No. 1 engine showed that the fuel met the specific gravity and distillation range requirements for jet B type fuel. Neither the previous history nor the Flight Engineer's operating log recovered from the wreckage showed any major problems associated with engine operation.

TESTS AND RESEARCH

A test flight was conducted on a similar aircraft with similar loading and centre of gravity positions. The purpose was twofold; a) to determine what effect if any, changes in power had on the static system as a result of changing airflows over the static port caused by the number 2 and 3 propellers, b) to determine trim, power and pilot control input to achieve conditions similar to those in the accident.

Flight profiles similar to those provided by the information from the flight data recorder and witnesses' testimony were flown with the following results: no significant effect of changing thrust on the aircraft could be associated with responses on any pressure instrument during flight. From a normal power setting to maintain level flight a reduction to 200 horsepower on all engines and a control input to achieve about a 7 degree nose down attitude resulted in a "hands off" stabilized descent without changes of trim with a vertical velocity of about 2000 feet a minute.

FIRE

There was no indication of any in-flight pre-impact fire. Post-impact fire from burning fuel was evident. The post-crash fire did not propagate on a large scale until about 15 minutes after impact.

SURVIVAL ASPECTS

The injury to the Captain and First Officer of compression factors of L1 vertebrae indicate the greatest impact of the decelerative force was directed upwards. The high peak G loading appeared to be the result of the use of thick elastic non-energy absorbing type seat cushions as well as the dynamic failure of the vertical adjustment seat friction clamp mechanisms. The fact that the Flight Engineer did not have a compression fracture can be explained by the hunched forward posture that would be required to operate the throttle from the Flight Engineer's seat.

The occupants in the passenger compartment in the rear of the aircraft were exposed to substantial horizontal deceleration forces; however, 50% had potentially survivable injuries. As the passenger restraint systems were not designed to withstand the deceleration forces the passengers were subjected to secondary impact. In all cases the seat mountings came loose from the floor track. A number of these were broken indicating they had pulled through the floor tracks and a number showed no witness marks indicating that the floor tracks separated releasing the seats. The seat pans of the canvas type were intact except in cases where burning occurred. Some of the seat belts were of the fabric pull through lift latch type where the evidence confirmed previous experience of inadvertent release. Chafing on the fabric showed that the belt pulled through the latch and allowed the passenger to fly free.

The three crew seats were equipped with 5 point harnesses with a single release and the shoulder harnesses with an inertia reel of the rate of extension type. None of the crew had elected to wear shoulder harnesses nor was this a practice with Panarctic crews nor a requirement of the company. As it was established that the Captain died from drowning, probably while unconscious, utilization of the shoulder harnesses could have contributed to his survival.

Of the four crew and thirty passengers on board, only the First Officer and Flight Engineer survived. One passenger survived initially but succumbed to hemorrhagic shock while enroute to Edmonton on an air medical evacuation flight. Of the remaining 31 occupants of the aircraft 16 had potentially survivable injuries. Of these with survivable injuries, it is estimated that five survived for greater than 15 minutes, four survived for ten to 15 minutes and seven survived for less than 10 minutes. Of those who survived for less than ten minutes, six were found on the ocean floor and probably succumbed to drowning.

ANALYSIS

The flight from Edmonton to Rea Point was routine for the type of operation involved until the aircraft had descended to about 875 feet above sea level and 6 miles from the DME. The Captain made the decision to descend to 300 feet before reaching the minimum descent altitude of 450 feet; the First Officer accepted the Captain's action. While the First Officer reset his radio altimeter warning to the minimum descent altitude of 450 feet, the Captain set his to 300 feet. Considering the runway elevation of 50 feet the radio altimeter selection of 300 feet would provide for a warning light when the barometric altimeter indicated an altitude of 350 feet above sea level over the runway or 100 feet below the minimum authorized altitude. When they descended through 450 feet, the First Officer reset his radio altimeter warning to 300 feet and advised the Captain.

The statements of the Captain that he believed they were on top of a layer of cloud at 300 ft just prior to the sudden steep descent is significant. This signifies that the Captain may have been using outside visual reference. Normally, the pilot flying maintains instrument reference until the other pilot indicates he has sight of the runway or approach lights. The Captain's selection of 150 ft on the radio altimeter would be consistent with an intent to try to descend below cloud.

The First Officer observed an ice/water line and advised the Captain he had visual contact. With this observation being made through the forward windshield the Captain should have been able to see the same ice/water line. However, the reaction of the Captain would be based on what he perceived. A rapid descent was initiated very quickly with a large control input causing a marked feeling of negative "G". The interpretation of sensory stimuli is dependent upon many complex variables including both psychological and physiological, factors. Identical stimuli may be perceived by different people in different ways or interpreted differently by the same person at different times. In this case there were a number of factors that could possibly have degraded the Captains perceptual state including:

- a) fatty liver disease possibly causing low blood sugar and deteriorating performance,
- b) a degree of fatigue,
- c) the movement of the ice/water line seaward from the position observed by the Captain on previous flights,
- d) stress from flying with a new First Officer under marginal weather conditions,
- e) the stress of continuing to fly in an operation of which he was apprehensive.

In his perceptual state the Captain interpreted the visual information as requiring an immediate steep descent. Misinterpretations could include: the ice/water line location; pitch-up from the dark/light difference; the ice being a cloud layer; or variations in light intensity and/or image shifting.

After the steep descent was established the Captain did not respond to the warnings of the First Officer and Flight Engineer. He also failed to respond to the instrumentation that showed a hazardous rate of descent at low level three miles from the airstrip. This failure to respond indicates a degree of incapacitation.

While the Captain's actions may have been influenced by perceptual problems the factors that predisposed him to be affected by these problems are significant. The descent to 300 feet on the radio altimeter put the aircraft 150 feet below the minimum authorized altitude. It was done in an apparently routine manner without discussion with the First Officer. This disregard of approach criteria was accepted by the First Officer as it had happened before on at least one previous flight with another Captain. It can be concluded that this procedure was either acceptable to those in control of the company flying operation or that they did not have an effective system for detecting operational deficiencies.

The omission of a prelanding briefing of the flight crew denied the Captain the safety factor inherent in cross monitoring by the crew. Both the First Officer and Flight Engineer were restricted in their capacity to monitor the approach due to a lack of information. Standardized procedures were not followed nor were procedures promulgated in a Flight Operations Manual or similar document. The Captain's past experience flying single pilot aircraft was probably a factor in his actions.

After the abrupt descent was initiated the Captain failed to respond to shouted warnings and instrument indications. The ice impact at about seven degrees indicates that there was little or no rotation of the aircraft in an attempt to arrest the descent. Despite concern and shouted warnings from the First Officer and Flight Engineer the First Officer did not take over the control of the aircraft. There was no company procedure established whereby the pilot not flying would detect subtle incapacitation and take over control in the case of any incapacitation. However, when the high descent rate in the order of 2000 feet per minute was established below 300 feet the possibility of a safe recovery was remote.

Undoubtedly the Captain was incapacitated to some degree. The evidence of his left leg being extended with the slight yaw to the left and being slightly right of the centreline indicates a remaining ability to recognize and react. However, the possibility of a serious debilitating condition brought about by metabolic change cannot be discounted.

From the time of the crash until rescue crews reached the scene about 2 hours had elapsed even though the crash site was 2 1/2 miles from the end of the runway. The delay occurred due to an inadequately defined response procedure. There was no off-airport vehicle on a standby basis and indecisive action followed the loss of communication with the aircraft. It is unlikely that a more rapid response in this instance would have affected the outcome.



Government of Canada / Gouvernement du Canada

MEMORANDUM

NOTE DE SERVICE

TO / À

A S E, Ottawa
Attention: Mr. R. M. Logan

FROM / DE

O C A I, Toronto

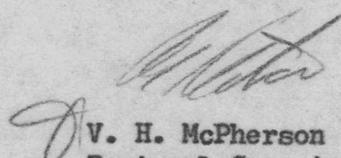
SUBJECT / OBJET

LOCKHEED ELECTRA MAINTENANCE MANUAL

SECURITY - CLASSIFICATION - DE SÉCURITÉ
OUR FILE - N/RÉFÉRENCE 5002-1140003
YOUR FILE - V/RÉFÉRENCE
DATE October 3, 1975

We are returning Electra Maintenance Manual Volume II, Chapter 24 to 38 and Volume III, Chapter 49 to 91.

These Manuals have now served their purpose with this office.


V. H. McPherson
 Regional Superintendent
 Accident Investigation

Encl.
BA:sml

Brien —

This is a FIRST,

ROUGH, UNREVISED
DRAFT

History of the Flight

001155



CONFIDENTIAL

Lockheed L188C Aircraft CF-PAB referred to as Panarctic's flight 416 departed Calgary International Airport at 1805 hrs MST. The aircraft was on a routine positioning flight to Edmonton with a Captain, First Officer and Flight Engineer on board. The 30 minute flight was uneventful with no unserviceabilities reported by the crew. The aircraft was prepared for the continuing flight north with the loading 20,000 lbs of baggage and freight and 21,000 gallons of jet B fuel. The aircraft Captain and Flight Engineer were changed to those scheduled for the Rea Point flight.

The outgoing Captain received a weather briefing; an IFR flight plan was filed to Rea Point by a direct Fort Smith, direct Comtwyto Lake, direct Byron Bay, direct Rea Point at an initial cruising altitude of 18,000 feet. The estimated time enroute was 4 hrs. 12 mins.

After loading 31 passengers and a fourth crew man, the load master cum flight attendant the aircraft departed the Edmonton International Airport at 20:04 hrs MST. The flight preceded uneventfully, initially cruising at 18,000 feet to Fort Smith where it was cleared to 21,000 feet and then to 25,000 feet passing Comtwyto Lake. The aircraft reported over Byron Bay at 23:04 hrs with an estimated time of arrival at Rea Point of 0016 MST.

Radio contact was established with Rea Point about 150 miles out and a descent was started for a straight-in approach to runway 33. At 0015 hrs the aircraft reported to Rea Point they were 6 miles out and at 15,000 feet on final approach. The ground radio operator acknowledged transmission and passed the 2400 hr weather observation. About 1 mile after this transmission the radio operator noticed the wind speed indicator exceed 50 mph and a check on the visibility reported he could see less than 50 yards. At this time he tried to contact the aircraft to advise them of the sudden

change but was unable to receive a response.

Further attempts to contact the aircraft proved fruitless. The senior company officials on the base were notified and after a decision was reached to search for the Lockheed a Twin Otter Captain was awakened at 0105 hrs, took-off at 1000 hrs and discovered the accident site 2 minutes later. The aircraft had struck sea ice 2 1/2 miles south and near the extended centre line of runway 33.

Events on the Ground at Rea Point

At about 2330 MST the aircraft was in contact with Rea Point on 122.8 megahertz with the conversation dealing with the load and routing and with confirmation of the estimate of 0016 hrs. The aircraft was provided with the weather and traffic information. At 0015 the aircraft advised it was 6 miles out on final approach and the radio operator gave the 2400 hr weather sequence which was ceiling thin obscured, visibility 1 mile in blowing snow, temperature -11°F, and the wind 312° through at 30 gusting to 38, and the altimeter at 29.91 in. mercury. It was later determined that the wind indication was an error and the actual was 25% lower which would give an actual wind of 20 gusting to 28. One or two minutes later the radio operator's attention was attracted by sudden increases in wind velocity that was indicated at just over 50 mph. He observed the visibility to be less than 1/8 of a mile and occasionally as low as 50 yards or less. This sudden reduction in visibility was reported to the aircraft but there was no response. Further contact was attempted with the aircraft on various frequencies but without success. The senior company person at the site was advised by the radio operator that the aircraft was 11 minutes over-due and after consultation with the site foreman, a Twin Otter pilot

was alerted, briefed on the circumstances and he took-off on runway 33 at 0135 hrs for a search of the approach area. The pilot reported that the visibility was about 1 mile in blowing snow during the take-off roll, shortly after becoming airborne above the blowing snow the visibility was unlimited. At about 800 feet altitude during a left hand turn towards the approach area, two small fires were seen south of the airport. During a low pass with landing lights on a person was seen to be standing in an area strewn with pieces of the Electra. After a brief examination of the accident site the Twin Otter landed back at the airstrip. The ground party departed the camp at about 0150 hrs and guided by the Twin Otter circling over the accident site arrived there in about 30 minutes. Three survivors, the Co-pilot, Flight Engineer and a passenger, were located and returned to the camp by about 2050 hrs.

Events in the Aircraft

The descent from the cruising level at 25,000 feet was uneventful. It was smooth with the exception of some turbulence encountered at about 4000 feet. The flight data recorder profile shows a descent rate between 3000 & 2000 feet of about 570 feet a minute, the aircraft leveled at 2000 feet at about 17 DME for a period of 1 minute 45 seconds. The aircraft then slowly descended at about 260 feet a minute to about 875 feet above sea level, and about 6 miles DME. A call was made to Rea Point advising them of their DME on final. There was light turbulence and about 1500 horse power selected on the engines. Both the VHF navigation radios were selected to 111.2 megahertz which is the VOR frequency and both ADF's selected to 396 kilohertz which is the OX nondirectional beacon. Both the Captain's and the First Officer's barometric altimeters were set to 29.91 inches of mercury which was the latest setting provided by the Rea Point

radio operator. The airspeed was indicating 150 knots with a -25 wind component resulting in a ground speed of about 125 knots. The pre landing check had been completed with a 100% flap selected and the undercarriage down. The landing lights were extended but were not on due to a glare problem however the wing leading edge lights as well as the alternate taxi lights were on. The glare was experienced from these lights early in the descent from about 10000 feet but not there after. There was no briefing by the Captain as to what was planned for the approach or landing. The Flight Engineer was able to see what appeared to be open water with ice flows. The First Officer set he radio altimeter to 450 feet and the Captain set his to 300 feet. When the warning light illuminated on the First Officer's radio altimeter, he advised the Captain and as the descent continued through the minimum decision height of 450, the First Officer reset his altimeter to 300 feet and so advised the Captain. This was still a gradual descent of about 300 feet a minute. At about 300 feet the First checked the DME reading 3 miles, saw a dark area of open water and an ice line and reported to the captain that they seemed to be coming up on an ice ridge and that they had visual. Near this time the captain reset his altimeter to 160 feet. Also close to this time the Captain said that he believed they were on top of a layer of cloud then repeated the statement and at the same time retarded the throttles and pushed forward on the control wheel. The forward movement of the wheel was sufficient to lift the Flight Engineer out of his seat by the effect of negative G.

The First Officer warned the Captain they were at 300 feet and was responded to by the words "check 300". The rate of descent increased rapidly to between 1700 and 2000 feet a minute and the First Officer then in an alarmed state shouted at the Captain that they were descending through 200 feet at about 2 DME; however there was no response. The Flight Engineer and First Officer called out altitudes at 150 feet, 100 feet and

50 feet without obvious reaction from the Captain. The First Officer reached for the power levers and found the First Engineer's hands already on them. The First Officer was observed with his hands on the control wheel just prior to the impact. During the contact with the ice the cockpit area broke away from the remainder of the fuselage and with the cargo which was in the forward part of the aircraft continued along the ice surface for about 900 feet. After the cockpit came to rest the Flight Engineer who did not remember the impact undid his seat belt and saw both the Captain and First Officer remaining in their seats. The First Officer was able to undo his seat belt and the Flight Engineer pulled him from the cockpit onto the ice. The cockpit area sank through the broken ice. The flight engineer got a parka for the First Officer and kept him walking as long as possible, about 1 hour then made him as comfortable as possible but kept him awake until assistance arrived.

Findings

The Captain descended below the authorized minimum altitude.

The Captain became incapacitated after initiating an abrupt descent from below the authorized minimum altitude.

There was no established company procedure nor was the surviving crew aware of any procedure for dealing with crew incapacitation, either subtle or overt.

There was little or no crew coordination in the cockpit in the final stage of the flight.

There was no Flight Operations Manual or similar document in use to prescribe the duties and responsibilities of the flight crew.

The operation was licensed in the private category without the protection provided by the established commercial safety standards.

INVESTIGATION

Injuries to Persons

Injuries	Crew	Passengers	Others
Fatal	2	30	Nil
Non Fatal	2	Nil	Nil
None	0	0	0

Damage to aircraft

The aircraft was destroyed.

Other Damage

None

CONFIDENTIAL

Crew Information

Captain W. B. Thompson

Captain Thompson age 30 held a valid airline transport pilot licence #VRA1203, endorsed for single and multiengine land and sea up to a gross weight of 12500 lbs as well as for the Lockheed Electra aircraft. His class I instrument rating was valid to January 1975. A route check in July 1974 and an instrument flying competency recheck in August, both conducted by Ministry of Transport approved company check pilots were successfully completed by Captain Thompson.

Captain Thompson began flying in November 1962 and accumulated a total of 8,143 hrs of which 3600 hrs were flown on Twin Otters and 1792 were flown on the Lockheed Electra including 907 hours as Captain. Most of this flying time was accumulated in Arctic operations.

In January 1970 Captain Thompson started to fly with Panarctic as a Captain on the Twin Otter aircraft. In January 1972 he completed his transition training on the Electra and started line flying as First Officer. In June 1973, he took simulator and flight training and was upgraded to Captain in July 1973.

The Captain's last instrument rating renewal check flight was conducted by a Panarctic check pilot on July 18, 1974. Recurrent simulator training for a total of 9 hours 15 minutes was conducted during August.

Pathological Aspects

There was injury to the left foot with corresponding damage to the left boot as well as injury to the left ankle indicating in the extension of the left leg at the time of impact. There was fractures of the left hand indicative of the hand being positioned normally on the control wheel at the time of impact. There was a 50% compression fracture of the L1 vertebrae and a lack of other injuries indicating there was significant vertical acceleration in the area of 25g with an onset rate of at least 300g per second, and a duration of about .1 seconds.

The liver shows gross fatty infiltration with enlargement to nearly twice its normal size indicating a severe liver metabolic disturbance, although usually benign, this condition can be associated with severe hypokalemia and other electrolyte imbalances, changes in cardiac dynamics, various metabolic abnormalities including hypoglycemia and sudden unexpected death. In an otherwise apparently healthy individual the noted degree of fatty change in the liver is almost certainly associated

with the excessive intake of alcohol. Patients with alcohol liver diseases but without clinical evidence of cardiac disease can exhibit an abnormal left ventricular response to stress. Subjects with this type of liver disease can be particularly at risk in stressful situations. The negative tissue alcohol ^{metabolism} indicate that the Captain had not been drinking for a significant time before the accident. Acute alcoholic intoxication or withdrawal hangover is likely not implicated in this accident.

Biochemical studies were not significant with the exception of the lactate curves. These showed no stress response either chronic or acute indicating the Captain was not in fear of mortal damage due to an impending crash.

Psychological Aspects

Captain Thompson obtained a commercial pilot's licence in 1964 and for the next 10 years progressed to various flying positions to that of a Captain on a large 4 engine turbine aircraft at the time of the accident. His first instrument rating, a Class II was obtained in 1968. In 1971 Captain Thompson failed an instrument check but passed it the following day. During the same year he took his initial ground school and simulator training on the Lockheed Electra aircraft during the upgrading process from a Twin Otter Captain to a First Officer on the Electra. This training was completed in December 1971. Reports of this training indicated problems experienced with IFR approaches and adapting to the flight directors system. After flying as a First Officer for about 7 months, he was given an instrument proficiency recheck and had problems associated with cockpit management as well as the use of the ADF, (Automatic Direction Finder). His next instrument check about 6 months later revealed only a problem in altitude control. In June of 1973, Captain Thomson took simulator and flight training for upgrading from First Officer to Captain and during the

instrument check in the same month, his procedures were considered to be "unorthodox". In December 1973, he successfully passed the proficiency recheck however did have a derogatory comment of being inadequately set up for some procedures. Approximately 6 months later, the instrument recheck revealed he required more attention on detail of clearances and approach charts however the test was successfully completed. His last proficiency check of any kind prior to the accident was on August 24, 1974, in a Lockheed Electra simulator. Comments included by the check pilot were: preparation for ILS poor, not holding altitude to glide path intercept; slow initiating descent on ADF approach; speed high on missed approach - 195 knots.

This pilot had spent most of his flying career on light aircraft up to and including Twin Otter. During all of this time he would have been a single pilot in command on board with the requirement to conduct a complete one-man operation. While he had held an instrument rating during the four years up to and including 1971, instrument procedures during the approach phase would be markedly different but then those employed in a high performance well equipped, large, two pilot aircraft. His total experience on two pilot aircraft was in the Lockheed Electra starting in about January 1972 for 12 months as a co-pilot then for the following 14 months at the time of the accident as a captain. It is significant that many of the problems associated with proficiency checks on this pilot relate to procedures rather than to basic instrument flying. Studies have indicated that the maintenance of flying proficiency should focus on the training of procedures.

From the evidence collected Captain Thompson seemed to have been a mildly obsessive, compulsive, extraverted family oriented person. His consumption of alcohol was greater than what could normally be considered

"social drinking" but it seemed not untypical from the type of drinking pattern common to people who travel a great deal in their business including pilots. He had been initially well motivated towards flying but had been increasingly dissatisfied and frustrated within the year prior to the accident. The indication of his dissatisfaction with flying which included changing jobs or getting out of flying completely possibly indicated a breakdown in defence mechanisms and an early fear of flying syndrome.

From a medical standing, a point of significance are the increases in weight over the years and the heterophoria of between 6 to 8 diopters. In addition, June 19, 1974 a cardiological assessment was requested due to flattening of the T waves in Captain Thompson's electrocardiogram. The cardiovascular report was negative although in retrospect T wave flattening may have been due to lowered serum potassium. The increase in fatigue in the few months prior to the accident may have been partially caused by his liver condition and amplified by the frustration and fear which was rapidly developing.

First Officer D. W. Hatton

First Officer Hatton, age 32, held a valid airline transport pilot licence #XDA-1244, endorsed for single and multi-engine plane up to a gross weight of 12500 lbs as well as for helicopter and Lockheed Electra aircraft. His Class I instrument rating was valid to 1 March 1975.

First Officer Hatton commenced flying in 1966 and up to the time of the accident had accumulated about 51,000 hrs of which 1583 hrs were on Twin Otters and 160 hrs on the Lockheed Electra. Of the 1583 hrs on the Twin Otter, 665 hrs were experienced on Arctic operations out of Rea Point. In

July 1974 he started ground and simulator training on the Lockheed Electra aircraft for upgrading to First Officer from an Otter Captain and began flying in this capacity near the end of August.

Physiological

His first medical examination on file dated February 28, 1966 indicated no abnormalities or restrictions which was also reflected in his latest examination prior to the accident September 5, 1974.

Psychological

First Officer Hatton's attempt to obtain an instrument rating resulted in a failure assessment which could not be considered unusual in itself for an initial instrument flying proficiency check. About two weeks later, on February 27, 1970, he passed the proficiency check; however, with a Class II endorsement. About 1 year later he had another instrument proficiency recheck and was again awarded only a Class II with problems showing up in procedures but one month later he was upgraded to a Class I. He continued to successfully pass instrument proficiency flying rechecks to a Class I standard with no outstanding problems. In July 1974 he successfully completed Classroom and simulator training on the Lockheed Electra aircraft. He successfully passed an instrument flying proficiency check on August 1974 and began flying in the capacity of a first officer.

First Officer Hatton had very little experience in the two pilot operation of a high performance aircraft. His position for sometime would be that of someone in training to learn cockpit management techniques.

Flight Engineer G.E. Weyman

Flight Engineer Weyman obtained a Private Pilot Licence in 1969. After serving an apprenticeship he received his Aircraft Maintenance Engineers Licence in 1972. In June 1973 he completed Lockheed Electra training and a service training course on Allison Turbine Engines in August of the same year. During the same month he completed Lockheed Electra simulator training and flight training in the capacity of flight engineer.

Aircraft

The aircraft was a Lockheed Electra model 118C, manufacture serial #118C/1141. It was powered by four Allison 501-D13 engines driving constant speed aeroproducts A6441 FN 600 hydromechanical propellers. The Federal Aviation Agency Type Certificate Data Sheet #4A22 was issued 22 August 1958. Aircraft came to Canada in 1969 under FAA, Certificate of Airworthiness #E-66547, issued 29 December 1969 when the airframe had accumulated 19133.4 hrs. The Ministry of Transport issued a Certificate of Airworthiness to CF-PAB on 30 December 1969 and a Certificate of Registration for Panarctic Oils on 2 January 1972.

The weight and balance sheet made up prior to the flight to show the load and C of G position showed a maximum take-off weight of 114580 lbs calculated on the basis of 20009 of cargo and 52070 lbs for 31 male passengers. The burn off or enroute fuel was calculated to be 18930 lbs to provide a maximum landing weight at Rea Point of 95650 lbs. The total fuel for take-off was indicated to be 26530 lbs and the C of G was shown as 26.7% MAC. The Flight Engineer's fuel log from the aircraft showed the fuel at take-off to be 27860 lbs or 13030 lbs more than indicated on the weight and balance form. The form itself had been revised and only used

for a few weeks prior to the accident and showed aircraft compartments not in agreement with the weight and balance document. Other discrepancies existed on the weight and balance sheet and despatch documentation however none would have had a direct bearing on the accident circumstances.

From an ergonomic point of view, the cockpit seemed to be well arranged with excellent visual fields. The altimeter was of the three-pointed type known to induce perception errors although usually of the 10 thousand foot level. Of significance was the lack of a DME read-out on the First Officer's panel even though it was used as a primary approach aid. While it was possible for the First Officer to see the Captain's DME read-out it is in the least, a distracting influence.

The passenger emergency procedure cards illustrate how to open the overwing exits which in many cases with cargo in that area would not be available for passenger egress. The cards illustrate only the location of the exits in the passenger compartment but not how they should be opened. No information is provided regarding the evacuation slide with the exception that an illustration indicates that high heels should not be worn.

Meteorological Information

The meteorological condition over the Arctic Islands north of 70° latitude from 1600 hrs on October 29 to 0500 hrs MST on October 30 was controlled by a 978 millibar low that existed in Baffin Bay at 1600 on the 29th and a ridge of high pressure extending from Gladman Point to Northern Banks Island with a surface low that moved to the vicinity of Thule by 2300 hrs MST and began to fill. A new low pressure centre developed northeast of Alert by 0500 MST on the 30th. The ridge of high pressure remained

stationary through the period. A broad cyclonic flow of continental arctic air prevailed over the Island with the maximum northwesterly surface gradient occurring in a northwest, southeast zone over eastern Melville Island.

There was a trough embedded in the northwesterly flow which moved southeastward at an estimated speed of 30 knots; passed Rea Point at 2000 hrs on the 29th and Resolute Bay 3 hrs later. Weather reports at Resolute and Rea Point indicate that overcast layer clouds prevailed ahead of the trough and decreased to scattered clouds one hour after the trough's passage. The Resolute Bay radiosonde at 1700 hrs on the 29th showed a saturated layer between 2000 and 9000 feet asl. This indicates that sufficient moisture existed to create overcast mixed layers ahead of the trough. However, the surface weather reports at Resolute Bay near 1700 hrs indicated only scattered to thin broken layers. Rea Point reported overcast clouds ahead of the trough with an estimated base of 1000 feet above ground level. One hour after the passage of the trough (at 2100 hrs on the 29th) Rea Point reported 1/10 of altocumulus.

Maximum surface winds and the lowest visibilities occurred ahead of the trough. Winds abated slightly and the visibility improved to 1 mile behind the trough. However, the wind experienced a secondary maximum with gusts to 38 mph at 2400 hrs on the 29th.

The terminal forecast for Rea Point issued by the Arctic weather Centre forecast office in Edmonton at 1530 MST on the 29th valid for 12 hours from 1600 to 0400 hrs on the 30th was included with the general weather information provided to Captain Thompson prior to his departure from Edmonton. This forecast indicated; scattered clouds at 1500 feet with

a broken ceiling at 8000 feet, conditions variable to partially obscured and a broken ceiling at 1200 feet; a visibility of 3 miles obstructed in ice crystals and ice fog variable to 3/4 mile in light snow and ice fog; the surface wind 300° through at 25 mph with gust. The surface weather observation at Rea Point taken at 2400 hrs on the 29th, about 16 minutes prior to the accident, was partially obscured ceiling of blowing snow with an opacity of 2/10; the visibility 1 mile in blowing snow and occasionally higher; the surface wind 312° at 22 gushing to 28 mph. The reason for the omission of blowing snow from the terminal forecast was not determined.

Contrary to the requirement for filing alternate airports, Pedder Point was filed as the alternate although no terminal forecast was available. The only weather available for Pedder Point would have been the last hourly sequence which at 1800 hrs was sky clear, visibility 10 miles in ice crystals. Hourly weather observations continued to be taken with the 2400 and the 0100 observations were missing. The 2300 hr observation was; "sky partly obscured in blowing snow with an opacity of 2/10 with scattered altocumulus clouds at 10000 feet; visibility 3 miles in blowing snow; wind 230° at 17 mph.

The weather observed by the surviving crew members included turbulence at 4000 feet and smoothing out with turbulence again encountered at about 300 feet, no heavy turbulence; vertical visibility up to and including moment just prior to the sudden descent; no lights on the ground were observed at any time. When the Twin Otter took off from Rea Point at 0235 MST to search for the aircraft the pilot observed the weather to be visibility of about 1 mile in blowing snow until reaching about 100 feet above ground when the visibility and ceiling increased to unlimited conditions. Very low fog of perhaps 10 feet in height appeared to be streaming out over the open water from the wind blowing off the ice.

The observing stations at Rea Point and Pedder Point as well as other arctic sites that are primarily used by private oil drilling operations are manned by radio operators employed by the drilling company involved but under contract to the Department of the Environment on a no cost mutual benefit basis. These operators as well as making weather observations have other duties including communication with aircraft ground stations. They are also not required to take special weather observations when conditions change between the regular hourly observations. Six days after the accident the weather observer equipment and capability were examined by an inspector of the Department of the Environment. The inspection revealed that the observations were satisfactory with one exception, the wind speed detector was found in error and a correction of all observed winds speeds require a correction factor of -25%. This correction was applied to all surface wind speeds referred to in this report.

Aids to Navigation

The primary enroute aid, the nondirectional beacon, OX on 396 kilohertz located .87 nautical miles on the extended centre line of runway 33. There's a VOR/DME primarily as an approach aid located on the same extended centreline .14 nautical miles from the end of the runway. (See appendix A Company approach plate)

Communications

The aircraft was communicating with the radio operator at Rea Point on 122.8 megahertz. There were no indications that any problems existed, neither in the ground nor aircraft installation.

Aerodrome and Ground Facilities

The airstrip at Rea Point is located on Melville Island about 1 mile from the shore line of Byam Channel oriented 333° true. It is a firm level sand surface 200 feet wide and 5677 feet long. The lighting consisted of 2 standard red obstruction lights on top of the NDB and VOR towers with a "T" pattern approach lighting system. This comprised 950 watts amber lights across the runway direction followed by 4 similar amber lights leading into the runway threshold spaced about 200 feet apart. The threshold was marked with 10 green lights of 50 watts with white runway lights of 50 watts spaced at 200 feet intervals.

The fire fighting equipment consisted of four 350 lb dry chemical reel type extinguishers two positioned on the aircraft ramp one in the main garage and one in the heated area. There are also numerous small fire extinguishers located throughout the camp. The reel type extinguishers are mounted on elevated platforms to provide for mobility by use of a pickup truck.

There was no off-airport tracked vehicles on standby for emergency use.

Flight Recorders

The aircraft was equipped with a Fairchild A-100 cockpit voice recorder serial #1698 and a Fairchild 5424-221 flight data recorder serial #1301. The rear section of the aircraft containing both recorders sank to the bottom of Byam Channel in about 100 feet of water. The recorders were subsequently recovered without any apparent damage from the accident or the

immersion in sea water. However, the cockpit voice recorder was found to be unserviceable due to a failure of an incorrect tape splice and the data recorder was found to have an inoperative heading stylus and reversed dynamic and static pressure connections. Time histories of altitudes and airspeeds prior to the accident were derived but with a reduced accuracy that resulted from the reversed connections. The accuracy of the acceleration data was poor in the final stages of the approach due to vibrations. The data derived from the flight data recorder for the last 10 minutes of flight as well as an expanded version of the last 100 seconds is included in appendices B and C.

The fluctuations in the derived pressure altitude over the last 40 seconds of the accident flight were studied in order to try and explain their presence and resolve why the final recorded altitude was at least 110 feet above sea level. It was obvious that the fluctuations were too rapid to represent genuine flight variations. However, there is no obvious explanation for the variations and no satisfactory corrections could be found to reduce them to a more realistic value. Since the altitude had to be derived from a combination of the altitude and air speed stylus positions there is a combination of measurement errors that degrades the accuracy.

Wreckage

All major surface wreckage was located and identified. The major portions of the wreckage under water was located and identified with the use of under-water video and divers. Without exception the fracture characteristics of the identified items were typical of instantaneous overload failure. Some 200 other unidentifiable fragments also showed instantaneous overload characteristics. The locations, both surface and under-water of the wreckage and victims is shown in Appendix D.

The aircraft struck the 8 inch thick sea ice on a heading of about 321° true with about a 2° crab angle to port. The wings were level or slightly left wing low with a nose down attitude in the order of 7°. The presumed break up (for the Appendix use figures 3, 4 Structures Group Report pages 17, 18 and 19 with part of the write-up under each diagram, excluding reference to Figure 2).

The burnt part of the upper rear portion of the fuselage containing the passenger compartment indicates that it was partially immersed in water for some time prior to sinking. The rear main passenger door was in the open position during the damage from surface fire. Under-water examination showed that the emergency recessed T-handle used to operate the door manually had been pulled and the door was moved to a nearly fully open position. No satisfactory explanation was found for the position of the door urgency handle as all passenger seats had been ejected through the front of the passenger compartment at the time of the aircraft break-up. This resulted from the passenger compartments area being exposed to accelerations in the order of 16 to 20g.

The examination of pressure sensitive instruments did not reveal any significant witness marks or indications; however both altimeters were set at the latest altimeter setting provided by the ground station of 29.91 inches of mercury. Significant electrical instrument indications included the single DME indicator on the captain's side showing 2.3 nautical miles and the radio altimeter also on the Captain's side indicating 27 feet with the altitude alert bug set at 160 feet. The first officer's radio altimeter was indicating 35 feet and the altitude warning bug was set at instruments feet. The course and heading indications found on the compass indications.

The engine power parameter indications showed turbine inlet temperatures of 742, 755, 748 and 718 degrees centigrade, and horsepower of 2835, 2725, 2720 and 2445 for engines 1 to 4 respectively, in both cases. The oil pressures and fuel flows showed appropriately similar indications. The fuel quantity at impact in each of the 4 tanks was approximately 3210, 3680, 1790 and 1930 pounds respectively.

The warning light bulb indications of the major aircraft's systems of fuel hydraulic, electrical and fuel as well as control boost were examined. With the exception of the landing gear down indicator bulbs which were on at impact, all warning indicator bulbs were found to be off.

The number 1 engine was found on the ice surface and examination showed it to have been functioning normally at the time of impact. The fuel co-ordinator was found to have been set at 70 degrees at impact and the test of another engine with a similar setting, revealed a turbine inlet temperature of 756 and a horsepower of 2300. The remaining 3 engines sank to the bottom and although observed on an under-water video camera, were not recovered for more detailed examination. Fuel samples taken from No. 1 engine showed that the fuel met the specific gravity and distillation range requirements for jet B type fuel and that neither the amounts or the types of contaminants found in the samples were unusual. Neither the previous history nor the flight engineer's operating log recovered from the wreckage showed any major problems associated with engine operation.

Tests and Research

A test flight was conducted on a similar aircraft with similar loading and centre of gravity positions. The purpose was twofold; a) to determine what effect if any changes in power had on the pitostatic system

s a result of changing airflows over the static port caused by the number 3 propeller, b) to determine trim, power and pilot control input to achieve conditions similar to those in the accident.

A video camera was mounted in the cockpit and an electric 5 frame per second, 35 mm handheld camera was utilized to record the instrument presentations. The test was hampered to some degree by the lack of a radio altimeter to record true altitude.

Flight profiles similar to those provided by the information from the flight data recorder and witnesses' testimony were flown with the following results. No significant effect of changing thrust on the aircraft could be associated with responses on any pressure instrument during flight. From a normal power setting to maintain level flight a reduction to 200 horsepower on all engines and a control input to achieve about a 7 degree nose down attitude resulted in a "hands off" stabilized descent without changes of trim with a vertical velocity of about 2000 feet a minute down.

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Medical and Pathological Information

Of the four crew and thirty passengers on board, only the First Officer and Flight Engineer survived. However, one victim survived initially but succumbed to hemorrhagic shock while en route to Edmonton on an Air Medical Evacuation Flight. Of the remainder of the victims, twelve were recovered on the surface of the ice between stations 54 + 25 and 56 + 50 (wreckage scatter diagram), ten from the ice between stations 56 + 00 and 57 + 00 were decayed and had been floating under water and were frozen into the ice. One found on the surface in a seat in the main impact area with four showing signs of post-mortem burning in areas of skin exposed above the surface of the water. The aircraft Captain was located in the flight deck strapped in the Captain's seat at station 50 + 50. Five victims were located on the ocean floor at about station 58 + 50 and one on the ocean

floor at station 57 + 10.

Of the 32 victims of the aircraft accident, 16 had potentially survivable injuries. Of these victims with survivable injuries, five survived for greater than 15 minutes, four survived for ten to 15 minutes and seven survived for less than 10 minutes. Of those who survived for less than ten minutes, six were found on the ocean floor and probably succumbed to drowning.

Of the victims which showed burning, there were low carbon monoxide levels, burn morphology and lack of carbon deposits in the respiratory tract all of which indicates that exposure to fire was post-mortem. In addition, one of the longest survivors was the most severely burned. With an estimated survival time of this victim of 10 to 15 minutes, it would indicate that the post-crash fire did not propagate on a large scale until more than ten to fifteen minutes following the impact.

Fire

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There was no indication of any in-flight pre-impact fire. Post-impact fire from burning fuel was indicated from fire damage to the exterior of the rear passenger compartment portion of the fuselage, post-mortem burns to passengers and an observation of small fires by the pilot of the search aircraft that located the wreckage.

Survival Aspects

Two basic decelerative patterns appear to have been present during the impact. The injury to the Captain and First Officer of compression factors of L1 indicate the greater decelerator forces were directed vertically.

This appeared to be the result of the severe magnification of external G loads because of the use of thick elastic non-energy absorbing type seat cushions as well as the dynamic failure of the vertical adjustment seat friction clamp mechanism. The fact that the Flight Engineer did not have a compression fracture can be explained by the hunched forward posture that would be required to operate the throttle from the Flight Engineer's seat.

The occupants in the passenger compartment in the rear of the aircraft were exposed to substantial horizontal deceleration; however, 50% had potentially survival injuries. As the passenger tie down chained could not survive the deceleration forces the victims were subject to secondary impact. In all cases the seat mountings came loose from the floor track. A number of these were broken indicating they had pulled through the floor tracks and a number showed no witness marks indicating that the floor tracks separated releasing the seats. The longitudinal floor mounts of the seats were bent in two different patterns; the majority were bent like a rocking chair but a few were bent in the opposite direction indicating that the floor in this area had probably buckled downward. The seat plans of the canvas type were intact except in cases where burning occurred. Some of the seat belts were of the fabric pull through lift latch type where the evidence confirmed previous experience. Chafing on the belt showed that the reel end opened the latch due to the deceleration and allowed the passenger to fly free.

Had shoulder harnesses been utilized it is unlikely any debilitating injury would have resulted to the cockpit crew and it is probable that the Captain would have survived.

The Pilot's and Co-Pilot's seats were equipped with 5 point harnesses with a single release and the shoulder harnesses equipped with an initial reel of the rate of extension type. None of the crew were wearing

shoulder harnesses at the time of impact or was this a habit with Panarctic Crews nor requirement of the company.

Analysis

The flight from Edmonton to Rea Point was routine for the type of operation involved until the final stage of the approach to Rea Point. The aircraft had descended to about 875 feet above sea level and 6 miles from the DME when the first step was taken in the sequence of events that was to follow. While the First Officer reset his altimeter warning to the minimum decision height of 450 feet, the Captain set his to 300 feet. Considering the runway elevation of 50 feet the radio altimeter selection of 300 feet could provide for a warning light when the barometric altimeter indicated an altitude of 350 feet over the terrain or 100 feet below the minimum authorized altitude. When they descended to 450 feet, the First Officer reset his radio altimeter warning to 300 feet and advised the Captain. The Captain had made the decision to descend to 300 feet before reaching the minimum decision altitude of 450 feet. The First Officer acquiesced or participated in what was normal operating procedure for this Captain. Considering the fact that blowing snow was the obscuring factor one would assume from the Captain's experience in Arctic conditions that he would realize a higher approach above the blowing snow would increase the possibility of seeing ground lighting. From the fact that the Captain's radio altimeter warning was selected to 150 feet (laboratory examination revealed it to be 160 feet, however, considering the circumstances it was probably perceived to be selected to 150 feet) it is apparent the Captain made a conscious decision to descend to 150 feet above sea or ground level. This is supported to some degree by the report the Captain believed they were on top of a layer of cloud during the gradual descent to 300 feet. At about 300 feet, the First Officer reported to the Captain they were visual as he had seen a dark area

of open water and an ice line. From the Captain's statements regarding a cloud layer and from surviving crew members' observations, the Captain was looking outside the aircraft for visual clues; contrary to the accepted practice of maintaining instrument reference until visual contact is reported by the other pilot. As the First Officer observed the ice water line on the forward wind screen, it is assumed it would also be visible to the Captain and he then reacted to this visual cue. The throttles were retarded by the Captain, and in terms of normal operation there is a very large forward control input causing negative G, that was of such magnitude that it was unique in the opinion of the surviving crew members. The reaction from the First Officer was to warn the Captain that they were 300 feet and 3 DME which the Captain acknowledged. The rate of descent increased very rapidly to near 2,000 feet a minute. The Captain's actions while unorthodox up to this point now became irrational. Despite the shouted warnings and calls of altitudes from the crew the Captain made no effort to retard the rate of descent.

The Captain's fatty liver disease could result in chronic hypoglycemia (low blood sugar) and hypokalemia (low serum potassium) resulting in symptoms of fatigue and lassitude. In addition the Captain would have been subject to acute fatigue as a result of being off flying for 11 days and working day-shifts. Since this was a night flight there would have been a circadian rhythm affect. The change in alternate just prior to departure from Edmonton as a concern for the weather conditions as well as the fact that he was flying with a new First Officer would increase the demands on the Captain. All these things would support the fatigue problem with its resultant acceptance of lowered performance levels and a further deterioration in performance as the flight was about to end. However, fatigue in itself does not account for the failure of the Captain to respond to the communication of a very dangerous situation both verbally from the other two crew members

and from the flight instruments. The bio-chemical studies resulting in lactate curves from an adrenergic response indicates that the Captain was not aware of mortal danger as would normally be expected under these circumstances. This points to a degree of incapacitation beyond what could be considered only a change in perceptual state. The possibility of an abnormal left ventricular response to stress causing a severe degree of incapacitation cannot be discounted.

The company had no established procedure for dealing with crew incapacitation. As pointed out in United Airlines, Pilot Incapacitation in Flight Procedures the keys to early recognition are: regular use of standard operating procedures; routine monitoring and cross-checking of flight instruments, particularly during critical phases of flight; regular use of the "crew concept" of operation; regular use of the "Two Communication Rule".

In this operation it would have been difficult to implement the procedure for early recognition of incapacitation due to the deficiencies in the operating procedures. It was apparent from the actions of the Captain in the lack of an approach and landing briefing to inform the crew of his intentions and what was expected of them and his use of the radio altimeter with disregard to established minimal approach altitude that established procedures did not exist or were ignored. Under these circumstances, it would not have been possible for the First Officer and the Flight Engineer to fulfill what should be their function of cross-checking, monitoring and supporting the Captain at this critical stage of flight. A deviation from a standard operating procedure would not be perceived as the First Officer and Flight Engineer had no way of knowing the standard. The use of the "crew concept" means the coordinated application of each crew members' individual effort. The "Two Communication Rule" refers to the failure of a flight crew

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member to respond appropriately to two consecutive verbal communications or fails to respond to any verbal communication associated with a significant deviation from a standard flight profile.

This company did not have in use a Flight Operations Manual which would outline the procedures to be followed and the responsibilities of each crew member. As this company was operating in a private category, the legislation requiring commercial operators of this size to have a Ministry of Transport approved Flight Operations Manual as well as a periodic check for compliance, did not apply as well as other detailed legislation considered a minimum safety level for commercial operation.

The abrupt descent initiated by the Captain from about 300 feet while extreme, can be associated with a phenomena known as "duck-under manoeuvre". It is considered by many pilots that if they wish to achieve a good landing and be consistent in touching down at the appropriate point from the threshold a shallow approach much less than the normal 2 1/2 degree glide-slope, is essential. This type of manoeuvre is frequently used in visual conditions where the "duck-under" or descent below the normal glide-slope begins at 200 feet or more above ground particularly in the Arctic situation where the landing roll distance is limited. Applying this visual experience to an instrument approach, limited outside visual cues would give an illusion of being higher than normal and there could be a strong urge to begin an immediate "duck-under" in order to achieve the same perceived perspective. It has been established that pilots, unable to see shadows or texture due to restrictions in visibility, interpret this to mean "higher" as would have been the situation in this case. This would compound the "duck-under" phenomena. Even with the 3 DME indication the application of this phenomena in this instance, is considered a possibility due to a fatigue lowered perceptual state. A further influencing factor that would

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contribute to the extreme manoeuver by the Captain was an innate desire to land. He is subconsciously faced with the possibility that maintaining normal approach heights would prevent him from seeing the runway lights and require a "go around" extending the time he must remain under the anxiety producing position as the aircraft Captain in the existing conditions.

From the circumstances of this accident, it is obvious the Captain was conducting essentially a one-man operation. Considering the lack of formalized company procedures and the Captain's background of single pilot aircraft operations, this behaviour would be expected.

One further explanation of the Captain's initiation of an abrupt descent should be considered. The First Officer observed an ice/water line and the Captain shortly thereafter initiated the abrupt descent; this could have been a response to a misinterpreted visual clue. As the Captain had not been flying for eleven days prior to the accident, the visible shoreline would have been extended seaward with the formation of new sea ice. This combined with the years of experience flying into Rea Point when a shore-line was visible could have caused an immediate response to the normally overriding visual sense which could be perceived as a position approximately one mile from the end of the runway rather than the 3 miles indicated on the DME. This explanation while unlikely, cannot be completely discounted.



Government of Canada
Gouvernement du Canada

MEMORANDUM

NOTE DE SERVICE

TO
À

A S I OTTAWA

ATTEN: A.J. CLARK

FROM
DE

B. ASTON TORONTO

SUBJECT
OBJET

AIRCRAFT ACCIDENT: LOCKHEED ELECTRA L 188 C, CF-PAB

SECURITY - CLASSIFICATION - DE SÉCURITÉ
OUR FILE - N/RÉFÉRENCE
YOUR FILE - V/RÉFÉRENCE
5002-1140003
DATE JUNE 12, 1975

ENCLOSED IS PART II OF THE SYSTEM GROUP REPORT PERTAINING TO THE SUBJECT ACCIDENT.

PART I OF THE REPORT WAS GIVEN TO MR. H.A. FAWCETT ON JUNE 12, 1975 FOR HAND DELIVERY TO OTTAWA.

PLEASE AFFIX A.S.E. REPORT TO PART II WHEN YOU RECEIVE SAME.

PLEASE LET ME KNOW IF YOU CONSIDER CHANGES SHOULD BE MADE TO THE REPORT.

B. ASTON
CHAIRMAN,
SYSTEMS GROUP

ENCL.
/C/

000057

Crack in weight wing plank (22 riser number 4
between station 79 + 95 repaired in A/W 4/5/73 88/573/
620E FIG 3 Sheet 24 + 25 started 1/10/72 (Completed
Aug 24 /73. by Lockheed A/T/T 27 157.4 cycles 28 214
on file with DOT

Repairs carried out June 27 after damage
to 1A/C on landing on file with department.

Fuel load on departure 28,400 LBS

Climb to T 250

Airport

East entrance.

703 6 Ave S W. 269-0311

Hanger #3 McCall field 277-7300

Mark. Marvic

Snip # FDR T 0416 D 29 head.

FDR Base

Searchlight modification marked #7

Static.

Pressure.

Female

Male

check if repair carried out to static line
after last ~~incident~~ accident

leading servo v/s. (second from G trace
should have been solid line
when not functioning

CVR

Tape splice v/s tape separated

When on test gauge should not indicate in
good range.

Splice on wrong side of tape (Splice should have
been on reverse of oxide side (Splice tape brittle and
cracked. Approx 50 feet short of new tape

Levalier Coast

29358

22310

7048

+ 115

7163.6 HRS.

29
4.8
29358.6

Serial not



logs state # 12 on however work
report states Serial on 24

Alexis Coast Serial

123

27157

20/8/73

Rudolber Coast

106

27157

20/8/73

Yorque tube every

27157

29

27081.5

CF - PAR. Serial # 1141

1 ENGINE REPLACED OCT 24 - 1974 } INSTALLED
29,318.6 } 501483.

COLLINS DF-203 SYSTEM DUAL INSTALLATION SEPT 20/74

29152.7
↓
BENDIX JA-21A COM } REMOVED
" RA-21A MAY }

SEPT 20/74
↓
KING KTR 900A COM } INSTALLED
" KNR 660 MAY }

29,019.0 LEFT HAND MAIN UNDERCARRIAGE ASSY CHANGED } AUG 22/74
APU INSTALLED O TIME T 25815 }

(Ball Hines) S.S. ATALLAH. CVR.)

HYDRAULIC PUMP POSITIONS

1	JX	212380	
1A	JX	210154	INSTALLED
2	JX	213134	CHECKED INSTALLATION SEPT 20/74
SPARE	JX	207208	

PHASE SYNCO SERIAL # C21-947 #4 POSITION.

Additional work sheet.

Hours 29 353.6

Oct 29/74

CVR Inflight recorder tape changed

By M H.

T + B F/O POSITION REPLACED

OCT 23/74

↓ 29 318.6

ON SERIAL

DA 76.7

JAN 20/1972 FLIGHT RECORDER FAIL WARNING LIGHT STAYS ON
AT ALL TIMES.

SERIAL # 1301 (NWA 64 OFF.

* MUST HAVE BEEN REPAIRED FOLLOWING REMOVAL.

JAN 22/1972 FLIGHT RECORDER INSTALLED SERIAL 1301

FLIGHT RECORDER TAPE CHANGED AFTER RUMPUT
14-10-71 OFF 1944 ON 1795
CASSETTE CHANGED

FLIGHT RECORDER TAPE CHANGED ON SERIAL 1944 22-7-71

The FDR was a zero timed unit when it was installed on June 27 1974 Serial 1301. It was in the CF. TAB at the time of the accident. Documents have been checked through out. The irregularities associated to the pressure and static lines being reversed was. A detailed search was made of the records since the aircraft was imported into Canada in order to determine if there was a possibility that the irregularities associated to the reversal of the pressure and static lines. No evidence could be found to substantiate that the lines had been reversed during normal maintenance or during major repair.

MEMORANDUM

NOTE DE SERVICE

TO: C A I OTTAWA

ATTEN: A.J. CLARK

FROM: B. ASTON OCAI TORONTO

SECURITY - CLASSIFICATION - DE SÉCURITÉ
CONFIDENTIAL
OUR FILE - N/RÉFÉRENCE
YOUR FILE - V/RÉFÉRENCE
DATE <u>H-0003</u>
<u>MARCH 14, 1975</u>

SUBJECT: AIRCRAFT ACCIDENT: LOCKHEED ELECTRA, CF-PAB

1. MR. A. NEWHAM, SUPERINTENDENT PANARCTIC MAINTENANCE, WAS CONTACTED ON FEBRUARY 26, 1975 AND INFORMED THAT THE TECHNICAL INVESTIGATION GROUP WOULD LIKE TO INTERVIEW THE FOLLOWING PERSONNEL WHO WERE UNDER HIS DIRECT CONTROL.

1. A. NEWHAM
2. J. BINDER, ASSISTANT SUPERVISOR AIRCRAFT MAINTENANCE
CHIEF FLIGHT ENGINEER
3. A.F. ROUTLEDGE, MAINTENANCE PLANNER
4. C.L. CLEMENT, AIRCRAFT INSPECTOR
5. S.J. ATALLAH, AVIONICS AND ELECTRICAL SPECIALIST
6. W.E. HINES, ELECTRA FLIGHT ENGINEER
7. P.K. HUMBLE, ELECTRA MAINTENANCE SUPERVISOR
8. G.L. PHILLIPS, ELECTRA FLIGHT ENGINEER
9. W.L. WEBER, AIRCRAFT MAINTENANCE ENGINEER

2. MR. NEWHAM VERBALLY STATED THAT AS FAR AS HE WAS CONCERNED WE COULD TALK TO THE PEOPLE WHEN AVAILABLE, HOWEVER HE WOULD HAVE TO GET CONFIRMATION FROM HIS COMPANY.

3. LATER THE SAME DAY HE TELEPHONED TO CONFIRM THAT THE ONLY STIPULATION WAS THAT A LEGAL REPRESENTATIVE WOULD HAVE TO BE PRESENT AT THE INTERVIEWS. HE ALSO AGREED THAT IN ORDER NOT TO DISRUPT HIS MAINTENANCE SCHEDULING HE WOULD APPRECIATE IT IF HE COULD DESIGNATE THE INDIVIDUALS WHO WOULD REPORT AT A CERTAIN TIME. HE ALSO STATED THAT IT WOULD NOT BE NECESSARY TO ISSUE LETTERS TO THE INDIVIDUALS REQUESTING THEM TO APPEAR AS THEY WOULD DO IT VOLUNTARILY, WITH THE EXCEPTION OF W.L. WEBER WHO WAS NO LONGER EMPLOYED BY PANARCTIC.

4. WE ON OUR PART INDICATED WE WERE IN AGREEMENT WITH THIS AND ALSO SUGGESTED THAT IT WOULD EXPEDITE MATTERS IF THE INTERVIEWS WERE CONDUCTED AT THEIR MAINTENANCE FACILITIES. THIS LAST SUGGESTION WAS VETOED BY, PRESUMABLY, THE COMPANY OR LEGAL REPRESENTATIVE. MR. A. NEWHAM CONVEYED THE IMPRESSION THAT HE AND HIS MAINTENANCE PEOPLE WERE MORE THAN ANXIOUS TO COOPERATE.

5. A BOARD ROOM WAS SET UP AT THE INTERNATIONAL HOTEL, CALGARY, TO FACILITATE INTERVIEWS.

.....2/

000069

6. ON MARCH 3, 1975 INTERVIEWS WERE STARTED AT THE INTERNATIONAL HOTEL, CALGARY WITH PANARCTIC COMPANY PERSONNEL.
7. THE INTERVIEW BOARD CONSISTED OF THE FOLLOWING:

CHARIMAN: B. ASTON
INVESTIGATORS: ANDONEY AND LEROUX
8. THE INTERVIEWS WERE RECORDED ON TAPE AND TRANSCRIBED LATER.
9. THE FIRST INDIVIDUAL TO BE INTERVIEWED WAS MR. A.F. ROUTLEDGE, MAINTENANCE PLANNING AND TECHNICAL RECORDS. HE WAS REPRESENTED BY LEGAL COUNCIL MR. D. BRENNER. THE INTERVIEW WAS SCHEDULED TO COMMENCE AT 0930 HOURS, HOWEVER MR. ROUTLEDGE AND MR. BRENNER DID NOT ARRIVE UNTIL 10:20 HOURS. MR. ROUTLEDGE STATED THE DELAY WAS DUE TO MR. BRENNER NOT ARRIVING ON TIME. MR. BRENNER DID NOT OFFER AN EXPLANATION.
10. MR. ROUTLEDGE APPEARED WITHOUT FORMAL LETTER REQUESTING HIM TO APPEAR BEING ISSUED, NOR DID MR. BRENNER MAKE ANY COMMENT IN THIS REGARD. MR. ROUTLEDGE COOPERATED FULLY AND THE INTERVIEW WAS CONDUCTED WITH VERY LITTLE INTERFERENCE BY MR. BRENNER AND WAS CONCLUDED TO THE BOARD MEMBERS SATISFACTION.
11. THE SECOND INTERVIEW WAS CONVENED AT APPROXIMATELY 11:45 HOURS SAME DAY WITH MR. G.L. PHILLIPS, FLIGHT ENGINEER, HE WAS ALSO REPRESENTED BY MR. D. BRENNER. AS WITH THE FIRST INTERVIEW, MR. D. BRENNER DID NOT INTERFERE WITH THE PROCEEDINGS TO ANY EXTENT. THIS INTERVIEW CONCLUDED TO THE BOARD MEMBERS SATISFACTION.
12. NO MORE INTERVIEWS WERE CONVENED FOR THIS DAY DUE TO THE HEAVY MAINTENANCE CHECK BEING CARRIED OUT BY PANARCTIC. THIS WAS A PRIOR MUTUAL AGREEMENT BETWEEN ASTON AND MR. A. NEWHAM, MAINTENANCE SUPERINTENDENT, IN THAT HE WOULD DELEGATE THE MOST CONVENIENT TIME FOR THE INDIVIDUALS WE WISHED TO TALK TO SO AS NOT TO DISRUPT HIS SCHEDULING AND COMPANY OPERATION.
13. ON MARCH 4, 1975, THE BOARD WAS CONVENED AGAIN WITH THE FIRST INDIVIDUAL MR. C. CLEMENT, ELECTRA MAINTENANCE INSPECTOR AND FLIGHT ENGINEER SCHEDULED TO APPEAR AT 0930 HOURS.
14. AT APPROXIMATELY 10:20 HOURS MR. E. LANE APPEARED AT ROOM 1906 INTERNATIONAL HOTEL CALGARY AND INFORMED THE MEMBERS OF THE BOARD, ASTON, ANDONEY AND LEROUX THAT HE WOULD BE REPRESENTING THE INDIVIDUALS THAT WE WERE INTERVIEWING THIS DATE.
15. SHORTLY AFTER MR. LANE ARRIVED, MR. CLEMENT PRESENTED HIMSELF AND HAD TO BE INTRODUCED TO MR. LANE.
16. MR. CLEMENT APPEARED VOLUNTARILY WITHOUT A LETTER REQUESTING HIM TO ATTEND BEING DELIVERED TO HIM, EVEN THOUGH LANE MADE A LENGTHY COMMENT ON THE LETTERS SUBSTANCE.
17. THE INTERVIEW COMMENCED AT APPROXIMATELY 10:40 WITH NO EXPLANATION BEING GIVEN BY LANE AS TO THE DELAY. FROM THE OUTSET OF THE INTERVIEW, MR. LANE'S SOLE PURPOSE APPEARED TO BE TO HARASS AND GENERALLY DISRUPT THE PROCEEDINGS AS CAN BE READILY SEEN BY THE TRANSCRIPTS. THE WITNESS APPEARED TO REQUIRE CONFIRMATION FROM LANE BEFORE HE WOULD ANSWER MANY QUESTIONS PUT TO HIM. LANE ON

THE OTHER HAND TREATED THE INTERVIEW AS IF WE WERE IN A COURT ROOM, THE ONLY DIFFERENCE BEING -- HE CONVEYED THE IMPRESSION OF BEING LAWYER FOR THE DEFENCE, JUDGE AND JURY.

18. THIS INTERVIEW TERMINATED WHEN IT WAS OBVIOUS THAT NO FURTHER USEFUL INFORMATION WOULD RESULT.

19. THE SECOND INTERVIEW WAS WITH MR. J. BINDER, FLIGHT ENGINEER SUPERINTENDENT AND DEPUTY MAINTENANCE SUPERINTENDENT.

20. MR. LANE INQUIRED IF ANYONE ON THE BOARD KNEW MR. BINDER, WE ALL DID SO HE REQUESTED THAT I ACCOMPANY HIM TO THE HOTEL LOBBY IN ORDER TO INTRODUCE HIM TO MR. BINDER, THIS I DID.

21. THE INTERVIEW WAS COMMENCED AT ABOUT 11:45 HOURS WITH THE SAME BOARD MEMBERS AND MR. BINDER BEING REPRESENTED BY MR. LANE.

22. MR. LANE IMMEDIATELY ASSUMED AN AGGRESSIVE ATTITUDE, DEMANDING THAT I SERVE WHAT HE REFERRED TO AS A WRITTEN SUMMONS WHICH HE STATED WAS THREATING AND INTIMIDATING BEFORE HIS CLIENT WOULD ANSWER ANY QUESTIONS. MR. LANE ALSO STATED BEFORE MR. BINDER WOULD ANSWER ANY QUESTIONS I WOULD HAVE TO "LAY THE LETTER ON HIS CLIENT" AND BE "AS BIG A BASTARD AS THE OTHER GROUP DOWN THE HALL". HE COULD ONLY HAVE BEEN REFERRING TO THE OPERATIONAL GROUP WHO WERE CONDUCTING INTERVIEWS DOWN THE HALL.

23. MR. LANE WAS ASKED SEVERAL TIMES WHY THE PREVIOUS INTERVIEW HAD BEEN CONDUCTED WITHOUT THE LETTER BEING ISSUED AND THE CHANGE OF PROCEDURE ON THIS ONE, HE NEVER REPLIED TO THIS QUESTION.

24. I REQUESTED TO KNOW WHY HE WANTED THIS TO BE DONE AS OBVIOUSLY HIS CLIENT HAD APPEARED WITHOUT TI. HE WOULD ONLY STATE THAT NO QUESTIONS WOULD BE ANSWERED UNTIL I SIGNED THE LETTER. THIS I DID BUT INDICATED IT WAS UNDER DURESS. THE INTERVIEW COMMENCED WITH LANE OBVIOUSLY LOOKING FOR ANY REASON TO TERMINATE THE PROCEEDINGS.

25. FROM THE TRANSCRIPT OF THE INTERVIEW, IT SUBSTANTIATES THAT IN THE OPINION OF THE BOARD MEMBERS IT WAS EVIDENT THAT MR. LANE'S SOLE PURPOSE AT THIS INTERVIEW WAS TO ANTAGONIZE, AND DISRUPT THE PROCEEDINGS SO THAT NO USEFUL INFORMATION COULD BE ATTAINED. THROUGHOUT THE INTERVIEW, IN THE OPINION OF THE BOARD MEMBERS, LANE DISPLAYED AN ARROGANT AND CONTEMPTUOUS ATTITUDE TO THE INVESTIGATORS.

26. HE APPEARED TO THE MEMBERS OF THE BOARD THAT HIS SOLE AIM IN BEING THERE WAS TO CREATE AN ANTAGONISTIC ATMOSPHERE WHEREBY THE BOARD MEMBERS WOULD ASSUME - THE SAME MANNER.

27. FORTUNATELY THE BOARD MEMBERS DID NOT ASSUME THIS ATTITUDE. THE WITNESS APPEARED TO ENJOY THE CHARADE AS HIS COUNCIL ANSWERED MOST OF THE QUESTIONS ONE WAY OR ANOTHER.

28. THE INTERVIEW WAS TERMINATED WHEN IT BECAME OBVIOUS THAT VERY LITTLE USEFUL INFORMATION WOULD BE DERIVED BY CONTINUING.

29. IN THE OPINION OF THE UNDERSIGNED, LANE WAS PRESENT TO HINDER NOT HELP.

- 4 -

30. NO FURTHER INTERVIEWS WERE CONVENED WITH THE REMAINDER OF THE INDIVIDUALS; ATALLAH, HINES, HUMBLE, AND NEWHAM.

31. IT IS UNFORTUNATE THAT THE FOUR INDIVIDUALS WERE NOT INTERVIEWED AS IT IS CONSIDERED THAT THEY COULD PROVIDE MUCH NEEDED INFORMATION IF THEY BE SO INCLINED. HOWEVER, IT IS SUGGESTED THAT IF AT A LATER DATE THEY AGREE TO BE INTERVIEWED NO USEFUL INFORMATION WILL BE DERIVED IF MR. LANE IS PERMITTED TO CONTINUE WITH HIS PRESENT ATTITUDE TOWARDS THE INVESTIGATION.



B. ASTON, CHAIRMAN
TECHNICAL INVESTIGATION GROUP



Government of Canada
Gouvernement du Canada

MEMORANDUM

NOTE DE SERVICE

TO
À

C.A.I.E. OTTAWA
Attention: T. W. Heaglip

FROM
DE

B. ASTON, OCAI

SUBJECT
OBJET

EXTRA DUTY PAY CLAIM FORMS

Enclosed are forms 10-0238 for Extra Duty incurred while in Calgary
Investigating accident to Lockheed Electra, CF - PAB.

Encl.

B. Aston
OCAI, Toronto

SECURITY - CLASSIFICATION -- DE SÉCURITÉ
OUR FILE -- N/RÉFÉRENCE
5002-B0003-1 C.A.I.E.
YOUR FILE -- V/RÉFÉRENCE
DATE
MARCH 18, 1975



Government of Canada
Gouvernement du Canada

MEMORANDUM

NOTE DE SERVICE

TO
À

C.A.I. OTTAWA
Attention: J. F. Pedley

FROM
DE

B. Aston, Toronto

SUBJECT
OBJET

AIRCRAFT ACCIDENT - LOCKHEED ELECTRA
L188C, CF - PAB

SECURITY - CLASSIFICATION - DE SÉCURITÉ
OUR FILE - N/RÉFÉRENCE H40003-1
YOUR FILE - V/RÉFÉRENCE
DATE March 13, 1975

Attached is travelling expense claim incurred for the recent trip to Calgary. Re interviewing witnesses pertaining to the subject accident.

Encls.
BA:sm1

B. Aston
Toronto

MEMORANDUM

NOTE DE SERVICE

TO
À

C A I OTTAWA

ATTEN: J.F. PEDLEY

FROM
DE

B. ASTON TORONTO

SECURITY - CLASSIFICATION - DE SÉCURITÉ
OUR FILE - N/RÉFÉRENCE
YOUR FILE - V/RÉFÉRENCE
H 40003 - 1
DATE
MARCH 12, 1975

SUBJECT
OBJET

AIRCRAFT ACCIDENT - LOCKHEED ELECTRA
L188C CF-PAB

1. ENCLOSED IS THE TRANSCRIPT OF MR. WILLIAM L. WEBER'S STATEMENT. THE ORIGINAL STATEMENT WAS TAKEN AT MR. WEBER'S RESIDENCE ON MARCH 2, 1975 BY ANDONEY, GLENN AND ASTON.
2. ALSO INCLUDED IS THE TAPE CONTAINING THE ORIGINAL STATEMENT.
3. WOULD YOU PLEASE FORWARD TO INSPECTOR UNGER THE ATTACHED ORIGINAL COPY OF THE PROBABLE FLIGHT PATH PROFILE PERTAINING TO THE SUBJECT ACCIDENT.

THANK YOU.


B. ASTON, INVESTIGATOR
ACCIDENT INVESTIGATION

ENCL.
BA/OI

PAN ARCTIC
AIR TRANSPORT
PHONE NUMBERS
PER SINNEL

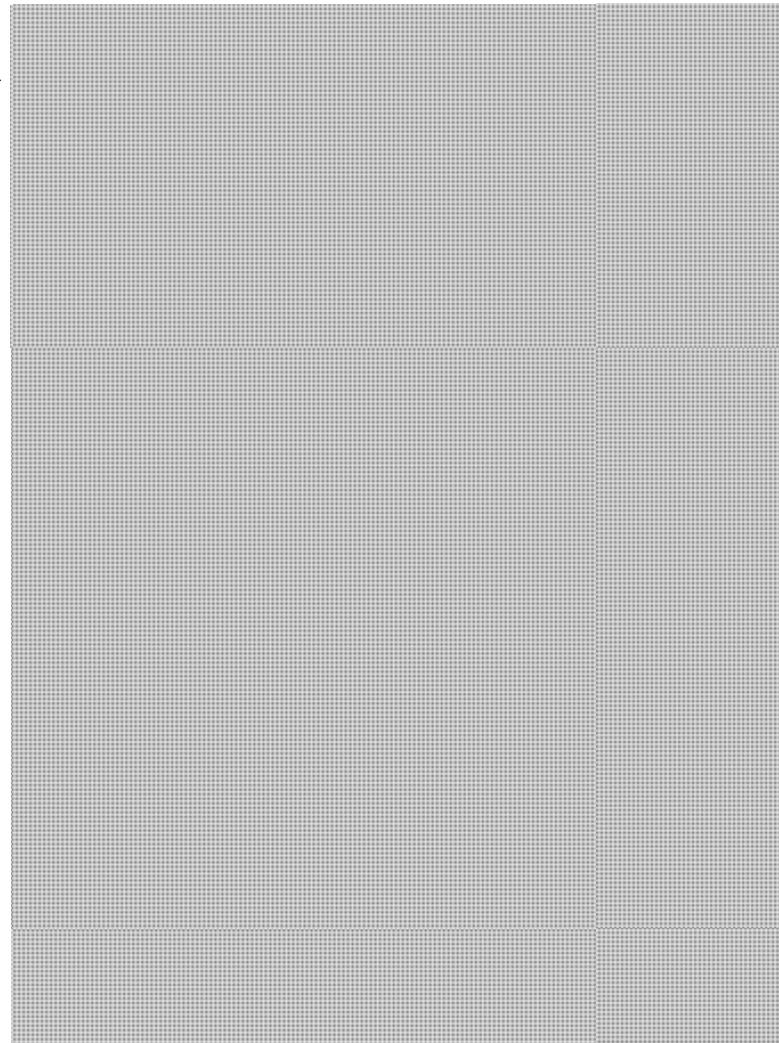
August 19, 1974

J. UNTER OPS

s.19(1)

AIR TRANSPORTATION

Alleman, D. F.	Dale & Joan
Anderson, R. F.	Andy
Atallah, S. J.	Sam & Ferial
Atkinson, R. T.	Rick
Bell, H. P.	Pat & Jane
Bell, R. M.	Bob & Lorraine
Binder, J.	John & Judy
Blampied, D. L.	Don & Phyllis
Bremault, G. G.	Gene
Builder, J. D.	Dave & Brenda
Castledine, J. M.	John & Isabell
Clement, C. L.	Chuck & Eileen
Coulter, G. S.	Greg & Betty Ann
Daniel, D. M.	Dave & Rita
Ditto, K. M.	Karen
Dodds, J. A.	Jim & Laura
Evans, L. B.	Link & Helen
Forbes, D. A.	Dave



Electra Captain

Chief Expeditor

Avionics & Electrical Specialist

Asst. Expeditor - Edmonton

Airlift Co-ordinator

Maintenance Supervisor -
Twin Otter Operations

Asst. Supervisor Aircraft
Maintenance/Check Flight Engineer

Storeman

Apprentice Aircraft Maintenance
Engineer

Aircraft Materials Controller

Aircraft Maintenance Engineer

Aircraft Inspector

Apprentice Aircraft Maintenance
Engineer

Aircraft Maintenance Engineer

Secretary

Loadmaster

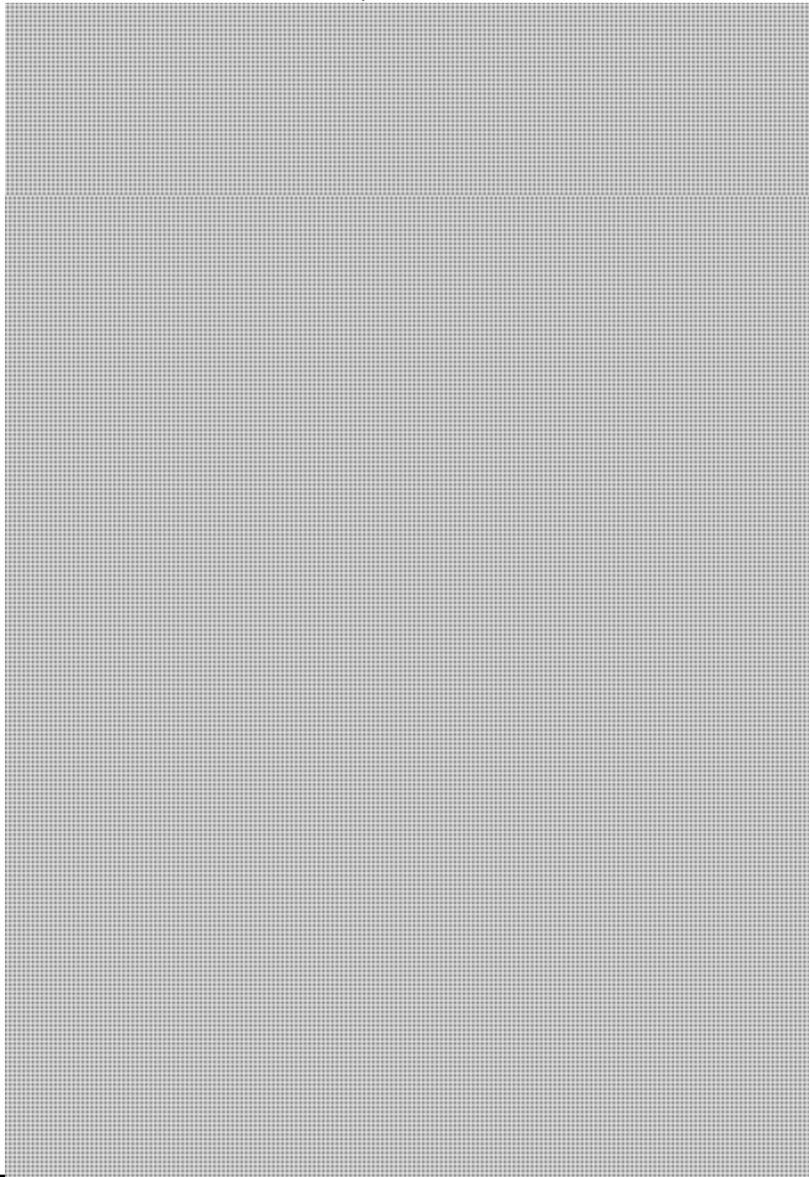
Aircraft Maintenance Engineer

Loadmaster

s.19(1)

Fox, R.	Bob
Frame, M. E.	Murray
Gehrke, R. S.	Bob & Pat
Gehrke, W. J.	Bill & Roberta
Giesbrecht, P. N.	Peter & Gerlinde
Graham, G.	Gary
Hanson, G. L.	Gary & Phyllis
Hatton, D. W.	Dave
Hauck, M. M.	Mel & Joyce
Hauser, M. J.	Morris & Barb
Hines, W. E.	Bill & Gail
Hruschak, R.	Ray
Humble, P. K.	Peter & Shiela
Johnson, G. G.	Gordon & Vivian
Johnson, R. A.	Bob
Johnston, D. I.	Ian & Verna
Knott, R. S.	Roger & Yvonne
Kowalik, E. J.	Ed & Jenny

KILBARRA



Apprentice Aircraft Maintenance Engineer

Apprentice Aircraft Maintenance Engineer

Electra Captain

Aircraft Maintenance Engineer

Aircraft Maintenance Engineer

Apprentice Aircraft Maintenance Engineer

Twin Otter Captain/Electra First Officer

Twin Otter Captain

Apprentice Aircraft Maintenance Engineer

Senior Aircraft Maintenance Engineer - Edmonton

Electra Flight Engineer

Loadmaster

Electra Maintenance Supervisor

Apprentice Aircraft Maintenance Engineer

Asst. Expeditor - Edmonton

Electra Check Pilot

Apprentice Aircraft Maintenance Engineer

Air Transportation Manager

FLT. ENG.

s.19(1)

Pa. 3

Kowalik, T. S.	Ted
<i>H. B. B. C. N.</i> Ladouceur, T. A.	<i>Ken</i> Tom & Jean
Lawrick, J. P.	Joe & Dianne
Lidgren, R.	Ray & Pat
Livock, T. A.	Tom
Mariacchi, M. J.	Marsh & Carole
Miller, A. J.	Andy & Judith
Millott, B. L.	Barry
Misener, B. E.	Bryce & Bev
Mitchell, P. M.	Peter
Morris, W. B.	Barry & Carole
Newnham, A. R.	Al & Sharon
Olsen, D. G.	Denis & Judy
Patten, D. L.	Daryl & Eva
Phillips, G. L.	Gordon & Brenda
Rainbow, D. F.	Don & Judy
Rod, K. A.	Ken & Maria
Routledge, A. F.	Frank & Barbara

Apprentice Aircraft Maintenance
Engineer

Asst. Expeditior - Calgary
Maintenance Clerk

Electra Captain

Apprentice Aircraft Maintenance
Engineer

Supervisor Twin Otter Operations

Twin Otter Captain

Apprentice Aircraft Maintenance
Engineer

Edmonton Expeditior

Twin Otter Captain

Twin Otter Captain

Aircraft Maintenance Superintendent

Aircraft Maintenance Engineer

Loadmaster

Electra Flight Engineer

Twin Otter Captain/ Electra
First Officer

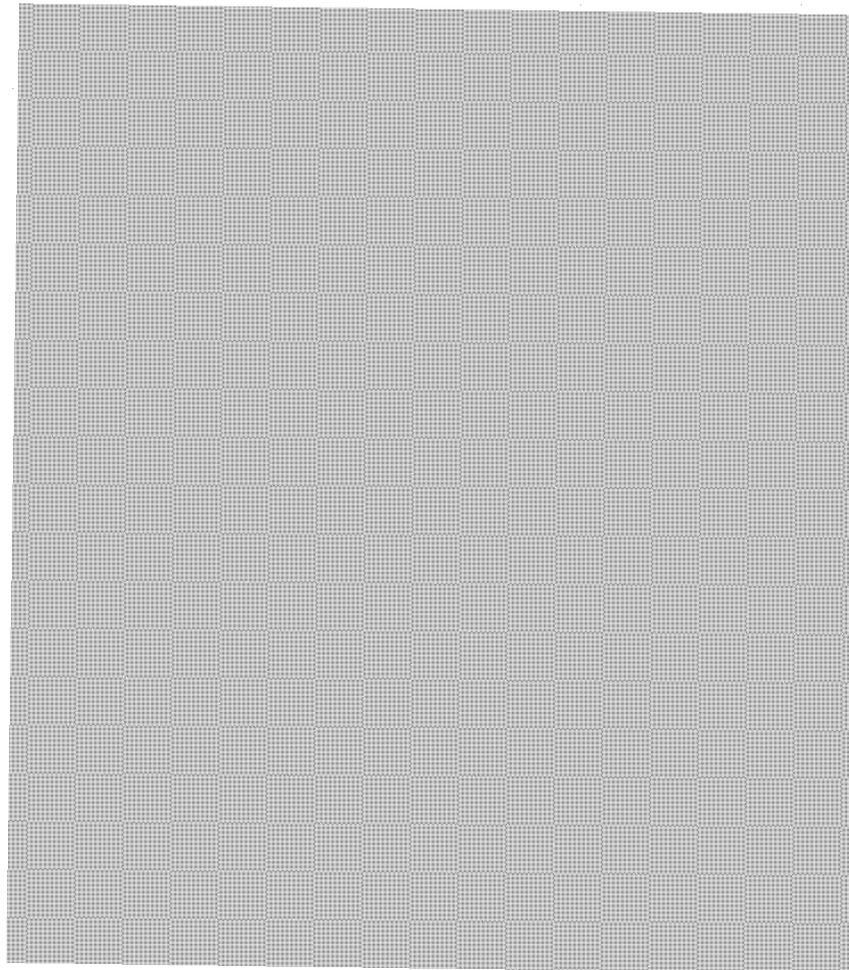
Twin Otter Captain

Maintenance Planner

s.19(1)

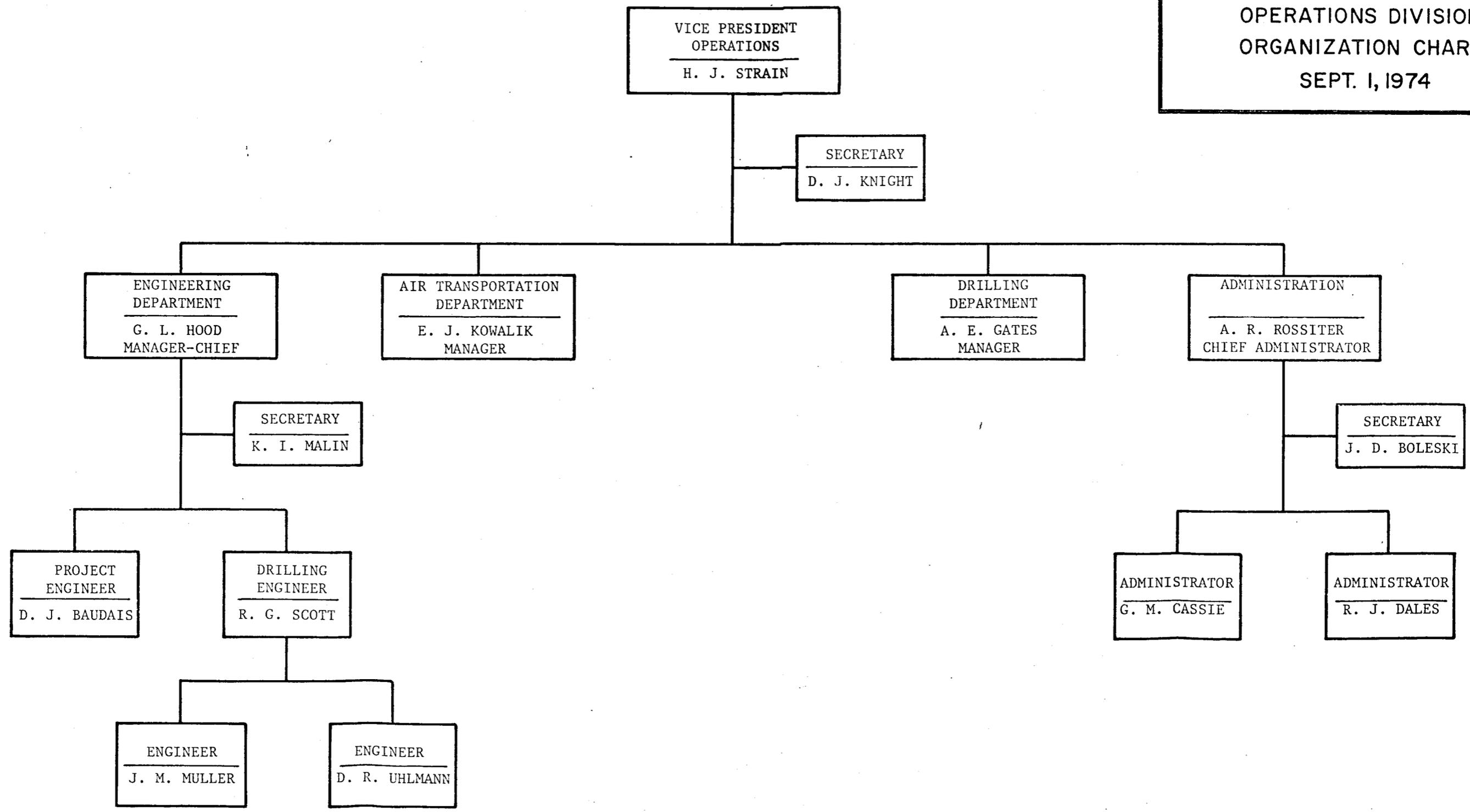
Page 4

Rubuliak, L. A.	Larry & Delores
Schneidmiller, G. D.	Gene
Senft, G. E.	Gary & Patricia
Sherlow, D. C.	Doug & Joan
Silvester, W. W.	Bill & Linda
Smith, W. E.	Bill & Helean
Smyth, M. J.	Mike & Dorthy
Stettner, E. L.	Larry & Marlie
Stewart, G. D.	Gordon & Angline
Thom, R. E.	Rene & Ingrid
Thomson, W. B.	Brian & Lou Ann
Webb, C. F.	Clare & Doreen
Weber, W. L.	Butch & Eileen
Weyman, G. D.	Gary & Carol
Wongsted, A. E.	Al & Margaret
Zoschke, W. J.	Walter & Stella



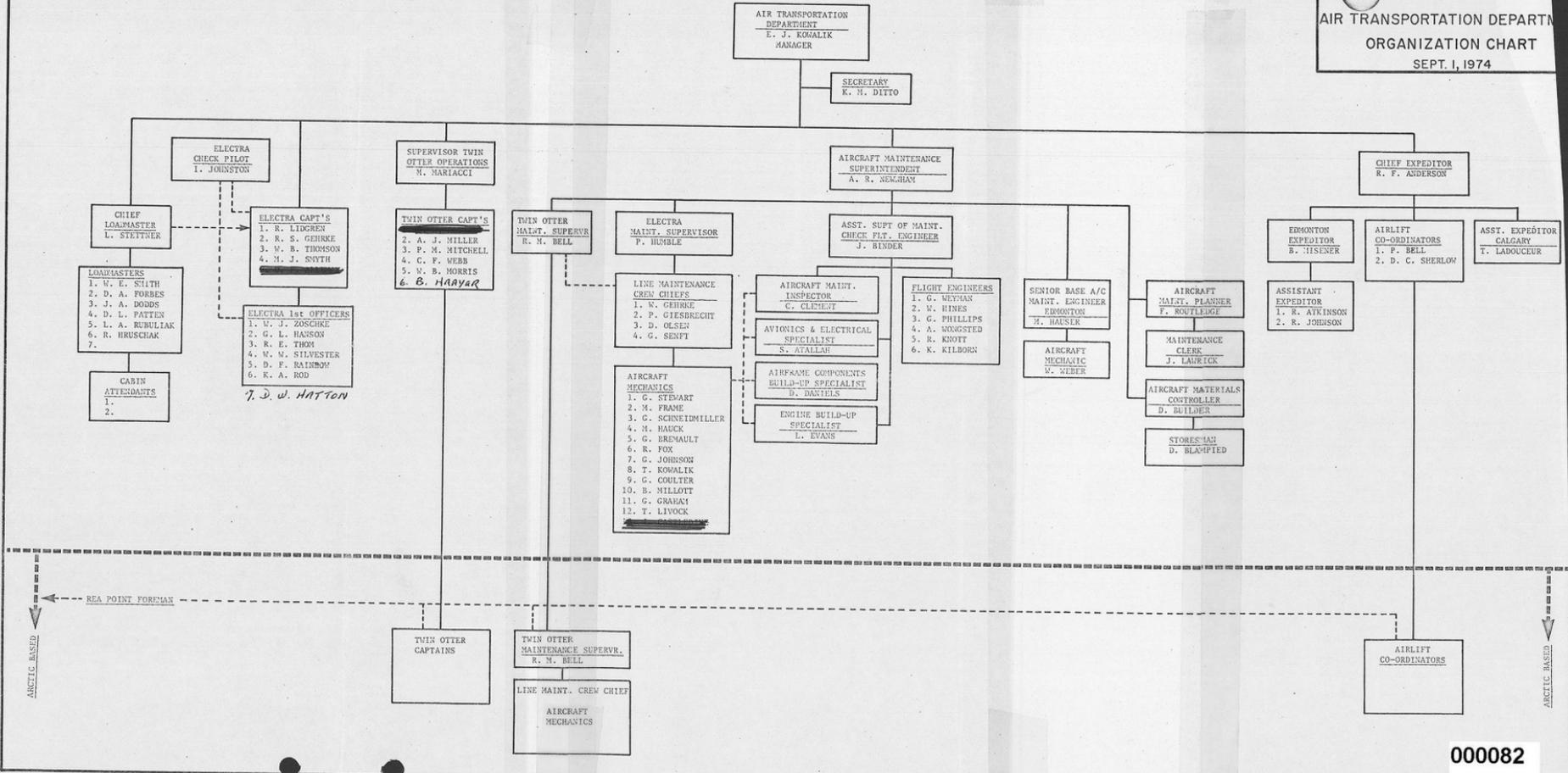
Loadmaster
Apprentice Aircraft Maintenance Engineer
Aircraft Maintenance Engineer
Airlift Co-ordinator
Twin Otter Captain/Electra First Officer
Loadmaster
Electra Captain
Chief Loadmaster
Apprentice Aircraft Maintenance Engineer
Twin Otter Captain/Electra First Officer
Electra Captain
Twin Otter Captain
Aircraft Maintenance Engineer
Electra Flight Engineer
Aircraft Maintenance Engineer
Twin Otter Captain/Electra First Officer

PANARCTIC OIL OPERATORS LTD.
OPERATIONS DIVISION
ORGANIZATION CHART
SEPT. 1, 1974



Feeders copy.

AIR TRANSPORTATION DEPARTMENT ORGANIZATION CHART SEPT. 1, 1974



FEBRUARY

S	M	T	W	T	F	S
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2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	

SATURDAY

FEB

22

s.19(1)

Walker W. H.



James Mackenzie
Res Bay

53-312 FEB. 22

000083

11

FEBRUARY

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
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23	24	25	26	27	28	

FEB



8

9

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312. 30438)

Debriefing of L188, 29 October 1974 Accident Investigation

Wednesday December 18, 1974
0900 hrs. Board Room, 8th Floor, Tower C.

Objectives

- To examine the effectiveness of established policy and procedures.
- To make specific recommendations for improvement.

AGENDA

Each member of the investigative group will be asked to present his views with constructive recommendations for improvements. The following order of discussion items will be followed with additional items added as the speaker may suggest.

1. Initial response

- a - Standby investigator
- b - CAI
- c - IIC
- d - ARCO
- e - HQ Coordinator

2. Field investigation

- a - Regional response
- b - Organization
- c - Resources; availability, lack etc.
- d - Communication
 - with HQ
 - within investigation team
 - within own group
- e - Use of PIP
- f - Support of aircraft operator ✓
- g - Support of aircraft manufacturer ✓
- h - Clothing
- i - Food and accommodations
- j - Funds (standby advance)
- k - Admin. services
- l - Press liaison
- m - Coordination with Civil authorities
- n - Security
- o - Contracts

3. Chairmen and IIC reports

- a - Preliminary report (before leaving field)
format
- b - Final report
format
group approval
priority
timing

GROUND SURVEY
UNDERWATER

27/11/74

Ken

The two enclosed tapes are from the F.D.R. installed on CF-PAB and CF-PAK

The tape from CF-PAB and identified was removed on October 29/1974. This should give you a indication of previous let downs into base.

The tape taken from CF-PAK was removed on November 25 1974 at my request. Please check this tape to see if the irregularities as evidenced on CF-PAB are not present.

Alvin Kohn

FAIRCHILD INDUSTRIAL PRODUCTS DIV.
 LOS ANGELES, CALIF. 90022

FLIGHT DATA RECORDER CALIBRATION
FINAL INSPECTION

S/N 1301
 MODEL 221

ALTITUDE

	READ	ERROR
- 1000'	.128	+ .003
- 500'	.159	- .000
Sea Level	.194	+ .002
1,000'	.256	+ .001
2,000'	.317	- .000
4,000'	.436	- .001
6,000'	.543	- .002
8,000'	.646	- .002
10,000'	.740	- .003
16,000'	.991	- .004
20,000'	1.132	- .004
25,000'	1.282	- .004
30,000'	1.411	- .001
35,000'	1.519	+ .001
40,000'	1.605	+ .001
50,000'	1.727	+ .002
TOTAL SPREAD	1.599	ERROR - .001

HEADING

	READ	ERROR
0°	3.217	- .003
30°	3.073	- .002
60°	2.926	- .004
90°	2.782	- .003
120°	2.924	- .006
150°	3.073	- .002
180°	3.219	- .001
210°	3.368	+ .003
240°	3.517	+ .007
270°	3.654	- .001
300°	3.509	- .001
330°	3.363	- .002
360°	3.216	- .004

ACCELERATION

	READ	ERROR
- 3 Gs	4.537	+ .003
- 2 Gs	4.473	+ .005
- 1 Gs	4.404	+ .003
0 Gs	4.336	+ .001
+ 1 Gs	4.269	+ .001
+ 2 Gs	4.201	- .000
+ 3 Gs	4.133	- .002
+ 4 Gs	4.066	- .002
+ 5 Gs	4.000	- .001
+ 6 Gs	3.935	- .000

AIR SPEED

	READ	ERROR
0 Knots	1.752	- .003
100 Knots	1.784	- .004
150 Knots	1.826	- .003
250 Knots	1.965	- .006
350 Knots	2.189	- .008
450 Knots	2.504	- .001

Binary #1	<input checked="" type="checkbox"/>
Binary #2	<input checked="" type="checkbox"/>
Binary N/S	<input checked="" type="checkbox"/>
Binary T&D	<input checked="" type="checkbox"/>

TIME CK. 10 MIN. 1.000 = .010

ERROR - .002

INSP. Ray E. Cho DATE 10-30-73



INSP. STAMP

5002-W-30096 (WCAI)

Room 929
Federal Building
9820 - 107 Street
Edmonton, Alberta

December 7, 1973

Pan Arctic Oils Ltd.
Box 190, 703 - 6th Avenue, S.W.
Calgary, Alberta

ATTENTION: Mr. Ed Kowalik

Dear Sir:

This refers to the accident involving Lockheed L188C, aircraft CF-PAB which occurred October 16, 1973.

The cockpit voice recorder and the flight data recorder tape were submitted to our Laboratory in Ottawa for evaluation with respect to the accident.

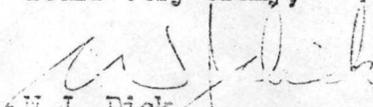
The Lab found that no relevant information was available from the flight data recorder tape. The cockpit voice recorder was found deficient in that no conversation within the cockpit area was recorded, although both the Captain's and First Officer's headset tracks were normal.

In accordance with established Ministry of Transport Policy, voice recorder transcripts and data recorder information may not be released except to the crew members involved in the occurrence. A technical report has been prepared by the National Aeronautical Establishment Flight Research Laboratory covering the apparent deficiencies and unserviceabilities related to the CVR and FDR, a copy of which is herewith provided to your firm.

In order for us to understand the reasons for the shortcomings in the information from the two recording systems we would appreciate receiving your report of inspection and rectification of the problem areas.

In the event that your firm does not have adequately qualified personnel, we advance for your consideration the name of Mr. G. Fryer, who is Design Approval Representative No. 45 and is experienced and qualified on five-parameter flight recorders which includes the type installed in CF-PAB.

Yours very truly,


W.J. Dick
Regional Superintendent
Accident Investigation

WJD/aek
Enclosure

*Original of this letter + the Technical Report
are being taken by hand by Insp R H Cook
for a further interview with ...
wfd
Dec 7/73*



Government of Canada
Gouvernement du Canada

MEMORANDUM

NOTE DE SERVICE

TO
À

C.A.I. OTTAWA

ATTEN: A.J. CLARK

FROM
DE

B. ASTON

O.C.A.I. TORONTO

SECURITY - CLASSIFICATION - DE SÉCURITÉ
OUR FILE - N/RÉFÉRENCE
YOUR FILE - V/RÉFÉRENCE
H 40003-1 C.A.I.O.
DATE JANUARY 16, 1975

SUBJECT
OBJET

ACCIDENT - LOCKHEED ELECTRA CF-PAB

1. ENCLOSED IS THE INITIAL REPORT PERTAINING TO THE SUBJECT AIRCRAFT.
2. THE FINAL REPORT IS NOW BEING COMPILED AS THE SITUATION EXISTS. IF CIRCUMSTANCES CHANGE THE REPORT WILL BE AMENDED ACCORDINGLY.
3. ALSO ENCLOSED IS A PHOTOSTATIC COPY OF THE WEIGHT AND BALANCE REPORT DATED FEBRUARY 18, 1974 AND AMENDMENT DATED SEPTEMBER 20, 1974 FOR CF-PAB AS REQUESTED BY J.R. LEROUX.

B. ASTON
CHAIRMAN SYSTEM GROUP

ENCL.
BA/CW



Gouvernement
du Canada

MEMORANDUM

NOTE DE SERVICE

TO
À O.C.A.I. - Toronto

FROM
DE C.A.I.E./GEN - Ottawa

SECURITY - CLASSIFICATION - DE SÉCURITÉ
OUR FILE - N/RÉFÉRENCE 5002-H40003 (CAIE)
YOUR FILE - V/RÉFÉRENCE
DATE 9 January 1975

SUBJECT
OBJET Re: Accident - Lockheed Electra, CF-PAB
CAIE Laboratory Project FI 167/74

1. This is in response to a telephone request from Mr. B. Aston on 6 January 1975.
2. Attached you will find a copy of 12 pages from Section II of the Electra Operating Manual and a copy of 6 pages of Section 14 of the same Manual.

R.M. Logan
Supv., General Investigation
Acc. Inv. Eng. Lab.

encl.



Government of Canada / Gouvernement du Canada

MEMORANDUM

NOTE DE SERVICE

REGISTERED

TO / À

C.A.I.E. OTTAWA
Attn: Mr. R. M. LOGAN

FROM / DE

OCAI, Toronto
B. ASTON

SECURITY - CLASSIFICATION - DE SÉCURITÉ
OUR FILE - N/RÉFÉRENCE H40003-1 (CAIO)
YOUR FILE - V/RÉFÉRENCE
DATE January 6, 1975

SUBJECT / OBJET

AIRCRAFT ACCIDENT - CF-PAB

1. Enclosed are the black and white negatives for the wreckage scatter pertaining to the subject accident.
2. It is requested that the negatives be returned when they have served your purpose.

Encls.
BAA:ml

B. Aston
OCAI, TORONTO



MEMORANDUM

NOTE DE SERVICE

TO
À B. Aston (Systems Chairman)

FROM
DE A. J. Clark



SECURITY - CLASSIFICATION - DE SECURITE
OUR FILE - N/REFERENCE H40003-1 (CAIO)
YOUR FILE - V/REFERENCE
DATE 11 December 1974

SUBJECT
OBJET

Initial Report L188 - Aircraft Accident CF-TAB

1. The subject initial report will be done in accordance with the requirements set out in chapter 1102 of the Manual of Aircraft Accident Investigation. As the conclusion of the field investigation phase is somewhat arbitrary, please have the reports in my hands by January 14, 1975. In addition please include a list of all material gathered by your group during the course of this investigation also test research or investigation still outstanding with the anticipated objectives.
2. Please co-ordinate any meetings of your group to ensure completeness of your area of responsibility in this investigation. When the data gathering stage has been completed by all the groups a meeting will be held with all Chairmen and you will be advised accordingly. It is also intended that we will hold our normal de-briefing meeting at which you should be prepared to discuss revisions in our procedures and techniques that we will learn as a result of this investigation.
3. Thank you for your excellent co-operation and dedication during this difficult investigation.


A. J. Clark
Investigator-in-Charge



Government of Canada

Gouvernement du Canada

MEMORANDUM

NOTE DE SERVICE

TO
À

C A I OTTAWA

ATTEN: A.J. CLARK

FROM
DE

O C A I TORONTO
(B. ASTON)

SUBJECT
OBJET

LOCKHEED ELECTRA L188, CF-PAB

SECURITY - CLASSIFICATION - DE SÉCURITÉ
OUR FILE - N/RÉFÉRENCE
5002-H40003
YOUR FILE - V/RÉFÉRENCE
DATE
DECEMBER 6, 1974

1. Enclosed are 11 photographs showing Lockheed Electra L188, CF-PAK on a landing sequence for Rea Point on November 10, 1974. All the photographs were taken while standing in the same position which was approximately mid-position of the wreckage area of CF-PAB.
2. The negatives for the photographs are being retained in the Toronto Regional Office.


V.H. McPherson
Regional Superintendent
Accident Investigation

Encl.
BA/cw

Items to be accomplished in Calgary.

Flight data recorder -

Check on when and who did last plumbing installation for static and pressure lines. Obtain proceeding ~~for~~ fail to determine if heating trace was o/s.

Check certification in records for installation.

Cockpit voice recorder - Tape broken at splice and approximately 50' missing. Check when tape installed and if repair had been carried out by Panarctic.

Obtain serial # of all components -

Flight
Electrical
Fuel

Hydraulic including flight boosters.

Obtain any drawings which may ~~have been~~ cover modifications to flight instruments.

Check on all modifications to aircraft.

Check on life lines

1
For Paul Anthony, Engines.

Check on serial # for all -
Engines
Propellers
Components

Check times on -
Engines
Propellers
Components.

Check on life time components ~~and details~~ and date
of installation.

Obtain list of -: premature component changes.

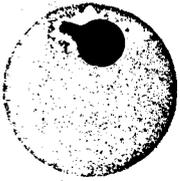
History of -: engines
Propellers
Components

List of unrecoverabilities recorded and rectification
during life of major components.

JOE. CHIEFS.

HELPER

- | | |
|-----------------------|---------------|
| ① BRIAN ASTON - | WAYNE SAWCHUK |
| ② BOB LOGAN - | JUAN BLOCKA |
| ③ JEAN PAUL ANDONEY - | FRENCHY KING |
| ④ CHUCK CLMENT - | CLEN ERWERT |
| ⑤ HILTON ESTABROOK - | ROBERT LUND. |



**panarctic
oils ltd**

H. J. STRAIN
Vice-President
Operations

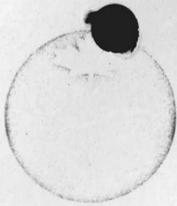
703-6th AVENUE S.W., CALGARY, ALBERTA • P.O. BOX 190 • T2P 2H6 • PHONE (403) 269-0311 • TELEX 038-24687

FLIGHT FILES BEING RETAINED BY B. ASTON OF THE M.O.T.

Flight 9379	September 1, 1974	(continuation of August)
381	September 3, 1974	
9381	September 4, 1974	
382	September 5, 1974	
383	September 6, 1974	
735	September 9, 1974	
388	September 14, 1974	
9393	September 21, 1974	
736	September 22, 1974	
9399	October 1, 1974	
9400	October 3, 1974	
737	October 4, 1974	
738	October 12, 1974	
739	October 16, 1974	
740	October 21, 1974	
742	October 24, 1974	
415	October 28, 1974	
FLIGHT TRAINING	September, 1974	

Karen Datto 2/12/74.

[Signature] 2/12/74



panarctic
oils ltd

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Vice-President
Land & Administration

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DOCUMENTS RECEIVED FOR PAB

DECEMBER 2, 1974

PAB Work Book - #MSN1141
PAB Technical logs
Airframe Vol. (1)
Airframe Vol. (2)
Engine - Serial #501483
Engine - Serial #501204
Engine - Serial #501697
Engine - Serial #501204
Propeller - Serial #P687
Propeller - Serial #P665
Propeller - Serial #P576
Propeller - Serial #P710
Record Of Installations and Modifications Vol. (2)
Journey log Vol. (4) and Vol. (5) [copy]

#1 Work cards dated January 1 to October 28.
Folder for last 5-3 check.
Folder for 5-4 check dated September 20, 1974.

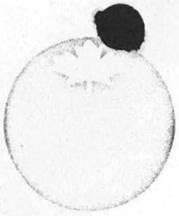
F/E Logs - Dated - January 1974
January 1974
January/February 1974
February 1974
Opened February 23, 1974
Opened March 9, 1974
April 17, 1974
April 14, 1974, closed April 27, 1974
Opened May 10, 1974

CF-PAB Files:

#1 1 - PAB General
1 - SOAP Reports - 4 Engs.
1 - Repairs - May 1973 - Doorframe
1 - Repairs - September 1973 - Wing RH
1 - Repairs - November 1973 - A/C Accident - Noice Penn
1 - Repairs - June 1974 - A/C Accident - Eglinton Island

A.F. Routledge
Mice Planning / Tech Records

B. ASTON
MINISTRY OF TRANSPORT



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A.F. Routledge
Mice Planning / Tech Records

B. Aston
B. ASTON
MINISTRY OF TRANSPORT.

CF-PAB Documents (to MOT - 30-Oct-74)

- 1 - Aircraft Journey Logs - Vols 1, 2, 3, 4 & Xerox
copy of Vol 5. returned by MOT
- 2 - Aircraft Technical Logs - Airframe, Sect I - Vols 1 & 2
" , Sect II - Vol 1 & 2
Engines (4) Retained by MOT ✓
Props (4) ✓
- 3 - Aircraft Maintenance Cards - Mar/72 to 29-Oct-74
- 4 - Lifed Item Cardex - 1 Vol to 01-Jan-74 returned ✓
01-Jan to 29-Oct-74 ✓
retained by MOT - all prev
- 5 - Maintenance Program Charts - 1 - NWAirlines (black)
1 - P.A. Oils returned (black) ✓
- 6 - Maintenance Planning Work Book (AFR-200-100) - 1 - held by MOT
- 7 - Weight & Balance Manual - 1 returned ✓
- 8 - Electrical Load Analysis (Lockheed Aircraft) - 1 - mtd 15-Nov ✓
- 9 - Files - -PAB General (1) & Repair - (4) - & SOAP (4) ✓ held by MOT
- 10 - Engine Records (4); Turbine Records (4); Propeller Records (4)
& Prop Regulator Records (4) - by Installed 5/14
(all above in individual brown File Envelopes)
all above returned ✓

4 returned *JA*

- 11 - No 5 Check (1000 hr) Inspection Records - (6) envelopes.
- 12 - Freighter Conversion Manual - PAIB (1) Book # 11 returned *JA*
- 13 - Lockheed Flight Manual - L-133 (1) Book # 1 ?
- 14 - Manuscript Resume - of % , Erg. Prep Times / Status, ✓
including copies of CoFR & CoPA.

Assembled by

Accepted by

A.F. RUTLEDGE
Paracetic Oils

A.J. FROEHLER
MOT R.A.I.

Box of Mtec Records - 1JA - returned *JA*

02-Dec-74

Above Records checked this date. - items marked "retained by MOT" - or "held by MOT" surrendered to Mr B. Aston. - Remainder checked as present, with exception of items 12 & 13, which are subject to recheck. - Recheck - item 12 returned. - Item 13 only, outstanding.

Rutledge
02-Dec-74



000103

000104

C 4 2 R 7 8 1

000105

(17) Left elevator trim tab

13
2
K
7
8
1

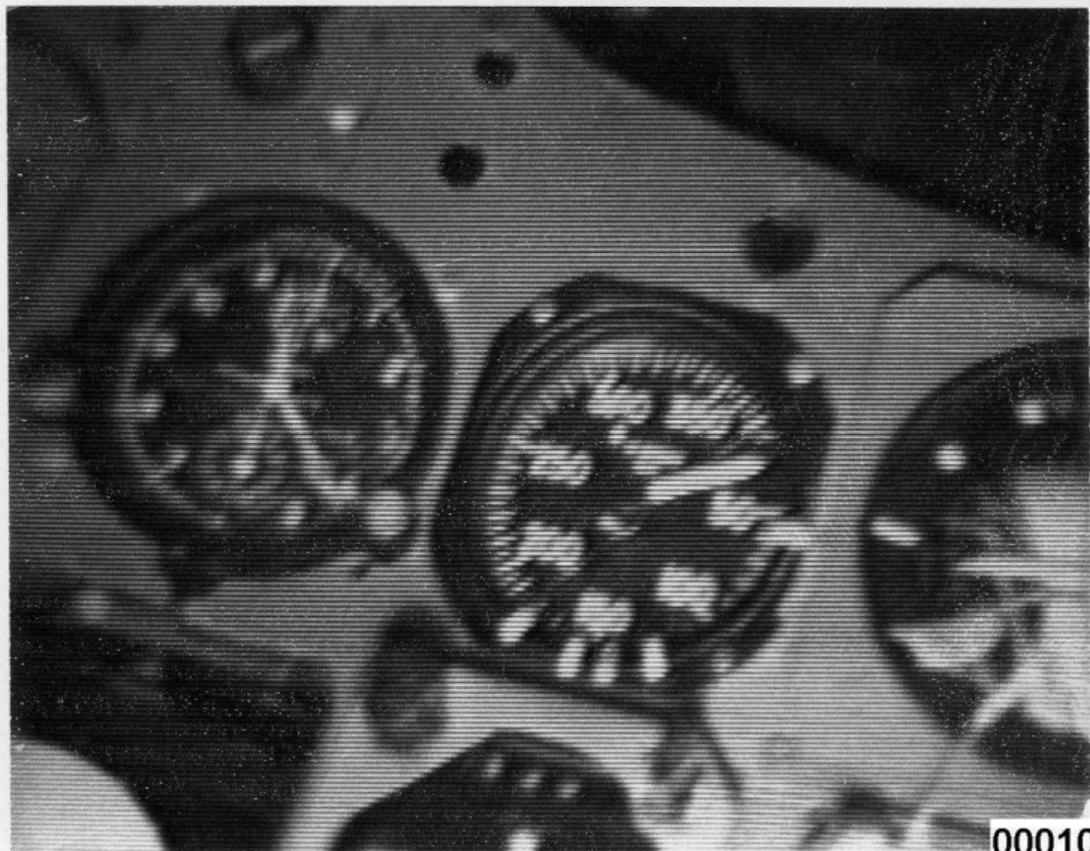
000106

000107

17 LEFT ELEVATOR AT FUSELAGE
STRUCTURE

182 K7 84

000108



000109

(12)

C/DIKOT SORTA

F/PANIEL

C 4 2 K 7 8 1

000110



000111

31

1608140

000112



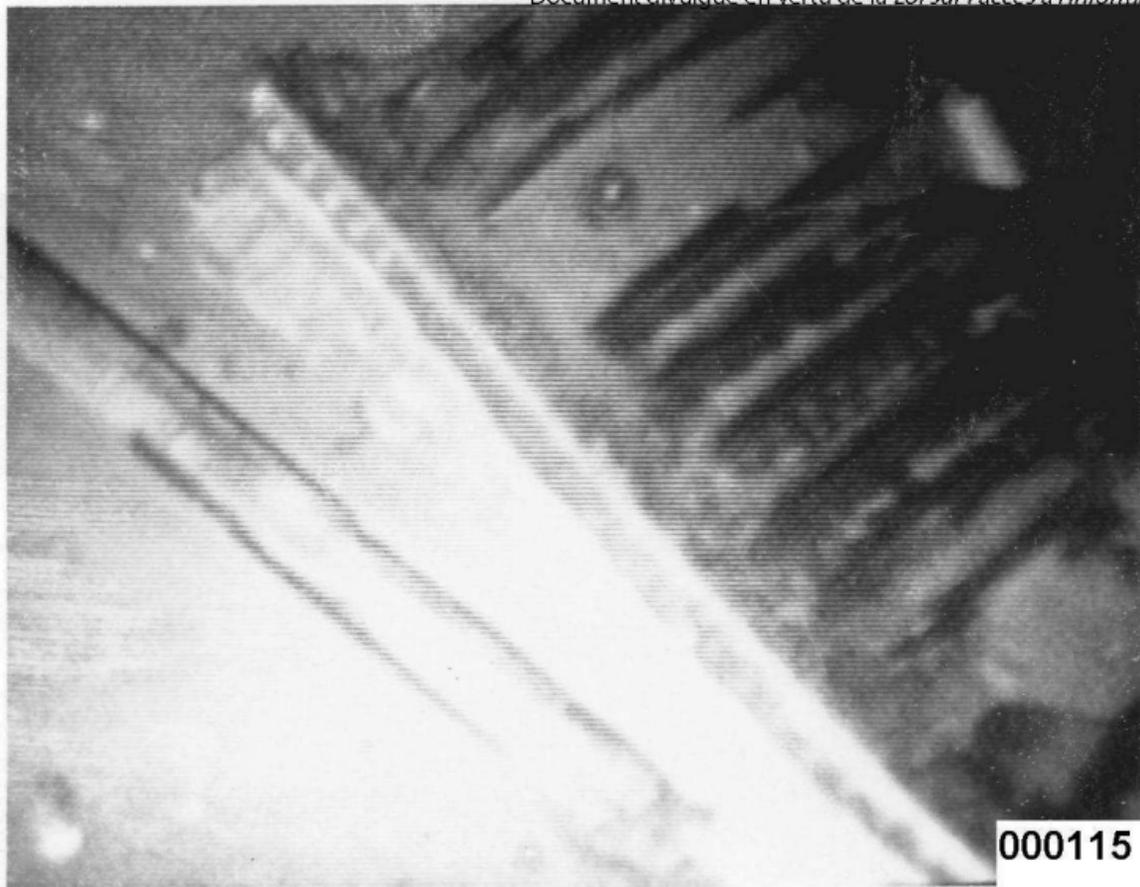
000113

35

ELECTRICAL BAY

1
5
0
1
1
4
3

000114



000115

32 RIGHT ARMED PUSH
PULL ROD

1600242
000116



000117

4 AILBON BELL CRANK

4
4
1
8
0
9
4

000118



000119

(10) CONTROL BOOSTER HYD)
COCKPIT

C 1 2 4 7 8 9

000120



000121

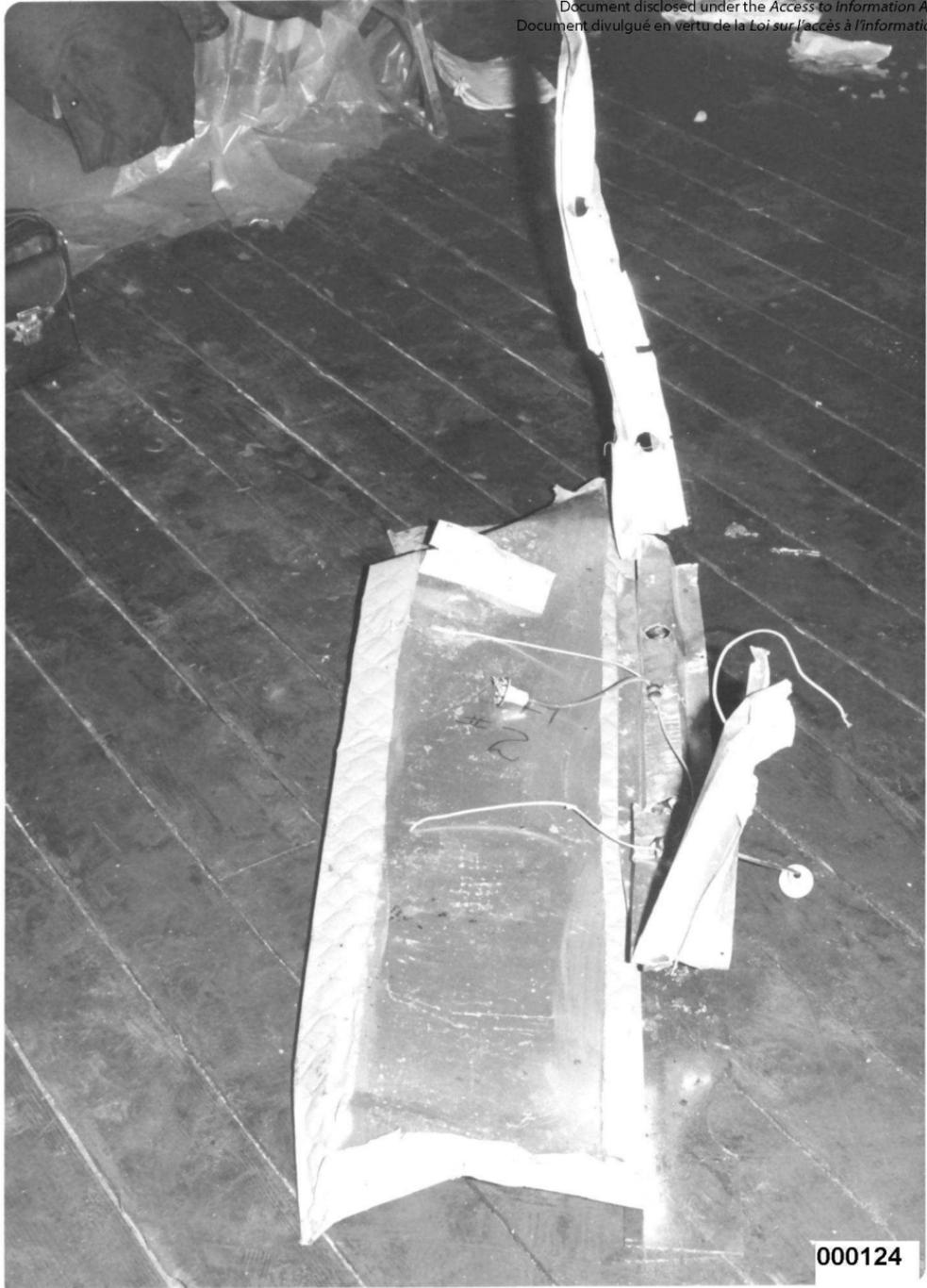
27 LEFT INBOARD HALF SECTION
FLAP

160822

000122



000123

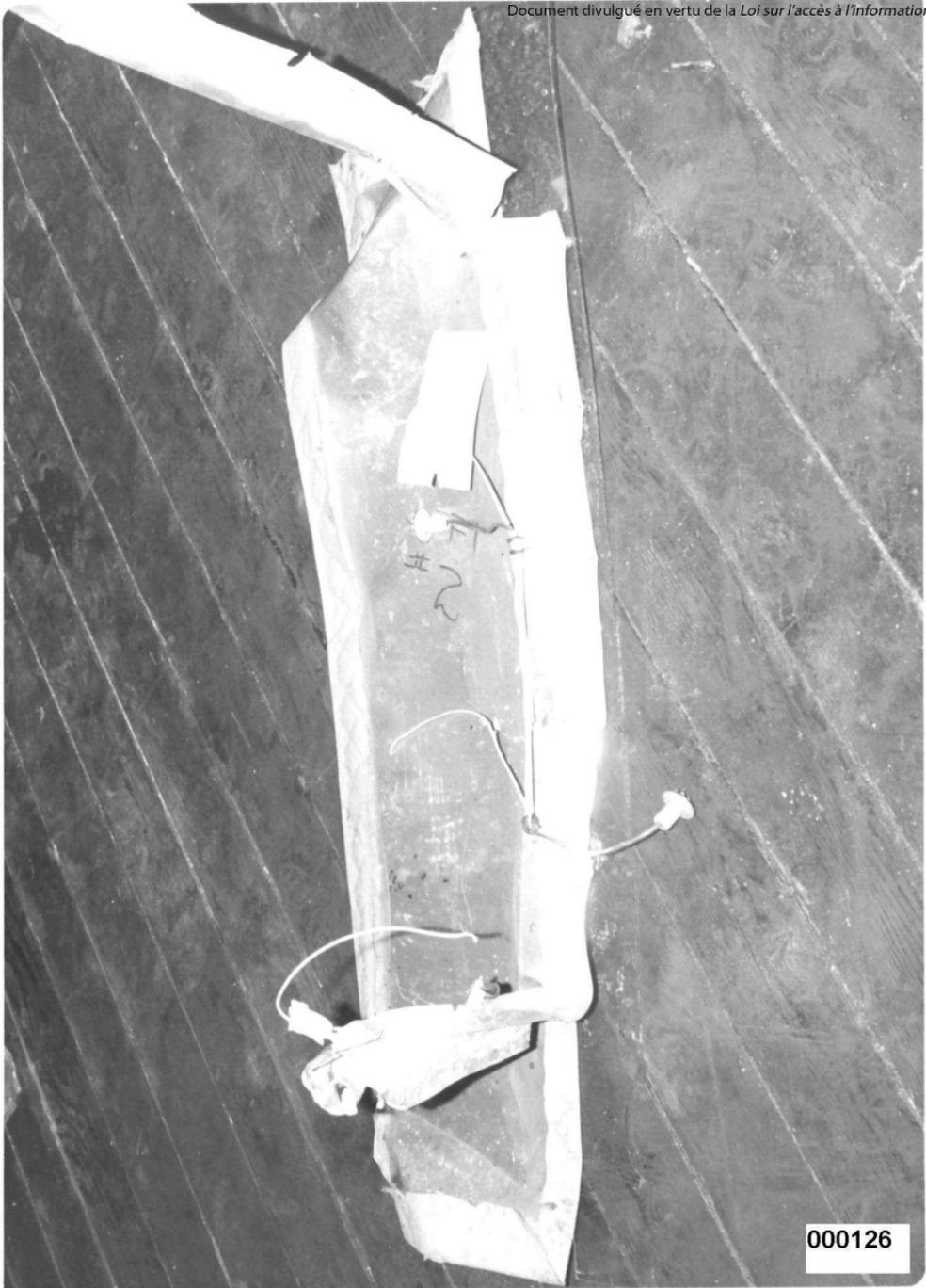


000124

3497

#

2 HEADLINE PANEL FROM FRONT
CABIN. LEFT SIDE



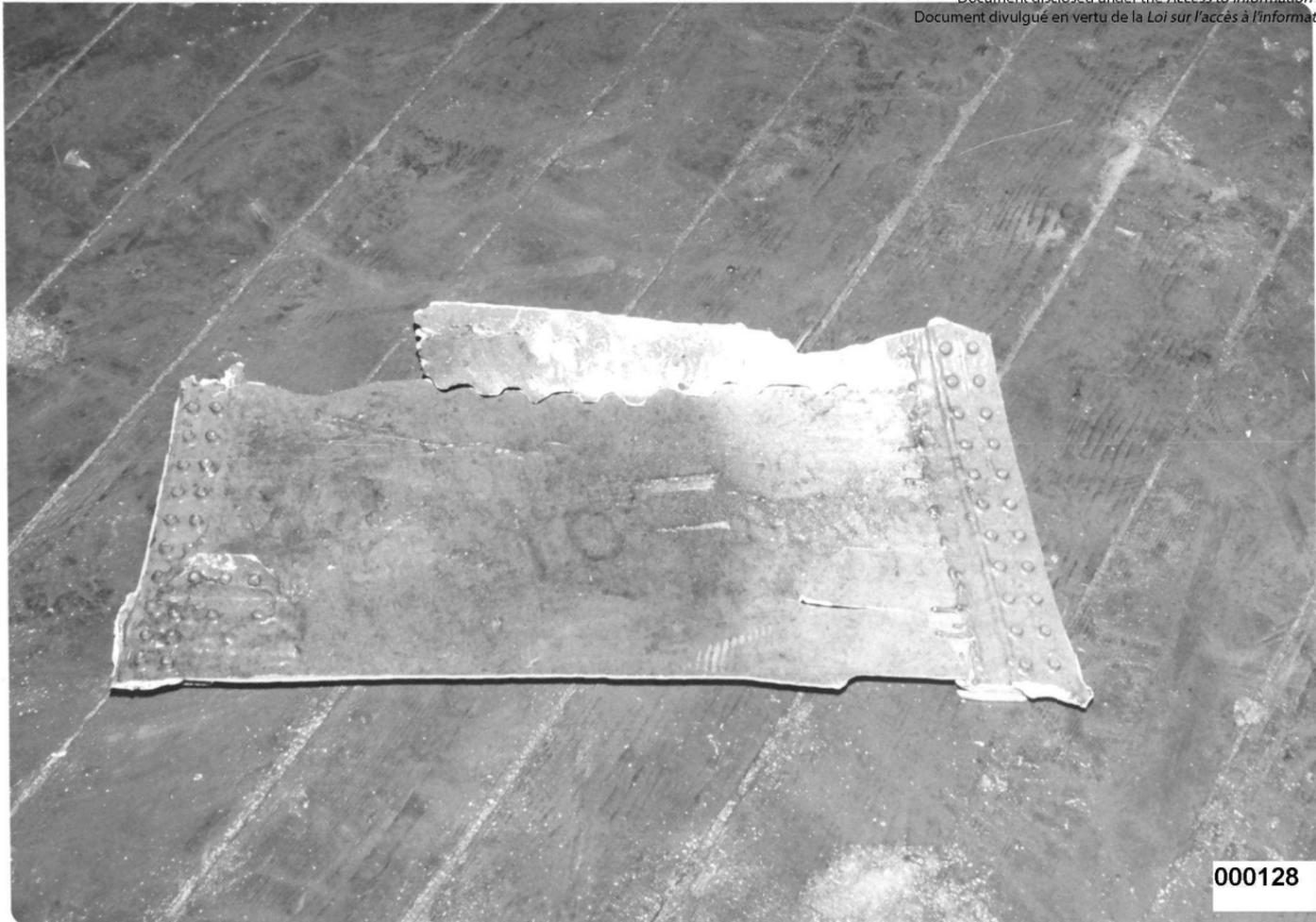
000126

3497

#

2 HEADLINER PANEL FROM FRONT CABIN

LEFT SIDE



000128

#

10

SECTION OF FORWARD WING BEAM.



000130

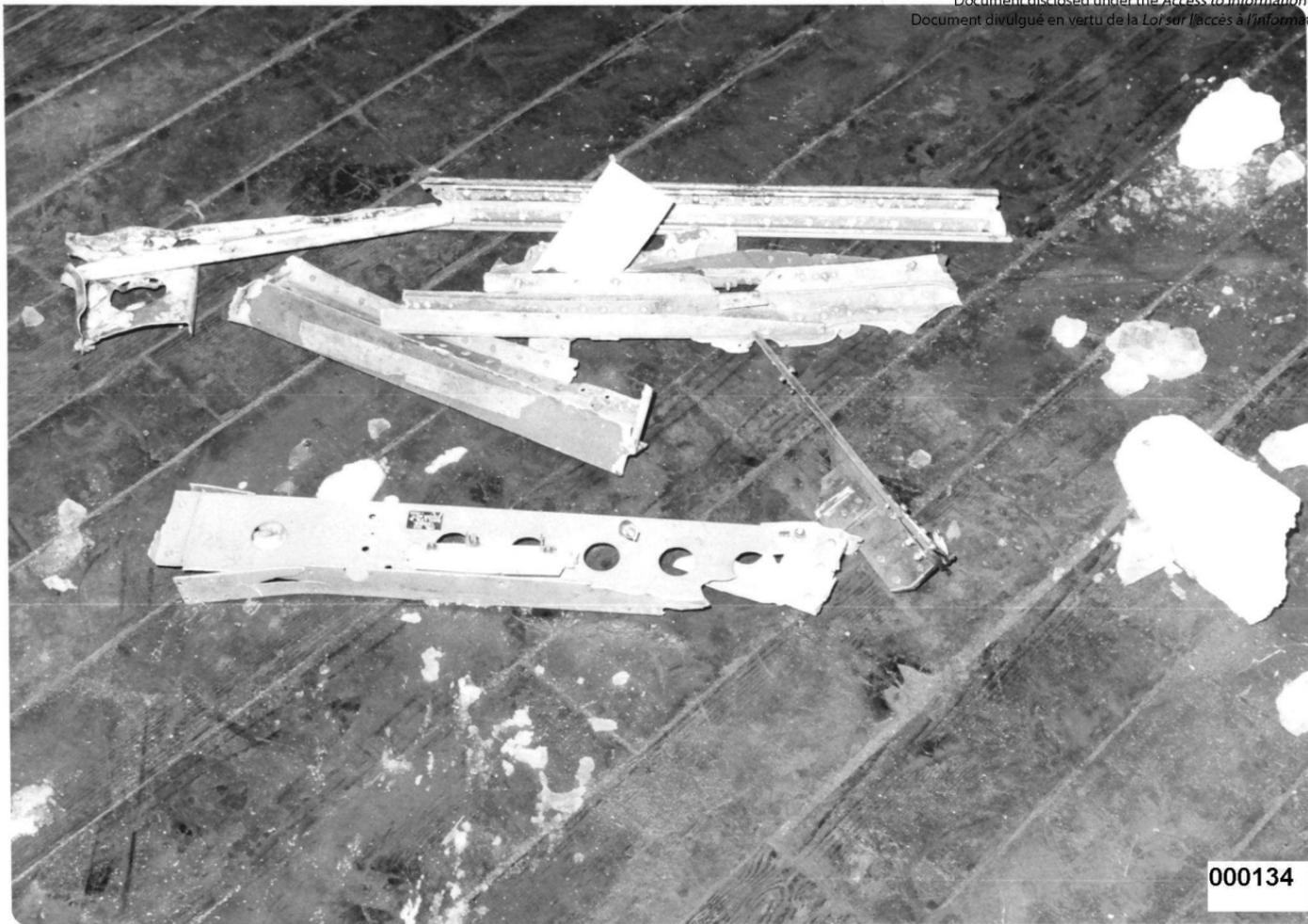
10

SECTION OF FORWARD WING BEAM



000132

FLAP CARRIER



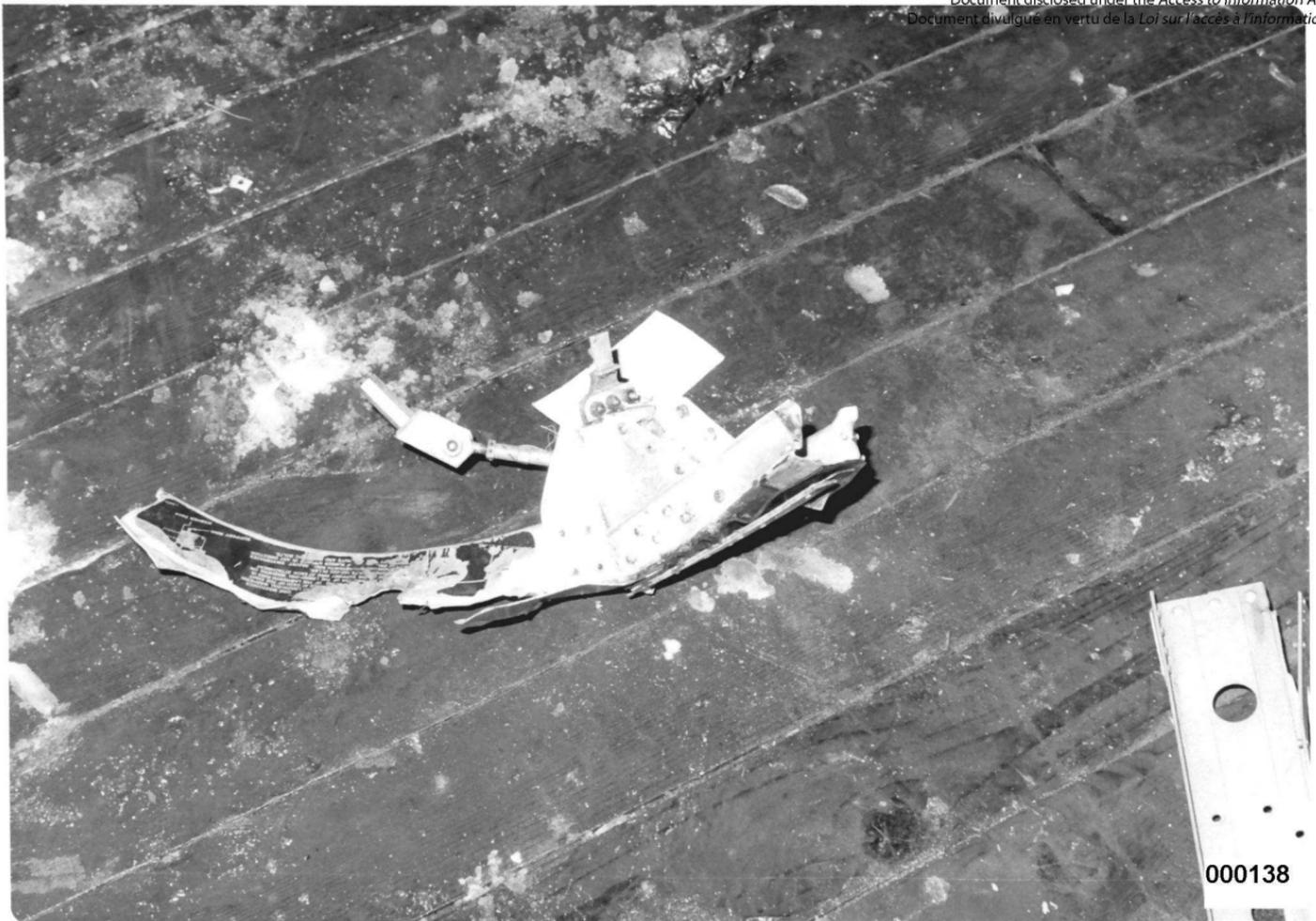
000134

3470 SECTION PRIMARY STRUCTURE FORWARD
BAGGAGE PIT



000136

L 3555 ELECTRICAL CONTROL PANEL FROM FREIGHT
DOOR LOCATED JUST OUTSIDE FLIGHT STATION DOOR
RIGHT SIDE



000138

SECTION PROPELLER AFT BODY FRAME



000140

L 3619

SECTION PROPELLER AFTER BODY FRAME



000142

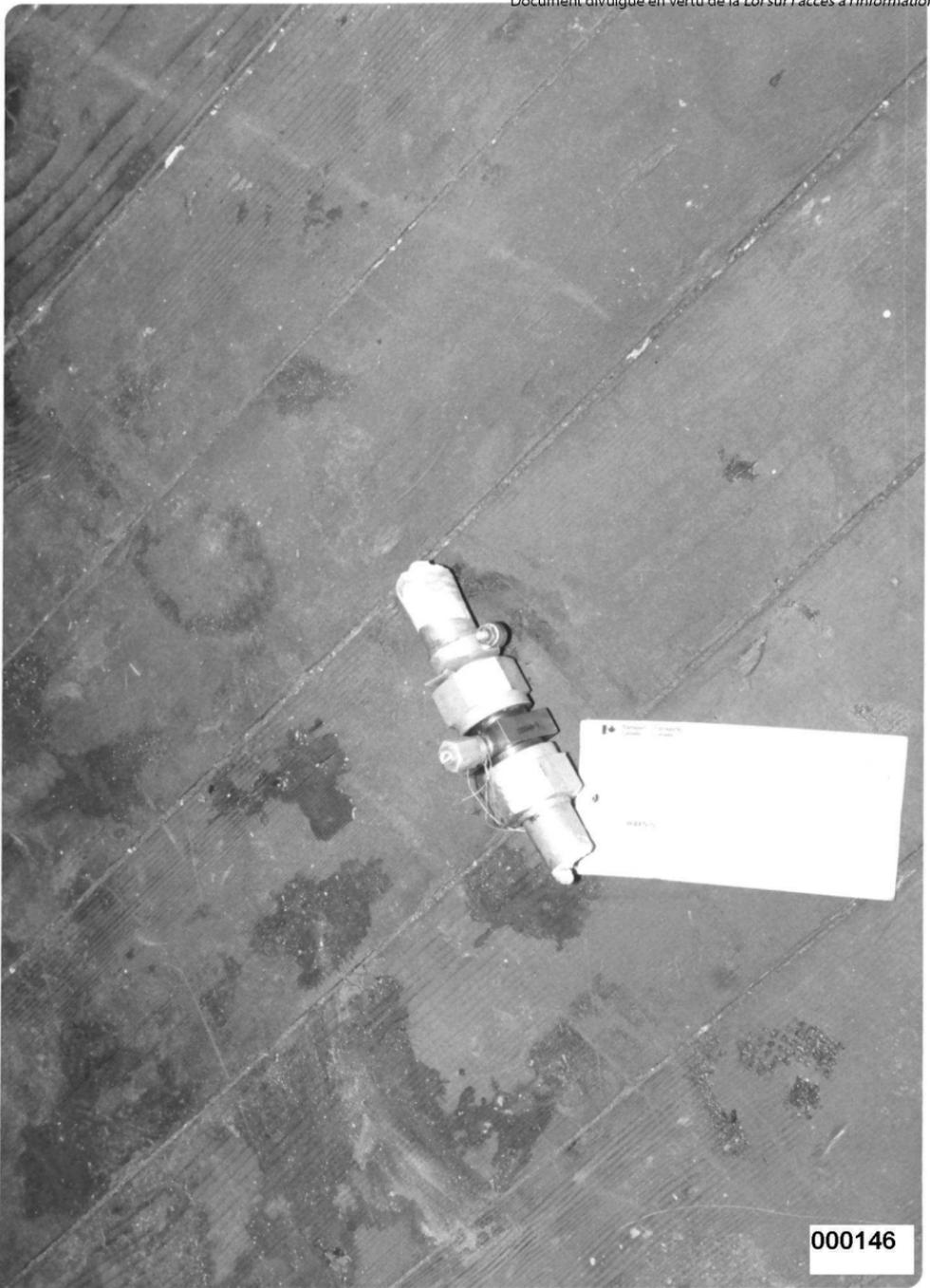
3468 AFT LOWER CORNER OF FORWARD BAGGAGE DOOR



000144

L 3605

DIFFERENTIAL SYNCHRONIZER MOUNTING BASE.



000146



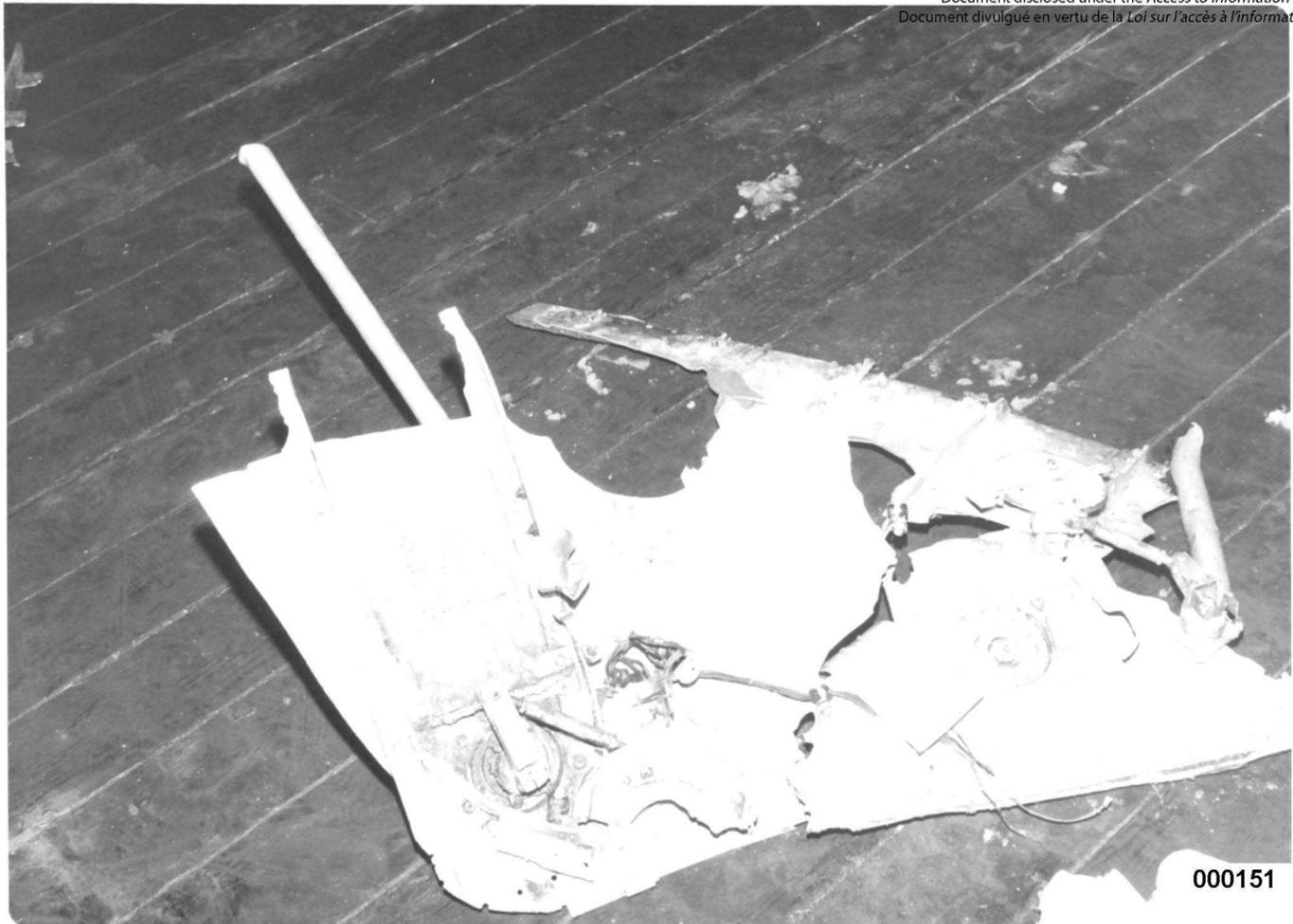
000147

FLIGHT STATION HEATING AND AIRCONDITIONING DUCT
OUTLET LOCATED STATION 200 IN CEILING MADE OF
FIBRE GLASS TORN FROM STRUCTURE



000149

3585 FUEL CROSSFEED VALVE
UNKNOWN LOCATION



000151

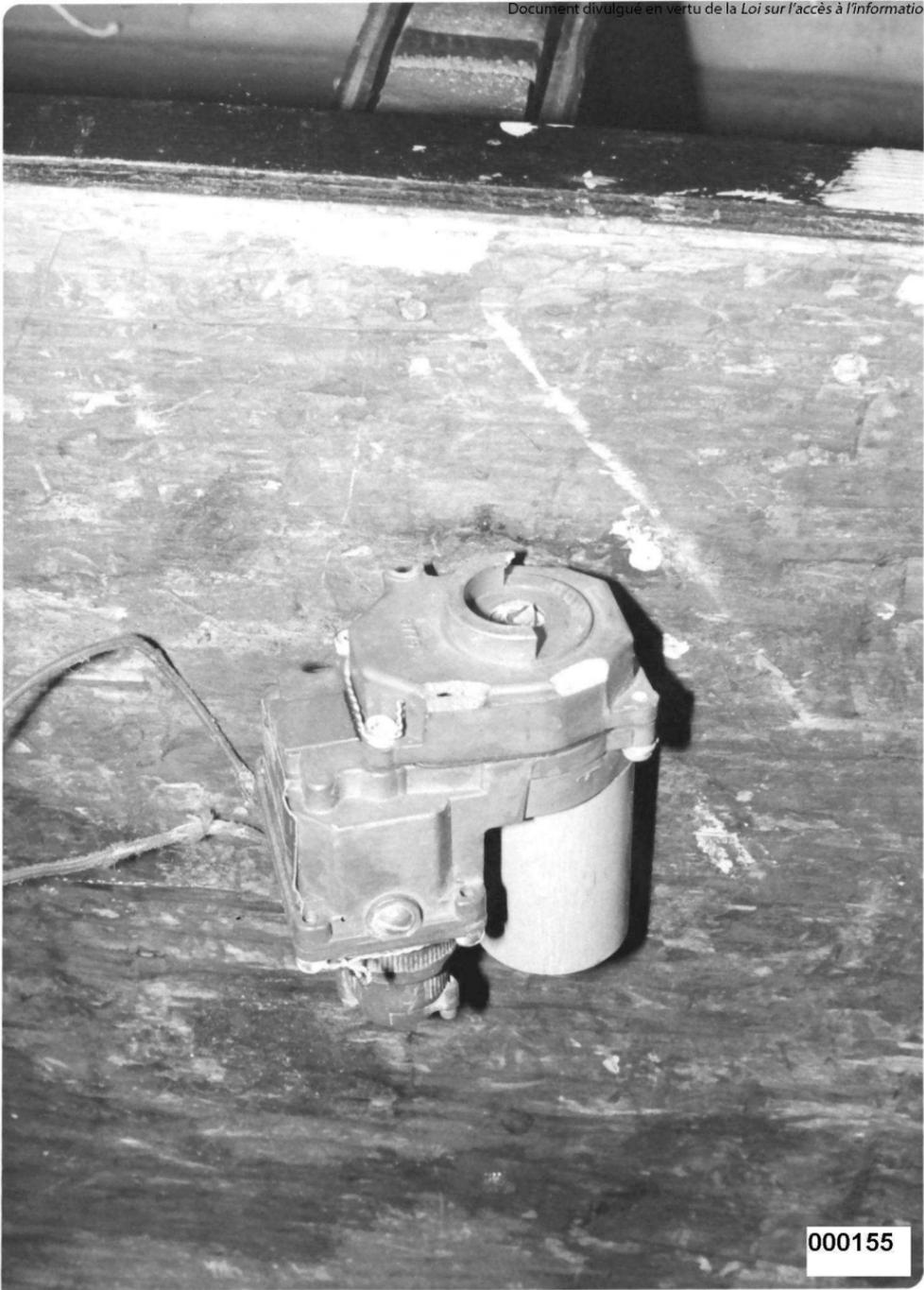
L 3586

CROSS FEED VALVE AND EMERGENCY FUEL
SHUT OFF VALVE



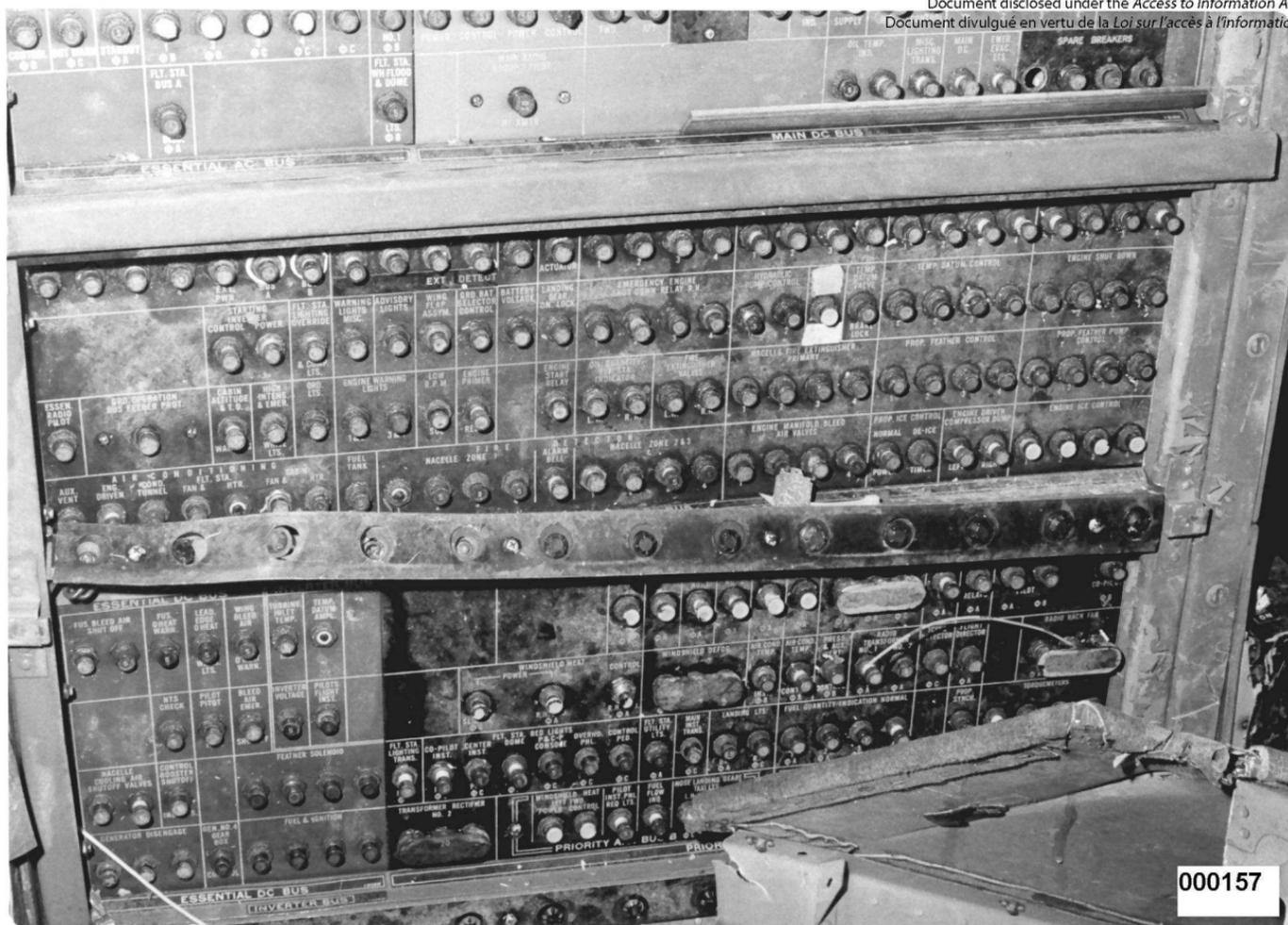
000153

IMBOARD AND OUTBOARD SCAVENGE PUMP TORN AWAY
WITH WING PLATING. UNABLE TO DETERMINE POSITION
BECAUSE MOTOR ASSY HAD BEEN SHEARED AWAY
BOTH SUBJECT TO FIRE DAMAGE. SOLID PIPES FRACTURED
FROM BENDING OVERLOAD.



000155

FUEL SHUT-OFF VALVE MOTOR SERIAL K 9661-0023



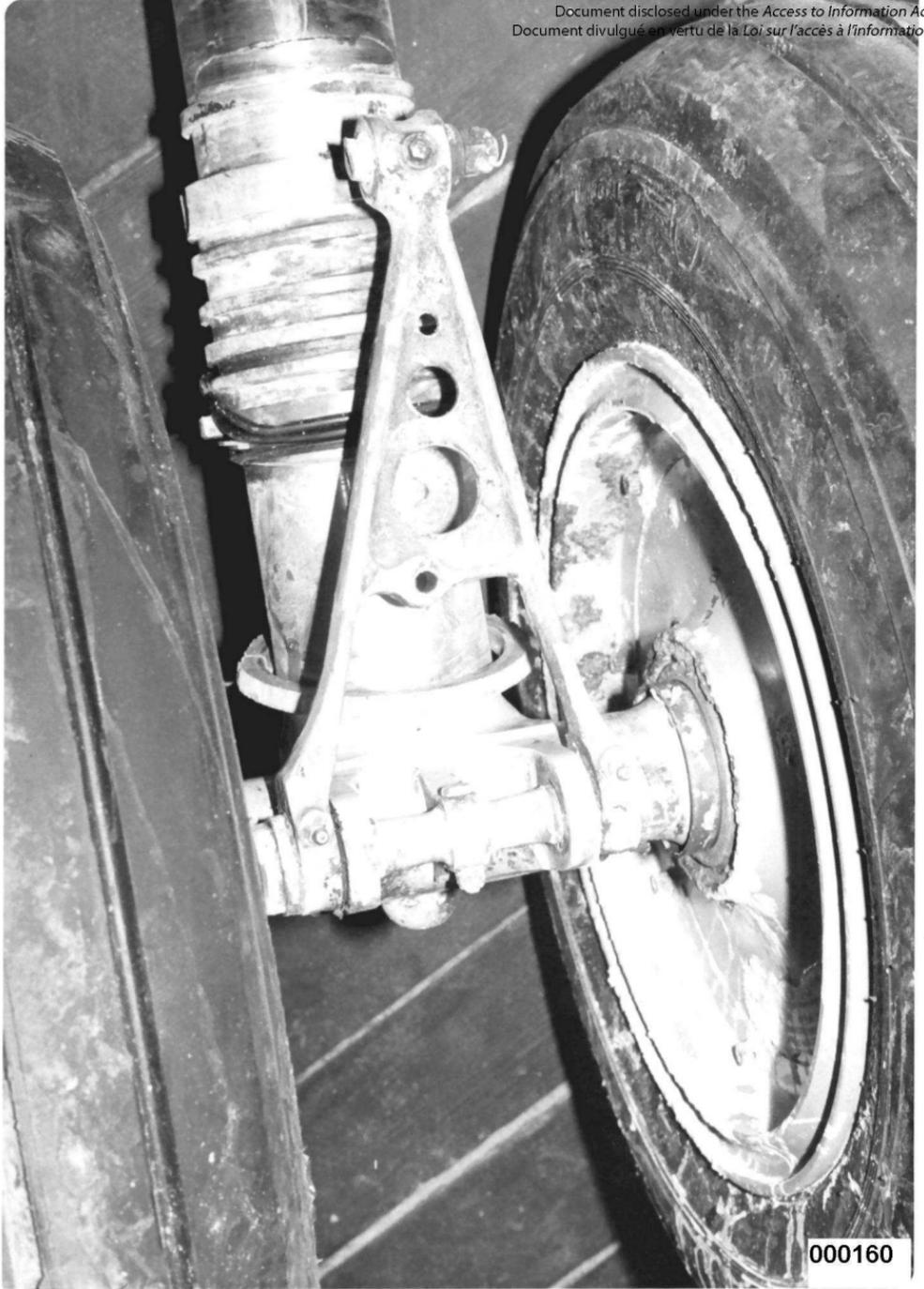
000157



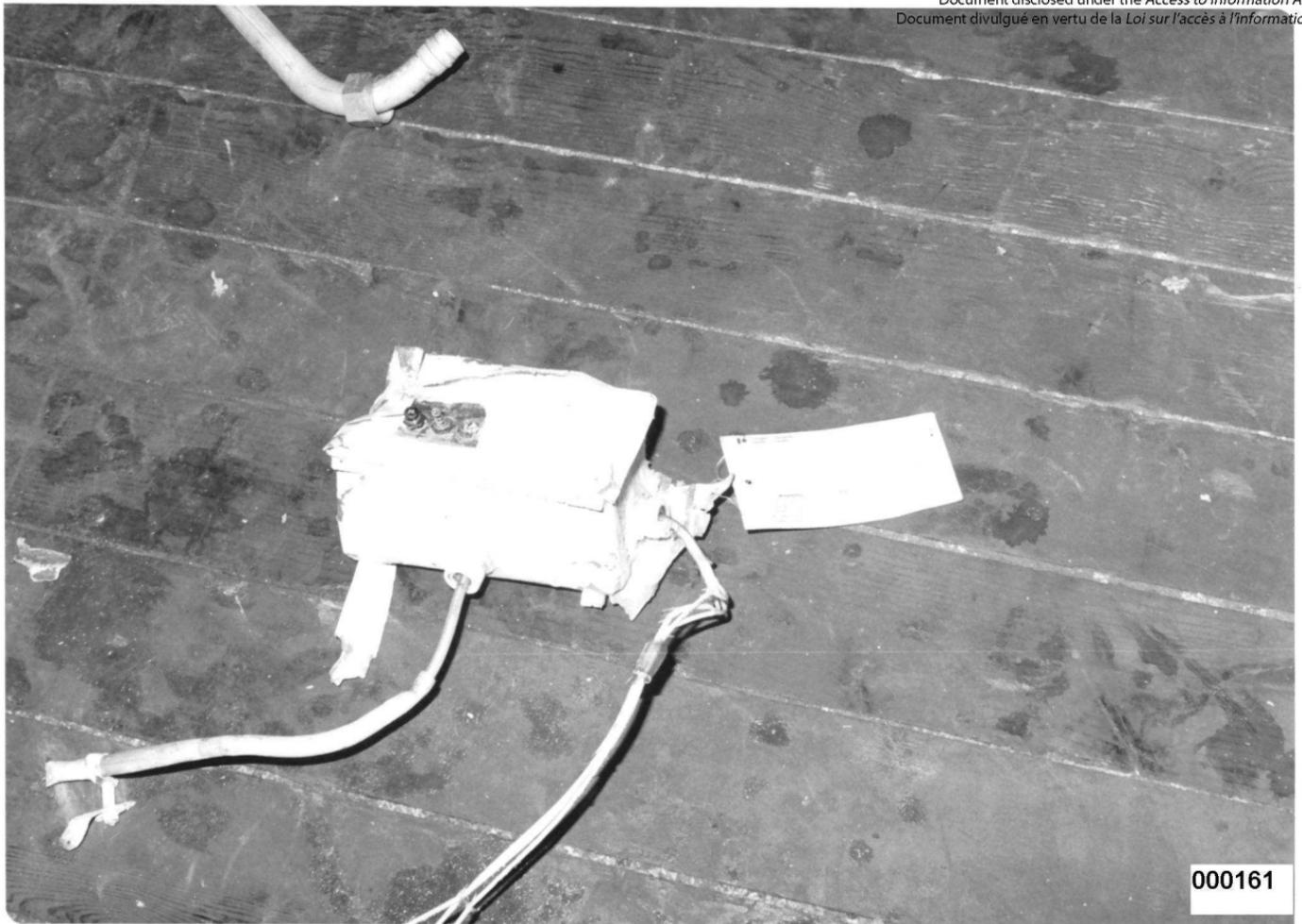
000158



000159



000160



000161

3627

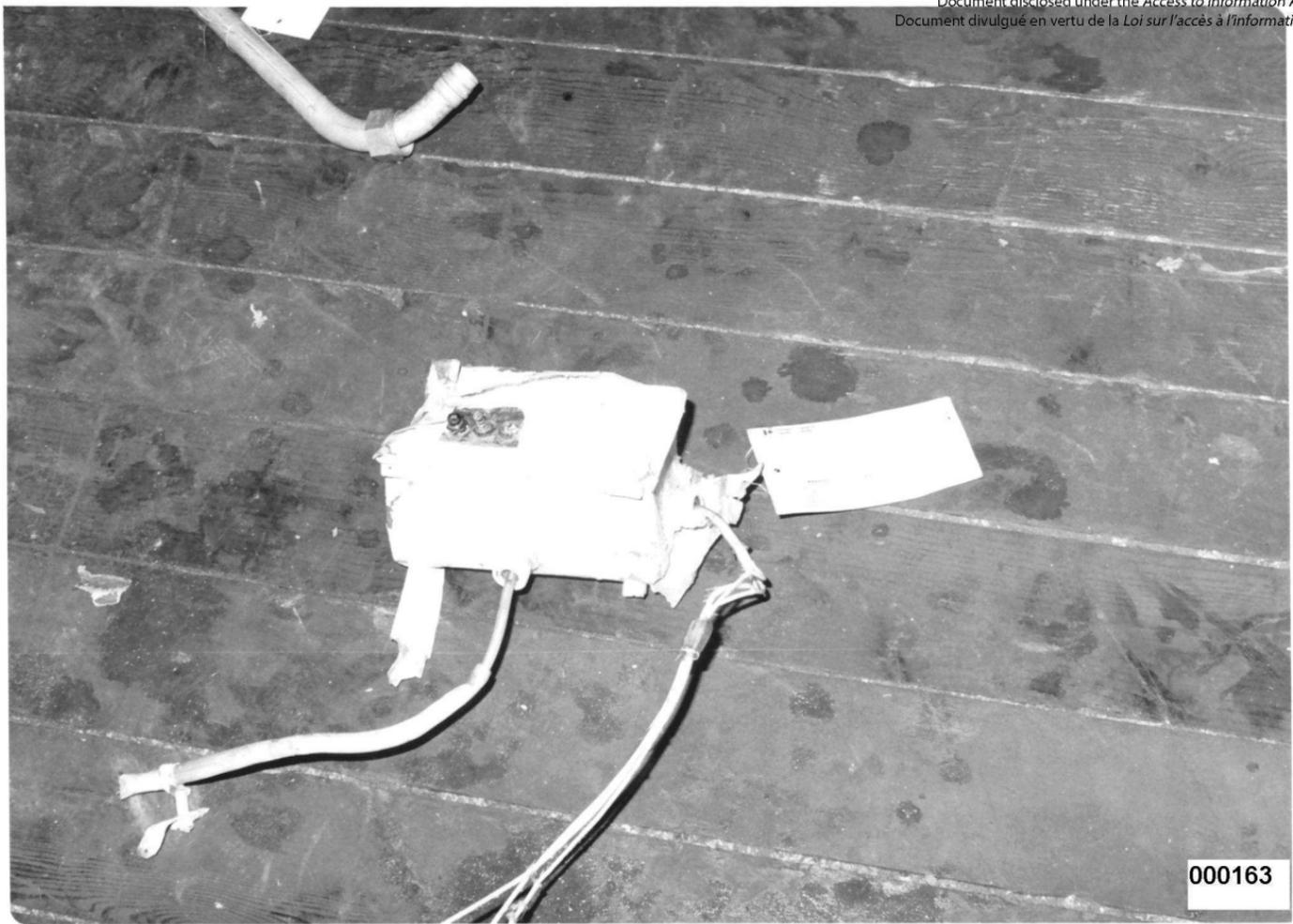
#

2

TRANSFORMER RECTIFIER CIRCUIT

BREAKER BOX L/H LOCATION NOSE WHEEL

WELL



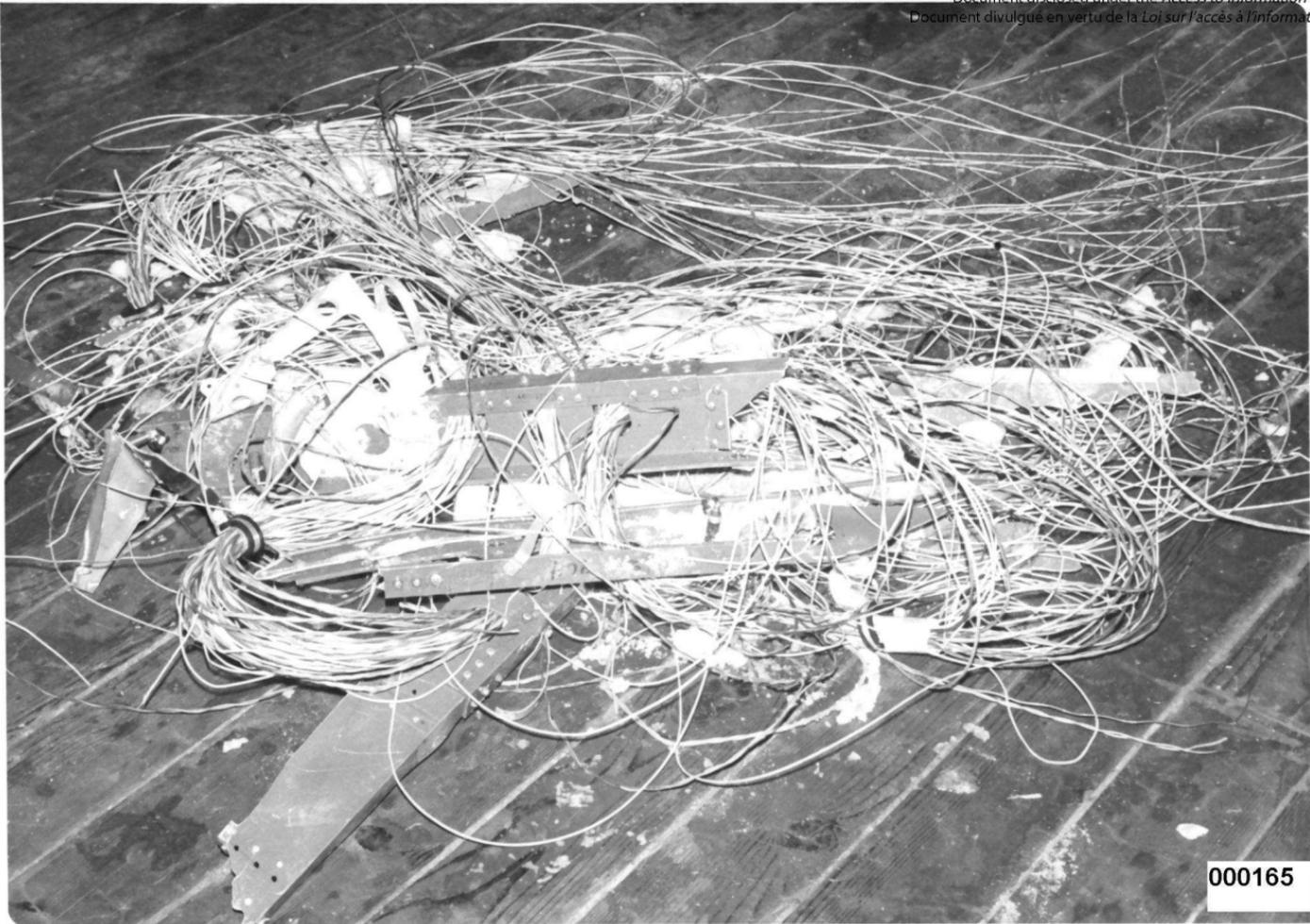
000163

3627

2

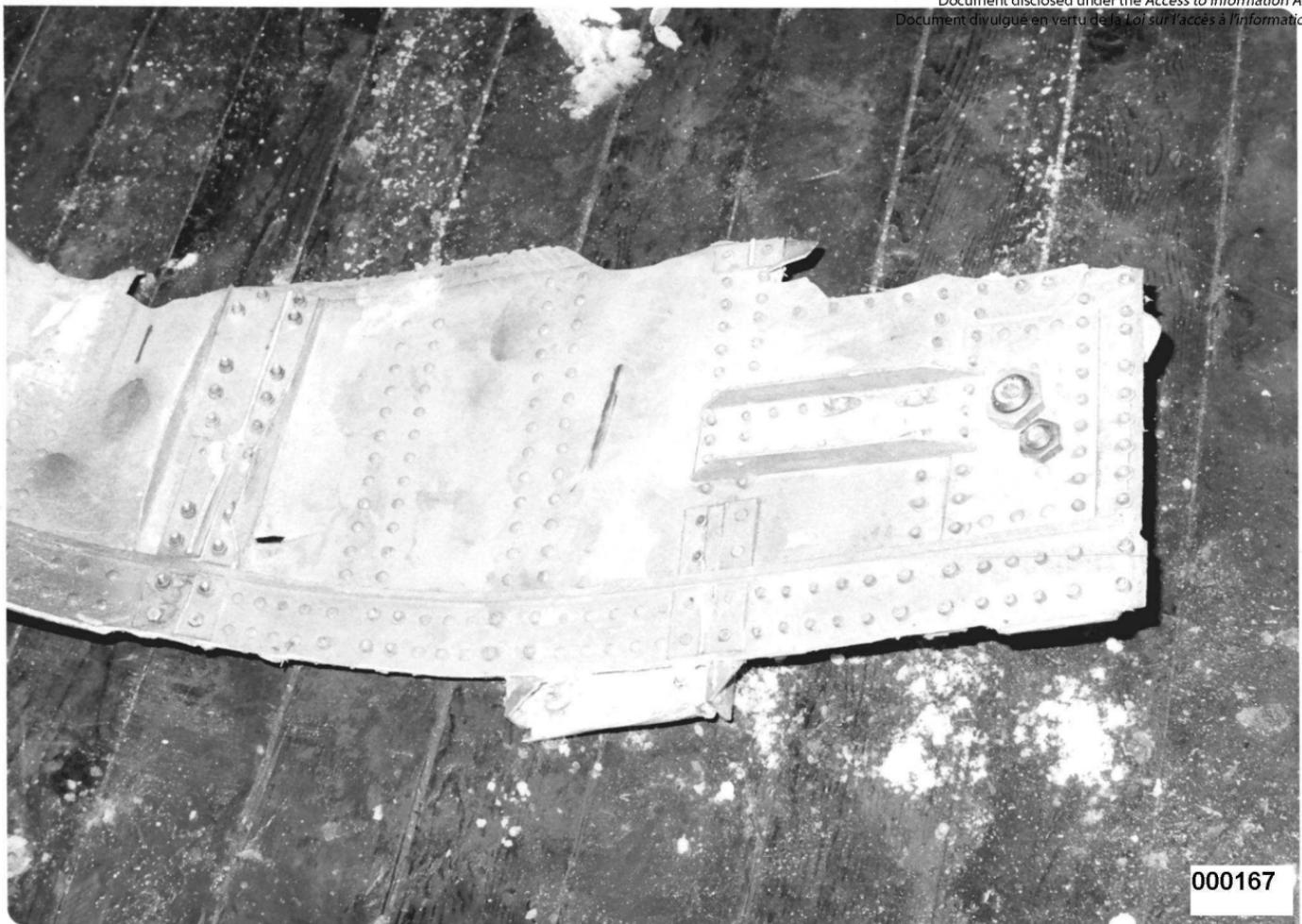
TRANSFORMER RECTIFIED CIRCUIT

BREAKER BOX L/H LOCATION NOSE WHEEL
WHEEL



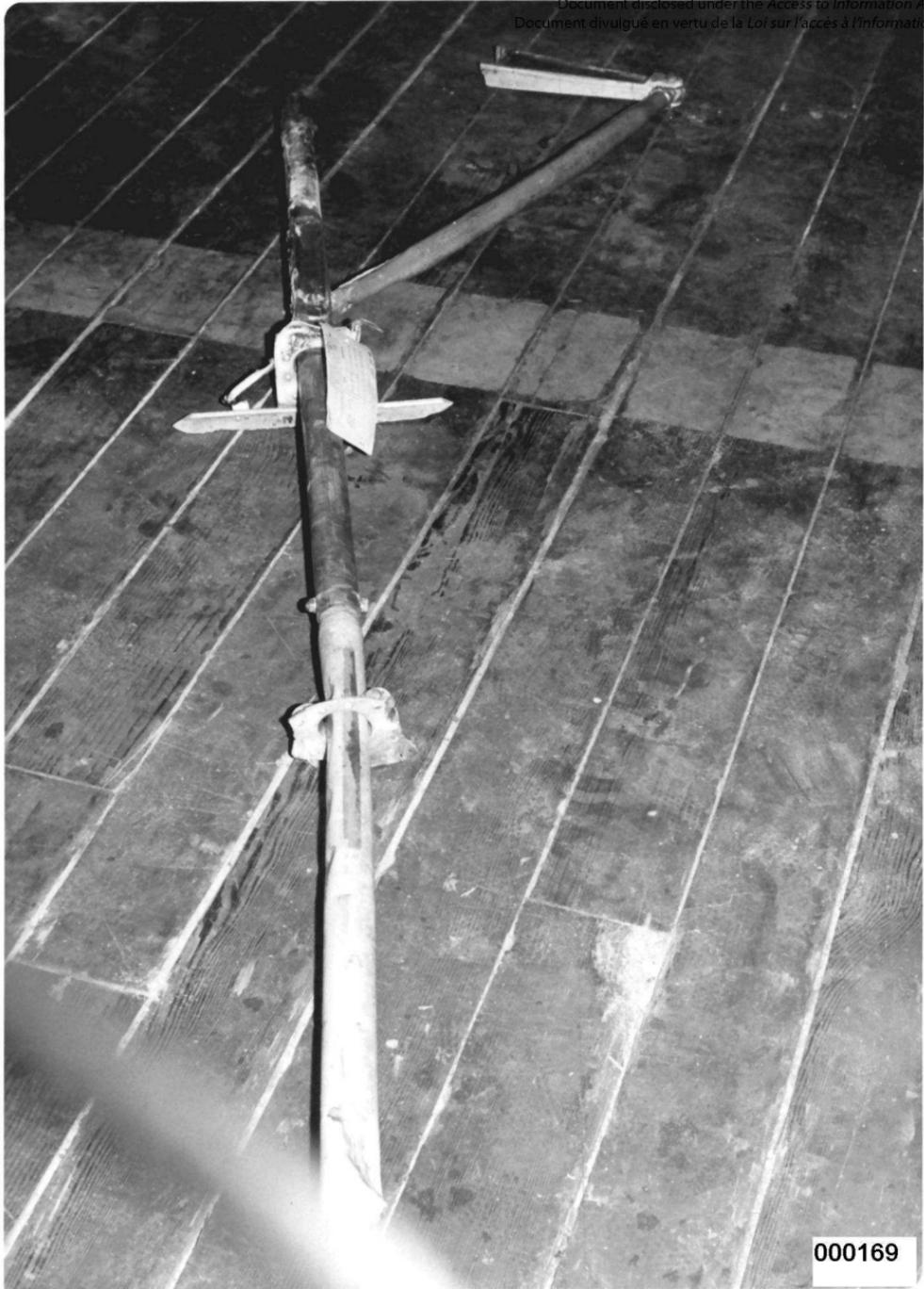
000165

ELECTRICAL WIRING FROM ELECTRICAL SERVICE
BAY TORN AWAY WHEN AIRCRAFT STRUCTURE COLLAPSED.



000167

SECTION OF CENTRE SECTION REAR SPAR BOX
HYDRAULIC BAY



000169

~~27~~ 27-2 PAGE 2

AILERON CONTROL ARM.



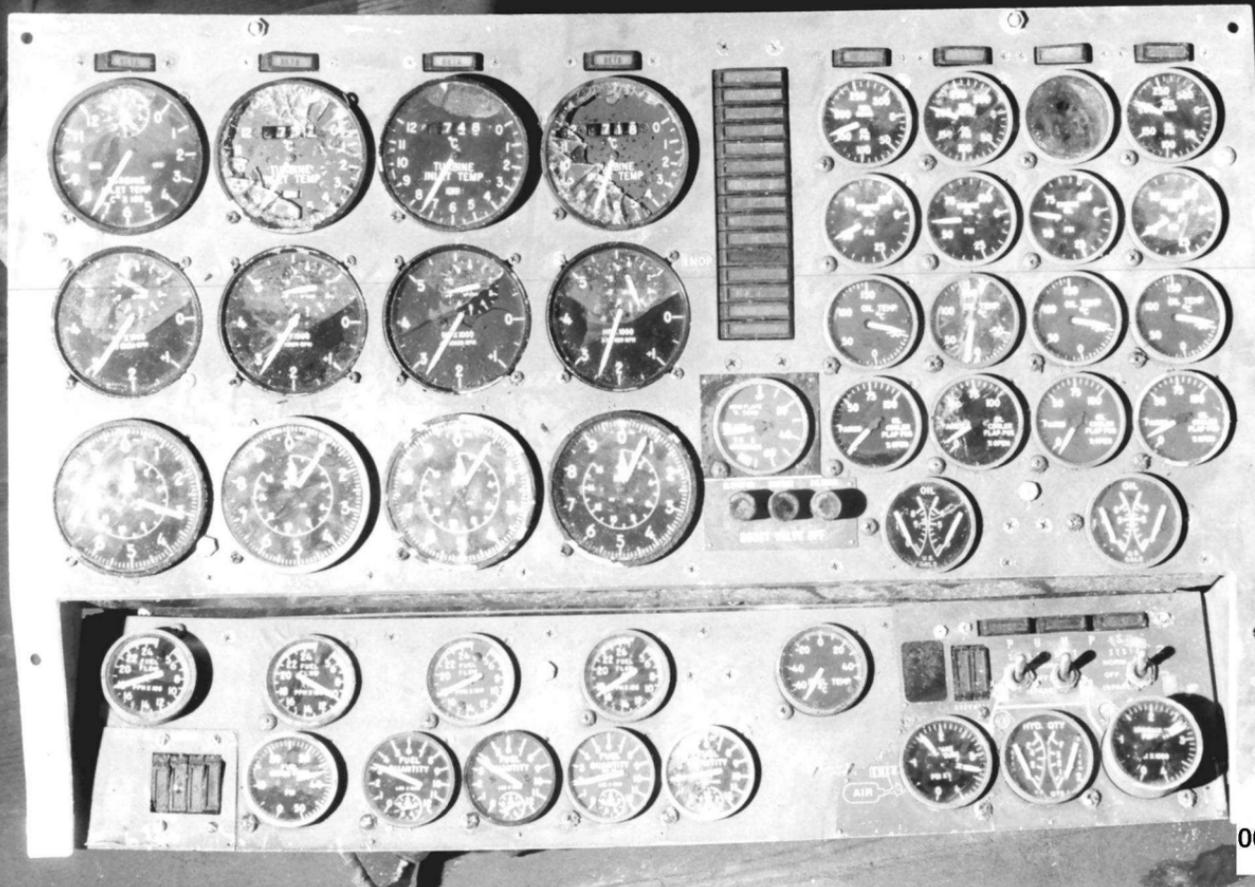
000171

11 AILERON PUSH PULL ROD RIGHT SIDE
TWO RODS OUTBOARD FROM FUSELAGE



000173

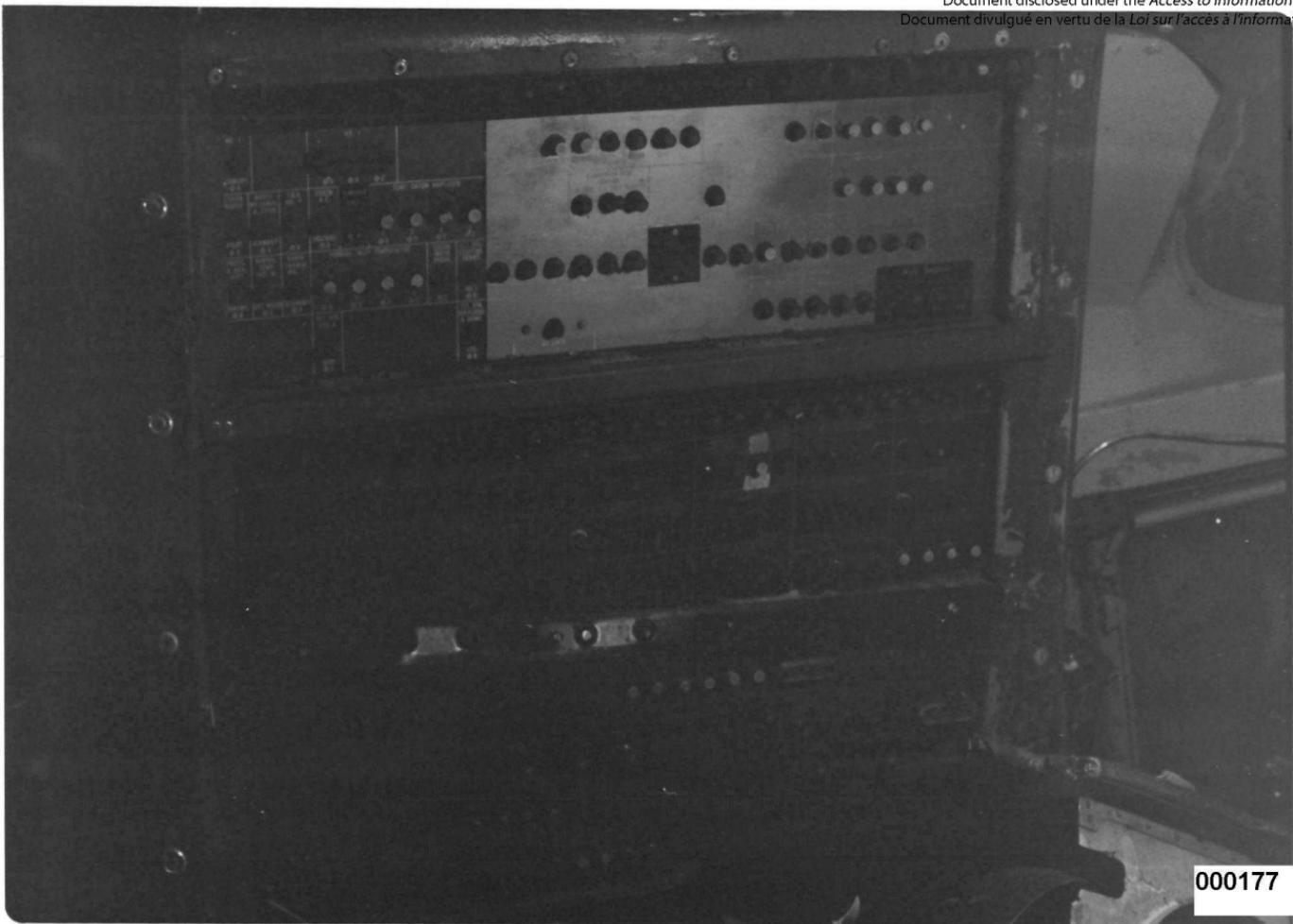
INBOARD AND OUTBOARD SCAVENGE PUMP



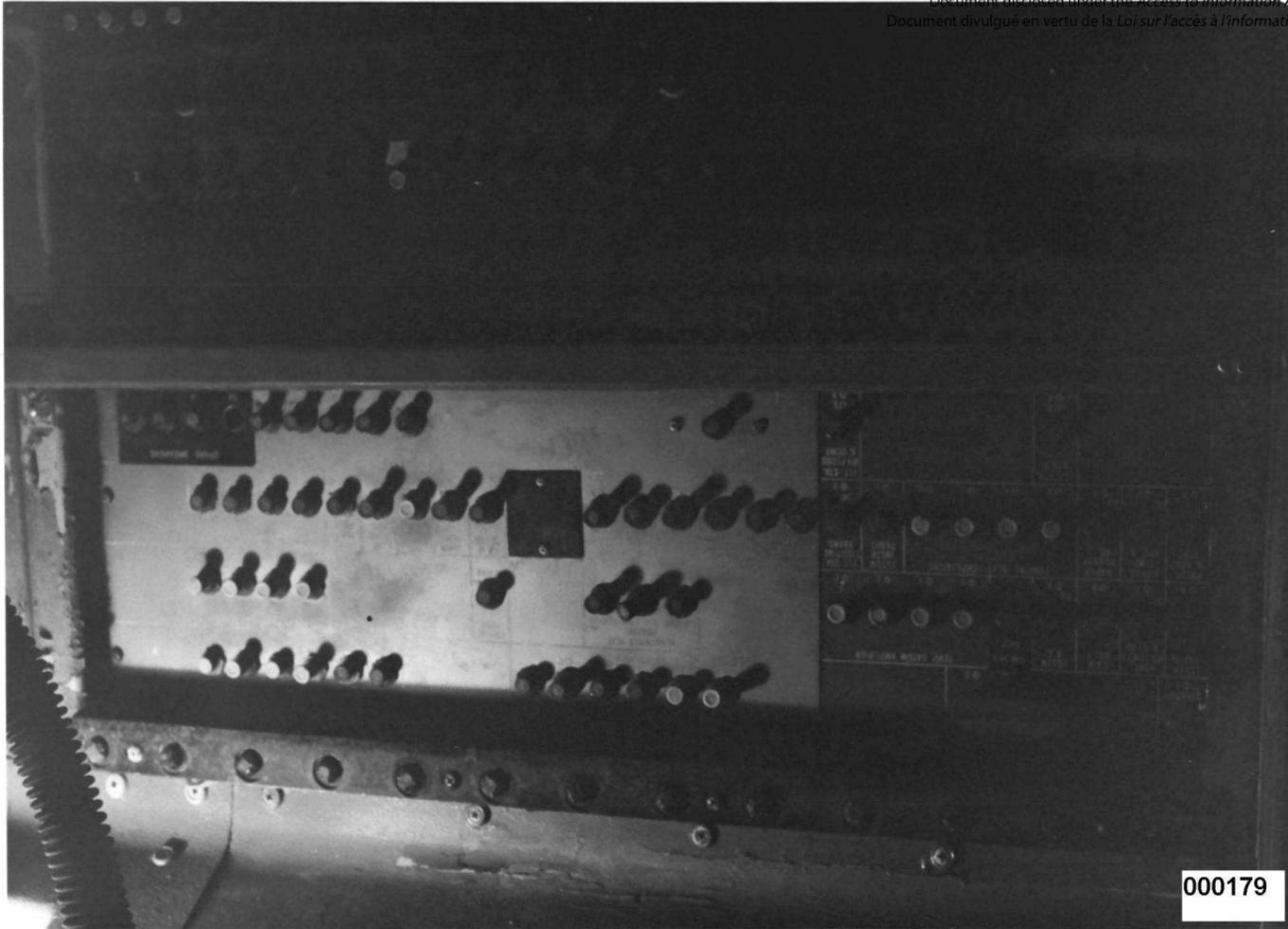
000175



000176



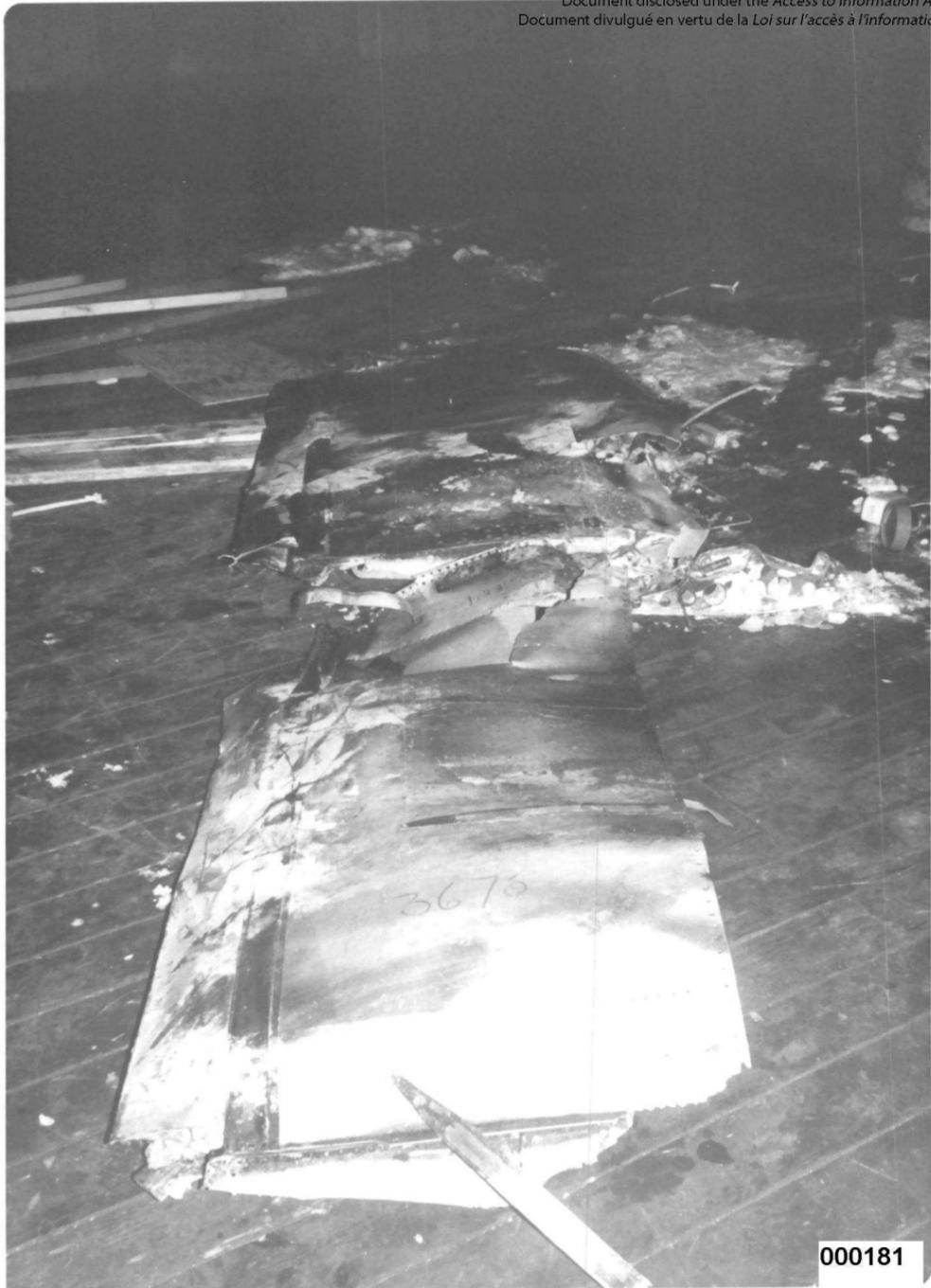
000177



000179



000180



000181

3666

000182

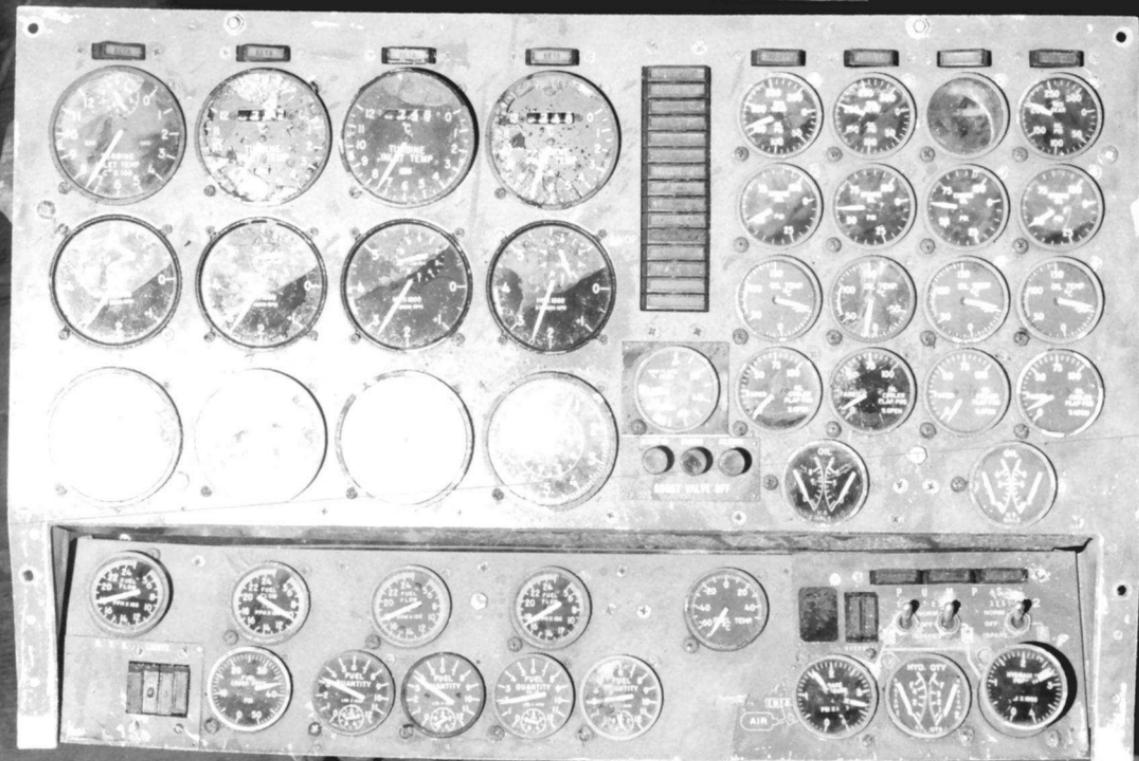


000183





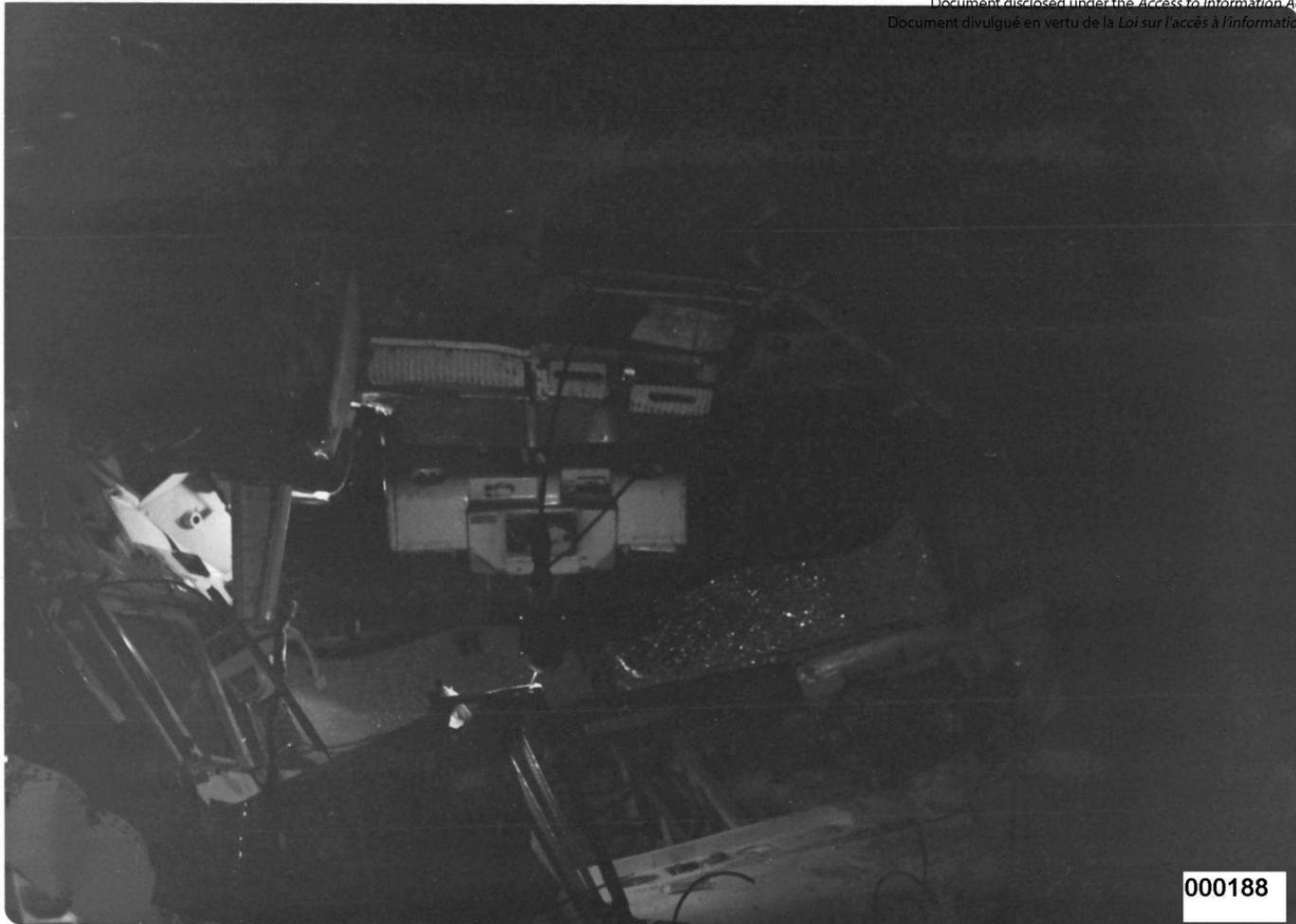
000185



000186



000187



000188

Phase 3

General view of aircraft wreckage scatter.

Looking South-East from centre line at position 5457.

NOTE "A" NUMBER 1 ENGINE ITEM # 162
"B" LEFT MAIN UNDERCARRIAGE WHEELS AXLE, AND OLEO PISTON ITEM 131
"C" FUSELAGE SECTION ITEM ~~126~~ 126
"

Document disclosed under the *Access to Information Act*

Document divulgué en vertu de la *Loi sur l'accès à l'information*

10 THE GLOBE AND MAIL, WEDNESDAY, NOVEMBER 26

000190

Document disclosed under the *Access to Information Act*
Document divulgué en vertu de la *Loi sur l'accès à l'information*

000191

THE GLOBE AND MAIL, WEDNESDAY, NOVEMBER 26, 1975 9

ACROSS CANADA

Alberta judge named to probe air crash

OTTAWA (CP) — An Alberta district judge, William A. Stevenson, will head a special inquiry into the Panarctic air crash that claimed 32 lives last year, Justice Minister Ronald Basford said yesterday. His instructions are to investigate all circumstances surrounding the crash at Rea Point, NWT on Oct. 30, 1974. Only two men, both members of the crew, survived the disaster. All aboard the Lockheed Electra were employees of Panarctic Oil Ltd. and were returning to their jobs at Rea Point when the aircraft hit the sea ice about two miles short of the runway. Mr. Basford said Judge Stevenson was appointed because of his extensive experience as a lawyer in the North.

000192

Mass of information to be studied

Jury in Panarctic crash expected to deliver verdict today

By SUZANNE ZWARUN
Special to The Globe and Mail
YELLOWKNIFE — A coroner's jury investigating the crash of a Panarctic Oil Ltd. plane one year ago announced yesterday it will not reach verdict until this afternoon at the earliest.

The announcement came after hours of deliberation by the jury which is investigating the crash of a Lockheed Electra just short of the Rea Point runway on Mellville Island, 1,600 miles north of Edmonton. The crash killed 32 of the 34 men aboard and was the worst in the history of the Ca-

nadian Arctic. The inquest opened last April 1 but has been plagued by adjournments and delays caused by the failure of vital witnesses to appear and a court case attempting to stop it.

Originally, the jury was expected to retire Wednesday night, but juror Willy Laserich asked for an adjournment.

"It took a year to compile all this information. There's no way we can go through all this paper in a few hours and come up with something useful," Laserich said.

Yesterday, the jury spent

an hour querying technical points made during the inquest. It also had previous testimony read to it. Copies of the inquest transcript were denied them because inquest officials ruled that inquest juries don't normally have the benefit of transcripts and that the transcript readings had to be put to them publicly, not privately.

The five jurors—a sixth has moved from Yellowknife and was excused—are all experienced in aviation. Three are pilots, one is an aircraft engineer and one is a freight supervisor with an airline.

The key to the crash—what happened in the plane's cockpit during the final moments—remained unknown to the jury.

With the plane's flight recorder inoperative, the final events are known only to the two survivors, flight engineer Gary Weyman and co-pilot David Hatton, and they have resisted all efforts to get them to testify, according to inquest officials.

Coroner England, in his summation, several times stressed the handicap the inquest faced without the survivors' testimony. He detailed his attempts to reach them and four other vital witnesses and concluded that "we've got everything we're going to get."

Both Coroner England and Crown counsel Edward Broden repeated their demands

for a public inquiry and told the jurors they could make a recommendation for such an inquiry, although they weren't bound to do so.

The cell for a public inquiry was repeated by two fathers of victims and a sister of pilot Brian Thomson who maintained that the truth of the crash remains unknown. All three are unhappy with the Ministry of Transport report on the accident and dissatisfied with the abortive inquest.

Despite the inquest's conclusions, the story of the crash is still riddled with discrepancies and missing information. The only new material presented to the inquest this week was the MOT report, but the jury also received Panarctic's rebuttal to the report and an MOT rebuttal to Panarctic.

Panarctic and MOT are

arguing over the psychological state of the pilot and whether he was suffering from fatigue. They disagree on his flying record and whether he gave a pre-landing briefing to his crew.

While the MOT report blames alcohol abuse for the pilot's liver condition, Panarctic points out that MOT's medical adviser told the inquest there was no evidence of such abuse.

They also disagree on whether Panarctic had the necessary flying manuals, whether an alternate landing site had been properly planned, whether communications priorities at the runway were properly established, whether proper emergency vehicles should have been available and whether flight recorders needed repairs before the crash.

Pilot's widow disputes findings, says husband not heavy drinker

LEDUC, Alta. (CP) — The widow of the pilot killed in the crash of a Panarctic Oils Ltd. aircraft last October says she feels a Ministry of Transport on the subject painted an inaccurate picture of her husband.

Lou Ann Thomson, widow of William Brian Thomson, 29, who died at the controls of the Lockheed Electra aircraft in which 32 of 34 passengers were killed in a crash into sea ice off Rea Point in the Northwest Territories, was most disturbed about the report's statements that he drank too

much, was unhappy with his job and often had too little rest.

Mrs. Thomson said her husband was not a heavy drinker and added that he was happy and well-rested, particularly on the day of his final flight. There was no suggestion that he was drinking before the flight.

Mrs. Thomson, who has two pre-school children, described suggestions that her husband was unhappy with his job as nonsense. She said he had applied for four jobs in a three-year period, all with large

commercial airlines. However, he had learned the company planned to change to daytime flying and told her a few days before his last flight that it would take a good opportunity to get him to leave Panarctic. He did not like flying at night in the North.

Despite her disagreement with much of the report, Mrs. Thomson said she doesn't know what to do about it. She was given no opportunity to discuss it with Ministry of Transport officials before it was released.

Children mistreated by guards, detention centre probe confirms

MONTREAL (CP) — A Quebec Government committee investigating conditions at the province's 75 youth detention centres confirmed that three guards at Montreal's St. Vallier institute for boys handled several youngsters.

The committee investigated the detention centre after staff educationists charged earlier this month that guards hired from a private agency were mistreating children.

Chairman Manuel Batshaw said on Wednesday that the committee has been able to verify that one youngster was told to apologize on his hands and knees to a guard for committing infractions of institute regulations.

While two other guards handled him, another on his hands and knees, Mr. Batshaw said in his opinion, it's a

should only intervene when their services are required by staff.

St. Vallier director Jean-Marc Peloquin and a spokesman for the security agency—Unique Security Agency—denied Mr. Batshaw's find-

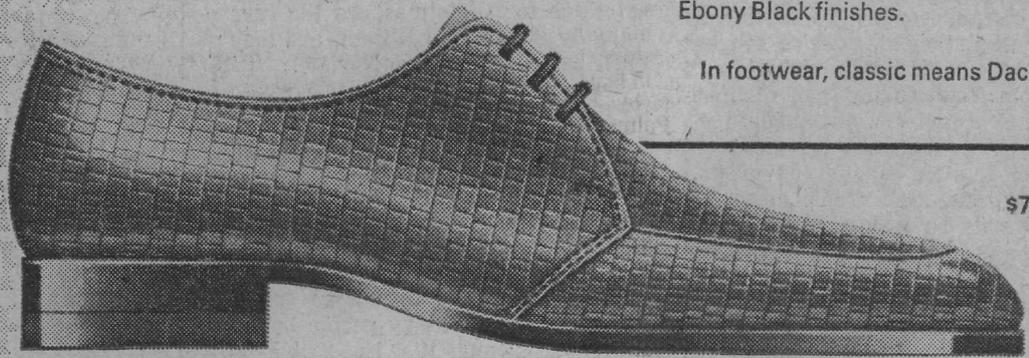
ings.

"We have been called upon to use physical force at certain times to control some of the youths," Mr. Peloquin said, "but at no time was anyone treated in a brutal manner."



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Bomb damages police station in car attack

ARMAGH, Northern Ireland (Reuter) — A huge bomb weighing 200 to 300 pounds badly damaged the police station here yesterday but no one was hurt.

Guerrilla gunmen held up a car with two occupants on the outskirts of Armagh and forced the driver to take a van with the bomb in the back to the Royal Ulster Constabulary building.

On arrival he shouted a warning and the police station and nearby homes were evacuated.

In Belfast, a feud between the rival Official and Provisional wings of the Irish Republican Army showed no sign of ending yesterday.

Gunmen, thought to be Provisionals, shot up the homes of two people associated with the Republican Clubs, the political branch of the Official IRA.

The feud burst into the open last Wednesday and since then four people have been killed.

AUCTIONS
CONSUMER/INDUSTRIAL
page 39

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BETH TZEDEC CONGREGATION
The ANNUAL GENERAL MEETING of the Members of the Congregation
will be held in the Main Banquet Hall of the Synagogue for the ELECTION of members of the Board of Governors and for the transaction of such other business as may come before it.
SUNDAY, NOVEMBER 23rd, 1975
GENERAL MEETING 11:30 a.m.
BALLOTING 10:00 a.m. 1:00 p.m.
A list of nominees proposed by the Nominating Committee has been mailed, however, due to the mail strike some members may not have received this list. This list is available to members at the Synagogue Office.
In light of the postal situation, the date for nominating additional candidates by Petition in writing has been extended to Thursday, November 6th, 1975.
Because of the uncertain postal situation, no further notice will be sent to the Annual General Meeting and of the final list of candidates for election to the Board of Governors.
The final list of candidates will be available at the Synagogue Office on Friday, November 7th, 1975.

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Lord Montagu of Beaulieu drives across Westminster Bridge yesterday in a 1903 De Dietrich, at the start of the annual London to Brighton old crocks rally.

Panarctic probe recommended

● From Page One
allowing many of the men to be hurried free.
The jury commended the response to the emergency as "more than adequate... under adverse conditions... despite the lack of information at Rea Point pertaining to emergency procedures."
But the jury deemed the Rea Point medical staff "insufficient" to handle an accident of this size had there been more survivors and suggested it should be increased. It also noted that staff

should be instructed in the procedure to follow in the event of an emergency. A Ministry of Transport investigation into the crash has also ruled that established emergency response procedures were inadequate.
The jury would also like to see better radio operations at remote strips. It recommended that all radio operators be licensed, that their duties be clearly outlined with priority given to air-to-ground and weather transmissions and that the monitoring of the emergency 121.5-megacycle

band should be mandatory at all sites.
According to testimony at the inquest, Rea Point radio operator Roderick Brooks did not hold a radio operator's licence. He testified he was unaware of the emergency frequency and was too busy the night of the crash to give full attention to the incoming planes.
The detailed recommendations reflect the aviation knowledge of the jury. Three are pilots, one is an aircraft engineer, and the other a freight supervisor with an airline. A sixth juror, also a pilot, was excused after he moved to Edmonton.

Prison probe

● From Page One
overcrowded institutions until their completion in September, 1977.
Meanwhile, the ministry lost about 450 inmate beds when it closed the Burwash Correctional Centre late last year. The Northern Ontario centre, the ministry said at the time, was inappropriately located because most of its prisoners were from Southern Ontario. It also said the centre was too expensive to maintain because it was operating under capacity.
When it closed in November, the centre had only about 250 inmates.
The real dilemma for the Government, Mr. Kerr said, is what to do about short-term jail facilities.
If the public's reaction to the bail legislation (or at least the police and court perception of that reaction) remains the same, and if the police and the courts continue to put

more people in jail to await trial, then the Government may have to commit itself to massive spending on expansion of local jails.
If that surge doesn't occur, however, or if the rate of custodial remands drops, then there is no need for a building rush.
And, on the other hand, Mr. Kerr pointed out, if the federal Government acts on pre-trial diversion recommendations from the Law Reform Commission of Canada, even if the police and the courts want to commit more people to jail before trial, they may not be able to and the jail system would be under-used as a result.
The ministry's problem, Mr. Kerr said, is not that it hasn't thought of possible policies to cope with the overcrowding problem, but that it can't accurately predict what factors should influence its decision-making.

The inquest verdict ends the seven-month inquest into the crash. An MOT investigation, blaming pilot error for the disaster, was released last weekend and was one of the exhibits studied by the jury.
The MOT report was condemned by the fathers of two of the victims. They travelled from their homes in Alberta to Yellowknife at their own expense to attend the inquest but they left before the final day.
Mrs. Peterson, the only relative of any of the victims left in the courtroom by the time the jury brought in its verdict, commended the jury's work as the "one area of sincere and honest investigation" into the crash. But because the jury was hampered by the absence of key witnesses, she too was demanding a public inquest.
The inquest verdict ends the seven-month inquest into the crash. An MOT investigation, blaming pilot error for the disaster, was released last weekend and was one of the exhibits studied by the jury.
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Ontario will help family move from near radioactive waste site

DELOOR (CP/Special) — A Deloro man whose house is near a concentration of radioactive waste material from a nuclear generating station has been told the Ontario Government will pay his out-of-pocket expenses to move him and his family to a safer house.
Ted Galloway said representatives of the Ontario Health Ministry and officials from the Atomic Energy Commission told him in a letter on Friday that his house would be closed "until the present condition is no longer exhibited."
Alan Prince, president of the Atomic Energy Control Board, said radiation in the house was "not at an accept-

able level" and although the family had been living in the house for many years, it would be better if it moved out as soon as possible.
He said no offer had been made to buy a house for the Galloways.
Mr. Galloway said officials told him his house would be closed for at least six months.
The letter stated the danger of radiation exposure was great enough to contribute to development of lung cancer. "I already have lung cancer," Mr. Galloway said.
He said he was relieved and happy to move his family away from the radiation. He lives in the house with his wife and one of their five children.

"I've wanted to get my family out but I couldn't do it financially," he said.
He said the ministry will pay for the expenses of moving and acquiring a new residence. The family would be able to take furniture and clothing, but "after that we will have to get special permission to go back in."
An Atomic Energy official said earlier that wastes from a nuclear generating station at Port Hope have been deposited in fields in the Deloro area, about 25 miles north of Belleville. The high radiation levels in Mr. Galloway's house were discovered during testing of the dumps for radioactivity.

Five from Hamilton injured Seven killed in two Ontario road accidents

Seven people died in two separate traffic accidents in Ontario Saturday.
A two-car collision near Owen Sound on Saturday night killed four people and sent five Hamilton-area residents to hospital with serious injuries.
The accident occurred on Bruce County Road, 25 miles southwest of Owen Sound.
Three people were killed in one car: Douglas MacKinnon, 19, of Dobbinton; Dennis Prevost, 18, of Port Elgin, and Judy Goodale, 14 also from Port Elgin. Police say they cannot be sure who was driving the car.

In the second car were six people from Hamilton. Dead is a passenger, James Boland, 25. The driver of the car, Kevin Carey, 23, is in serious condition at the Owen Sound General and Marine Hospital.
Three of the other passengers in the car were transferred to hospital in Hamilton. Collette Carey, 18, sister of the driver, is in fair condition, and in poor condition are Norman Anderson, 18, and James Virtue, 21.
Debbie Olds, 18, was being transferred from Owen Sound to Hamilton when medical workers decided she could go only as far as Guelph. After a lengthy operation, she was

placed in the intensive care unit in Guelph Hospital and is in critical condition.
Walkerton OPP said that the Port Elgin car was travelling south and making a left-hand turn when it collided with the northbound Carey car.
Three Northern Ontario men were killed in a single-

car accident Saturday when they were thrown from the vehicle after it hit a ditch and rolled over several times on Highway 11 near Sundridge. Dead are Maurice Pepin, 28, of North Bay; Richard Reinbal, 24, of Beldard; and Oliver Bernard of Novar. Sundridge is 38 miles south of North Bay.

Venezuela said ready to begin worker plan

© New York Times Service
CARACAS — The Venezuelan Government is reportedly ready to initiate a program that would bring thousands of skilled European emigrants here over the next few years.
The program is intended to ease the shortage of technicians in Venezuela and to fill specialized jobs created by industrial growth.
Under the proposed program, the intergovernmental Commission for European Migrations, which helps European emigrants find jobs, would supply Venezuela with about 3,000 trained personnel a year, beginning in 1976.
Venezuela's industrial development, spurred by heavy Government spending over the past two years, will be limited sharply if the country cannot find new engineers, management personnel, and technicians, according to business and government officials.
The immigrants will be coming from Portugal, Italy, Spain, other Latin-American countries, and the United States. They would be guaranteed jobs here.

A government official said that the program would be aimed at individuals with specialized skills, and would not be an open invitation to mass immigration. He said that the plan would lead to a long-term agreement with the intergovernmental Commission if it proved a success.
President Carlos Andres Perez, and other government leaders, are said to agree with the plan; unions and professional associations are said to have shown little enthusiasm.
A government official said that the state would pay about an eighth of the costs of bringing people here. It has been estimated that the Gov-

Colon polyps respond to dose of Vitamin C

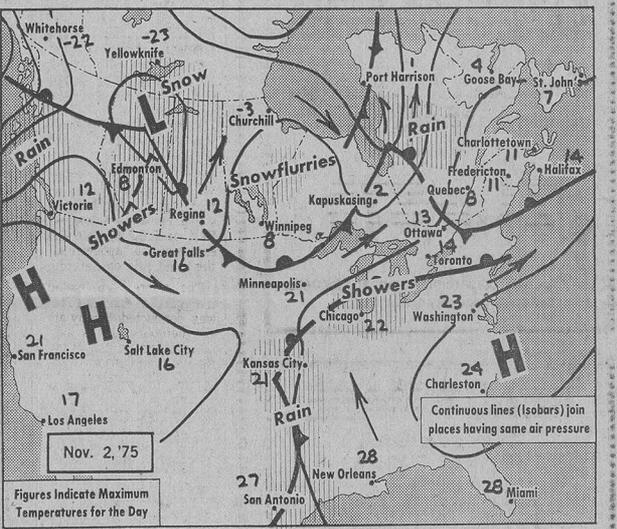
MILWAUKEE (AP) — Massive doses of Vitamin C have been used successfully to treat patients with a type of polyps of the colon, Wisconsin researchers report.
Polyps, a type of tumor, are thought by medical scientists to lead to cancer of the colon.
All but one of the eight patients studied by the researchers at the Medical College of Wisconsin had undergone previous surgery for treatment of polyps, but had a recurrence.
The patients suffered from what is called familial polyposis—a rare, inherited condition characterized by the presence of numerous polyps.

Dr. Jerome J. DeCossé, professor and chairman of surgery at the college, headed the research team. He said half the children affected will develop multiple polyps in the colon or rectum in adolescence.
If untreated, those affected die before age 40, he said in an interview. Dr. DeCossé also said the reduction of minimization of polyps might decrease the risk of cancer for polyps sufferers.
The patients treated with Vitamin C had been referred because other treatments had not been successful in eliminating the problem.

4 women attacked, 16-year-old charged

A 16-year-old Metro youth faces one charge of rape and three charges of attempted rape after four women were attacked in their apartment buildings during the past week.
Police said the first case on Oct. 25 involved a 23-year-old woman who was forced back into the building she had just left and raped.
Six days later a 21-year-old woman and a 39-year-old woman were separately

stopped in their apartment buildings, taken into the sauna room and told to remove their clothing.
In both cases the women fled without injury.
An 18-year-old woman was followed into the elevator of her building Saturday, threatened with a knife and taken into the sauna room where she too was told to remove her clothes.
Police said she kicked her assailant and escaped.



Talks resume on mail strike this morning

OTTAWA (CP) — Negotiators in the postal dispute are scheduled to resume their talks here at 10 a.m. today after regrouping during the weekend.
When talks adjourned at 2:10 a.m. on Saturday following a marathon round of bargaining last week, there were still two major non-monetary issues to be settled.
Spokesmen for both sides say they have been unsuccessful in their attempts to agree on the use of casual, non-union labor, electronic surveillance and wages.
Following the adjournment on Saturday, Postmaster-General Bryce Mackasey said "the priority seems to be on casuals. We need them. We can't run the Post Office without them."
He said the use of casual labor is required to handle sudden increases in the volume of mail at peak periods, such as Christmas.
Jean-Claude Parrot, chief negotiator for the Canadian Union of Postal Workers, said the union is seeking the elimination of casual workers.
The union would like all work to be done by full-time or part-time workers. But Mr. Mackasey said the Post Office is prepared to minimize the use of casuals.

THE WEATHER

Metro Toronto—Occasional rain. Some fog patches. High near 14. Tomorrow: Little change.
Windsor, Hamilton, London, Peterborough, Niagara, Lake St. Clair, Lake Erie, Lake Huron, Lake Ontario, southern Haliburton, southern Georgian Bay—Occasional rain. Some fog patches. High 14 to 17. Tomorrow: Little change.
North Bay, Sudbury, northern Haliburton, northern Georgian Bay—Extensive fog this morning. Sunny periods this afternoon. High 8 to 11. Tomorrow: Occasional rain.
Algoma, Temagami—Sunny with cloudy periods. High 9 to 12. Tomorrow: Cloudy.
White River, Geraldton—Mainly cloudy. Moderate southwest winds with a few showers late in the day. High 8 to 11. Tomorrow: Cloudy periods.
Cochrane—Cloudy with showers late in the day. High 5 to 8. Tomorrow: Cloudy periods.
Moose River, Western James Bay—Cloudy with periods of light rain or wet snow. High 1 to 4. Tomorrow: Cloudy periods.
Ottawa, Montreal—Cloudy with a few showers. High 10 to 12. Tomorrow: Little change.
Quebec—Cloudy with a few showers. High 8 to 10. Tomorrow: Cloudy with showers.

TORONTO RECORDS

Toronto Airport
Yesterday's temperatures: 7 a.m. 6; noon 11; 2 p.m. 11; 4 p.m. 12; 7 p.m. 14. Maximum to 7 p.m. 14; minimum to 7 p.m. 6; mean 10; difference from average 4 above.
Wind: 7 a.m. SW2; noon S2; 7 p.m. SW10, gusts to 16.
Barometer: 7 a.m. 30.14; noon 30.12; 7 p.m. 30.05.
Rainfall at 7 p.m. 1.25 mm.
Saturday's maximum 11; Saturday's minimum 3.
Saturday's rainfall 4.16 mm.

Sun rise today at 6:55; sets at 5:08.
DOWNTOWN
Yesterday's high: 14; low 8; rainfall to 7 p.m. trace.
Saturday's high 12; Saturday's low 8; Saturday's rainfall: 5.84 mm.
Maximum and minimum for this date last year: 11.7 and 6.7.
Highest ever recorded in Toronto on this date: 22.3 in 1961; lowest: 6.7 below in 1875.
Toronto Island
Yesterday's high 11; low 6; rainfall to 7 p.m. 1.25 mm.

TEMPERATURES

Dawson	-34	-30	Charlottetown	7	11	San Juan	25	30
Vancouver	8	12	St. John's	-1	9	Temperatures at noon GMT yesterday: Aberdeen 10, Amsterdam 11, Ankara 13, Antigua 27, Athens 22, Auckland 15, Berlin 8, Beirut 24, Birmingham 11, Bonn 13, Brussels 10, Cairo 25, Casablanca 18, Copenhagen 9, Dublin 10, Geneva 12, Hong Kong 23, Lisbon 17, London 11, Madrid 13, Malta 23, Manila 27, Moscow 0, New Delhi 16, Nicosia 26, Oslo 9, Paris 27, Peking 9, Rome 20, Saigon 26, Seoul 13, Sofia 12, Stockholm 8, Sydney 16, Taipei 22, Tehran 19, Tel Aviv 25, Tokyo 13, Tunis 22, Vienna 7, Warsaw 5.		
Victoria	7	12	Chicago	12	22			
Edmonton	-3	8	Buffalo	11	15			
Calgary	-4	12	Boston	11	21			
Yellowknife	-9	-23	New York	12	19			
Saskatoon	-5	8	Washington	6	23			
Regina	0	12	Atlanta	8	23			
Winnipeg	4	8	Miami	24	28			
Thunder Bay	-4	17	New Orleans	17	28			
Sault Ste. Marie	-1	17	St. Louis	14	24			
Timmins	-1	11	Tucson	7	24			
North Bay	2	10	Los Angeles	12	17			
Sudbury	1	11	San Francisco	7	21			
Windsor	11	18	Acapulco	25	32			
London	9	17	Barbados	23	27			
Kingston	6	13	Bermuda	21	26			
Ottawa	5	13	Havana	22	27			
Montreal	2	12	Kingston	22	30			
Quebec	0	8	Mexico City	13	23			
Fredericton	6	11	Monterrey	20	27			
Saint John	6	12	Nassau	25	30			
Halifax	9	14	St. Kitts	25	31			

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The Globe and Mail

CANADA LIFE INCOME PROTECTION POLICIES Cloudy, showers High near 14

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Paul Gresser sits amidst his 41-foot model of the German battleship Bismarck sets out on her maiden voyage on Lake Simcoe yesterday. The wood and fibreglass model took her builder 13 months to complete, and is powered by an outboard motor. Mr. Gresser served in the German navy during Second World War.

Talks with civil service planned Maloney to probe jail riots warning

By JOHN BEAUFROY Ontario's ombudsman Arthur Maloney will investigate allegations that the province's prison system is facing the possibility of major riots. Mr. Maloney said in a statement yesterday that his legal officer, Keith Hollett, will meet the civil service officials who made the allegations about the Correctional Services Ministry, and also government authorities. On Friday, the Civil Service Association of Ontario adopted a resolution alleging jail overcrowding, understaffing, a lack of equipment, improper security precautions and a general downgrading of discipline throughout the system. Mr. Maloney said he would issue a notice about the next step in his investigation as soon as he receives Mr. Hollett's report. Yesterday's statement suggests that no matter what the report says about the situation, Mr. Maloney will conduct a thorough investigation. However, Ken Cavanagh, Mr. Maloney's spokesman, said in an interview that a full-scale investigation is not inevitable. Mr. Maloney's decision, he said, will depend on Mr. Hollett's report. If a full-scale inquiry is launched, it will be the first for the province's ombudsman. Mr. Maloney, one of the nation's foremost criminal lawyers, officially took over the \$60,000-a-year job last week, but from the moment his appointment to the post was announced in May, the public began sending letters to him. By August, he had received 420 complaints. Under the ombudsman legislation, he is able to investigate almost any provincial Government activity and recommend changes to the Legislature. To help him in his inquiries, he has a small executive staff and six full-time investigators, most with police, social work and legal backgrounds. The prison and jail investigation announced yesterday is being held under a section of the legislation that allows the ombudsman to initiate inquiries on his own whenever he sees fit. In the midst of the controversy about Ontario's overcrowded jails and prisons, the ministry is having to take a hands-up-in-the-air position, according to one spokesman. Donald Kerr, information officer for the ministry, said in an interview yesterday that many provincial institutions are "seriously overcrowded" from time to time. He said ministry officials have tried to figure out what has caused the surge in commitments for short-term remands in local jails, and the only thing they could come up with as a major factor was police and court reaction to public backlash over the 1972 Bail Reform Act. Under that federal act, people charged with a crime were allowed freer access to bail—freedom before trials—

Ford responding to criticism from Congress

By LESLIE GELB © New York Times Service WASHINGTON — President Gerald Ford has dismissed Secretary of Defence James Schlesinger and William M. Colby, director of Central Intelligence, in a major reshuffling of his top national security posts. Administration officials said the President had also asked Secretary of State Henry Kissinger to relinquish his post as the national security adviser in the White House but to stay on as head of the State Department and that Mr. Kissinger had all but agreed. White House officials said Mr. Schlesinger probably would be replaced by the White House chief of staff, Donald Rumsfeld, and that Mr. Colby's likely successor would be George Bush, head of the U.S. liaison office in China.

BISMARCK SAILS AGAIN

and is powered by an outboard motor. Mr. Gresser served in the German navy during Second World War.

and is powered by an outboard motor. Mr. Gresser served in the German navy during Second World War.

Cologne Cathedral is robbed of priceless art works, gems

From The Associated Press and The New York Times COLOGNE — Two burglars using Alpine ropes broke into Cologne Cathedral, crawled through air ducts and escaped yesterday with priceless Roman Catholic art works and gems stripped from other religious edifices. Police estimated the value of 15 stolen sacred objects at several million marks, the equivalent of at least \$1-million and one of the biggest art thefts in postwar Germany. But a church official at Germany's most famous medieval cathedral said, "They were priceless treasures belonging to the bishopric for hundreds of years. No one can say how much they were worth." He added that the objects were insured but the size of the policy was not immediately known. Cologne's archbishopric and an insurance company posted rewards

Schlesinger, Colby fired, Kissinger may leave security post

tion from which to oppose the secretary's policies. Mr. Schlesinger, who had a meteoric rise from a job in the U.S. Budget Bureau to head the Atomic Energy Commission, the Central Intelligence Agency and then the Defence Department, was reported by close friends to be resigned and philosophical about his abrupt dismissal, which came as a surprise to him. Months ago, as pressure was building to reduce Mr. Kissinger's responsibilities, Mr. Ford stated publicly that he would not do so because Mr. Kissinger's talents were unique and because he was receiving sufficient alternative advice on policy from other quarters. At the same time, Mr. Kissinger let it be known that he would regard such a request as a vote of no confidence in him and that he would feel compelled to resign from both positions if it were forthcoming.

U.S. plans withdrawal from UN labor body

© New York Times Service WASHINGTON — The United States will notify the International Labor Organization this week that it intends to withdraw from the 124-member United Nations body, according to Administration officials. The decision was made after study of a long accumulation of U.S. grievances, including ILO acceptance last June of an observer from the Palestine Liberation Organization. It was not clear how the notice of withdrawal would affect U.S. financial contributions to the Geneva-based organization. In recent years the United States has contributed about a quarter of the ILO's \$30-million annual budget and has also contributed heavily to the organization's technical assistance programs for less-developed countries. There have been occasions when the United States withheld payments. Five years ago the House voted a limited cutoff of funds for the ILO because of objections by U.S. labor organizations, which saw it as "a stage for Communist propaganda."

Price freeze for Ontario urged by Lewis

By WILFRED LIST Globe and Mail Reporter KITCHENER — Ontario New Democratic Leader Stephen Lewis last night drew a standing ovation when he challenged the Ontario Government to display the same courage as the NDP Government in British Columbia and impose a freeze on prices. Mr. Lewis was speaking at a rally on the eve of the Ontario Federation of Labor's annual convention. He said that the Conservative Government of Ontario has abdicated its responsibility. The federal Government obviously knows how to control wages but is totally impotent when it comes to controlling prices, he said. "The province can't alter federal law but it can intervene to cushion the blow of the wage-price guidelines for those who are treated unfairly," he said. Labor strike forecast Page 11

\$2.7 billion loan Beame rejected offer of funds from Arabs

From Associated Press, Reuters and The New York Times NEW YORK — Mayor Abraham Beame has turned down a \$2.7-billion loan offer from an Arab country as "unreasonable and unacceptable." A city hall spokesman said Saturday that at the time the offer was made, New York officials did not know it came from the unidentified Arab country—only that it was a foreign country. The spokesman said that one of the chief reasons for the rejection some time ago by the almost-bankrupt city was that the terms called for a full guarantee of the loan by New York City banks. "If we could get that kind of a guarantee from the banks for our own securities, we wouldn't have to go this route," he said. The spokesman said another reason was that the terms called for interest to be compounded annually at 8 per cent and paid at the end of 20 years. This meant the city would have to pay \$14-billion for a \$2.7-billion loan, he said. He added that the loan would have been advanced to the city at the rate of \$50-million every 90 days and in that way would have carried the city past its legal debt limit. Mr. Beame, a Jew, was asked at a news conference last August whether he and the city, which has the world's largest Jewish population, would find an Arab loan acceptable. The mayor re-

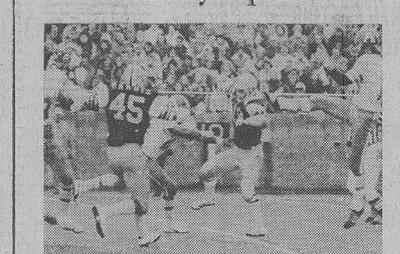


Pass! Pass it on—Metro Toronto will be visited this week by its chairman, the peripatetic Paul Godfrey. So says Dick Beddoes in his new column starting today on Page 8.

Inquest jury urges inquiry into crash of Panarctic plane

Special to The Globe and Mail YELLOWKNIFE — A coroner's jury has recommended a public inquiry into the crash of a Panarctic Oils Ltd. plane last October in the high Arctic. The call for the inquiry, accompanied by a variety of recommendations designed to improve flying safety in the North, came on Saturday night after the five-man jury had deliberated for almost 30 hours. The inquest opened on April 1 into the crash of a Lockheed Electra 24 miles short of the Rea Point runway on Melville Island, 1,600 miles north of Edmonton. Of the 34 men aboard 32 died. It was the worst crash in the history of the Canadian Arctic. The inquest, crippled by the lack of testimony from key witnesses, had been delayed by adjournments and a court case attempting to stop it. It reconvened on Wednesday night and the jury had been working on its conclusions since 11 a.m. Thursday. The jury agreed the crash occurred when the aircraft descended "for undetermined reasons" below Panarctic's altitude requirements. The jury added that marginal weather, high winds and poor flight scheduling, "possibly resulting in increased fatigue," contributed to the crash. "The jury is not privileged to base its verdict on assumptions beyond any reasonable doubt, but only on the facts at its disposal. We therefore cannot prove that the pilot reacted when the co-pilot reported seeing open water and ice... the cockpit procedure was adhered to that very severe turbulence existed at low altitude." The reason for the aircraft's descent "could only be substantiated by the appearance and subsequent testimony of the two surviving crew members, David Hatton and Gary Weyman, at the coroner's inquest," the jury said. "Without the testimony of the two survivors and other key witnesses to clarify existing discrepancies, we cannot come to a firm and more comprehensive verdict," the jury concluded, recommending "very strongly" that a public inquiry be held. The jury also asked for amendments to the Coroner's Act that would extend the coroner's power of subpoena throughout Canada. The missing witnesses cannot be subpoenaed unless they are within the jurisdiction of the Northwest Territories coroner. Other recommendations are aimed at improving safety at the Rea Point airstrip. The jury wants flights by heavy aircraft carrying passengers to remote staging sites to schedule arrivals during normal working hours "to retain peak efficiency." The jury ruled that voice and data recorders should be compulsory on all heavy aircraft, that all aircraft should be equipped with seatbelts of the metal-to-metal locking device kind (which are carried on commercial flights), that shoulder harnesses should be worn by all flight crews during takeoff and landing, and that heavy aircraft with passengers should be equipped with two emergency locator transmitters. The jury said all major staging sites should have at least minimum emergency equipment approved by the Ministry of Transport and the MOT should assist in equipping the Rea Point site with at least glide slope localizer, strobe beacons and published back-course as well as front-course landing approaches. Because the Panarctic operation is classified as private by the MOT it is not operated or required to operate by established commercial standards. The downed plane which was approaching Rea Point after midnight did carry a voice recorder although not required to, but the machine wasn't working the night of the crash. No one in the crew wore a shoulder harness and the canvas seatbelts worn by passengers ripped apart on impact. PANARCTIC — Page 2

Monday Sports



OTTAWA Rough Riders, receiving superior passing from rookie quarterback Tom Clements, secured a bye into the Eastern conference final, defeating Montreal Alouettes 46-6 at Lansdowne Park yesterday. Ottawa awaits the winner of the Montreal-Hamilton semi-final to be played in Montreal next Sunday. The Tiger-Cats overcame a 15-point disadvantage on Saturday to terminate Toronto Argonauts' woeful season, with a 26-10 victory to finish third in the East. Stories, pictures on Pages S1, S2, S7. Contract Bridge 38 Your Horoscope 39 Crossword Puzzle 38 Movie listings 18

One good turn saves millions of dollars Fake cure for bedsores proves old method works

By JOAN HOLLOMBON Bedsores, which cost Canada an estimated \$60-million a year, can be cured by the oldest treatment of all—turning the patient—according to a Toronto bioengineer who used a hoax machine to prove his point. Geoffrey Fernie said only six patients returned in a bed for three hours in danger of developing a bedsore. Bedsores are often extremely hard to heal, so that all kinds of treatments are suggested—medications, creams, powders, water beds. The difficulty in finding out if they are really effective is to establish some kind of baseline to measure them against, as well as to make sure that when the sore heals, it really has been the treatment that did the trick. Dr. Fernie, who is a research associate in the University of Toronto department of surgery, decided first to evaluate the oldest treatment of all—turning the patient in bed at regular intervals. Six patients at Toronto General Hospital whose bedsores had failed to heal with other treatments were selected. Then, to make sure nurses would keep to a precise schedule and that patients would accept being moved throughout the night as well as the day, Dr. Fernie devised an impressive-looking machine. Patients and nurses were told the machine gave off electromagnetic emissions, so that it must be directed toward the bedsore for half an hour every two hours. The machine, of course, did nothing, but when the patient was turned so that the bedsore faced the machine his weight was off the bedsore. Bedsores on all six patients healed within 30 days. One patient, however, had shown no improvement by the 18th day. Dr. Fernie found that hospital staff thought the machine was so effective that it was being used just during the daytime. Once this patient, too, received his "treatments" every two hours around the clock, his sore also healed. Dr. Fernie explained the research project in an interview during the weekend rehabilitation symposium sponsored by the Ontario Society for Crippled Children and the Ontario March of Dimes. It was held at the Ontario Institute for Studies in Education. Dr. Fernie said the machine was not a trick, but a serious way of proving that frequent turning alone is effective. The idea of the machine "treatments" made it easier for patients to accept being disturbed throughout the night; and by diverting everyone's attention from the actual turning, it introduced an objective measure of proof into the study. The bioengineer said about 3 per cent of hospital patients have bedsores, plus about another 3 per cent nursed else-

Your morning smile A doctor apologized to a man for keeping him waiting. "I don't mind the wait—so much," the man replied, "but I had thought you would prefer treating 000195

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AUCTIONS
CONSUMER INDUSTRIAL
page
41

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RCMP probes plot to aid terrorists

From Page One

The informant said the people under surveillance are not impressed by Canada's border security or by the RCMP, which they consider too small a force for so large a country. He has heard them say, however, that the RCMP's investigations have intimidated them into not taking certain, unspecified actions.

The co-ordinator of the group's activities lives in Edmonton. He worked actively for the Popular Front in Lebanon before coming to Canada and he has provided information on Arabs and Jews in Canada to Syrian intelligence authorities during visits to the Middle East.

The man is described as a natural and brilliant leader who has the respect of Popular Front supporters in Canada.

Canadian security authorities are watching two restaurants in Windsor. They say they know terrorism is discussed in the restaurants by Arabs from both Detroit and Windsor who use them as meeting places. Reporters saw several meetings between Detroit and Windsor Arabs at one of the restaurants. (Detroit's Arab population of about 80,000 makes it North America's largest Arab community.)

Resumes Wednesday Arctic crash report won't affect inquest

Special To The Globe and Mail
CALGARY—Coroner Walter England has not yet been able to read the Ministry of Transport report on the crash of a Panarctic Oils Ltd. plane in the Northwest Territories last October. But the report won't affect his plans to resume an inquest into the crash on Wednesday.

Mr. England said in a telephone interview yesterday that he had not been able to do more than skim the MOT report because only a few copies were delivered to Yellowknife. The copies were distributed to the news media and only one was left for the coroner and Crown counsel Edward Brogden to share.

Mr. Brogden was reading the report yesterday, Mr. England said. "I get my turn tomorrow."

The inquest into the crash began on April 4, but was adjourned in mid-April because several key witnesses failed to appear. Mr. England said the missing witnesses, including the two survivors, have not indicated whether they will appear on Wednesday, but he plans to go ahead with a review of evidence gathered so far.

The jury could then make recommendations on the next move in the year-old investigation of the crash. The recommendations could include a request for a public inquiry into the crash.

A public inquiry is not favored by Diane Peterson, sister of William Brian Thomson who was piloting the plane when it crashed. "The inquest should be completed. It's the only place we'll ever find out the truth. Public inquiries are political things. The survivors want an inquiry and that's frightening. They're afraid to come to the inquest to testify, so why do they want an inquiry? Because they think they'll get protection there as they've been getting all along," she said by telephone yesterday.

Soviet military size called 'exaggerated'

© New York Times Service
WASHINGTON—Senator William Proxmire, taking issue with warnings by Defence Secretary James Schlesinger, contended yesterday the U.S. Defence Department was distorting and exaggerating intelligence estimates about the size of the Soviet military program.

"Insinuations of a widening gap between the Soviet and United States military power to the advantage of the Soviet Union, are nonsense, unsupported by the facts," Senator Proxmire said.

He made the statement in making public testimony by William Colby, director of the Central Intelligence Agency, and Lt. Gen. Daniel Graham, director of the defence intelligence agency, about the Soviet military effort.

Postal negotiations

From Page One

most of the 22,000 union members off their jobs and halted postal service across the country.

"While our attitude is not inflexible with respect to possible solutions, we trust we are not being presumptuous by expecting the same attitude should prevail on our part," the union letter said.

Old reliable
MOOSE JAW (CP)—Leslie Erskine who farms seven miles northeast of this southwestern Saskatchewan city, uses a 1928 Holt combine to harvest his crop. Mr. Erskine robs three other old machines for parts and says his Holt has "never missed a year since I got it in 1928."

More to be learned All Watergate facts not known: prosecutor

NEW HAVEN, Conn. (AP)—Former special Watergate prosecutor Leon Jaworski said yesterday that all the facts about Watergate have not been made public even with the release of the final report of the Watergate prosecutor.

"There's still a whole lot more to be learned," he said. "Those matters that relate to prosecutions and, particularly, the story relating to the Watergate break-in and the Watergate coverup, the facts with respect to that are known."

Mr. Jaworski said the still-secret facts about Watergate are "in places where no indictments were returned because the evidence wasn't sufficient to warrant an indictment."

Mr. Jaworski said the turn of events in the investigation came with the successful subpoenaing of the White House tapes.

"I can tell you, if I'd lost, Nixon wouldn't have turned those recordings over. He would have escaped impeachment in my judgment."

Probe report of U.S. crew held 25 years

© Washington Star
WASHINGTON—The Senate Intelligence Committee is investigating the possibility that at least eight U.S. Navy airmen may still be prisoners of the Russians 25 years after their plane crashed into the Baltic Sea.

Another who was later admitted to a university in the west was an official Popular Front spokesman in Beirut during negotiations that followed the hijacking of an aircraft. The hijacking involvement did not hinder his entry into Canada. The man has since left Canada and is working in the Middle East.

Postal negotiations

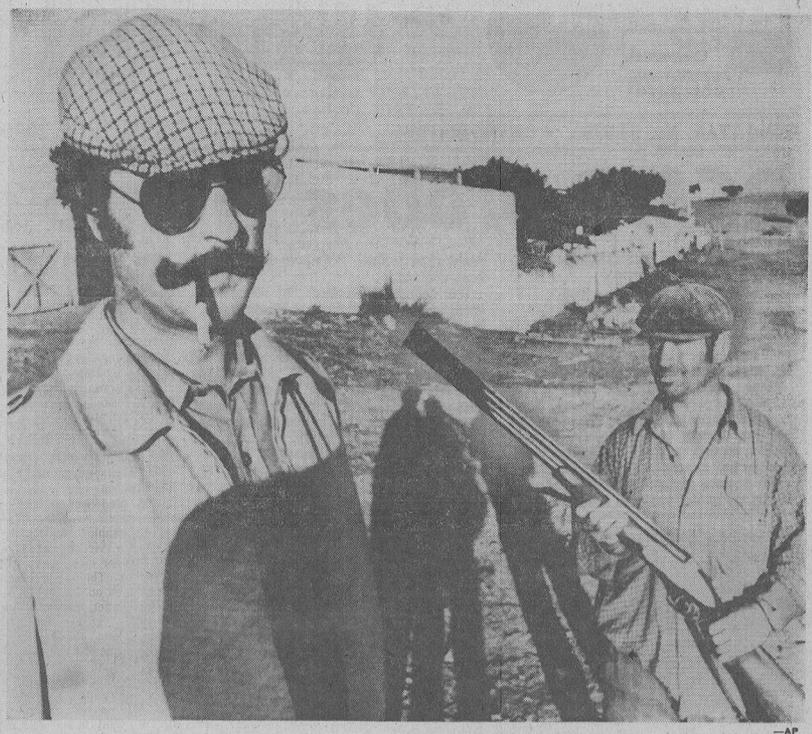
From Page One

a rally tomorrow outside the Royal York Hotel to protest against the mail strike.

On Friday, the Periodical Press Association, representing 500 Canadian magazines, sent telegrams to Mr. Mackay and the Canadian Union of Postal Workers, whose 22,000 members are on strike.

The 18,000-member Letter Carriers Union of Canada was told that Friday was the last day of work until CUPW members returned to sort the mail.

The strike isn't hurting everyone, however. Private delivery services, airlines, buses, courier services and Bell Telephone all report an upsurge in business.



Portuguese farmer Jorge Van Zeller and his armed foreman stand ready to defend their farm, south of Lisbon, against takeover by Communist forces. There are 20 to 30 land-grabs a day in the Alentejo Plain area.

More to be learned All Watergate facts not known: prosecutor

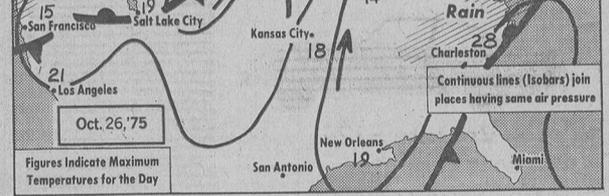
Mr. Jaworski said he did not want anyone to speculate as to what the conversations were.

"I knew I couldn't repeat them. You sit there and talk to a president, you're supposed to keep those conversations to yourself."

Mr. Jaworski, who practices law in Houston, Tex., said he turned down an opportunity to talk to Mr. Nixon at the time he was prosecutor. Mr. Jaworski said he "didn't want anyone to speculate as to what the conversations were."

Mr. Jaworski said he did not want anyone to speculate as to what the conversations were.

"I knew I couldn't repeat them. You sit there and talk to a president, you're supposed to keep those conversations to yourself."



THE WEATHER

Metro Toronto—Mostly sunny and warmer. High near 15. Tomorrow: Cloudy periods.

Windsor, London, Hamilton, Niagara, Peterborough, Lake St. Clair, Lake Erie, southern Lake Huron, Lake Ontario, southern Haliburton—Mostly sunny and warmer. High 13 to 15. Tomorrow: Cloudy periods.

Northern Lake Huron, northern Haliburton, southern Georgian Bay—Sunny with cloudy periods and a little warmer. Winds southwest 15 to 20. High near 14. Tomorrow: Cloudy with sunny periods.

North Bay, Sudbury, northern Georgian Bay, Algoma, Temagami—Mostly cloudy. Winds southwest 15 to 25. High 12 to 14. Tomorrow: Cloudy and clear.

Geraldton, White River—Windy with a few showers or flurries late in the day. Winds southwest 15 to 25 shifting to northwest late in the day. High around 8. Tomorrow: Mostly cloudy with a few flurries.

Cochrane—Mostly cloudy and a little warmer. Winds southwest 15 to 20. High near 11. Tomorrow: Windy and colder with a few flurries.

Moose River—Cloudy with some rain or wet snow. High near 8. Tomorrow: Windy and colder with a few flurries.

Ottawa, Montreal—Mainly sunny but becoming cloudy in the evening. High 12 to 14. Tomorrow: Cloudy.

Quebec—Mainly sunny but becoming cloudy in the evening. High 10 to 12. Tomorrow: Cloudy.

TORONTO RECORDS

Toronto Airport
Yesterday's temperatures: 8 a.m. 1; noon 11; 2 p.m. 13; 4 p.m. 11; 8 p.m. 8. Maximum to 7 p.m. 13; minimum to 7 p.m. 1; mean 7; difference from average 1 below.

Wind: 8 a.m. WNW2; noon NW5; 7 p.m. SSE3.

Barometer: 8 a.m. 30.17; noon 30.17; 7 p.m. 30.15.

Rainfall to 7 p.m.: Nil.

Saturday's maximum 18. Saturday's minimum 7. Saturday's rainfall .3mm.

Sun rises today at 6:46; sets at 5:17.

Downtown Toronto
Yesterday's high: 13; low 7; rainfall to 7 p.m.: Nil.

Saturday's high: 18; Saturday's low: 11; Saturday's rainfall: Nil.

Maximum and minimum for this date last year: 9.4 and 6.1.

Highest ever recorded in Toronto on this date: 21.7 in 1947, lowest: -7.2 in 1869.

Toronto Island
Yesterday's high: 12; low 5; rainfall to 7 p.m.: Nil.

TEMPERATURES								
Dawson	-11	5	Charlottetown	11	16	Trinidad	23	30
Vancouver	4	7	St. John's	6	17	Temperatures at noon		
Victoria	4	5	Chicago	1	14	GMT yesterday: Aberdeen 13, Amsterdam 6, Antigua 28, Athens 17, Auckland 17, Berlin 5, Beirut 25, Birmingham 11, Bonn 13, Brussels 7, Cairo 18, Casablanca 19, Copenhagen 6, Dublin 15, Geneva 8, Hong Kong 25, Lisbon 19, London 10, Madrid 17, Malta 18, Manila 22, Moscow 8, New Delhi 27, Nice 20, Oslo 10, Paris 8, Peking 11, Rome 19, Saigon 27, Seoul 14, Sofia 11, Stockholm 13, Sydney 13, Taipei 24, Tehran 21, Tel Aviv 25, Tokyo 13, Tunis 22, Vienna 11, Warsaw 6.		
Edmonton	-4	-3	Buffalo	7	12			
Calgary	-4	-1	Boston	17	17			
Yellowknife	-10	-8	New York	14	14			
Saskatoon	-2	0	Washington	15	20			
Regina	-2	12	Atlanta	13	18			
Winnipeg	-6	8	Miami	19	26			
Thunder Bay	-6	9	New Orleans	18	19			
Sault Ste. Marie	0	13	St. Louis	0	16			
Timmins	-2	9	Tucson	8	27			
Sudbury	1	11	Acapulco	25	32			
Windsor	3	12	Barbados	22	29			
London	2	13	Bermuda	24	27			
Kingston	7	13	Havana	21	27			
Ottawa	4	12	Kingston	25	32			
Montreal	6	12	Mexico City	13	25			
Quebec	6	10	Monterrey	12	23			
Fredericton	13	16	Nassau	20	29			
St. John	11	16	St. Kitts	23	31			
Halifax	11	17	San Juan	24	29			

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The Globe and Mail

CANADA LIFE
INCOME PROTECTION POLICIES
Sunny
High near 15
Details on Page 2

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TORONTO, MONDAY, OCTOBER 27, 1975

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RCMP probes plot to support terrorists at Olympics

By ARNOLD BRUNER and PETER MOON

© 1975 The Globe and Mail
A conspiracy by at least 14 Arab Canadians to assist foreign agents in an act of terrorism at the Olympic Games in Montreal next year is being investigated by the Royal Canadian Mounted Police.
Senior federal officials and police sources in several forces have said that the plot and the identities of the conspirators are known to the RCMP. Police haven't enough evidence to lay criminal charges and cannot arrest the plotters.
The sources claim the plotting is continuing up to this moment, although they

doubt that a final "Olympic plan" has been decided.
The sources said that the suspected conspirators know the police are aware of their planning but this does not appear to make them any the less dangerous. They are willing, able and in positions to provide food, accommodation, transportation, weapons, intelligence and other support and local expertise for Arab or other terrorists from abroad who choose the Olympic Games as a target.
The conspiracy involves what an informant for the RCMP says may be "a spectacular international act of terrorism" for the Olympic Games.

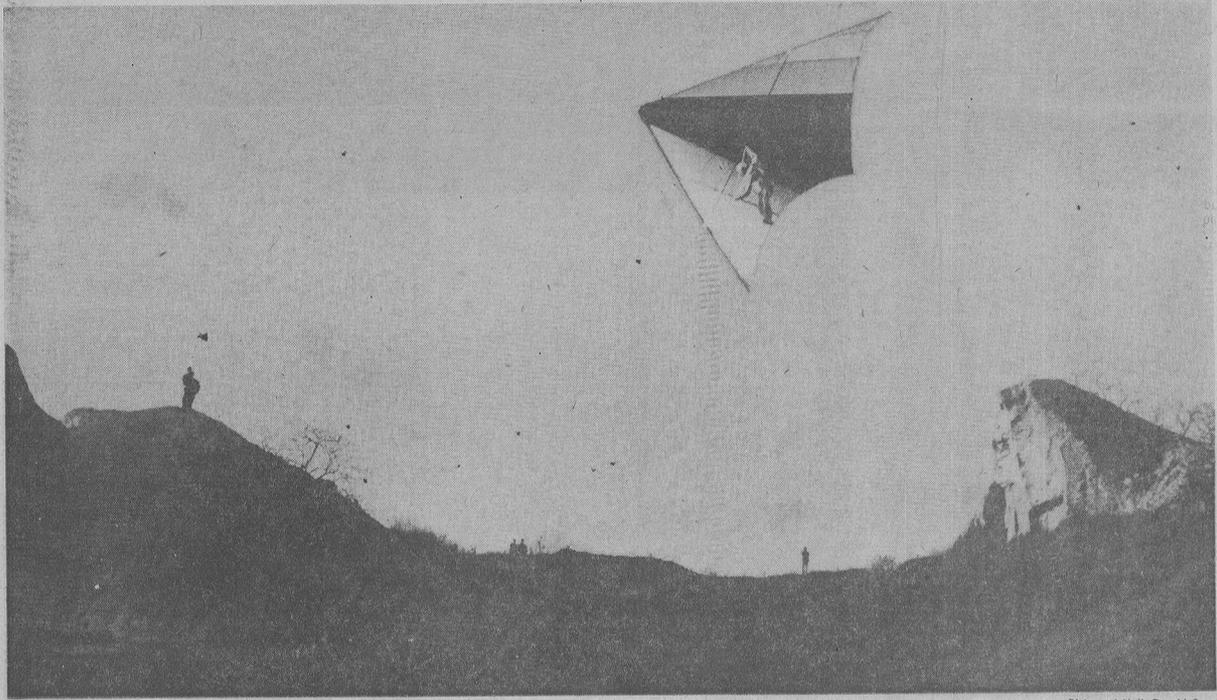
The terrorists are expected to enter Canada at either Windsor or Vancouver and move to Montreal with the help of the conspirators and the use of "safe houses" provided by Arab-Canadian supporters of the Palestine Liberation Organization or the Popular Front for the Liberation of Palestine.
Security authorities say a key man in the conspiracy was employed for a while in Montreal at COJO, the Olympic Games organizing committee, in a job that provided him with early access to confidential site plans and security arrangements for the Games.
His employment by COJO was "of

great concern" to security authorities until it was ended. The RCMP's informant described him as "vicious and dangerous."
PLO and Popular Front supporters have been and are employed in jobs at both Montreal and Toronto international airports. "They are in an ideal position to pick up information on airport security," a Government source said.
A Toronto conspirator said by authorities to be an army-trained bomb disposal expert, is under close surveillance by the RCMP. He got into trouble with Arab authorities because of his PLO sympathies before migrating to Canada. "He's a

tough nut," said one source and then he added: "remember, before you can be a bomb-disposal expert you've got to know how to make bombs."
The number of Arabs in Canada is estimated at 90,000 and Government sources stressed that they are concerned about the potential actions of only a few dozen Arab Canadians. The sources said the ones who worry them most are mainly in their early twenties. They are usually relatively recent immigrants to Canada. And most of them are Palestinians.
The individuals, regarded by police as key to the conspiracy, are all supporters of the PLO or the Popular Front, and live

in Edmonton, Toronto and Montreal. Others, also under RCMP surveillance, live in Calgary, Windsor, London and Brantford.
The Globe and Mail was told about the conspiracy a month ago by the same informant who first told the RCMP about it. His information was obtained by meeting and talking with the conspirators over the past 18 months. It was he who said the conspirators were discussing "an international act of terrorism."
Government sources approached at that time about the accuracy of the information.

RCMP — Page 2



Onlookers stand on the Scarborough Bluffs as John Woolner soars down toward the beach at Bluffers Park yesterday, riding his hang-glider. Dan Genge, who was injured while flying a hang-glider during the CNE this summer, was also flying yesterday, travelling at around 22 mph during the drop of almost 300 feet.

Federal regulations being overhauled Pilot error is cited as a major factor in Panarctic crash

OTTAWA (CP) — Pilot error was one of the main causes of the crash of a Panarctic Oils Ltd. aircraft at Rea Point in the Northwest Territories a year ago, a Transport Ministry report says.
The report, released Saturday, also suggests that ministry regulations for operation of private aircraft are not stiff enough.
Prepared by Transport Ministry investigators, the report says the pilot, William Brian Thomson, 30, of Leduc, Alta., reacted improperly to a visual cue and started a final rapid descent leading to the crash which took 32 lives. Mr. Thomson died in the crash.
"Partial incapacitation of the captain was a factor in the failure to recover from the high rate of descent," the investigators say.
The report also says the crew was inadequately briefed by Mr. Thomson during the final stage of the descent. The crew was not properly coordinated.
Several factors could have led to the pilot's inability to react and perceive—fatigue, liver disease, stress from flying with a new first officer in doubtful weather conditions and worry about the flight in general, the report says.
An autopsy on the pilot's body showed fatty change in the liver, the investigators say. This was "considered by consulting pathologists to be

almost certainly associated with excessive intake of alcohol."
People with fatty liver disease might have an abnormal heart beat under stress and be incapacitated. There was no evidence of recent consumption of alcohol or drugs in the body, the report says.
Transport Minister Otto Lang said in a statement released with the report that the department's air regulations are being overhauled. New standards will be developed to improve safety in commercial and private air operations, he said.
The only survivors of the Oct. 30, 1974, crash near Rea Point on Melville Island were co-pilot David Hatton and flight engineer Gary Weyman. Both have refused to testify at a coroner's inquest in Yellowknife.
Coroner Walter England said in Yellowknife on Oct. 10 that the inquest is to resume next Thursday after months of delay. He said that if the inquest still has trouble getting key witnesses to testify, he may repeat his call for a full-scale public inquiry with the power to subpoena.
The Panarctic Lockheed Electra, on the way to Rea Point from Edmonton, crashed into the ice near Rea Point after a sharp descent.
The investigators say Mr. Thomson reported that he saw a layer of cloud just before

the sudden drop. This meant the captain was referring to landmarks outside rather than watching instruments until the co-pilot indicates he sees the runway, the report says.
Mr. Hatton, the co-pilot, saw the ice and water and told Mr. Thomson, but the pilot increased the rate of descent, the report says.
The other two officers shouted at the pilot as the aircraft dipped below 100 feet and 50 feet above sea level, but without any reaction from Mr. Thomson, investigators say. They seized the controls

from the pilot just before impact.
The investigators say a 1973 Government flight check found Mr. Thomson "somewhat unorthodox" in instrument flight operations.
The Panarctic check pilot had found Mr. Thomson slow or poor in some flight operations in a test in August, 1974.
Mr. Thomson had become increasingly dissatisfied with flights on the Lockheed Electra in the North, as he considered this flying hazardous, the investigators say.
The report says the Canadian Transport Commission ruled that the Panarctic Lockheed Electra operation was non-commercial. This meant that Transport Ministry operating certificates did not apply, and the company was responsible for its own safety rules.
The company set up its own air transport department and the flight was operated under a mixed set of rules including Transport Ministry standards and company regulations.
The investigators found there was no company flight operations manual to lay down aircraft crew duties adequately.
Another finding was that "planning for a disastrous aircraft accident was inadequate" at the Rea Point airstrip. Rescue crews took two hours to reach the crash site, even though it was only 2 1/2 miles from the end of the runway, because of an "inadequate response procedure."
The investigators urged the ministry to ensure that all operators of large aircraft weighing more than 12,500 pounds and carrying passengers should be required to meet ministry operating standards.
Mr. Lang said the ministry will examine Panarctic air operational procedures.

Leaders gather at palace

From The Associated Press and The New York Times
MADRID — Gen. Francisco Franco was near death early today as doctors, preparing for surgery, instead massaged the Spanish leader's failing heart and gave him an emergency blood transfusion, sources close to his medical team said.
Prince Juan Carlos de Borbon, Gen. Franco's heir as head of state, and all top government officials went to the generalissimo's Pardo palace 10 miles north of Madrid.
A medical bulletin late last night reported he was sleeping but his heart was experiencing "important rhythmic upsets with marked accentuation of the congestive cardiac insufficiency" he has experienced in the past few days.
He also suffered a second

ary gastric hemorrhage, the bulletin said, but this appeared to be of minor consideration compared to the deterioration of his heart.
A Madrid newspaper said openly that the nation and its leaders suspected and what Gen. Franco's doctors so far have refrained from saying. "Franco is dying," reported the Nuevo Diario, adding that the general also was suffering kidney complications.
Gen. Franco asked for the last rite of the Catholic church Saturday after suffering heart seizures, lung complications and stomach swelling.
Almost every important figure of the Spanish regime visited the Pardo palace yesterday while hundreds of ordinary citizens gathered outside the gates, some holding ros-

Company claims conclusions present an inaccurate picture

CALGARY (CP) — Panarctic Oils Ltd. of Calgary says conclusions about pilot ability in a report by the federal Ministry of Transport on the Oct. 30, 1974, crash of a Panarctic plane in the High Arctic are unsubstantiated and portray an inaccurate and negative picture.
The MOT report, released Saturday, said pilot error was one of the main causes of the crash which killed 32 of the 34 passengers and crew aboard.
Co-pilot David Hatton and flight engineer Gary Weyman were the only survivors of the crash.
Panarctic, in a seven-page text submitted to the MOT after receiving its report, disputed the MOT statement that the captain of the plane was unhappy with safety conditions on his job.
The MOT said the captain, William Brian Thomson, had been "increasingly dissatisfied and frustrated during the

year prior to the accident with this type of flying which he considered to be hazardous."
Mr. Thomson had flown in the Arctic for seven years but had flown Electras for only two years.
The report also refers to evidence of chronic fatigue which it said may have been partly caused by the captain's liver condition and amplified by the frustration and anxiety which was developing.
"These conclusions directly contravene or are a distortion of the statements and evidence of the captain's employer, his co-workers and his widow," Panarctic said.
Although Mr. Thomson considered flying in the Arctic to be hazardous, he simply found it more hazardous than flying in southern Canada, "a view no doubt shared by numerous pilots," Panarctic said.
As well, his "dissatisfaction" was limited to a desire to increase income and a preference for day, instead of night, flying, Panarctic said.
During the 11 days preceding the accident Mr. Thomson spent seven days in Calgary in normal rotation as duty pilot. The day before the accident was a day off and the captain awoke "well-rested" on the day of the crash, Panarctic said.
Panarctic also said the MOT failed to refer to any evidence that the captain used alcohol excessively.
Panarctic said the MOT omitted to include in its report the fact that after each of a series of instrument flight-rating renewals and checks, the captain was declared to be at or above the required standard by MOT inspectors.
The MOT report "without any justification, downgrades the skills, ability and conscientious attitude displayed by Capt. Thomas throughout his entire flying career."
In other criticisms Panarctic said that although no company flight operations manual was available to personnel, the report failed to mention any of the "functionally similar" manuals in use by Panarctic at the time of the accident.
As well, the MOT "appears to have overlooked" the fact that on two occasions in April, 1972, MOT air-carrier inspectors checked the operation of the Electra on return flights from Edmonton to Rea Point and had no significant criticisms.
Reacting to an MOT finding that Pedder Point was filed as an alternative landing point, notwithstanding the fact that no terminal forecast was available, Panarctic said the captain relied on advisories issued by Edmonton International Airport.
The use of Pedder Point as an alternative "enlarged the margin of safety" by allowing the captain to divert there or to Resolute Bay, depending on actual weather conditions, Panarctic said.

Trudeau threatens tougher measures if appeals ignored

Prime Minister Pierre Trudeau said last night that if the Government will not budge from its offer to the postal workers, but said companies faced with bankruptcy from the anti-inflation measures will be exempted from the controls.
Asked if the federal Government intends to cut back on its own spending, Mr. Trudeau said that it "is a mistake" to look at Ottawa "as the villains, the culprits, the devils" in spending.
He said the Government takes no more than 8 or 9 per cent

cent annually from the economy for its own goods and services, such as building new post offices.
He brushed aside queries about the Government's policy on capital punishment and what it intends to do about the rising crime rate. "I'm afraid you're anticipating a policy that we haven't announced," he said.
Baffle or phony war? Page 7
Major test today Page 11

Interviewed on CFRB's Let's Discuss It, Mr. Trudeau said he hoped the wage and price control measures will not be in effect for more than the proposed three years, but indicated they could remain in force longer if people don't co-operate to make them work.
Asked what will happen if the big labor unions refuse to go along with the controls, as some have bitterly indicated, Mr. Trudeau said unions for years have been asking for price controls. He said unions are afraid the price controls won't work.
"We'll put a few union leaders... in jail for three years and the others will get the message," Mr. Trudeau said mockingly.
Chiding the media, the Prime Minister said a month ago they were asking the Government "to give leadership... to do something." Then, he said, when the wage and price controls were introduced on Thanksgiving Day, the media were saying: "Are you sure you should have done this? Make up your minds," Mr. Trudeau said.

Mr. Trudeau indicated that the Government will not budge from its offer to the postal workers, but said companies faced with bankruptcy from the anti-inflation measures will be exempted from the controls.
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He said many people had been expecting inflation to get worse and to protect themselves, had demanded and received huge salary increases. He said that "we had been hoping that inflation would correct itself. Many people in our economy haven't been playing the game that way."
If the Government had introduced the controls for only a year or 18 months, it would not "be killing inflationary expectations" and the measures "would probably not have worked." He said people would "not have been restraining their demands, they would have been delaying them."
The interview with Mr. Trudeau was taped on Friday when he was in Toronto to address a service club luncheon at the Royal York Hotel.

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New talks may hinge on Post Office note delivered to union

OTTAWA (CP-Special) — A letter sent to the striking Canadian Union of Postal Employees last night from the Post Office could determine whether the two sides will resume negotiations.
The letter, fourth in a series of exchanges, was signed by ailing Postmaster General Bryce Mackasey by his deputy, John Mackay. Mr. Mackasey is expected back at work today.
Neither side would disclose the contents of the letter, but the union said its negotiating committee would study it and make a public response today.
Union president Joe Davidson told a press conference in Vancouver last night that he hopes negotiations will resume today or tomorrow.
"We are ready to go back any time but we don't want any conditions put in our way."
The series started on Thursday when the union delivered a letter to Mr. Mackasey saying it was prepared to resume negotiations on two hours' notice if the Post Office would agree there should be no limitations on the talks.
Mr. Mackasey, who collapsed at his desk on Friday and was ordered by his doctor to take the weekend off, replied that he stood on his final offer of a \$1.70-an-hour increase over 30 months, a cost of living allowance and improved vacation entitlements as outlined in the conciliation report of Judge Jean Moisan of the Quebec Superior Court.

Mr. Mackasey, who collapsed at his desk on Friday and was ordered by his doctor to take the weekend off, replied that he stood on his final offer of a \$1.70-an-hour increase over 30 months, a cost of living allowance and improved vacation entitlements as outlined in the conciliation report of Judge Jean Moisan of the Quebec Superior Court.
He added the Post Office was preparing a package of all outstanding issues, including the wage offer, and asked that the union "acquiesce tactically" on the wage issue.
"We are not concerned with the order in which the outstanding items are discussed," Mr. Mackasey said. "It was sheer reality that dictated our position."
The union reply on Saturday, signed by chief negotiator Jean Claude Parrot, rejected the idea of acquiescing tacitly on the wage issue and instead suggested it be the last issue discussed.
The union letter left the door ajar for further talks in the dispute that has taken

Your morning smile

A motorist stopped to pick up a hitchhiker. He asked the hitchhiker if the car's turn signal was working. The hitchhiker looked at it and said:
"Yes, it is... no, it isn't... yes, it is... no, it isn't... yes, it is..."

Monday Sports

SNOW Knight, E. P. Taylor's chestnut colt, held off all comers in the stretch yesterday to win the \$188,700 Canadian International Championship Stakes at Woodbine. Comtesse de Loir was second and Carney's Point third. Page S1.
TORONTO Argonauts overcame a 23-10 disadvantage at halftime to defeat Hamilton Tiger-Cats 27-23 Saturday at CNE Stadium. Page S1.
Contract Bridge 41 Osgoode Hall 39
Crossword Puzzle 39 Your Horoscope 41

MONASTEREVIN, Ireland (Reuters) — The head of the Provisional Irish Republican Army's political wing yesterday appealed for the release of Dutch industrialist Tiede Herrema, kidnapped 23 days ago by two former members of the outlawed guerrilla group.
Rory O'Brady, leader of the Provisional Sinn Fein, told the annual conference of the organization in Dublin that the kidnapping would serve no useful purpose.
"I appeal to those holding Mr. Herrema to release him, to release him now and to release him unharmed."
His statement—seen as a further attempt by Republican leaders to dissociate the IRA from the kidnapping—came as the police and army siege of the house where Mr. Herrema is held dragged through the weekend with no sign of a break.
Mr. Herrema's captors have been holding him at gunpoint on the upper floor of the house since police discovered their hideout on Tuesday morning.
The kidnapers, Eddie Gallagher and Marian Coyne, quit the Provisional movement after ignoring its rules. However, they are still strong supporters of the IRA cause.
Mr. O'Brady, asked whether he thought the kidnapers would listen to him, said: "One has to try. I made this appeal on a very public occasion and was applauded by all of the 1,000 delegates."
It was not just the president of Sinn Fein appealing but the man who holds that position with the backing of the members. It could not have been stronger," he said.
Mr. O'Brady claimed that the Republican movement had done all it could to try to secure the release of Mr. Herrema, who was seized near his Limerick home on Oct. 3.
Mr. O'Brady's statement was broadcast on Irish radio but it was not known whether the kidnapers have a radio.

TORONTO STAR 18 SEPT 1975

Coroner says TV show distorts Arctic inquest

YELLOWKNIFE, N.W.T. (CP) — A television documentary on the crash of a Panarctic Oils Ltd. aircraft in the Far North last October was misleading, Territorial Coroner Walter England said.

England, a hardware merchant and justice of the peace, was on the first aircraft that flew into Rae Point 24 hours after a Lockheed Electra crashed in a blizzard killing 32 of the 34 passengers on board.

He watched the Canadian Broadcasting Corp. documentary with crown attorney Ed Brogden Tuesday night.

Both said the documentary, part of a new program called the Fifth Estate, misrepresented their conduct and the inquest into the crash.

England alleged an application to halt the inquest, thrown out of court in Yellowknife Tuesday, was a deliberate attempt by Panarctic to frustrate the proceedings.

The coroner said the inquest will resume as soon as possible.

He said he will press for a full public inquiry if the court "cannot get the answer to what happened at Rae Point."

England and Mr. Brogden rejected the documentary's inference that the sole survivors, co-pilot David Hatton and flight engineer Gary Weyman, were eager to appear at the inquest.

"Their lawyer told us in writing they would not appear," Brogden said.

Hatton said during the program he had made 14 trips to the Territories and was never once served with a summons or questioned by police.

England said the two survivors knew they were wanted at the inquest and, if they were eager to appear, they should have "let us know where they were."

Brogden said he would prefer a federal public inquiry into the crash.

England said he tried to obtain a copy of the statements made to ministry of transport (MOT) investigators by Hatton and Weyman.

"This was refused to us by MOT, who said they were private statements."

Charles Heatherington, Panarctic president, said yesterday in a telephone interview from Calgary it would be irresponsible to comment on the program when it is "really up to the MOT to determine the cause of the crash."

"I have great difficulty in

understanding how they (the CBC) could prejudge a situation that has been investigated for months by government experts."

Ron Haggart, senior producer of Fifth Estate, said the "two surviving members of the crew said, and said on our program, they expected to be called to give evidence and were willing to give evidence. In the case of one of them, he was in the Northwest Territories 14 times and easily available to any competent law enforcement agency."

England headed the inquest into the deaths of a British nurse and an Eskimo mother and child whose plane, piloted by Martin Hartwell, crashed in the Arctic in November, 1972.

N.Y. prelate visits Israel

TEL AVIV (Reuter) — The archbishop of New York, Terence Cardinal Cooke, arrived in Israel last night at the head of a delegation of 52 pilgrims for a four-day tour of Christian holy sites.

GLOBE & MAIL

Panarctic crash program called misleading

CBC show makes lawyer splutter, coroner pale

By SUZANNE ZWARUN
Special to The Globe and Mail
YELLOWKNIFE — Coroner Walter England, pale and miserable, stumbled out of a sickbed Tuesday night to watch the CBC's fifth estate documentary on the Panarctic air crash that killed 32 people almost a year ago.

Thirty-five minutes later Mr. England, paler and more mis-

erable, slumped into an armchair and pondered how he and Crown attorney Ed Brogden became, as they saw it, the villains of the North's most controversial inquest.

"I think the show, was well assembled—well put together, but it was surely misleading," Mr. England concluded.

That didn't surprise Mr. England. In the North, where

there are usually a dozen rumors for every fact, rumors about the CBC show have been circulating since it was

Disaster unexplained Page 6

filmed last summer and inquiries from the South earlier this week tipped Mr. England to the slant the show would

take—a slant he felt maligned his efforts and made Panarctic, as an airline official said on the show, "a squeaky clean airline."

Mr. England watched the show with resignation, but it set Mr. Brogden to spluttering, taping it on a Sony recorder and filming segments. He decried several of CBC's conclusions with angry murmurs.

Mr. England's big comfortable home in Yellowknife's Old Town—where they watched the program—seemed worlds removed from the ice at Rea Point where Mr. England landed 24 hours after the crash on Oct. 30, 1974. He arrived in the same blowing snow and sub-zero temperatures that the Panarctic men died in and he helped saw bodies out of the ice.

The Panarctic show was screened in Yellowknife only hours after the NWT Supreme Court dismissed a bid to quash the inquest started by Mr. England on April 1. The inquest limped along without hearing testimony from several key witnesses until it was adjourned in mid-April.

Mr. Brogden, Mr. England and his wife, Carolyn, listened in shocked sympathy as co-pilot David Hatton, one of two survivors, described to the CBC his desperate struggle to survive on the Melville Island ice. When Mr. Hatton halted, broke down and couldn't speak, they too were silent.

"Don't you die on me now, you son-of-a-bitch, they are just about here," Mr. Hatton recalled his buddy, flight engineer Gary Weyman, saying as the lights of the rescue team started across the ice toward them.

Mr. England spoke almost in wonder because, as he sees it, he's done his best to find out why 31 of 34 men aboard the Lockheed Electra died in

Panarctic program called misleading

● From Page One

the crash (another died out of Mr. England's jurisdiction en route to Edmonton.) He says the CBC did not present the whole picture.

Calgary lawyer A. M. Harradence, on the fifth estate, suggested the coroner was liable for a defamation suit because he allegedly charged that Mr. Harradence's clients—the two survivors—left the country rather than appear at the inquest.

Mr. England says that all he knows about the missing witnesses was given him by the RCMP and a lawyer representing Panarctic, Donald Brenner. According to Mr. England, the Panarctic lawyer announced at the opening day of the inquest last April that the survivors were not present and never would be.

Mr. Weyman boasted on the program that he had been in and out of the territories many times and nobody has subpoenaed him.

Mr. England said that the subpoenas were served on Mr. Brenner, who was "as close as we could get to Weyman and Hatton."

Because the coroner's jurisdiction is limited to the territories, that was all he could do, and because there weren't any warrants out, the RCMP's not finding them is understandable, Mr. England said.

"The coroner works on a much lower budget than the CBC, I don't have a Lear Jet to start with and it doesn't do me any good to find them in San Francisco," Mr. England said, referring to the CBC's statement that their reporters had no trouble finding the missing witnesses that caused Mr. England to adjourn the inquest in mid-April.

Panarctic contended on the CBC program that it couldn't get inquest transcripts from the coroner. Mr. England says Panarctic received them as soon as anyone did and that in the North overworked court reporters can't produce same-day transcripts.

The jury, the CBC said, was biased. The jury, Mr. England says, was picked as all northern juries are—for their knowledge of a situation. If it is a mining death, the jury knows mining; in an aviation disaster—the Panarctic crash



Edward Brogden



Walter England

was the worst in the history of the Canadian Arctic—the jury knows aviation.

"We look at who is available and try to select people who are going to understand what is going on."

The CBC didn't like the medical evidence, either, but Dr. Olaf Skjenna "was the medical investigator at the Rea Point scene. The Ministry of Transport said he would come, and he did. I think we were better off with him than with some pathologist talking over our heads."

As for demanding the MOT reports, as the CBC said Mr. England should have done, he said "I'm not in a position to demand. We ask, and they were refused to us as privileged information."

He has no harsh words for

the MOT or the young RCMP officer who investigated.

But the coroner and Crown prosecutor deny many of the CBC allegations.

Mr. Brenner was not thrown out of the inquest. He was simply told to keep his hands off the exhibits, they said.

The jury was always present—never absent. Mr. Brogden has been a lawyer five years, not 2½ and the show, he said later, was enough to ruin him. "I should be looking for a job about noon tomorrow."

Radio operator Rod Brooks, in the control tower on the night of the crash, had approached the coroner in April after the inquest was first adjourned and volunteered to testify at a new session. He testified then he had been

browbeaten by Panarctic lawyers into not testifying at the inquest and he described his role in the tower the night of the crash.

Mr. Brooks told the CBC he rehearsed his answers with Mr. Brogden but the Crown prosecutor shuddered at the use of the word rehearsed. He says the only agreement they made with Mr. Brooks was that the Crown would not ask him about his lack of a radio operator's licence because that had nothing to do with the crash.

Mr. Brooks was not wined and dined and rehearsed as the CBC implied, Mr. Brogden said.

The CBC said there was clear evidence of pilot error in the crash. Mr. England does not know, because he has never seen the statements the CBC said were made by the survivors.

Mr. England, 57, says he is not disheartened and the inquest will go on in two weeks to a month.

"I think the inquest should be concluded but I don't see how you can come to any conclusions without the evidence of the only two survivors and we apparently are not going to get that evidence. I think we should conclude but without that evidence the verdict is not going to be meaningful or enlightening."

But he agrees with the CBC on one point: There should be a public inquiry. That, however, is up to the people down south—the way TV shows are. And you get the feeling Mr. England doesn't have much faith in people down south.

2 survivors' statements withheld

The RCMP was given statements by two survivors of the crash of a Panarctic Oils Ltd. aircraft in the Northwest Territories last year, but did not turn them over to an inquest into the crash.

A spokesman at RCMP headquarters in Ottawa confirmed yesterday that the Ministry of Transport, which interviewed the survivors' for its investigation of the crash, gave copies of the survivors' statements to the RCMP.

However, Walter England, coroner at the inquest, said in a telephone interview from Yellowknife yesterday that neither he nor Crown attorney Edward Brogden saw copies of the statements.

"The Ministry of Transport had advised the RCMP that these were privileged statements and were not to be made available to anyone else," Mr. England said.

H. A. Fawcett, a spokesman for the Ministry of Transport, had refused earlier yesterday to say whether the ministry had handed over the statements to the RCMP.

He added it would not be uncommon for the ministry to provide copies of these documents to the RCMP to help their investigation.

However, because the statements are given in confidence to the ministry, the RCMP are not allowed to introduce them into a public proceeding where they could be used as

evidence against the witnesses, he said.

Under the Aeronautics Act, witnesses are required to give statements to the ministry about an aircraft crash. But they do not have to answer questions by the RCMP.

In this case, Gary Weyman, one of the survivors, referred an RCMP investigator to his lawyer, Donald Brenner, who told the officer that his client would not release statements about the crash.

J. A. McCulloch, superintendent of the criminal investigations branch of the RCMP in Yellowknife, refused to answer any more questions over the phone involving the RCMP's role in investigating the crash.

ing it
Kelly said he assumes
the girl picked up the typhoid
germs at the camp along with
those who contracted the actual
disease. Authorities are
still searching for the source
of the infection.

... million dollars in wages had
been lost at two sawmill and
logging operations above
Tache. His company has a
new \$2.2-million sawmill that
has never been used.
"We were going to start up
May 1. The sawmill and log-
ging operations would have

Not covered by policy Crash victim's family rejects \$7,500 offer

HIGH PRAIRIE, Alta. (CP) — The family of a young oil worker killed in the crash last Oct. 30 of a Panarctic Oils Ltd. aircraft at Rea Point, NWT, has rejected an offer of \$7,500 in compensation for the death of their son.

vene a public inquiry into the crash because "Panarctic is giving everyone the impression that they have something to hide."

Charles Killeen and his wife of High Prairie were given the offer by lawyers for British Aviation Insurance Corp. of Edmonton, insurers of the Panarctic Electra, which crashed through sea ice, killing 32 of the 34 men aboard.

"I don't know if the public is really interested any more in what happened but the parents and families of the men killed in the crash are very interested."

Mrs. Killeen said yesterday that the company is still negotiating with lawyers for the family.

In Calgary, Panarctic president Charles Hetherington would not comment, saying "It's between the family and British Aviation Insurance."

The couple's son, Chris, 22, had just completed a technical school program before he was hired by Adaco Drilling of Edmonton to work in the Arctic. He was on his first flight into the Arctic when the aircraft crashed during a violent early-winter snowstorm.

Russian fleet is accused of falsehoods

YARMOUTH, N.S. (CP) — The executive director of the Atlantic Fishermen's Association says figures on herring catches submitted by the Russians are not accurate.

Chris Killeen was not covered by Adaco insurance because the company said he had just started to work. The Adaco insurance policy does not come into effect until an employee has been with the company for three months.

Dick Stewart said the herring quota of 67,000 metric tons in the Bay of Fundy was reached early yesterday by local seiners. He said 55 seiners fished five days a week for two months to reach the quota.

Mrs. Killeen said officials of Adaco and Panarctic have refused to talk to them about the accident.

Mr. Stewart said the Russians, fishing in the same area seven days a week for three months and using 75 larger ships, reported their catch to be only 10,000 metric tons.

"They haven't told us one thing. They have never been in touch with us, and they won't tell us anything when we call them."

He said the system of reporting statistics on herring catches is a sham and the Russians are lying.

Mrs. Killeen said she and her husband feel that the federal Government should con-

THE TORONTO STAR
A 18 Sat., Aug. 2, 1975

Pilot says he never got wind report

EDMONTON (CP) — The crew of a Panarctic Lockheed Electra that crashed last Oct. 29 in the Arctic, killing 32, never received a weather report advising of "an abrupt wind change," the co-pilot says.

David Hatton, a Panarctic employee, is now in San Francisco recovering from a nine-hour operation to restore part of his right hand that was lost in the crash.

"The wind was gusting to 70 miles an hour," Hatton told a San Francisco newspaper. "We veered more than 60 degrees. Then the plane crashed on frozen ice."

Until the winds blew up, the flight had been routine, said Hatton, 33.

Hatton said he hopes to fly again for Panarctic. Three weeks ago, he took a ministry of transport twin-engine test and flew a twin-engine Piper.

000202

Not asked to testify pilot says

VANCOUVER (CP) —

The co-pilot of a Panarctic plane that crashed in the Arctic last October killing 32 men says he has not been asked to testify at an inquest into the crash.

David Hatton, 33, who arrived in Vancouver from San Francisco Friday said Panarctic lawyers who represented him at the inquest had advised him not to testify.

The crash survivors and several Panarctic Oils Ltd. employees did not testify at the inquest in Yellowknife, N.W.T., which began in April and could not be compelled to give evidence because coroner Walter England had no power to subpoena them from their homes in other provinces.

The inquest has been adjourned until October, pending the mid-September hearing of an application by a Panarctic employee that the inquest be quashed.

000203

Never asked to be witness, co-pilot says

VANCOUVER (CP) — The co-pilot of a Panarctic plane that crashed in the Arctic last October says he has never been asked to testify at an inquest into the deaths of the 32 men killed in the accident.

David Hatton, 33, who arrived here from San Francisco after an operation on his frostbitten hand, said during the weekend that the Panarctic lawyers who represented him at the inquest had advised him not to testify. But neither he nor a fellow survivor, flight engineer Gary Weyman, was asked to give evidence.

The crash survivors and several Panarctic Oils Ltd. employees did not testify at the inquest, which began in April in Yellowknife, and could not be compelled to give evidence because coroner Walter England had no power to subpoena them from their homes in other provinces.

The inquest has been adjourned until October, pending the mid-September hearing of an application by a Panarctic employee that the inquest be quashed.

Whether he will be willing to testify in the future will depend entirely on his lawyer's advice, Mr. Hatton said.

Mr. Hatton was in San Francisco for an operation in which the stump in his left index finger was transplanted to his right thumb to give him a usable thumb.

8 THE GLOBE AND MAIL, MONDAY, AUGUST 4, 1975

000204

STAR 16-6-75

Northern air disaster should be probed

An investigation of any major air disaster is of interest to the public because it points out possible weak spots in mechanical or safety devices, and shows how similar tragedies can be avoided in the future.

Last Oct. 30 the Canadian north suffered its worst air disaster when an Electra transport owned by Panarctic Oils Ltd. crashed near Melville Island, killing 32 men.

The inquest has been persistently delayed. Worse, it's been held up by an arm of the federal government—Panarctic itself—whose stock is 45 per cent federally owned. Yet the government has refused to put pressure on the company to stop its blocking tactics, which are against the public interest.

The inquest started early in April but the coroner and the jury were unable to get the information they needed to reach a finding.

Six key witnesses, all Panarctic employees, including the two surviving members of the crew, refused to attend the inquest and testify. Another Panarctic employee stated that he was "advised not to appear" by a company lawyer.

The coroner issued a warrant to compel the one employee to attend as a witness. But a lawyer who apparently represents both Panarctic and the witness, started proceedings to quash the warrant and stop the whole inquest.

Crown Attorney Ed Brogden charged last week that Panarctic is trying to block the inquest.

This would be bad enough if a private corporation were involved. But Panarctic is a semi-public organization.

When the question was raised in the House of Commons last April, Northern Affairs Minister Judd Buchanan said that he had no authority to make company employees testify at the inquest. In a narrow legal sense this was probably true.

But as a 45 per cent shareholder, the federal government must be in a position to bring effective pressure on the corporation management to stop these manoeuvres and co-operate fully with the coroner to establish the facts of the disaster.

"Good corporate citizenship" is a phrase we hear often nowadays. Surely a corporation in which the government of Canada is a major shareholder should set an example in this respect. If it 000205
the government should act to make sure that it does.

Globe & Mail June 3

ACROSS CANADA

Not enough jurors, inquest adjourned

YELLOWKNIFE (CP) — An inquest into the crash of a Panarctic Oils Ltd. aircraft that killed 32 reconvened here yesterday but was adjourned for a month less than an hour after it started because there weren't enough jurors available. News of the adjournment brought an angry response from Eric Lane, counsel for two men who had been subpoenaed to appear yesterday. Only one of Mr. Lane's clients, Leonard Storvold of Calgary, was present in the cramped magistrate's courtroom. The other man, Barry Morris of British Columbia, had informed RCMP last week that he could not attend because of illness in the family. Coroner Walter England issued a warrant for Morris's arrest. The Lockheed Electra crashed last **000206** at the Rae Point drilling site.

STAR

Survivors of Arctic crash can't be found, coroner says

Special to The Star

YELLOWKNIFE, N.W.T. — Territorial Coroner Walter England said yesterday subpoenas have not been served on two survivors of an Oct. 30, 1974, air crash that killed 32 men, because the two cannot be found.

England said subpoenas have been served on all other key witnesses into the crash of the Lockheed Electra at Rea Point on Melville Island.

But, he said, "We have been unable to locate" copilot David Hatton and flight engineer Gary Weyman.

The inquest, which opened April 1 but adjourned without determining the cause of death of the 32 victims, will be reopened in Yellowknife June 30 or July 1, England said.

There was some controversy when the inquest opened that key witnesses had been asked by Panarctic Oils, owners of the plane, not to appear.

Because they lived outside the territories, they could not be compelled to come and testify.

But England said the subpoenas were issued on the witnesses, all employees of Panarctic Oils, when they returned to the Northwest Territories to work.

England said that he and crown attorney Ed Brogden have been told by Panarctic officials that the two survivors are outside the country.

The coroner had ordered Brogden to ask British Columbia and Alberta to take legal action against Hatton and Weyman to compel them to testify either at a coroner's inquest or at a provincial judicial inquest.

But England said yesterday the territorial government decided not to proceed because "it would do no good if the men are not in their province of residence and . . . were out of the country."

Weyman returned to work aboard the second Panarctic Electra a few months after the crash, the worst air disaster in Canadian Arctic history.

He suffered only minor injuries in the crash and was

credited by rescuers with saving the life of Hatton and a critically injured passenger, Wilfred Hoffman of Flatbush, Alta., who died later of injuries while on a mercy flight to Edmonton.

England said subpoenas have been issued "to just about everyone" who had refused to testify at the inquest. He said he wanted to hear evidence from Leonard Storvold and Al Vossler, on duty at the Rea Point camp the night of the crash; and Barry Morris, the pilot of a Panarctic aircraft which found the crash site.

Hatton and Weyman have refused to give any public version of the events surrounding the crash, including their three-hour ordeal on the ice.

000207

Crown says Panarctic blocking air inquest

Special to The Globe and Mail
YELLOWKNIFE — Panarctic Oils Ltd. is apparently trying to block an inquest into the worst air disaster in the history of the Northwest Territories, Crown Attorney Ed Brogden said yesterday.

The crash, involving a Panarctic-owned Electra aircraft, killed 32 people last Oct. 30 near Rae Point in the high Arctic.

An initial application was made in Yellowknife yesterday to quash a discretionary warrant for the arrest of Barry Morris and to stop the whole inquest.

Mr. Morris was the Panarctic pilot who discovered the wrecked plane and his testimony is considered crucial.

"Panarctic is afraid for some reason," Mr. Brogden said. "They want to prevent Barry Morris from answering questions at the inquest and I want to know why."

Coroner Walter England issued the warrant in Yellowknife earlier this month to ensure Mr. Morris appears when the inquest reconvenes on July 4. Mr. Morris had been subpoenaed to appear on

June 2 but could not attend because of a death in his family. The warrant was issued to retain jurisdiction over the pilot who was believed to be travelling out of the Territories.

The application to quash the inquest will be heard on June 30 by NWT Supreme Court Justice William Morrow.

Although the application was made on behalf of Mr. Morris, Mr. Brogden is convinced Panarctic is behind the move.

The application was made through an agent of Ian Maxwell, who is acting as Mr. Morris's lawyer.

But at an earlier session of the inquest, Mr. Maxwell said he represented Panarctic and another lawyer, Eric Lane of Toronto, said he was Mr. Morris's attorney.

The inquest which began in April and adjourned on June 2, has had difficulty getting witnesses to appear since it began.

The federal Government controls 45 per cent of Panarctic Oils Ltd. The rest of the interest is divided among several oil companies.

000208

Inquest on 32 Arctic deaths stymied by lack of witnesses

By DERIK HODGSON
Globe and Mail Reporter

YELLOWKNIFE — A coroner's inquest into the death of 32 men in a plane crash in the High Arctic was adjourned indefinitely yesterday after being stymied in attempts to get testimony from key witnesses and survivors.

Coroner Walter England is attempting to get court orders to force the employees of Panarctic Oils Ltd., the company that owned the plane, to testify. The coroner hopes to achieve his aim by making application in provincial courts where the men reside.

The aircraft slammed into an ice shelf just short of the Point Rae runway in the early hours of Oct. 30, scattering men and cargo along the ice and into the water.

The sub-zero weather and the frigid Arctic waters, coupled with the violent impact, killed all but two of the men.

Flight engineer Gary Weyman and first officer David Hatton survived the disaster, but they have refused to acknowledge Northwest Territories summonses that would have brought them to the inquest from their homes in Southern Canada. Other Panarctic employees also failed to appear.

Federal lawyers in Yellowknife and Ottawa have started to work on applications to provincial courts in an attempt to force the employees to testify. The process could be fairly lengthy, according to Crown counsel Edward Brogden. He indicated that decisions on the applications are not expected until the summer.

The jurors—six men hand-picked for their aviation experience—were released with the caution not to talk to anybody, including each other, about the crash.

Before adjourning the inquest the coroner praised Constable David Fogerty for his work in investigating the worst-ever Canadian Arctic crash.

The pilot of the four-engined Lockheed Electra had a diseased liver, which was capable of incapacitating him suddenly.

The jury learned yesterday that an autopsy on the body of pilot Brian Thompson revealed the disease, but there was no indication that he was incapacitated by the ailment before the crash on the ice 1,600 miles north of Edmonton.

Earlier expert testimony indicated that the aircraft owned by Panarctic Oils Ltd. plunged earthward about 15 seconds before the crash.

Mr. Hatton and Mr. Weyman, the flight engineer, were in the cockpit area and Mr. Broeden suggested that without their help it would be difficult to ascertain what happened in those final seconds before impact.

No Panarctic employees have been witnesses and the coroner has been forced to attempt to get their testimony by applying through courts in other jurisdictions.

The Crown, the coroner, the jury and Ministry of Transport investigators have been critical of Panarctic's attitude.

Federal cash investigator Allan Clark said the investigation had been hampered because investigators hadn't been able to interview witnesses. He also said he suspected that all witnesses were not answering candidly.

Medical testimony yesterday indicated that 16 of the victims had what Dr. Olaf Skjenna termed "potentially survivable injuries."

Dr. Skjenna, an adviser to the Ministry of Transport, said some of the men lived up to 15 minutes and either died of shock or exposure on the ice, or possibly drowned in the waters of Byam Martin Channel. The pilot's body was

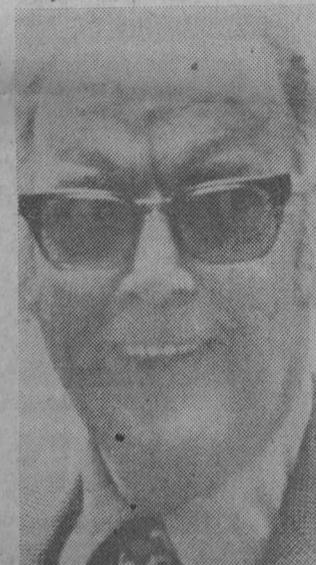
impact, scattering men on to the ice and into the hole created by the crash. Many apparently drowned and one body that has been recovered from the water failed to show any injuries that could have been received in the crash.

Dr. Skjenna said some of the men on the ice might have had a better chance of surviving if they had been dressed in warmer clothes.

The doctor spent almost an hour explaining and answering questions about the liver disease, which he said Capt. Thompson may not have been aware of. The disease—potentially fatal—could cause a wide spectrum of incapacitation, he said, that could be brought on by sudden stress.

A U.S. study showed, he said, that the liver disease—an enlarging of the liver containing excess fat—was a major cause of sudden death. Alcohol is one of the possible causes of the disease, but the doctor said there was no indi-

cation that Capt. Thompson was a heavy drinker. The autopsy did not turn up alcohol or any other toxicants in his body.



—CP
Coroner Walter England

ACROSS CANADA

Belleville bus drivers strike for \$1 an hour

BELLEVILLE (CP) — City bus drivers went on strike yesterday to back demands for a \$1-an-hour wage increase over a one-year contract. The 23-member local of the Canadian Brotherhood of Railway Transport and General Workers voted 70 per cent in favor of strike action on Thursday night after contract talks with the city's transit commission broke down. The commission offered the drivers an immediate 75-cents-an-hour increase over a one-year period with a further 10-cent-an-hour increase June 1. Drivers now earn an average of \$4.50 an hour. They have been without a contract since December, 1974.

Ottawa taxes may increase 25%

OTTAWA (CP) — A 25 per cent increase in 1975 residential taxes has been recommended by board of control a board member says. He said the recommendation could be overruled by City Council or obviated by provincial tax reliefs. The residential tax rate proposed by the board to cover city and library expenses is 36.58 mills—an increase of 7.31 mills from last year. The proposed rates would mean an additional \$7.31 in taxes for every \$1,000 of property assessment or an increase of \$51.17 for a homeowner with an average assessment of \$7,000.

New variety of oats is licenced

OTTAWA (CP) — Cavell, a new variety of oats, has been licenced for use by Canadian farmers, the agriculture department said yesterday. Cavell was developed at the department's Lacombe research station in Alberta and is specially adapted for Central Alberta and the Peace River region. The new variety is early maturing—two to three days earlier than Random and five days earlier than Fraser, two varieties grown in that area. Yields from Cavell are about the same as Fraser, slightly less than Random and slightly more than Rodney.

Cabinet committee to study employment

WINNIPEG (CP) — A Cabinet committee on manpower and employment has been established by the Manitoba Government. With Labor Minister Russell Paulley as Chairman, its task will be to undertake policy planning and co-ordinate programs in those areas. Other members are Industry Minister Leonard Evans, Education Minister Ben Hanuschak, Northern Affairs Minister Ron McBryde, Insurance Minister Bill Uruski and MCA Ken Dillen. Secretary of the committee is George Ford, who has been assistant secretary in the Cabinet's planning secretariat since 1973.

Stratford policewoman reinstated with full pay

STRATFORD (CP) — Stratford Police Commission has reinstated Jacqueline Hall as a constable with full pay on the city's police department.

Mayor Betty McMillan said yesterday that the reinstatement overturns a commission decision of March 15 to ask Mrs. Hall to resign her job as a third-class constable because the commission felt she was performing only 75 per cent of a male officer's duties.

Mrs. Hall was assigned work in the department's dispatch office beginning March 17.

The mayor said she was at first unaware of Mrs. Hall's displeasure with the transfer to the dispatch office but said she had spoken to Mrs. Hall and now realizes Mrs. Hall prefers the full status given

The mayor said she felt at that time that if Mrs. Hall wanted to continue on as a constable she could, but she would have to perform 100 per cent of an officer's duties.

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ontradiction

I think I see the point... m is not one in which... circulation is likely to... effects of money supply... contrary, if the money... es, that tends to raise... n of prices and that in... velocity. Equally, if the... is sharply restricted... price expectation and... Thus velocity changes... ly rather than counter... of monetary policy.

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While the principle of... changes and velocity... ng together applies to... movements, it does not... changes in money sup... e intended to break a... nment which is trying to... nflation by restricting... ply may well find that a... ectionation of higher prices... city and offsetting the... tight money policy.

with permission—Times... d., London. From book... Rees-Mogg. Publishers... ton Ltd.

no answer

against their lives, these... criminals still commit armed... robbery and other offences... knowing that they could be... shot by the police. The danger... of 'on-the-spot' capita punishment does not seem to serve... as a deterrent for this type of

Ford and veterans engage in finger-waving debate

SALT LAKE CITY, Utah (AP) — President Ford engaged three Vietnam veterans in a backstage, finger-waving debate Saturday over legislation to increase veteran's education benefits.

The encounter took place after Ford ignored

the veterans' shouted questions during a speech at a political rally here.

Ford told the veterans "there are some problems" with the measure sharply increasing the veterans' education benefits but said he has not yet decided whether to sign or veto it.

White House Press Secretary Ron Nessen arranged the meeting between Ford and the three college-student veterans after they had approached him after the speech, which made no reference to the legislation.

A reporter's tape record-

ing of the debate, which took place behind the stage in a campus basketball coliseum, showed the veterans asked Ford whether he would sign the bill.

"I'm not in a position to say yes or no until it gets down to the White House," Ford responded.

"Don't you have a stand on it?" one of the veterans asked.

The bill would increase the present 36-month eligibility to 45 months, a move sponsors said would help veterans go to graduate school.

The debate then trailed off as Ford headed for his motorcade and continuation of his campaign travels.

Aboard Air Force One,

Ford sent a message back to the small group of reporters aboard.

"I hope they (the veterans) understand that this bill raises some legitimate questions. It involves substantial amounts of federal dollars. I haven't made up my mind yet as to what to do about the bill."

The measure already has cleared both houses of Congress and will be sent to Ford shortly after Congress reconvenes following next week's election.

White House aides called it a budget breaker and said will cost about

\$800 million above per cent more than Ford recommended and about five per cent more than a compromise Ford subsequently offered to accept.

It increases benefits by 23 per cent — about 10

11-year-old killed in gang war

LOS ANGELES (AP) — Three persons, including an 11-year-old girl caught in a crossfire, died early Sunday after a gunman burst into a Thai restaurant here and opened fire.

Police said they have learned the "street name" of a Thai gunman, possibly a gang leader, responsi-

ble for the shooting.

The gunman entered the restaurant in the Hollywood area about 1:30 a.m. and walked to a booth near the rear. Witnesses said he drew a gun and threatened one of the booth's occupants, Govit Chianthanachinda, 28, of Hollywood.

At least 10 shots were

exchanged before Chianthanachinda slumped to the floor, fatally wounded.

Also killed in the exchange were Punsak Sosthikul, 32, and Daowson Dilakevilas, 11, both of Los Angeles.

A police spokesman said the gunman and Chianthanachinda were both members of Thai gangs.

Talked at same time

Then, when the three veterans started to talk at the same time, Ford gestured and said, "Now wait a minute. The point is there are some provisions in there that have to be analysed. They have added beyond what Korean and World War II veterans got by nine months in entitlement. . . . Some of

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Americans predict hard times

NEW YORK (Reuter) — Forty-five per cent of Americans questioned for a Time magazine poll published here Sunday believe the United States is heading toward another depression like the one the country suffered in the 1930s.

Eighty-six per cent of those polled said they believe prices will continue to increase and 73 per cent of those polled foresee a further increase in unemployment.

Thirty-three per cent of those questioned consider themselves to be in economic distress and 27 per cent worry a lot about losing their jobs.

On politics, fifty-seven per cent of those questioned were opposed to Ford's pardoning former president Richard Nixon and 33 per cent approved it.

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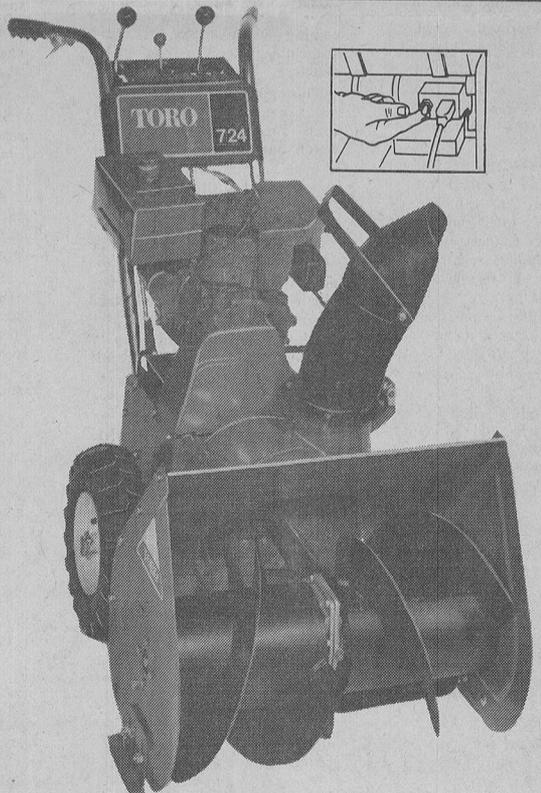


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Investigators work in freezing cold probing crash

— CP photo

Ill-fated airplane had 2 other mishaps

Steve Krueger, Canadian Press staff writer, has just returned from Melville Island in the High Arctic, where a four-engined Lockheed Electra crashed last Wednesday, killing 32 of the 34 men on board. This is his account.

REA POINT, N.W.T. — A Panarctic Oils official says the company Lockheed Electra which crashed last week, killing 32 men, had sustained damage in two other accidents within the last 12 months. Jim Strain, vice-president for operations of the Calgary-based firm, said during a weekend inspection trip to the crash site that different pilots were involved in each of the three accidents. He said human error was involved in the first two, in which there was heavy damage to the plane but no injuries.

A team of Arctic diving specialists begins recovery operations under the sea ice this week in an attempt to find the cause of the third crash last Wednesday which left only two survivors.

Bob Kutzleb of Falls Church, Va., head of the diving team, said operations would begin as soon as a compression chamber arrived. Most of the wreckage of the four-engine aircraft is under about 110 feet of 28.5-degree water. The flight recorder, which may hold clues to the cause of the crash, has not been recovered.

Mr. Kutzleb said he has recovered the flight recorder of an aircraft in 260 feet of water, and "I think we can get this one too if we can find the plane." Eighteen bodies have been recovered. Five more were visible but recovery was delayed until the ice surrounding them thickens enough to support safely the transport ministry investigators.

The team is hampered by lack of daylight, high winds, blowing snow, below-zero temperatures and thin ice.

The ice near where the Electra

broke through is eight inches thick but threatens to crack, and so officials have limited recovery teams working among the debris and bodies to 16 men, and ordered them roped together for safety.

Another threat was a huge polar bear which wandered into the area late in the week. Various attempts including firing shots into the air failed to drive the animal off, and he was considered a threat to the men. They must walk a half-mile from their vehicles to the crash scene near the edge of open water three miles from the Rea Point camp.

Past accidents

Mr. Strain, the senior company official at Rea Point, said the Electra ran off the end of a 1,000-foot landing strip at a Melville Island drilling site 12 months ago. The plane smashed through a massive pile of snow at the end of the strip, ripping away its nose landing gear and damaging the front sections of the plane.

Six months ago, the same plane hit a row of oil drums at the end of the Rea Point runway, destroying two propeller blades. The aircraft was purchased by Panarctic five years ago and was used to haul cargo and crews to the high Arctic islands where Panarctic is exploring for gas and oil.

The plane was the first of two Electras purchased by Panarctic. The second aircraft, augmented by a chartered Electra, was continuing operations in the Arctic during the weekend.

Wind storm

The fatal crash took place while the aircraft was attempting a landing in a wind storm that a Rea Point communication department source said had reduced visibility to less than one-eighth of a mile in blowing snow. Federal requirements for the air strip are visibility of one mile and a 300-foot ceiling.

The Electra was in its final approach when it sent its last radio message to the tower at Rea Point.

The plane was less than two miles from the end of the runway when it crashed into the ice in a wheels-down position. The plane broke apart on impact, scattering three survivors and the bodies of 23 dead men on the ice and into water. One survivor died of his injuries soon afterward.

Transport ministry officials, led by A. J. Clark of Ottawa and Ha Fawcett, chief of aircraft accident investigation, have examined all the bodies at the scene and turned them over to a Yellowknife N.W.T., coroner.

The last message

Dr. Roy Hewson of Winnipeg, a physician with the department of health and welfare assigned to the Rea Point crash, said only one body which he has seen appeared to have been burned, and that had burns limited to the back of one leg.

Ed Kowaluk, chief of aviation for Panarctic, said the last message received from the Electra was that the plane was six miles out from Rea Point.

Brian Thomson of Leduc, Alta., pilot of the downed Electra, has flown in the Arctic for seven years but had flown Electras for only two years.

Co-pilot David Hatton and flight engineer Gary Weyman, both of Calgary, survived the crash and are in an Edmonton hospital. They have refused to talk about the crash with reporters.

Arctic tragedy

Crash details pieced together

REA POINT, N.W.T. (CP) — "Thank God you are here."

Those were among the first words spoken by Gary Weyman of Calgary after he survived an Arctic plane crash last Wednesday in which 32 men were killed.

Weyman was the flight engineer on a Lockheed Electra that smashed into sea ice short of a sand-and-gravel airstrip at Rea Point on the southeastern tip of Melville Island, 1,600 miles north of Edmonton.

Co-pilot David Hatton and Mr. Weyman, in satisfactory condition in an Edmonton hospital, have declined to tell their story to reporters and Panarctic officials have refused permission for interviews with the men who were on duty at Rea Point at the time of the crash, the worst in the history of the Canadian Arctic.

However, a Canadian Press staff writer who visited Rea Point during the weekend managed to obtain enough information to put together details of the tragedy.

The Electra, a four-engine cargo-passenger plane purchased by Panarctic five years ago, was on final approach to the 5,000-foot Rea Point runway at the conclusion of a four-hour flight from Edmonton.

Most of the 30 passengers were en route to Bjerne, a gas drilling site on Ellesmere Island 400 miles further north, for a routine crew change. The plane was to have landed at 12:15 a.m. MST.

An automatic sonic distance transmitter picked up the plane when it was 180 miles south of Rea Point, just over the northern coast of Victoria Island. The device gives a distance reading to the flight crew and is a key component of the electronic landing system at Rea Point.

Accurate enough

A pilot for International Jet Air, which operates Electras into the High Arctic islands, said the device is not used close to the runway because it is not accurate enough for full instrument flying.

Ed Kowaluk, chief of aviation for Panarctic, said the last radio message from pilot Brian Thomson of Leduc, Alta., was that the aircraft was six miles out on final approach.

Then—silence. When the plane did not appear on the gravel runway and could no longer be contacted by radio, the duty radio operator notified camp officials, who ordered one of Panarctic's two twin Otter aircraft into the air for a search.

Shortly after take-off, the twin Otter pilot radioed that he had found "a hole in the ice" two miles from the end of the company-operated runway.

One of the first men in camp awakened was Doug Murdoff, a registered nurse and camp medic at Rea Point.

"They came in and shook me and said to get ready to go onto the ice, that the Electra had crashed," said Mr. Murdoff. "It wasn't anything too unusual for me at first because I'm on call 24 hours a day and often they're getting me up at all hours.

"Then what they told me sank in and I realized we had a disaster on our hands."

Air disasters

The Electra, an aircraft plagued by a series of air disasters which led to design changes in 1960, was attempting to land in what are less than ideal weather conditions—but ones that are common here.

Weather records indicate the temperature was 17 degrees below zero with winds gusting to 40 miles per hour—a chill factor of about 75 degrees below zero.

Visibility was less than one-eighth of a mile in blowing snow, but the plane apparently made no attempt to fly to the alternate landing field at Resolute, 200 miles to the east. Minimum conditions for landing at Rea Point are visibility of one mile and a 300-foot ceiling.

Sources at the camp said black tire marks were found at the scene, indicating the plane hit the ice wheels first, and broke up on impact.

Mr. Murdoff was the first man to talk to Mr. Weyman.

"Weyman said he found himself lying on the

ice, still buckled in his seat. He told me what led up to the crash but I can't say anything about it because of MOT regulations.

"He and the rest of the flight crew and most of the passengers were in shirt sleeves, like businessmen working in an office building. The chill factor was something awful.

"Weyman got up and, fortunately for him and the co-pilot, he kept his wits about him. He went to each of the bodies on the ice and checked to see who was alive and who was dead.

"He took parkas and boots off the men who were obviously dead and put some on himself, then when he found the two other men (co-pilot Hatton and passenger Wilfred Hoffman of Flatbush, Alta.) who were alive he got them into the boots and parkas.

Saved life

"As soon as he got them dressed he got some more parkas and put them over the injured men to keep them alive. He never panicked, he kept his head and he undoubtedly saved the life of the co-pilot.

"When we got there I asked him if he was okay and he said yes, then he kissed me on the cheek and said 'thank God you are here.' We had to walk just about all the way from the beach to the crash site (about two miles) so it took a while to reach them.

"We put the injured men onto stretchers but Weyman insisted on walking back. He talked to us as we went and tried to keep our spirits up. Imagine, what he had just been through and he was trying to make us feel better."

Mr. Murdoff said he lost track of time and doesn't know when the men were brought back to camp. Other men in the camp, however, pinpointed their return at about 3:15 a.m.—three hours after the plane crashed.

Jim Strain, Panarctic vice-president of operations, said he knew precisely how long the rescue took, but added "I can't tell you because of MOT regulations and legal positions."

While the rescuers were locating, transporting and treating the injured men, other workers, some of whom had first-aid training, were preparing what resembled a battlefield hospital in the Rea Point Camp recreation room.

"When we got back they were all set up and ready for us," said Mr. Murdoff. "A couple of men who had first aid tickets took over working on Weyman and the other fellow while I worked on the co-pilot.

"If we hadn't been given that kind of cooperation we might not have saved the co-pilot."

A British-born radio operator, a veteran of five years in the Arctic, was one of the men who helped in the makeshift hospital.

"This was the first time I used my first aid training," said the man, who asked that his name not be used. "I flew down with the fellow who died. When I got into Edmonton I went home to my parent's place and got drunk. I had to. I didn't want to dream about it."

A Hercules cargo plane arrived from Resolute, 250 miles away, about 6 a.m. and the three injured men, along with Mr. Murdoff and two other first-aid men, flew out to Edmonton almost immediately.

Somewhere over the Arctic coastline, about 7:15 a.m., Mr. Hoffman, a driller with one of Panarctic's contract companies, died.

Mr. Murdoff recalled the arrival in Edmonton with some bitterness.

"These goddamned reporters were running up to us as we got off the plane and asking who the injured men were and what had happened. Christ, I was holding a bottle of plasma in one hand and trying to hold a pressure bandage with the other.

"If I'd had a free hand I probably would have punched the first one I could reach."

A few hours later Mr. Murdoff and the other medics went their separate ways. Each got a few hours of fitful sleep, and most had more than a few drinks.

The next night, they were back aboard another northbound Electra, on the way back to Rea Point. They talked about the crash to anyone who would listen, like men trying to purge themselves of a memory.



— CP photo

Sister Electra of one that crashed

'It has to be the worst place on earth to probe an accident'

REA POINT, N.W.T. (CP) — If someone had to pick the worst possible spot for a disaster, this supply base in the High Arctic, run by Panarctic Oils Ltd. of Calgary on the east coast of Melville Island, would rank close to the top of the list.

"It has to be the worst place on the face of the earth to do an accident investigation," said Hal Fawcett, chief of aircraft accident investigation for the ministry of transport (MOT).

Mr. Fawcett and 14 MOT investigators arrived here 20 hours after a Lockheed Electra operated by Panarctic crashed through the sea ice about 12:15 a.m.

Weather conditions which would be considered extreme elsewhere in Canada are common here. Temperatures now are around 15 degrees below zero, winds often gust to 45 miles per hour, and blowing snow reduces visibility, accentuating the almost total isolation.

To work here a man needs a portable environment. Every man depends on a huge, downfilled parka and insulated boots, or a down-filled snowmobile suit, to stay alive.

With proper clothing, a man can work outside all day, and even survive the worst blizzard, said Jim Strain, vice-president of Panarctic's operations. But without it, a man will suffer frostbite in minutes and die within a quarter of an hour.

Dr. Roy Hewson, a department of health and welfare physician who acts as an MOT aviation medical consultant, said the cold on the ice "has a way of building up on you."

"The first day we were here I went out and I wasn't really that cold, even though we were out there for about five hours with no shelter," he said. "But today, even though it isn't as cold, I got really numbed." Mr. Strain knows from personal experience that men can work and survive in the Arctic winter.

About a year ago, a plane carrying Mr. Strain, a pilot and another man had to make a forced landing on a small Arctic Island.

"We were out there three days before we were able to fly back and we all survived just fine," he recalls. "You have to have a good, heavy parka, with good fasteners and a deep, fur-lined hood. With that and a good pair of boots you can live through anything."

Men needed reassurances that other plane was safe

BJORNE, Ellesmere Island, N.W.T. (CP) — The loss of 32 lives in the crash Wednesday of a Lockheed Electra off Melville Island was probably felt more profoundly here than anywhere else in the Arctic.

On Saturday, forty men crowded into the narrow corridor between the two bunkhouse units at this strip camp 2,000 miles north of Edmonton to hear Ed Kowaluk, chief of aviation for Panarctic Oil Ltd. of Calgary, owners of the ill-fated aircraft, tell them they had nothing to fear about riding on the Electra parked outside.

The men needed the reassurance. Virtually all of the 30 oilmen aboard the plane which had crashed 72 hours earlier were en route to Bjerne on a routine bi-weekly crew change and were friends of the men at the meeting.

Mr. Kowaluk said he realized that "each and every one of you has suffered a personal loss, a friend, a loved one, a workmate."

"I know too that after a tragedy like this you are apprehensive about getting back onto that plane, particularly about flying north again.

"It's understandable. I feel the same way sometimes. "I can tell you now that you can rest assured that our planes are operated safely, at standards the same as any international carrier. . . . "The most dangerous part of our job as flyers is the drive to the airport. The most dangerous thing you do is work in the cold weather up here. About the safest thing you do is fly in and out on that plane.

Mr. Kowaluk was at the controls of the second Panarctic Electra which had arrived at Bjerne just a few minutes earlier. Aboard was a hastily-gathered replacement crew for the Bjerne operation.

The crew that was on the way south for a 10-day reunion with families still grumbled as they climbed the 12 steps of the wooden ladder that served as the passenger ramp of the Electra.

The atmosphere was heavy with emotion. Countless men asked those who had come in from the south what people were saying about the crash.

Some men said they weren't coming back.

"This camp just lost a whole plane of men who were like brothers to us," said one oil man. "The guys are laughing a little on the outside but inside it's tearing our guts apart."

NORMAN WEBSTER

Talent of MPPs wasted

A GOVERNMENT running for re-election and looking for ideas could do worse than cast an eye down the list of private members' bills on the order paper. There are proposals to control the prices of fuel oil and gasoline, to set up an ombudsman, to outlaw the laundering of tainted money, to stiffen the qualifications for school bus drivers and to write an Ontario Bill of Rights.

Altogether, the lineup indicates there is a fair amount of talent and imagination on the backbenches of Her Majesty's Legislature at Queen's Park. Unfortunately, as in this case, a lot of it goes for naught. Private members' bills are a legislative dead-end, candidates only for oblivion. Most of these bills and resolutions never even get debated on the floor of the House. Once a week, though, at 5 p.m. on Monday, an hour is set aside for private members' business—but the Government arranges that none of the items will ever come to a vote. They are talked out, if necessary by Government windbags waiting just in case debate seems to be drying up.

The last bill

The last time a private member's bill was passed, according to Roderick Lewis, clerk of the House, was in the 1950s: Conservative Robert Macaulay, then in his pre-Cabinet days, proposed an amendment to the Mechanics Lien Act and the Government accepted it.

The need for an environmental bill of rights

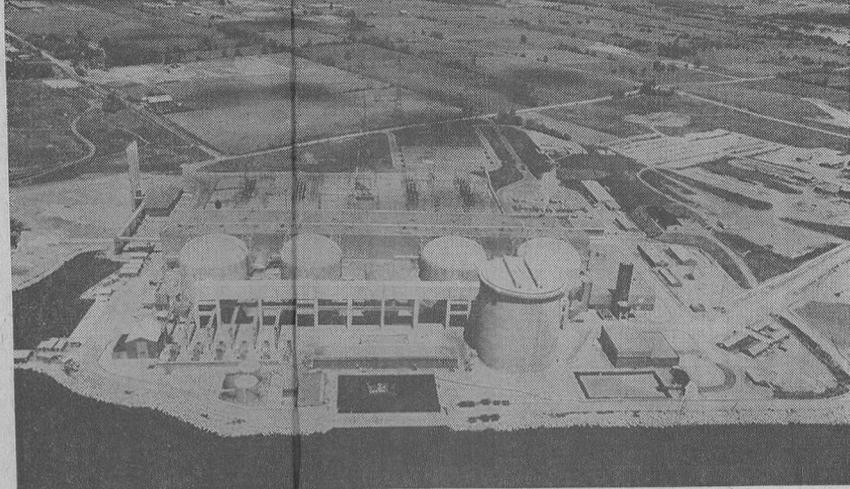
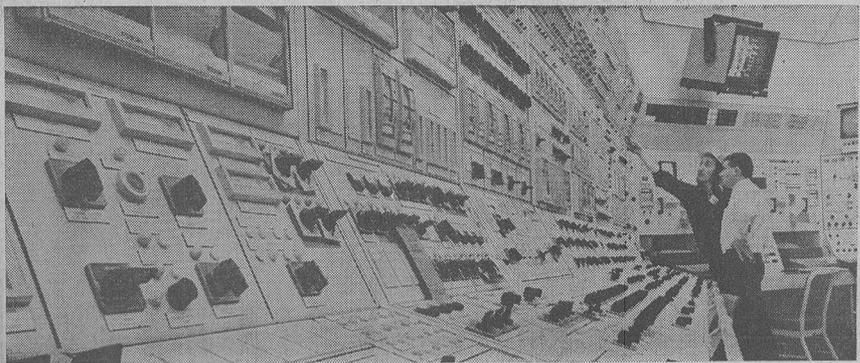
BY J. F. CASTRILLI AND ELIZABETH BLOCK

The authors are researchers at the Canadian Environmental Law Association.

FIRST IT WAS the environmental crisis. Now it is the combination of an energy crisis and an economic crisis—the threat of a depression—and concern for the environment seems like a fad compared to the prospect of not having enough oil for our furnaces.

But the link between these crises has been overlooked, for to solve one is to solve others. The best solution is conservation. The efficient use of energy would cut pollution and measures taken to reduce pollution would have the effect of conserving energy.

For example, smaller automobiles would use less gas, thus simultaneously saving energy and decreasing the emissions which account for more than half of all urban air-pollution. The use of rapid intercity trains would be a vastly more efficient use of energy than airplanes, would reduce air- and noise-pollution and would prevent the massive gobbling up of valuable



Power station. Second generator is planned; others will be built elsewhere.

ent decides the project is for another reason. ple, with the Pickering federal studies were done e what the project's effects and energy could be, or to consider cost of the airport—in e farmland, in the spread awl, in disruption of local —would be worth it, or e should turn to other nsportation.

no way for concerned ctice an environmental as- be done. The massive pub- that was brought to bear airport did no more than a "slow trial". Because s did not have the neces- to properly present their use Damaging information cret and because the decid- the airport had already the hearing was a farce. e and Mail editorial noted "When minds close, in- le."

t us suppose that an as- s been done, but it is inad- h is the case right now to offshore drilling in the es have been done stress- ive aspects—the economic ac- crue from the oil and ty precautions which the es have promised to take crude and limited consid- environmental factors.

ow that even if all existing sures were carried out d consistently there may nmental disaster of gigan- ons, such as an oil well se consequences could ex- change in the climate of ca.

us suppose that an assess- en done and it is a good s it goes. But it deals only rticular project, not with e behind the entire proj- ch the particular project

For example, the Ontario Govern- ment has committed itself to the in- creasing use of nuclear power. A second nuclear generating station has recently been approved for Pickering and at least nine other stations and plants are expected to be built by 1990.

This commitment has been made in spite of serious risks: the danger of an accident discharging large quantities of radiation; the cumulative effects of routine discharges of low-level radiation; the rising incidence of lung cancer in uranium miners; the yet-un- solved problem of how to dispose of highly radioactive wastes.

Under these circumstances, if envi- ronmental impact assessments are done for nuclear plants they are likely to deal only with the question, "Where should this particular plant be located?" By then it will be useless for them to try to deal with the really vital question, "Are the risks inherent in nuclear power too high to be accept- able?"

Could be undercut

The commitment to go nuclear will already have been made. Yet unless such questions as this are given serious consideration, early enough in the planning process for the answers to influence the decision, the whole process of environmental assessment will be undercut.

Environmental impact studies for such things as nuclear plants and drilling proposals must look at alternative, non-polluting sources of energy. At present, almost all of the research being done by both government and industry on energy is concentrated on the traditional expensive sources.

Finally, let us suppose that the as- sessment is well-researched and objec- tive, but that the Government pro- ceeds with the project despite the as- sessment's warnings of major environ- mental damage. With discretionary procedures there is no way for citizens to force the Government to heed the recommendations of its own report,

nor even to force it to make the report public.

In short, discretionary environ- mental impact assessment procedures can be emasculated when it is administra- tively or politically convenient to do so. They are a wide-meshed net, from which it is far too easy for environ- mentally devastating projects to es- cape—by accident or design.

For example, in November, John Rhodes, Minister of Transport and Communications, announced a major extension of the Don Valley Parkway, without any prior debate or public consultation. One day earlier, the Canadian Environmental Law Association had received a letter from Mr. Rhodes regarding his ministry's position on environmental impact assessment. It stated in part:

"Since 1971 our ministry has been developing its own in-house methods, procedures, and staff towards the objective of fully integrating environ- mental assessment and public partici- pation into each phase of project de- velopment from planning through to operation. We adopted this approach in a voluntary sense in that there were no legislated requirements at that time. In other words, this ministry has been evolving ways of meeting the in- tent of the Ontario legislation (on environmental assessment)."

Apt expression

Considering the secrecy surrounding the planned highway extension, Mr. Rhodes' choice of the word "evolu- tion", to describe the change which in-house procedures have brought about in his ministry's decision-making process, was an apt one.

The change from business as usual is so slight as to be invisible to the naked eye, and so slow that the time that will have elapsed by the time Mr. Rhodes' stated objectives are reached will have to be measured on a geological time scale.

We need laws which do not merely give the Government the power to protect the environment—power which it may or may not choose to exercise. Environmental laws must be enforce- able in the courts by citizens, if for one reason or another the Government does not act responsibly. Otherwise, they are of limited value.

Governments to date have tended to view environmental impact assess- ment as a management technique— management of the environment, management of natural resources and, not least, management of public opin- ion. Their provisions for public partici- pation have accordingly been, by and large—as Richard Soberman, trans- portation consultant for Metro To- ronto, said in reference to the Pickering Airport inquiry—"public manipu- lation".

This does nothing to enhance confi- dence in government. The suggestion that citizens wait until the next elec- tion is not good enough. In the inter- vening time, a destructive project can move ahead, doing irreversible dam- age to the environment.

An environmental impact assess- ment process, guaranteed by law, would be the intelligent translation of society's environmental values into action. A discretionary procedure would be an environmental bill of goods—no substitute for an environmental bill of rights.

holding tax illegal, reader says

...ss, but a rather different re- Canadian book outsells our an incredible margin, perhaps y 50 to 1. Why, then, the lack y? It is not that the U.S. busi- ighter or more efficient. It is start-up costs—and there are costs every day in book pub- spread far more easily over t market. More people, more ers for each and every title gger press runs to supply that an market, lower unit cost. anadian publishers, with one- the market, are being blamed intaining competitive selling

Buckley's concern for the con- back Cole too for that matter of nonsense. Competition. Who competition, the author who sonally with the 50,000 or more sued in English each year or who can return for full credit book that he buys and does

ort of competition between au- their publishers too, of course) ublic really need Buckley and ct them against price-gouging ublishers? We have been com- t importation of U.S.-manufac- h books by Parley Mowat. The e books in the United States is ada they have attractive little ce in Canada \$1.95. Some pro- in Books Limited assures me

that these are not Penguin stickers. But our real fight is not with Coles or the Buckleys. The quarrel is with the Trudeau Government. It appears that our Canadian Copyright Act offers no real protection to the Canadian author or to the Canadian publisher. When the livelihood of Canadian writers is in question—and it really is in question—why doesn't our government act? They could, should and must amend our Copyright Act immediately if they have even the slightest concern about Canadian culture, Canadian writing and Canadian publishing.

We are not U.S. publishers. Our function, as we see it, is to maximize our authors' income in a small market. Yes, we do delay mass market publication when it makes economic sense to us to do so. Mr. Mozersky says Mowat's Whale sold only a trickle in hardcover three years after publication. Not so. In its second year it sold over 6,000 and is barely into its third. On the hardcover edition, Mowat gets a 15 per cent royalty rather than the 4 or 5 per cent paperback royalty. A paperback bestseller in Canada is one that exceeds 10,000 copies. Do your own arithmetic.

Was Mowat's Boat a rip-off at \$2.95? It was illustrated, printed large format, good paper, clear type. It sold over 40,000 copies in six months. The public didn't seem to mind paying for Mowat's old-age pension and in the process a great many other McClelland and Stewart authors were helped. Come off it, Mr. Mozersky. Most of our major authors have been or are available in mass market format—Atwood, Laurence,

Richler, Burnford Mowat, Leonard Cohen, and on. We also make cheap school editions available when the market exists. Jack McClelland Toronto

Airport inquiry

Congratulations for your editorial (As Ex- pected—Feb. 3). In few words, you put your finger on the fact that the airport inquiry commission was not a proper inquiry.

It has been extremely hard for the opposi- tion case against the Pickering airport to be cogently placed before the public. How could a motley group of citizens go against a commission whose terms of reference were so rigged, at hearings attended daily for months by 20-30 Ministry of Transport bureaucrats plus all their paraphernalia of outside experts, plus lawyers, PR men, and the rest? To my mind, this whole exercise demands the kind of truly searching public inquiry that the Americans seem able to mount.

At any rate, I recommend to you a report by de Havilland of Canada (The Pickering Airport Decision: A Current Assessment). The Pickering airport was launched because of noise surrounding Malton. This report shows that there are 17 airports in the United States alone which affect far larger numbers of people—yet the Americans are not building new airports to solve the problem—they are going to quieten jet engines. Clark Muirhead Ashburn

Tampered with evidence, Crown Attorney says**Panarctic lawyer ejected from inquest following charges**By DERIK HODGSON
Globe and Mail Reporter

YELLOWKNIFE — The lawyer representing Panarctic Oils Ltd. was ejected from an inquest yesterday after angry accusations of tampering with evidence.

Donald I. Brenner of Vancouver was representing Panarctic—a company owned 45 per cent by the federal Government—at an inquest into an air crash that killed 32 people in the High Arctic last Oct. 30.

An angry scene developed in the hall of the court building shortly before the inquest resumed after a lunch break.

Crown Attorney Edward Brogden stalked angrily up to Mr. Brenner, shaking his finger: "I've just about had enough of you . . . tampering with evidence . . . that's serious, you had no right."

Mr. Brenner started to protest, but was cut short by the angry Crown Attorney.

The anger washed over into the courtroom when the inquest resumed and Coroner Walter England told the Vancouver lawyer to get out of the court enclosure and sit back with the public.

Mr. England—a hardware merchant when he is not a coroner—gave the lawyer a verbal dressing down before banishing him to the public seats.

"You've contributed little, if anything, to this inquest," he said.

The coroner said Mr. Brenner's attitude and actions were inexcusable.

Mr. Brogden muttered "hear, hear" as the coroner berated the obviously shaken Mr. Brenner.

What angered the Crown attorney and the coroner was the fact that Mr. Brenner was seen leaving through court ex-

hibits that had been filed earlier.

Mr. Brenner said he assumed the evidence was public knowledge.

"It's not part of the public record until it's been processed," the coroner snapped.

Later, Mr. Brenner said the coroner's action could be grounds for a motion to set aside the entire inquest, but indicated that he would not take such action.

He said he rejected any suggestion of impropriety and indicated he was simply looking at the autopsy reports when the inquest broke for lunch.

Other lawyers, not connected with the inquest and apparently visitors from a nearby courtroom, looked at the same exhibits but nothing was said to them.

Although Mr. Brenner was representing Panarctic at the inquest, none of Panarctic's employees came to Yellowknife to testify and ignored summonses sent by the coroner because they were not living in Mr. England's jurisdiction.

The plane in which the 32 people died was owned by Panarctic. It was making a routine flight from Edmonton with a change of drilling crews.

Earlier yesterday, a grim picture of fire, ice and death in the High Arctic was described by word and photo to the six-man coroner's jury.

The inquest is moving ahead slowly without the key witnesses, and Mr. Brogden has been relying on second-hand or third-hand statements.

The two survivors of the four-engined Lockheed Electra have chosen to ignore requests to appear, as have other Panarctic employees, including the radio operator who made the last contact with the plane.

Statements were read to the jury that had been taken from crew members of another plane that handled the removal of the survivors. Three men survived the crash but one died en route to hospital in Edmonton.

Before reading the statements the Crown warned the jury the statements were only third-hand evidence and he said he was using them "with much trepidation."

David Walker, a crew member of the evacuation aircraft, said in his statement that he talked to survivor Gary Wey-

man, the flight engineer of the Electra, and quoted him as saying "I'd guess I won't have to go up there for a while."

The statement said Mr. Weyman remembered the altimeter reading 300 feet in blowing snow and the next thing he knew he was alone on the ice, shoeless and hearing cries for help.

Another member of the crew of the rescue plane said in his statement that the pilot and flight engineer were talking about cloud before the crash and one said to the other "That's not cloud, that's snow."

Both statements made reference to Mr. Weyman's condition and his glazed eyes and shaking hands.

The sworn statement quoted an unnamed medic as saying it was a good thing there were not more survivors because they didn't have equipment at the High Arctic base to handle any more.

The crash occurred 1,600 miles north of Edmonton about two miles short of the Point Rae landing strip. The plane was on a routine flight from Edmonton to change drilling crews at the Panarctic site.

Another witness yesterday, Ken Muir, the president of Park Ambulance Service Ltd., a private concern in Calgary that does contract medical work in the Far North, said there were enough medical supplies at the camp to handle many more survivors.

Much of yesterday's testimony involved documentation and identification of bodies. The jury was shown 103 colored pictures of the crash site and the frozen remains of the dead.

The picture showed torn-off smashed watches that stopped at about 12:35 on the morning of Oct. 30.

Many of the dead men were

without shoes—apparently by the force of the impact.

In Calgary, Leonard Stovold, a Panarctic employee and one of six people who didn't answer summonses, said at work that he wasn't subpoenaed but agreed that was because he's in Alberta

and the subpoenas were issued in the Northwest Territories.

In any case, he said, he won't go. If it were a public hearing he would but "all they're doing is hashing over the moans and groans."

He doesn't think inquests in-

vestigate accidents properly. "The MOT or DOT, call it what you want, looks after plane crashes, the mechanical end." Asked whether he felt the MOT had investigated this one adequately, he said: "We'll see when they make their report."

**4 of 6 jurors
are pilots**

YELLOWKNIFE (Staff) — The jury and inquest officials probing last October's air crash at Rae Point are all experienced Arctic fliers and aviation experts.

Both Crown Attorney Edward Brogden and Coroner Walter England are pilots with more than 1,000 hours' flying time, and four of the six men on the jury are pilots.

Edward Logozar, Willy Laseric, Frank O'Connor and Walter Pateman are pilots, while Don Hughes is an aircraft engineer and Ellis Lambertson is a freight supervisor with an airline.

PARLIAMENT

EXCERPTS FROM YESTERDAY'S
HOUSE OF COMMONS PROCEEDINGS

The House met at 2 p.m. Debate continued on amendments to the income tax laws. Ministers were questioned.

QUESTIONS

JOHN DIEFENBAKER (PC, PRINCE ALBERT): Mr. Speaker, my question is directed to the Minister of Justice. It has to do with the judgment or order handed down yesterday by the Canadian Transport Commission in connection with freight rates. Under that order the decision is that there be a holdback against the railway companies, the shippers of Canada. I asked the minister whether, if the order is appealed—as apparently it will be having regard to the statement made by the counsel for the Canadian Pacific Railway—the counsel for the minister and the Government of Canada will again follow the unprecedented action that it took on Jan. 9 in the Federal Court in opposing the position taken and in direct conflict with these positions and decisions of the provinces of Saskatchewan, Alberta and Manitoba, supported by the provinces of British Columbia, Ontario and the Atlantic Transportation Commission? Could the minister give the assurance that there will be no more of that monkey business that took place when the Government of Canada stood against the shippers of Canada? Indeed, it was so blatant that Mr. Gordon Blair, a former Liberal member of Parliament said—

AN HON. MEMBER: What is the question?
AN HON. MEMBER: This is a speech.
MR. DIEFENBAKER: Mr. Speaker, I do not understand this noise today. Apparently some of these hon. members believe that if a gaggle of geese saved Rome they are going to save the Government by these unseemly interruptions.
SOME HON. MEMBERS: Hear, hear!
SOME HON. MEMBERS: Questions.

MR. DIEFENBAKER: Can the minister give that assurance? Mr. Speaker, I can give information but not intelligence to hon. members such as the hon. member—
AN HON. MEMBER: Especially the hon. member for St. Boniface.
JOSEPH GUAY (L. ST. BONIFACE): A question of privilege, Mr. Speaker.
GORDON FAIRWEATHER (PC, FUNDY-ROYAL): The fish are biting.

AN HON. MEMBER: How did you know he meant you, Joe?
SPEAKER JAMES JEROME: Order, please. I was not able to discern from the remarks of the right hon. gentleman which hon. member he was referring to.
SOME HON. MEMBERS: Oh, oh!

MR. GUAY: Mr. Speaker, a question of privilege.
MR. SPEAKER: The hon. member for St. Boniface, on a question of privilege.
MR. GUAY: Mr. Speaker, my question of privilege is that I want to abide by the rules of this House.

AN HON. MEMBER: Then sit down.
MR. GUAY: I also recognize that I have to get up because I know that parliamentary secretaries cannot ask questions and I also know that anyone asking questions should ask them and not make a speech. I object to the—
SOME HON. MEMBERS: Hear, hear!

MR. SPEAKER: Order, please. The hon. member, of course, does not raise a question of privilege. He does point out, however, that questions ought to be brief. I would appreciate if the right hon. gentleman would put his question.
MR. DIEFENBAKER: Mr. Speaker, questions have to be brief but they have to be understandable to a Government that does not want to understand. As far as the hon. member for St. Boniface is concerned, I ascribe none of that lack of intellect to him.

SOME HON. MEMBERS: Ask the question.
MR. DIEFENBAKER: I ask the minister now, following the protection that has been built around him, if he will advise that this appeal when taken will not find the Government of Canada again through its counsel supporting the CPR rather than the rights of the consumers of Canada?
JUSTICE MINISTER OTTO LANG: We have heard a statement from a master of misinformation, Mr. Speaker.

SOME HON. MEMBERS: Hear, hear!
MR. LANG: Mr. Speaker, the right hon. gentleman has taken the patience of this House to describe in a totally inaccurate and totally misleading way a position which the Attorney-General has taken. In this case, the position has been to try before the Canadian Transport Commission and before the courts to indicate a particular view of the law which it was seen to be our duty to do.

MR. DIEFENBAKER: What is your duty? To tramp on the rights of the consumers?
MR. LANG: We have so far maintained and followed the kind of line which it seems to us was important to put before the court and the Canadian Transport Commission and has resulted in the decision at this moment has led to the lowering of freight rates to half the level they would otherwise have been increased.

While these matters are still before the courts and we ought not to go much further into debate than we have done, I think it is important to say to the right hon. gentleman that he is completely wrong in suggesting that we at any time sided with the railways. That is a false statement and he ought to have known it was false.
MR. DIEFENBAKER: Mr. Speaker, I have not had an answer to the question. I asked the minister if he was going to follow the same course that was wrong and was unjustified of rooking the consumers of Canada. The CPR had their lawyers. Did he not think they were good enough without the assistance of the Department of Justice?

MR. LANG: Mr. Speaker, the right hon. gentleman devises an attack by asking the Government whether we are going to do something we have never done and he expects an answer. I think he should have more respect for the House in view of his record in it.

Government secrecy guidelines will be tested before joint committee

By HUGH WINSOR
Globe and Mail Reporter

OTTAWA — The Government's right to shield itself from political embarrassment by suppressing controversial information will get an airing soon by a joint Commons-Senate committee.

The committee will examine a set of 16 criteria drawn up by the Cabinet to justify keeping such things as official papers or consultants' reports secret.

It also will study a proposal originally contained in a private member's bill drafted by

Conservative House Leader G. W. Baldwin that all Government documents be public unless the Government can make a case before a judge that a particular document should be secret on security or privacy grounds.

Forsey and Robert McCleave (PC, Halifax-East Hants), was established in the last Parliament to act as a check on regulations the Government drafts to implement legislation and to determine whether the powers they exercise are justified by law.

criteria is that they were drawn up unilaterally by the Government although they affect the rights of all Members of Parliament.

As the law and practice stand, any MP can file a motion for the production of any Government paper.

But the Government can decide by its own standards whether the publication of the document is in the public interest.

If it refuses to produce the document, it is supposed to cite one of the 16 criteria.

The list includes legal opinions or advice provided for the use of the Government, anything that would be detrimental to state security and anything the Government believes could be detrimental to relations with other countries or the provinces.

No internal departmental memoranda or Cabinet documents have to be produced, two criteria which, if followed to the letter, could be ex-

tended to cover almost any matter of concern to MPs.

Almost any policy or situation an MP might wish to smoke out at one time or other is the subject of an internal document or Cabinet paper.

If the MP is not satisfied with the Government's explanation for refusing to produce the document he wants, he can refer his motion for debate.

The Commons sets aside an hour every other Thursday afternoon to debate these motions which can be voted on if the Government loses the vote, a possibility during a minority Parliament or if the Government whip cannot muster enough supporters when the vote is called the Government must produce the document.

Senator Forsey said the committee is making preparations for an extensive study of the over-all problem of secrecy.

This could include calling witnesses from such organizations as the Canadian Bar Association, the Civil Liberties Association and the Consumers Association of Canada.

Mr. Baldwin also wants the committee to look into the Official Secrets Act that dates back to the First World War. It deals mainly with military secrets and prohibits such things as sketches of gun emplacements and trenches. But it also has a catch-all clause prohibiting the disclosure of any confidential document.

Since any civil servant writing a document can classify it confidential, the Official Secrets Act has been widely used to shroud the bulk of government business in secrecy.

The 16 criteria were originally referred to the committee in 1973 but in the politically-charged days leading up to last year's election, the committee never got around to discussing them.

Speaker at centre of House controversy as Broadbent queries fairness of his rulings

OTTAWA (CP) — Speaker James Jerome was the centre of a Commons storm again yesterday as New Democrats asked him to review the fairness of his rulings.

Edward Broadbent, the NDP parliamentary leader, led the criticism of Mr. Jerome, but his party was chided by Opposition Leader Robert Stanfield for activities that might bring the "opposition collectively into disrepute."

Mr. Broadbent, annoyed specifically that a question of privilege was disallowed during question period, requested that Mr. Jerome "consider your own decisions in the past week and see if they've been made with the usual standard of equity."

That was considered by observers to be blunt talk to the Speaker, who has complete authority over the proceedings of the House.

Such a review should be made in the light of questions allowed other parties, said Mr. Broadbent, who did not specify on what topics other MPs allegedly received a break from the Speaker.

Mr. Jerome, who was involved in a similar procedural



Speaker James Jerome

hassle last week with Social Credit members, replied that he has conducted a continuous check on such matters since becoming Speaker in September.

He reiterated his statement of last week, when he told Social Credit MPs that the number of questions and supplementaries allowed parties is

proportional to the number of members each party has in the House during the daily 40-minute question period.

If any members could show that his actions were not in accordance with that principle, he said, he would be prepared to consider their arguments.

Mr. Jerome, who now has been criticized by both NDP and Social Credit MPs over allocation of questions and disallowance of motions on supposed urgent topics, received some moral support from Mr. Stanfield.

The Conservative leader, saying he spoke as leader of the whole opposition, said that emergency motions requiring the seldom-granted unanimous approval of the House "have been used on two or three occasions recently to disrupt the business of the House."

"I'm concerned this could bring the operations of the opposition selectively into disrepute."

Mr. Stanfield did not name the parties involved, but his comments were an obvious reference to a lengthy series of motions presented by Social Credit last week and a similar series brought for-

ward this week by the NDP on the Syncrude oil sands project.

The Social Credit members used the motions, eventually cut short by Mr. Jerome, to delay proceedings as a protest over what they called Speaker's biased approach. They were upset that they did not get recognized more frequently to ask questions.

By CECIL JENNINGS
Globe and Mail Reporter

OTTAWA — An inquest into the crash of a Panarctic Ltd. Electra that killed 32 men in October could open within a month to six weeks, according to Yellowknife coroner Walter England.

Vague and mostly anonymous concerns that investigation of the crash of Melville Island in the High Arctic was somehow being obstructed made their way to the Commons this week.

Howard Johnston (PC, Okanagan-Kootenay), who said later a constituent had written to him on the subject, asked Transport Minister

Jean Marchand whether his department were "aware of any attempt to impede the progress of this investigation?"

Similar suspicions have been voiced in anonymous calls to The Globe and Mail.

Mr. Marchand's reply cast little light on the matter. "I know," he said in part, "that Panarctic decided to intervene before the inquiry and there are one or two lawyers there trying to make a case."

Mr. Marchand's office would not elaborate and neither would Wayne Holt, legal counsel for Panarctic, except to add it was a difference of opinion over procedure.

"Don't get off on any great dispute between Panarctic and the Ministry of Transport," Mr. Holt said. "I expect a meeting of minds soon to resolve the whole problem." The federal Government, with a 45 per cent interest, is part of the consortium that owns Panarctic.

Mr. England, a justice of the peace and hardware merchant in Yellowknife as well as coroner, said there is nothing abnormal about the time lapse between the crash and the holding of the inquest.

The plane crashed into the sea near Rae Point, about 1,600 miles north of Edmonton, and the area has been in al-

most total darkness since then.

"The sun should start coming over the horizon again around the 3rd or 4th of March," Mr. England said.

The plane's two flight recorders were recovered from 130 feet of water and the cockpit section was brought up from 70 feet. The two main sections of the plane are still in 130 feet, but all bodies have been recovered.

Cause of the crash has not been determined, according to the ministry, and the investigation might not be completed by the time of the inquest, if it's held as soon as Mr. England expects.

Risk criticized

Davis says Syncrude like early rail gamble

Premier William Davis has compared Ontario's planned \$100-million investment in the Alberta oil sands development to the gamble taken 100 years ago in building railways across Canada.

Liberal Leader Robert Nixon had asked in the Legislature yesterday what assurances the Government had that its 5 per cent investment in Syncrude Canada Ltd.'s \$2-billion project would not rise to more than \$100-million. He said the province might be "into some sort of open-ended raffle."

Outside the House, he said, he supports Ontario's participation but the Government should have gotten better guarantees on cost.

The federal, Alberta and Ontario Governments announced Tuesday they are buying shares of Syncrude of 15, 10 and 5 per cent, respectively. Their projected investment is \$600-million, but this could rise if costs increase.

Mr. Davis said the decision to go into the scheme was made on the basis of the best information available. There are "some possible hazards," but the investment is "the kind of thing that government should do in this day and age for the national good."

At the time the railways were built, it is doubtful if accurate cost estimates were available. "I hate to think just what might have emerged if some decisions of that kind

had not emerged at that particular time in our history."

In Winnipeg, Donald Craik, the Conservative's energy critic in the Legislature, said the Manitoba Government should take a serious look at investing in Syncrude. He suggested an investment of up to \$50-million as a hedge against future energy shortages for the province.

But a spokesman for Premier Edward Schreyer said the idea of Manitoba's investing in the project has never been seriously considered.

Premier Allan Blakeney of Saskatchewan condemned federal aid to the project as a resource giveaway. If oil companies cannot develop the oil sands "the logical thing would have been to take over the Syncrude project and operate it as a public project."

He said it is clearly discriminatory against his province to allow the Syncrude consortium higher oil prices and tax deductions for royalties paid to the Alberta Government when Saskatchewan oil producers have frozen prices and cannot deduct royalties.

In Ottawa, the Communist Party of Canada declared the Syncrude project a swindle and called for its immediate cancellation.

"It is another shocking example of a giveaway of Canada's resources and wealth to multi-national oil corporations," party president William Kashtan told reporters.

Inquiry told trainees used on job illegally

MONTREAL (CP) — A construction firm was paid the regular price of almost \$90,000 for a mine-site job even though most of the work was done by federally-paid workers in training, a Government inquiry was told yesterday.

George Roger, a metallurgical engineer employed by Industmin Ltd., told the royal commission inquiry into construction union freedoms that his firm paid Alnor Construction (Quebec) Ltd. \$87,841.60 to strip clay and boulders from a silica mine deposit at St. Canut, 35 miles north of Montreal.

Alnor, based in Oshawa, used workers in training to remove most of the 100,000 cubic yards of earth, he said, but in the last few weeks added a night shift of experienced workers to speed up the job.

The student heavy-equipment operators were taking courses run by Quebec but funded by the federal Government. By law, it is forbidden to use the students to help on an actual job, commission lawyer Lucien Bouchard said.

Earlier, the commission heard testimony that Alnor and Montcalm Construction Ltd. had made payoffs to have their equipment rented for the training courses.

Robert Meloche, former business manager of Local 791 of the International Union of Operating Engineers, said he received kickbacks of more than \$10,000 from Alnor and about \$25,000 from Montcalm Construction Ltd. two or three years ago.

At the time, Meloche said, he was a union representative on a committee responsible for administering courses for heavy equipment operators. Meloche, now unemployed, resigned his union position last November after inquiry evidence showed he had received payoffs from other companies for labor peace.

By having training courses conducted on their projects in the winter, Alnor and Montcalm profited from work for which they did not have to pay and from rental of their equipment, idled by a seasonal shutdown, Meloche said.

Montcalm was building runways at the new Mirabel airport north of Montreal.

Meloche said he could not recall getting payoffs from other companies for the training program and denied receiving \$33,520 from Montcalm in 1973 to prevent labor unrest on the Mirabel site.

Paul-Emile Bellemare, an employer representative on the committee, and Jean-Paul Lafond, the Labor Department's regional director for the northern Montreal area, said the courses, supposed to include theory and practice, were transferred without their knowledge into on-the-job training.

The decision on where courses would be held was made by four members of the eight- to 10-member committee, Bellemare said. He identified the four as director Gilles Varin, chief instructor Paul Vachon, Andre Simard, the committee co-ordinator, and Meloche.

Meloche denied splitting company payoffs with Varin.

Crash inquest in 6 weeks, Coroner says

PROFIT by O.D. flexible staffing plan to reduce overhead 967-7700 office overload

The Globe and Mail

CANADA LIFE COST OF LIVING POLICIES Cloudy High near 0 Details on Page 2

Ontario probing cancer potential at steel mills

By GERALD SENIUK Provincial health officials are investigating reports that hundreds of workers in Ontario steel mills face an abnormally high risk of lung cancer.

2 convicted of murder in Moncton

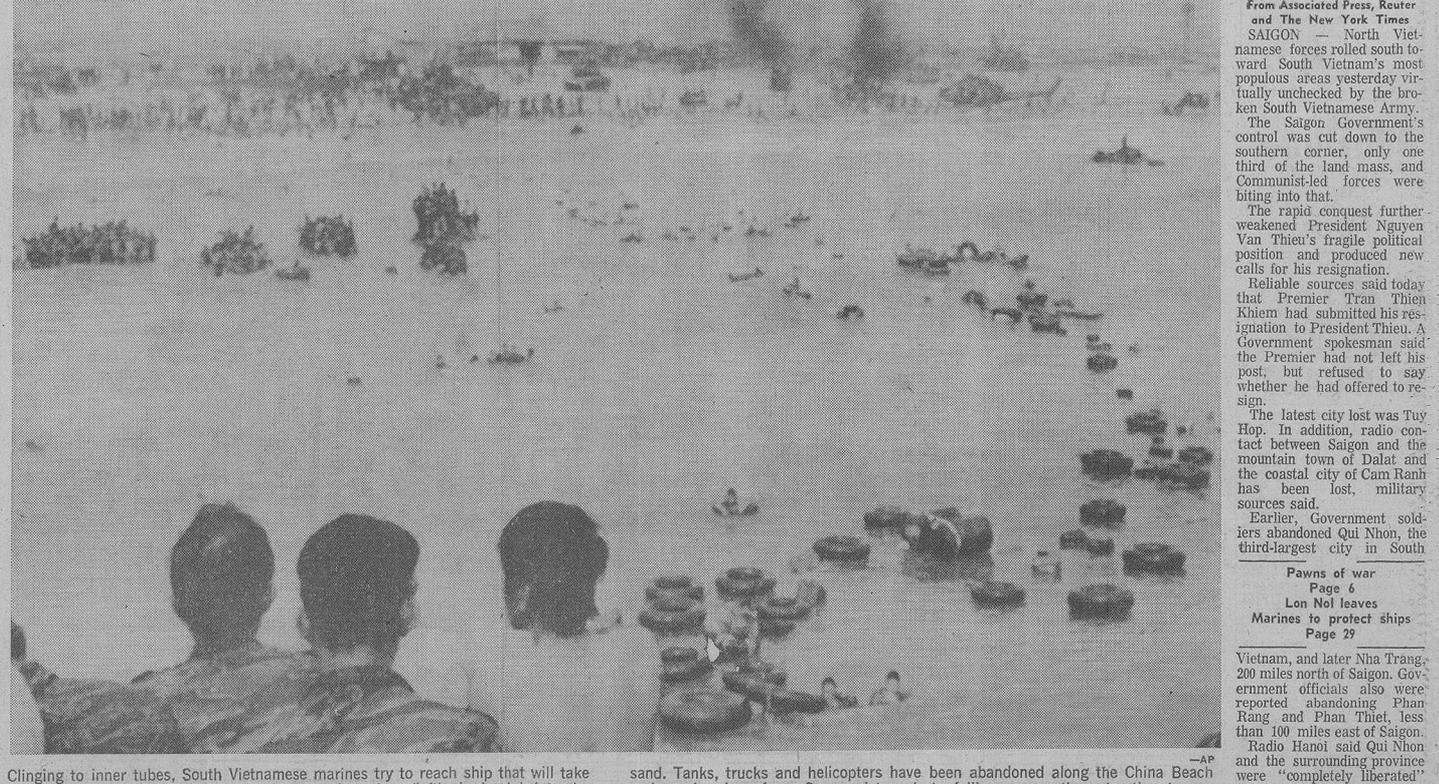
MONCTON (CP) — James Lawrence Hutchison, 47, and Richard Ambrose, 26, were sentenced last night to be hanged June 13 after they were convicted of murder in the shooting of two Moncton policemen in December.

Exact fares likely on TTC in 3 months Metro transit riders will require exact fares—tokens, tickets or cash — likely by July 1.

Boy dies after spraying cooking oil down throat

Death is believed to be the first of its kind in Canada, certainly in Ontario. Police said the boy and a friend bought a spray can of cooking oil. They went to the friend's home, where Pearson stretched out on a chesterfield and almost immediately started to turn blue.

Pressure grows on Thieu to quit Vietnamese cities abandoned as Communists roll southward



Clinging to inner tubes, South Vietnamese marines try to reach ship that will take them from Da Nang. Marines aboard armored carriers (left) slowly sink into the sand. Tanks, trucks and helicopters have been abandoned along the China Beach and smoke rises from Communist rockets falling among the retreating troops.

Coroner can't compel men to appear 6 key witnesses not attending Arctic plane crash inquest

By DERIK HODGSON Globe and Mail Reporter YELLOWKNIFE — A coroner's jury probing the worst air disaster in the Canadian Arctic was forced to fall back on "second- and third-best evidence" yesterday when key witnesses failed to appear.

Table with 4 columns: Title, Page, Title, Page. Includes items like 'Rally round the elephants', 'Swift justice in B.C.', 'Early, early trout fishing', 'Births, Deaths', 'Business', 'Classified', 'Comics', 'Contract Bridge', 'Crossword Puzzle', 'Editorial', 'Entertainment', 'Movie Listings', 'Osgoode Hall', 'Sports', 'Woman's'.

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Metro executive will consider official residence for chairman

By ALDEN BAKER The Metro executive committee will consider establishing an official residence for Metro Chairman Paul Godfrey on Friday. The residence would also serve to entertain distinguished official visitors.

Gunman's threat ends bets, borrowing

A gambler's tale: bookies, backstreet loans and bankruptcy By PETER MOON In April of last year, a young professional man in a Southern Ontario city filed an application for personal bankruptcy. He declared assets of \$10,000 and debts of \$125,145.

From Associated Press, Reuter and The New York Times SAIGON — North Vietnamese forces rolled south toward South Vietnam's most populous areas yesterday virtually unchecked by the broken South Vietnamese Army.

Pawns of war Lon Nol leaves Marines to protect ships

Vietnam, and later Nha Trang, 200 miles north of Saigon. Government officials also were reported abandoning Phan Rang and Phan Thiet, less than 100 miles east of Saigon.

WITNESSES — Page 2

Your morning smile

Dad to mom regarding their pre-teen daughter: "It seems like only yesterday that our baby took her fingers out of her mouth and stuck them in the telephone dial!"

A gambler's tale: bookies, backstreet loans and bankruptcy

By PETER MOON In April of last year, a young professional man in a Southern Ontario city filed an application for personal bankruptcy. He declared assets of \$10,000 and debts of \$125,145. Only weeks before, a man had walked into his office, taken a silencer out of his briefcase, pulled a revolver from a shoulder holster, attached the silencer to the gun and placed it against the professional man's forehead and demanded payment of a gambling debt.

Bankrupt gambler tells story

From Page One
dealt with were very conscious of the fact he was a professional man with a good income that would almost certainly grow substantially within a few years.
But even so, he found himself in trouble on occasions. A Montreal bookie lost his temper once when Mr. Smith told him he couldn't pay him what he owed him. The bookie punched him and knocked him to the ground. "Well, what do you expect?" Mr. Smith asked. "We all have our breaking points and I did

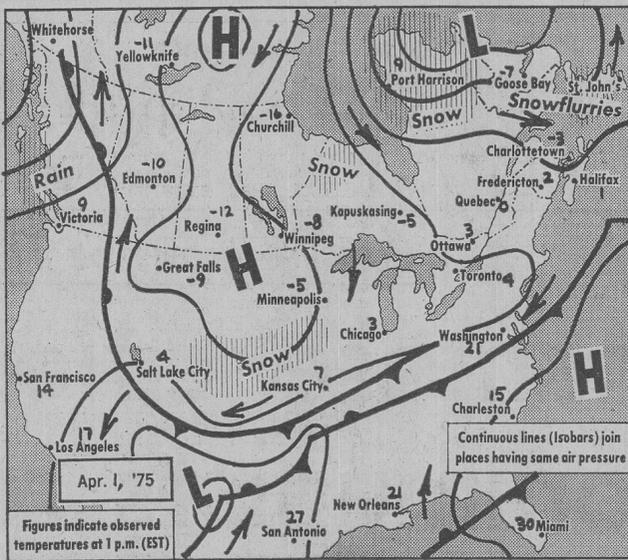
owe him the money. He probably had obligations of his own and he needed it."
Another time, he found himself owing a bookie in southwestern Ontario \$24,000. The bookie agreed to settle the debt for \$8,000 and Mr. Smith began making monthly payments to him.
Then, one day, two men arrived at his office. They told him the bookie had turned over Mr. Smith's debt to another man to whom the bookie owed money. "I told them the debt was none of their business. They said: 'It is now. You owe us.' They said the \$5,000 I still owed had to go to them now. One guy stood by the door and the other stood in front of me, smacking his fist into his hand. I gave them several hundred dollars, all I had on me. Of course, I was scared."
The men said they would come back a few days later. When they did, Mr. Smith's lawyer was in his office with him and four policemen were hidden nearby. Mr. Smith's lawyer told the men they were getting no more money. But the men made no move and said nothing that would enable the hidden police to

charge them. On their way out of town, the police stopped the two men's car and checked them to find out who they were. Other police followed them back to Toronto, where they were seen meeting a loan shark.
Shortly afterward, one of the men who visited Mr. Smith disappeared. Metro Toronto police believe he was murdered. The loan shark was later severely injured in a bomb attempt on his life.
About the same time, the incident with the man who had the gun and silencer occurred. The man threatened Mr. Smith, because another gambler on a flying junket to Las Vegas had said Mr. Smith, a friend of his, would guarantee his debts. The gambler demanded that Mr. Smith sign a cheque, but he refused. He said the cheque would bounce. The gambler said he would return and told Mr. Smith he had better have the money ready. Mr. Smith reported the incident to the police and called the man the gambler said he was acting for. The gambler later phoned him and threatened him, but he has heard nothing more from him since.
A few months before he filed bankruptcy, Mr. Smith finally felt he had to go to three loan sharks for money. He borrowed several thousand dollars, agreeing to repay \$1,300 for each \$1,000 he borrowed, at the rate of \$100 a week for 13 weeks—an interest rate of 120 per cent a year. He finished up owing them \$10,000 by the time he decided to go bankrupt.
The loan sharks, he said, were realistic when he explained what he was going to do. When they realized he was definitely going into bankruptcy, they agreed to settle the debts for \$6,000. It was paid to them by friends and relatives of Mr. Smith.

Paris wine ban said violation of EEC law

BRUSSELS (Reuter)—The French suspension of Italian wine imports is considered a breach of European Economic Community law, an EEC spokesman said here last night.
Agriculture Commissioner Pierre Lardinois has ordered a study of all possible legal moves by the common market executive to end the ban as soon as possible, the spokesman added.
French traders have suspended Italian wine imports until April 28. Bumper grape harvests in France and Italy have depressed prices and brought strong protests against Italian wine imports from French winemakers.
In a telephone conversation with Mr. Lardinois yesterday, French Agriculture Minister Christian Bonnet confirmed that the decision by French wine traders not to import Italian wine was backed by the French Government, officials here said.
Although the French Government has not taken legal action to enforce the import ban, its support of the traders' decision amounted to de facto encouragement of interference in the free flow of agricultural goods across common market borders, informed sources said.
This was an infringement of treaty rules on common market agricultural policy, the spokesman said.

"You hear about violence and read about it," he said, "but it doesn't happen that often. What's the point? Loan sharks—and that's a bad word, they're just businessmen really—they don't want the police around. But you have to pick your shark. The poorer ones may do something stupid and violent. Don't deal with them."
"But the better loan sharks, the businessmen... When these guys give you their word, that's it. They're honest with you. They'll tell you what's likely to happen if you don't pay when they make you a loan."
"But there's not all that much violence. They don't want the aggravation. If you're honest with them, and you really can't pay, they'll listen to reason."
"It's my opinion the only danger in dealing with the underworld is when you deal with small-time punks. Or with a big man, and a tremendous number of people know you've beaten him. Then he has to make an example of you."
Even so, Mr. Smith's home telephone number is unlisted. And when I arrived unannounced recently at a relative's apartment door in the same city, looking for Mr. Smith, I found myself having to identify myself and explain my business to the local police, who had a car on the scene in less than two minutes.
"Well, yes," Mr. Smith conceded, "I think the police are keeping an eye out for me. They've been pretty good."
NEXT: The move into Ottawa



Arctic railway problems

The following are letters to the editor of The Globe and Mail.

As one of the interveners before the National Energy Board on the Mackenzie Valley Pipeline, I heartily concur with your call (From the Arctic by Rail—March 29) for a full investigation of the rail alternative. Radically different cost figures and data have been presented on the rail project and we must have a full public inquiry to establish true estimates.

While agreeing with the general argument, Martin O'Malley's article (What Happened to Arctic Rail Alternative?—March 29) left a number of things unsaid. The environment problems are still far greater than the article implies because railways unlike pipelines have to have low gradients and "cuts" through the hills. In permafrost areas this creates severe problems with thermal erosion.

Secondly, the railway would require far more gravel than a pipeline and much of this would come from stream beds where the fish spawn, etc.

Thirdly, the sound shadow from such frequent rail traffic up and down the valley (at least three trains each way per hour) would create a barrier which wildlife would be reluctant to cross.

In addition, I found it hard to accept the cost figures for transporting the gas; it would seem that all or part of the costs of liquefaction in the delta and regasification in the south have been left out. This is crucial to the cost analysis of the whole project and rate at which gas can be delivered for southern consumers.

Potentially there may be great advantages for both northern and southern Canadians in the rail alternative. If Mr. Macdonald is serious about energy alternatives for Canada he must allow consideration of the rail alternative before the National Energy Board when the hearings open in late summer.

Bob Page
National Chairman
Committee for an Independent Canada
Ottawa

Resource levy dispute

Re Jean Roy's spirited defence of the mining industry, and by implication natural development of all kinds at the recent Prospectors and Developers Association convention (Governments Urged to End Resource Levy Dispute—March 11).

The Timmins MP suggested that the federal Government in its latest budget should have allowed deductibility of provincial levies on natural resource industries at least as high as that which had previously existed. This impresses me as most reasonable and I wonder why more has not been made of this approach.

Such an allowance would have served the federal position and credibility in regard to tax equity vis a vis the provinces and its stated concern for maintaining necessary profit incentives for industry.

Edmund C. Bovey, Chairman
Northern and Central Gas Corp. Ltd.
Toronto

Draft-dodgers

The actions taken by Royal Canadian Mounted Police in supplying data to the United States Government on draft-dodgers in Canada is inexcusable. What is the purpose of wasting tax money on something which is of absolutely no concern to Canada?

The RCMP is infringing upon these people's rights as Canadian citizens, or even visitors to Canada. We, as taxpayers who are supporting such foolishness, can only hope that eventually the Canadian Government will spend more time and money on matters which directly concern the well-being of Canada.

James A. Porteous
Mississauga

Dogs in parks

Recent leisurely walks through a few Toronto parks, including Winston Churchill, Kew Beach and Ramsden, have convinced me that our parks have gone to the dogs.

I have always been under the impression that parks exist for the purpose of human recreation, not canine defecation. Obviously many dog owners don't give a damn about our parks except for the service they provide as toilets for their pets. Add to this the fact that many dog owners ignore the leash bylaw created to prevent dogs from running loose.

Our affluent lifestyle allows for the purchase of these dogs in exotic shapes and sizes but, as so often happens, the owners are not interested in shouldering the full responsibility. As usual, the bylaws are virtually impotent without citizen respect and effective policing. I wonder if there are other dedicated park-users: picknickers, cyclists, frisbee-throwers, etc., who are also fed up with side-stepping the fees?

I, for one, am tired of this nauseating game and request of dog owners some consideration. May I suggest: (1) Dog feces picked up and properly discarded and (2) Dogs kept on a leash in public areas.

Norman Opperman
Toronto

Fiji

It is to be hoped that no one will be deterred by Robert Turnbull's article in the Travel Section (Fiji—March 29). We found Fiji to be one of the nicest places we have ever been. My wife says she preferred it to Hawaii. We were there about a year ago.

Why do travel writers always seem to irritate customs and immigration officials? I have read the same story in your evening rival about Australian officials. In over 50 years of travel through some 20 dozen countries the only discourteous ones have been Canadian or American, and in much less than 5 per cent of the times with them.

We, unfortunately, had only allowed ourselves five days in Fiji and three in Suva. I am sure drunkenness exists in Fiji as elsewhere but we saw no public drunkenness, were not even asked to buy drinks on the street nor saw any touts for duty-free shops. I was only on the streets for a short time but I suppose I am too old to be propositioned by anyone, dirty or clean.

Our motel room in Suva, air-conditioned, balcony overlooking city and harbor, kitchenette and swimming pool was \$14 (Canadian) double a day. An extra 50 cents is going to hurt anyone? Britain and Europe have a value added tax of 7 per cent and even Toronto has considered a hotel room tax.

No place is as nice as the second time around and certainly the quality of life everywhere has deteriorated but maybe Mr. Turnbull could try a third time when he is in a better humor.

C. W. Tunis
Burlington

The middle-class poor—they worked and saved and thought they had it made. Now they're asking

'What the hell is going on?'

BY SCOTT YOUNG

HAVING READ and reread about 50 letters from people who identify themselves as Canada's Upper Middle-Class Poor, the message that comes through most strongly is a sense of betrayal—which in turn might be taken as a clear warning to the young that the old ethic of working hard to get ahead in the world is a trap and a snare.

These people are professors, engineers, teachers, doctors, business executives; Canadians earning between \$20,000 and \$30,000 a year, some a little less, some a little more. Without exception, they felt themselves even a few years ago to be comfortably off, sometimes on much less income. Now they say that in today's Canada they no longer can afford what they worked hard for, and did fleetingly attain.

"There are times when I wish I had married any member of a union, that could demand and automatically get, rather than a professional engineer." That from the wife of an Ottawa engineer. "We have three children in university, one in medical school, a salary that has risen roughly half as much as the cost of living. Slipping behind—you said it!"

"Here," writes a Toronto woman, "the beige Buick has given way to the tiny Toyota; the doors of the comfortable club are closed to us; and that great skill holiday every year became a weekend in Ottawa, with relatives.

Run quicker but gain nothing

"But wait—it gets worse. Look more closely at the young couple in the \$240 apartment with more disposable income than we have. One of them is the kid you shed blood for, to help through university. With two of ours through university (total degrees, five) and two hard at it, getting some assistance from parents, I'm beginning to wonder that parents with dropouts complain. We find ourselves running twice as hard to stay in the same place."

This, from an Ottawa teacher: "After a career of 29 years, I now make \$20,500 and agree entirely with those who feel guilty about expressing dissatisfaction over the financial difficulties they are experiencing—when everyone else thinks they have 'arrived.' Mortgage payments on our house go on well past the time when I could (or should) retire. One son is completing university (no student loans because of my income) and another is about to begin.

"We have virtually no spending money—any little bit we get is from various forms of moonlighting which, over the years, I found necessary. It is not possible for my wife to work.

"We have one four-year-old car, with not a dollar set aside for a new one. No color TV, no cable. We neither drink nor smoke. No holiday trips, except a few by tenting. No income for my retirement except my pension. No investment income.

"In answer to the question—where does the money go?—the answer is that there is simply not that much money to go anywhere. Over \$4,800 was deducted for income tax last year. Property taxes were \$755. I suppose it is impossible to justify to a chap making \$10,000 a year that a teacher making twice that amount is on strike to try and get a few more dollars to make ends meet. You have to be middle-class poor to understand."

From a rural route north of Toronto: "My husband is an associate professor at York University and has an income of about \$24,000—before taxes. We have two children and two cars (because we live in the country) and we can barely manage to get to the symphony once a month. We were wealthier the first year we were married when my husband was a graduate student and I taught university students for \$6,000 a year. Ain't it hell!"

From a London teacher: "I am 40 years old, have eight children (I enjoy them despite my impending bankruptcy), have been teaching 18 years, own a home, have reached the top in salary at around \$22,000 a year, a good salary in anyone's book.

"We do not gamble, drink to excess, buy impulsively, over-extend at Christmas or holiday time (none last year). We do not live in a luxurious house (an expanded three-bedroom bungalow), travel (never outside Canada), entertain at all, or drive a new car (1970 Ford van).

"We do, however, find ourselves sinking slowly into poverty. In fact, the rate of sinking is becoming alarming to say the least. After taxes and other necessary deductions, I take home about \$1,200 a month. Our food, gas, hydro and renegotiated mortgage payments have doubled in three years. What the hell is going on?"

From Ottawa, a man making \$25,000: "Ten years ago I was making \$12,000 a year, or less than half of my present salary, and we were able to take normal vacations, with an occasional long-distance trip. Today, we haven't had more than a week away

within the province in the last three or four years.

"We have always paid our bills, do not own a cottage, or swimming pool. We have two children and my credit is stretched far enough to make it prudent not to borrow more. Our car is a 1973, bought near the end of 1974.

"I never did manage to get to university because the Second World War got in the way and I never did find a way to get someone or the country to pay for me while I got educated. . . . "God, how stupid people like us were! We actually got out and wore our heels down doing the rounds looking for a bloody job when we didn't have one. We walked and went from place to place filling in forms until we found one.

"Now, how privileged we are—we can pay for all the smarter ones (who of course vote) and I guess we can go to hell if we don't like it."

From a woman in Mississauga, wife of a senior executive: "Right now I have the blahs, not caused by the time of year but by the realization that people like us of middle age, middle income, who have always tried to do a good day's work, remained honest and charitable, been no kind of a liability to anyone since we were old enough (age 16) and progressed very slowly up the ladder solely by our own efforts, are being made fools of.

"We have been putting three kids through school and university—no grants, no assistance, no welfare, no unemployment insurance—and kept them out of trouble. We were moved from Montreal last year. Had bought a house 10 years ago for \$30,000, sold it for \$60,000, and paid \$90,000 for not as good a house here. . . .

"Time was when we were the people who provided employment for builders, carpenters, gardeners, painters, cleaners, etc., to keep up our homes. Now that these guys have priced themselves out of the market, the work doesn't get done or we do it ourselves, thus contributing unwillingly to a great deal of unemployment. . . .

"We were married in 1949 on about \$1,100 a year. I keep saying to the kids I had hoped that one day there would be something left over for the old folk—but I doubt it now."

From a Sudbury woman whose husband makes \$23,500 a year: "To all outward appearances we have 'made it.' Our family of one young adult and two teen-agers are, we consider, a credit to our belief in the importance of a stable family atmosphere. But now, when we are tired of struggling and feel that we have reached a plateau in life where we should be able to relax a little and perhaps pamper ourselves with a modest holiday or trip and the odd evening out on the town, we find that we can only rub along; there is no spare money for luxuries such as those.

"We run one four-cylinder car and own our home (taxes getting higher every year). Our oldest son is in university but lives at home. He has paid his own tuition from his earnings and provides his own spending money. Our daughter will be ready to go to university next year.

"Of course, we make far too much money to get any help from the Ontario Government, which is busy doing out tax money to students coming out of high school with marks so low that they never should be in university at all. We could throw our son out and then he would be eligible for these grants, but at what a cost. Oh, yes, we are lucky compared to most people. But we have paid our dues, and we are tired."

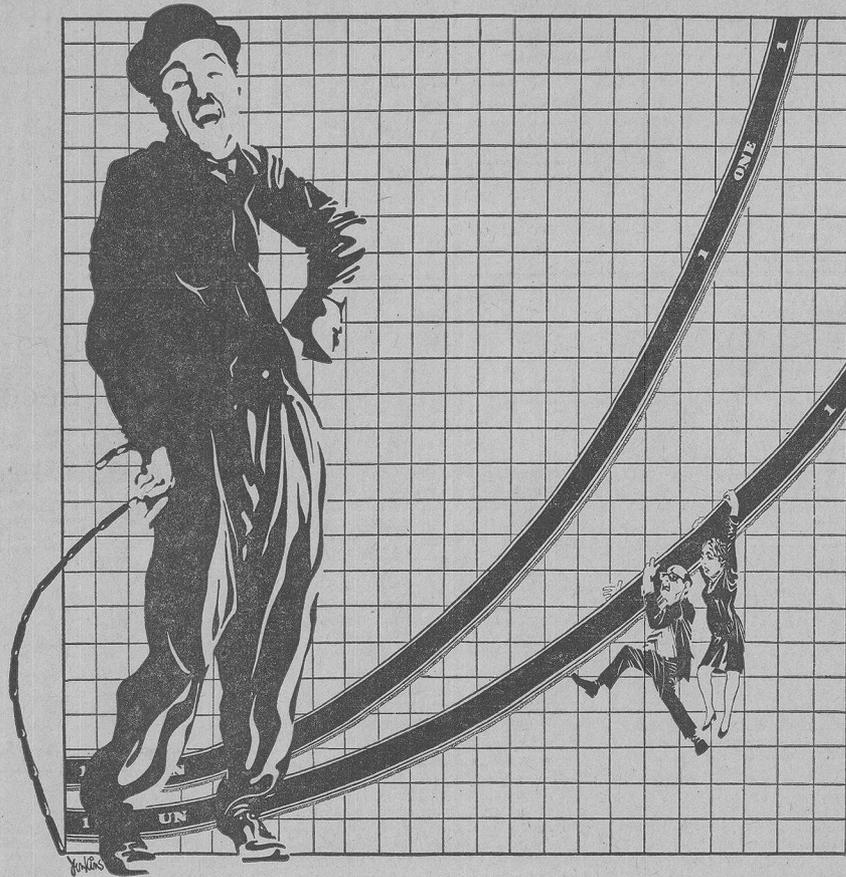
Her husband added a postscript saying he had dictated two letters on the subject but felt each sounded too apologetic "and indeed it is hard not to sound apologetic when one is making \$23,500 a year. However, five years ago this would have been an outstanding salary; today, living how and where we do, it is barely sufficient. As my wife stated, we have much for which to be thankful but as we near 50, we find that we live less and less and just 'exist' from year to year."

Can't keep pace with economy

It is that central fact—failure to keep pace with the economy with which they have always been a bulwark—that distinguishes these cases, and the tens of thousands more they represent.

They draw scoffers, of course ("I am not starving, but I would love to be so poor as to worry about fancy restaurants and fine clothing," wrote a Thunder Bay bank employee) but there is no apology necessary to those of lower incomes for the height of upper-middle-class expectations. As the Hindu proverb goes, "To the blind, the one-eyed man is king."

These people, not rich or privileged at the start, were encouraged by the common standards of society to be thrifty, hard-working, tax-paying achievers, always moving upward. And they did it. But now they find that the implied reward of leisure, comfort and freedom from money worries is no longer there.



If someone on the poverty level loses a home, it is commonly accepted as a tragedy. If someone on a high income struggling to keep his home is coming up empty or worse—another few hundred dollars in debt—at each month end, well, maybe it isn't a tragedy, but it is deeply disturbing, which is what these people express.

One recurring theme is that government bungling and over-spending is responsible for most ills. A man in St. Catharines calls himself a "middle-class pauper," although in 1972 when he retired on \$18,000 a year he thought he was assured of comfort for life.

A retiree is naturally less mobile than another person; the house is there, the life habits, the income, the recreations. But the income is set rigidly—and although handsome, it came from a lifetime of hard work, as anyone with that sort of retirement income will know.

"In 1972 I was delighted to abandon the ratrace," he wrote. "However, that was before our galloping inflation dug its feet with a vengeance into the good old middle class, aided and abetted by the good old government."

So he was happy enough with his lot in 1972, but is alarmed in 1975. He drives a 1967 Skylark, well-rusted.

"I will drive it from its present 64,000 to 100,000 miles, and then turn it in for a class VV at a cost in excess of the 1967 cost of the Buick. Prior to retirement, I guzzled three or four crocks of Canadian Club a week. Thereafter I switched to Bright's 74 sherry, and later followed up this economy by processing vast gallons of wine in my cellar. Do I prefer it to Walker's rye? Of course not."

He has cut down on cigarettes, abandoned plans for retirement travel, and in maintaining the bare bones of what he had thought would be comfortable retirement, still can't reduce old bank or insurance loans.

There is a certain humor in the way he tells what has happened to him. But it is a humor cut somewhat by the knowledge that he worked his life to ensure a retirement of a sort that he now simply hasn't got, that has been removed by factors beyond his control.

The brutal pace that some people maintain to earn their high salaries; and how long they want to go on producing for diminishing personal returns; that's another factor, seldom considered.

From an Ottawa woman: "I wouldn't say my husband and I are on the poverty line yet, but we certainly are seriously wondering whether the returns are worth all the effort we put in. My husband is paying 60 cents of every dollar he earns, in taxes. His income is obviously quite high. His workload is also very heavy. He doesn't go to work at 9 and return at 5. He is responsible for a private business and works long hours to ensure its success.

"There is no question of a raise for him or his employees unless the company is making a profit. In Ottawa, in addition, private business has to compete with high Government pay scales. . . . We are fed up with paying through the nose for people who either won't do their job properly or won't work at all.

"In nine or 10 years, when our children are on their own, what is to prevent us from buying a log cabin in the country and going on unemployment insurance or welfare? We could grow enough to feed ourselves. My husband would have time to do some writing. I could paint a few landscapes and we could both meditate on the state of the world. . . . Maybe that way we could recoup a little of what we have put in over the years.

"Mr. Lalonde is talking about a

Guaranteed Annual Income. This may just be the last straw. If the people in private business give up, where is the money going to come from? If there are too few people putting in and too many taking out, the whole system is going to collapse. Maybe it should. It doesn't seem to have too much going for it at present."

There is that recurring resentment of how some tax money is spent. The Ottawa man who wrote, "God, how stupid people like us were. . . ." The London teacher: "What the hell's going on?" The Mississauga woman who wrote, "People like us. . . are being made fools of." The North Bay woman who talked about throwing their son out, so that he could qualify for student aid.

And, more specifically, a Brantford man: "What happens when our sons or daughters apply for student aid or student loans? The sole government yardstick used in such applications is the gross income of the father, so there is little chance of success. At the same time we see children of well-to-do parents getting grants and interest-free loans; particularly (children) of wealthy farmers who may be worth 10 times as much as the salaried executive, but can show relatively small income after deducting large depreciation on their substantial assets."

In many letters, there was consideration of what might be done. A Thornhill man: "I'm sure many people are fed up with freeloaders and the continuous effort of supporting them with handouts. I sense they are beginning to slacken off in their efforts to keep on producing. The hell with it—'why should I?'—it's not worth it—are becoming the common language.

Early stages of silent revolt

"I sense that the middle class are in the early stages of a so far silent revolution, a malaise in our society that really disturbs me. I wonder if we have sufficient strength to overcome the problem?"

A Toronto executive: "It's hard to imagine these mostly conscientious, hard-working, serious, prideful individuals in any kind of an organized row, but I think they would move in a wave of enthusiasm if a bright new political ethic were to appear."

Of course, the principle of taking income from the upper groups and redistributing it to the lower in subsidies, grants, welfare and other forms of aid is well-established and the principle itself is not really subject to change. Until the people producing most of these funds for transfer payments began to feel the squeeze themselves, there was not much complaint.

Unemployment insurance is also an acceptable principle, but widespread knowledge of violation of the spirit of unemployment insurance has caused public anger. Maybe not enough.

In an interview with Jenny Podoluk, briskly-efficient director-general of the Household Statistics branch of Statistics Canada, we were looking at income tables. Now that unemployment insurance must be declared as income, statistics are available on where it goes among income groups.

In the 1973 figures, \$686,000 in unemployment insurance went to Canadians with declared incomes of \$25,000 a year and above; \$20,000 of that going to persons with incomes in excess of \$50,000 a year.

Shouldn't that make headlines for Canada among the social support systems of the world? At the very least, it is unlikely to provide solace for anyone of any income group who pays

taxes to provide money used for such incomprehensible ends.

Trying to find support statistics for what is happening to the upper middle class today is difficult, because most surveys and tables are a year or more behind—and the problem is now.

It won't be easy for a year or two, at least, to determine the spring of 1975 relationship between rising incomes, rising cost of living and taxes, and loss of disposable income.

But it is possible to take a few random shots. One that Miss Podoluk produced was startling: average family incomes in Canada rose by 91.7 per cent from \$6,536 in 1965 to \$12,532 in 1973; and per capita personal income in 1974 was up 15.1 per cent, or more than the rise in the cost of living; yet in the two years between September, 1972, and September, 1974, personal debt in Canada, not counting mortgages, rose a fantastic 40.4 per cent, outstripping all income and cost-of-living rises by far.

Oddly enough, Canadian holdings of liquid assets—savings, bonds, etc.—also has been increasing. The extent to which any of this applies to the upper middle class can only be guessed. But as they are largely the people with the best credit, much of the borrowing must be theirs.

Their place among the basic sugar-daddies of the system is easier to pin down. For convenience, we picked the \$15,000 to \$25,000 income group.

In 1972 they were about 18 per cent of Canadian income-producing families, and accounted for 29.5 per cent of total income. Miss Podoluk said that the 1973 figure would be higher, close to 40 per cent of total income coming from this one group.

With that potential for affluence, what happened? It may be easier to say how difficulty could have been avoided.

A Toronto man: "My family and I regard ourselves as aristocrats of sorts. We have never owned anything but a broom and a Bissel to sweep our three little Oriental rugs, and don't feel deprived. We own a castoff blender, one wedding-present mixer, a used TV, radio, toaster and frying pan, and three lamps. We find money for wine, concerts, the theatre, an occasional supper out, although together we make less than \$7,000 a year.

"We found an apartment in the Annex for \$140. If there is a silent scream here, it is that we will probably never be able to own a house; the \$25,000 class have bid up the market.

"I hope you will tell your affluent, but pained audience that they are suffering not just the consequences of an inflation that is largely of their own making, but that this is also the result of buying a set of values that was always doomed."

But it isn't the "what might have been" that we are concerned with here, it is the "what is." A Scarborough woman, wife of a teacher: "Twelve years ago, with an income of \$3,300, we borrowed the downpayment on a house. We didn't give much thought to its size, design or location because we didn't plan to stay more than a few years. It left much to be desired. But here we are, 12 years later.

"Last year we decided to move, but on considering the costs we found we had to change our minds. The point is this. We could at least afford to get into the place when we were at the bottom. Yet after seven years in university, two degrees and five years at a top-level teacher's salary, we can't afford to get out without plunging ourselves into permanent debt.

"From the point of view of economics, an increase of four to five times in income which leaves one's lifestyle stock-still shows the extent of what is happening in the country. . . ."

Economy ideal ready in May, Turner says

OTTAWA (CP) — Finance Minister John Turner said yesterday that the Government hopes by the end of May to have reached a consensus among various interests on how to deal with the country's economic troubles.

His comment came during a lunch break in talks with leaders of the Canadian Labor Congress. The meeting between Cabinet ministers and the union leaders was the second in recent weeks.

Cabinet ministers have been meeting in closed sessions since January with leaders of business, labor and professional interest groups in an effort to find mutually agreeable techniques to deal with inflation and a formula to divide up the national income.

Mr. Turner and CLC president Joseph Morris would not give specifics of yesterday's talks but said that the discussions were more detailed than in their previous meeting.

When there is something to report, the Government will announce results of the closed sessions in Parliament and to the country, Mr. Turner added. The congress and the ministers hope to meet a third time in early May.

"I would hope that if something is possible one way or the other that we'd resolve the question. We'd have to resolve the question by the end of May," Mr. Turner said.

The ministers and labor leaders had talked more in depth of possible solutions and the congress had given preliminary reactions to some proposals yesterday, Mr. Turner said.

Mr. Morris said some new aspects of a program had been discussed but the talks still were exploratory.

He defended the secrecy of the talks, saying that the public must be patient because discussions would take time. The talks would be more fruitful in private, he said.

"A lot of patient discussion has got to go into this. It takes time to consult all interests," he added. Mr. Morris said he agreed with the approach and that the problem should have been tackled earlier.

Crossing protest gets fast action from railway

Special to The Globe and Mail
BRACEBRIDGE — Swift action followed a one-minute protest by Muskoka Ambulance Service against a rough CN crossing on Wednesday.

James Thwaites, owner of the six-vehicle ambulance fleet, said CN crews patched holes in the crossing within hours of the demonstration. And the area track supervisor said the railway will replace the tracks at the crossing next month.

Mr. Thwaites said the crossing was particularly uncomfortable for ambulance patients. To bring attention to the situation, one of his drivers unloaded a mock patient and carried him across.



CURIOUS MARCUS

Marcus Ramirez, 2½, of Hamilton, got head through opening between the seat and back of a chair, but was unable to retreat. Firemen dismantled chair to free him.

Morgentaler's release from prison to get award a matter of 'merit'

OTTAWA (CP) — The case of Dr. Henry Morgentaler will be considered "on its merits" if he applies for temporary prison leave to accept a U.S. humanist award, the Quebec Justice Department said yesterday.

"We try to be as humane as possible but we must abide by the rules," said Dr. Maurice Gauthier, director-general of corrections.

Dr. Morgentaler, a Montreal physician who has admitted performing thousands of abortions, began an 18-month prison sentence last week.

The 52-year-old doctor has been named humanist of the year along with feminist Betty Friedan by the American Humanist Association.

The AHA has sent a telegram to Justice Minister Jerome Choquette asking that Dr. Morgentaler be released from prison to accept the award at a May 24 ceremony in St. Louis.

Normally, no prisoners are entitled to temporary leave until they serve at least a third of their sentence, Dr. Gauthier said. But exceptions are made in urgent circumstances, such as a death in the family, or situations considered "vital to rehabilitation."

He said Dr. Morgentaler must apply to the warden at Bordeau Jail in Montreal for temporary leave. A request from an outside source would not be considered.

Prison wardens in turn forward applications to the Justice Department with recommendations for or against.

He said Dr. Morgentaler will not receive special treatment over other prisoners because all must be handled equally.

The possibility of parole, open to most prisoners after they serve one-third of their sentence, is a federal matter, Dr. Gauthier said.

Copies of the AHA telegram, dispatched on Wednesday, were sent to Prime Minister Pierre Trudeau, Opposition Leader Robert Stanfield, Justice Minister Otto Lang, Health Minister Marc Lalonde and Edward Broadbent, New Democratic Party parliamentary leader.

The Prime Minister's office said receipt of the telegram would be acknowledged but no other action would be appropriate.

French declining outside Quebec

Study indicates prospect is bleak for bilingualism

By WILLIAM JOHNSON
Globe and Mail Reporter
OTTAWA — "The prospects are not promising for a bilingual Canada, a study of census data from the past 40 years indicates.

The use of English is shown to be declining in Quebec, as is the use of French outside Quebec, and the trend is described as being toward two distinct language zones bridged by a thin bilingual belt.

"The trends show that French-speaking minorities

are rapidly fading away and could virtually disappear within another generation or two, except in those parts of Ontario and New Brunswick which form the westward and eastward extensions of Quebec," Richard Joy says in a paper to be delivered tomorrow to a sociological conference.

"Polarization of Canada's two main language groups could then become as complete as that now found in Belgium, with French Canada and English Canada in con-

tact only along a narrow bilingual belt that would include Ottawa, Montreal and Moncton."

Mr. Joy, an Ottawa civil servant and author of a book about language use in Canada, will present the evidence for his conclusions at a conference in Montreal on the theme Language and Community. The conference begins today at the Loyola campus of Concordia University.

The picture he paints of English Canada's becoming increasingly English-speaking

and French Canada's becoming increasingly French-speaking is derived from a number of observations:

—In Quebec, bilingualism is more common among men than among women. But even among men, the percentage who can speak English has been in decline. In 1931, 16.1 per cent of the male population spoke English only. The unilingual English population had declined to 9 per cent among males by 1971. The number speaking both French and English also declined to

45.6 per cent from 49.2 per cent. The proportion of males speaking only French rose to 44.7 per cent from 34.1 per cent.

—Outside Quebec, the total number of Francophones remained constant from 1941 to 1971 because the natural increase in people of French origin was offset by the number who adopted English.

The proportion of French-speaking Canadians living outside Quebec declined from one-fifth in 1941 to one-eighth in 1971.

In provinces other than Quebec, Ontario and New Brunswick, the number of Francophones declined from about 200,000 in 1941 to fewer than 125,000 in 1971. And "a continuing downtrend is probable, since there is little net migration of Francophones into these provinces and the age distribution of the 1971 census shows that the number of French-speaking children is below the replacement level."

—In New Brunswick, long expected to be the second province to achieve a majority of Francophones, a downturn in the proportion of Francophones has been evident in the past two censuses.

—In Ontario, which contains more than half the Francophones outside Quebec, their share of the provincial population has dropped to 4.6 per cent in 1971 from 7.6 per cent in 1941.

"Falling birthrates in the rural parishes suggest that the relative strength of the Franco-Ontarians will fall even faster in the future," Mr. Joy says. In addition, Francophones are increasingly moving out of the 11 counties in which they have been concentrated in Eastern and Northern Ontario and into the cities, where the likelihood of their losing their language increases.

Mr. Joy, an engineer by training, is an employee of the federal Department of Industry, Trade and Commerce who began studying the demographic profile of language use in Canada as a hobby. His book, *Languages in Conflict*, was first published in 1967 and republished in 1972. It is considered the best study of language use in Canada.

Crown, coroner call for public crash inquiry because reluctant witnesses frustrate inquest

By DERIK HODGSON
Globe and Mail Reporter
YELLOWKNIFE —

Frustration over the lack of co-operation by key witnesses of an Arctic air disaster last October sparked a call for legal action to set up a public inquiry yesterday.

Crown counsel Edward Brogden told an inquest attempting to find the cause of the crash, which claimed 32 lives, that Ministry of Transport investigators had also been frustrated in their attempts to explore reasons for the crash and noted that there had been an earlier call for a public inquiry under the Transport Act.

Both Coroner Walter England and Mr. Brogden said they strongly supported such an inquiry.

Mr. Brogden said a public inquiry would not be limited in its jurisdiction, nor would it be restricted in its terms of reference.

The call for a public inquiry followed an accusation earlier by the coroner that Panarctic Oils Ltd., owner of the crashed plane, was obstructing the inquest.

Every Panarctic employee, including the two survivors of the crash and a radio operator, have refused to come to the Northwest Territories to testify.

To force the witnesses to give an account of what happened on the Arctic ice, the coroner instructed the Crown to move under a section of the Alberta Evidence Act.

Section 57 of the Alberta Evidence Act provides that an application can be made to the Supreme Court of Alberta for evidence to be taken in that province. Other provinces have similar legislation, the Crown counsel said.

Mr. England has no jurisdiction outside the territories and ordered Mr. Brogden to summon three Panarctic employees who live in Alberta to appear before a commissioner in Alberta to give evidence.

Mr. Brogden indicated that if the Alberta proceedings go ahead, the inquest will be adjourned for several months before the jury has a chance

to see the commissioner evidence and make its recommendations.

The Crown counsel told the inquest that he had been speaking to H. W. Fawcett, chief of the aircraft investigation branch of the Ministry of Transport. He said Mr. Fawcett authorized him to tell the jury that the ministry has been frustrated in its attempts to conduct its investigation of the crash.

He indicated that the federal crash investigators were prepared to go to Transport Minister Jean Marchand again to ask for a public inquiry.

For the second day running yesterday, Mr. England ejected Panarctic's lawyer, Donald Brenner, from the counsel table.

The inquest then ground to a complete halt because there were no witnesses available.

All Panarctic employees summoned—including the two survivors of the Panarctic-owned Lockheed Electra—have refused to testify.

The lack of first-hand knowledge has forced Crown Attorney Edward Brogden to fall back on sworn statements and reports of second-hand conversations.

Mr. England said that if there was any obstruction, it was on behalf of Panarctic and not the inquest.

Jury foreman Willy Lasevich stood in the jury box and noted that the six jurors

shared the coroner's sentiments.

The inquest is awaiting the arrival of Ministry of Transport investigators.

The Vancouver lawyer representing the federally financed exploration consortium was first asked to leave the court enclosure on Wednesday after he had thumbed through inquest exhibits.

At the opening of yesterday's proceedings, Mr. Brenner again tried to sit at the lawyer's table. When the coroner told him to get back into the public seats, Mr. Brenner asked that the record show that Panarctic's representative was prevented from taking part in the proceedings and noted in clipped phrases that the actions of the Crown were most improper.

Mr. England snapped right back and said that if the lawyer was suggesting that the inquest was obstructing Pan-

Barrie chief to quit

BARRIE (CP) — Ed Tschirhart, police chief since 1955, is taking an early retirement next April because he says he is disillusioned with certain aspects of modern police work, particularly the Bail Reform Act. "It's awfully discouraging to feel we can't adequately protect the public by having so little control over known criminals," he said.

MacNabb gets deputy's post in resources

OTTAWA (CP) — Gordon MacNabb, a 44-year-old career civil servant, has been appointed deputy minister of Energy, Mines and Resources.

Mr. MacNabb, until now the senior assistant deputy minister, has been promoted to succeed Thomas Shoyama, who took over Tuesday as deputy minister of finance.

The appointment leaves vacant the job of senior assistant deputy minister of energy, bringing to four the number of vacancies in senior civil service positions.

Other jobs still to be filled are deputy ministers for Health, Industry, Trade and Commerce, Services and Receiver-General.

Mr. MacNabb, a native of Almonte, joined the Water Resources Branch of the Department of Northern Affairs and Natural Resources after graduating from Queen's University in 1954.

The branch became part of the Department of Energy, Mines and Resources in 1966. A year later he was named an assistant deputy minister, becoming senior assistant deputy in 1973.

Bulk carrier becomes lodged in canal bank

Special to The Globe and Mail
THOROLD — The Welland Canal was blocked for several hours yesterday afternoon when the 730-foot bulk carrier J. W. McGiffin struck the rocky east bank and became lodged.

The incident came shortly after noon in high winds gusting to more than 50 miles an hour. St. Lawrence Seaway Authority officials said there was an indication that the downbound vessel lost power in one of its engines shortly before the accident.

The ship, owned by Canada Steamship Lines, was taking water in two of its forward tanks and was to be taken to a wharf for a full inspection of the damage.

The McGiffin was carrying a load of coal for Hamilton.



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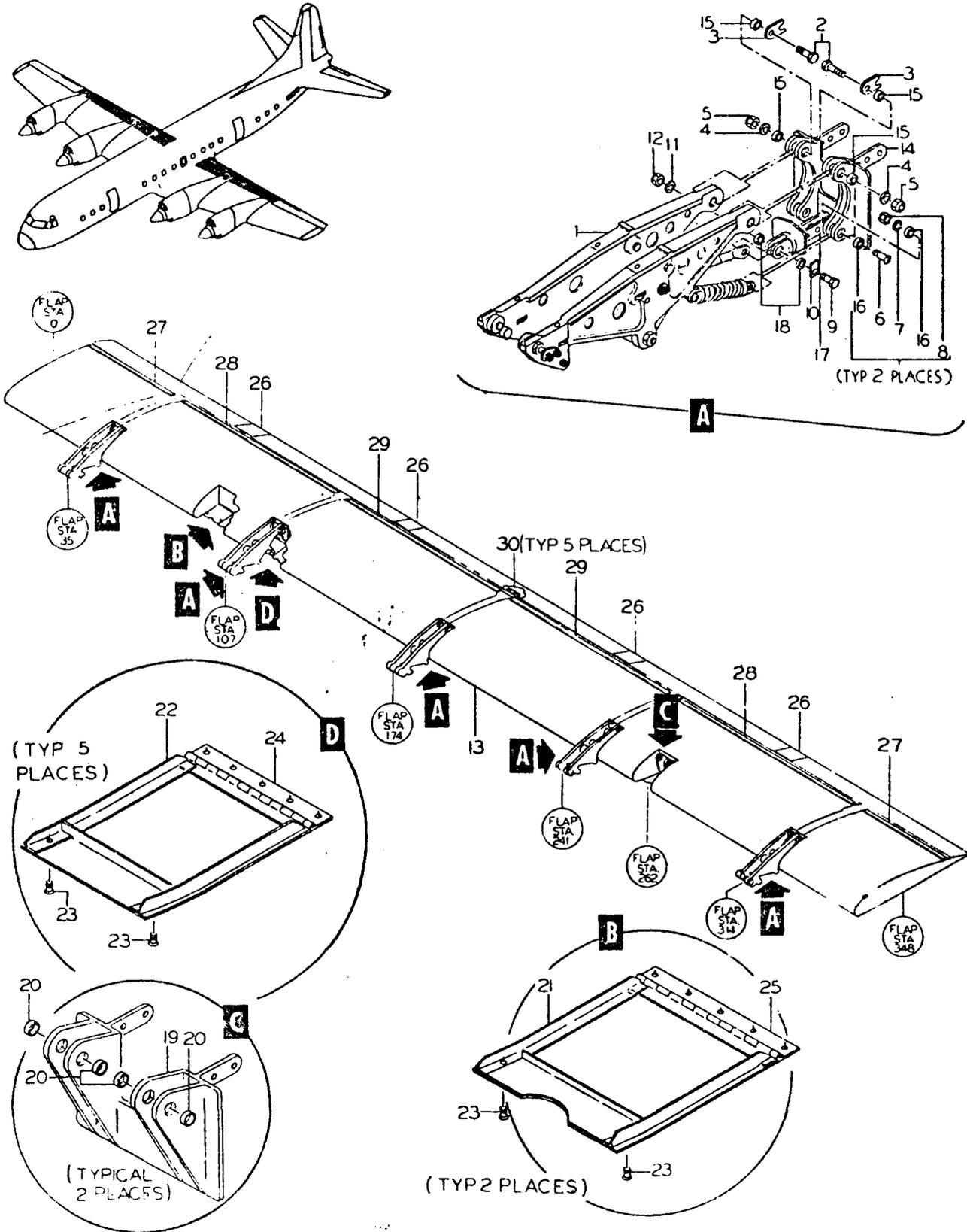
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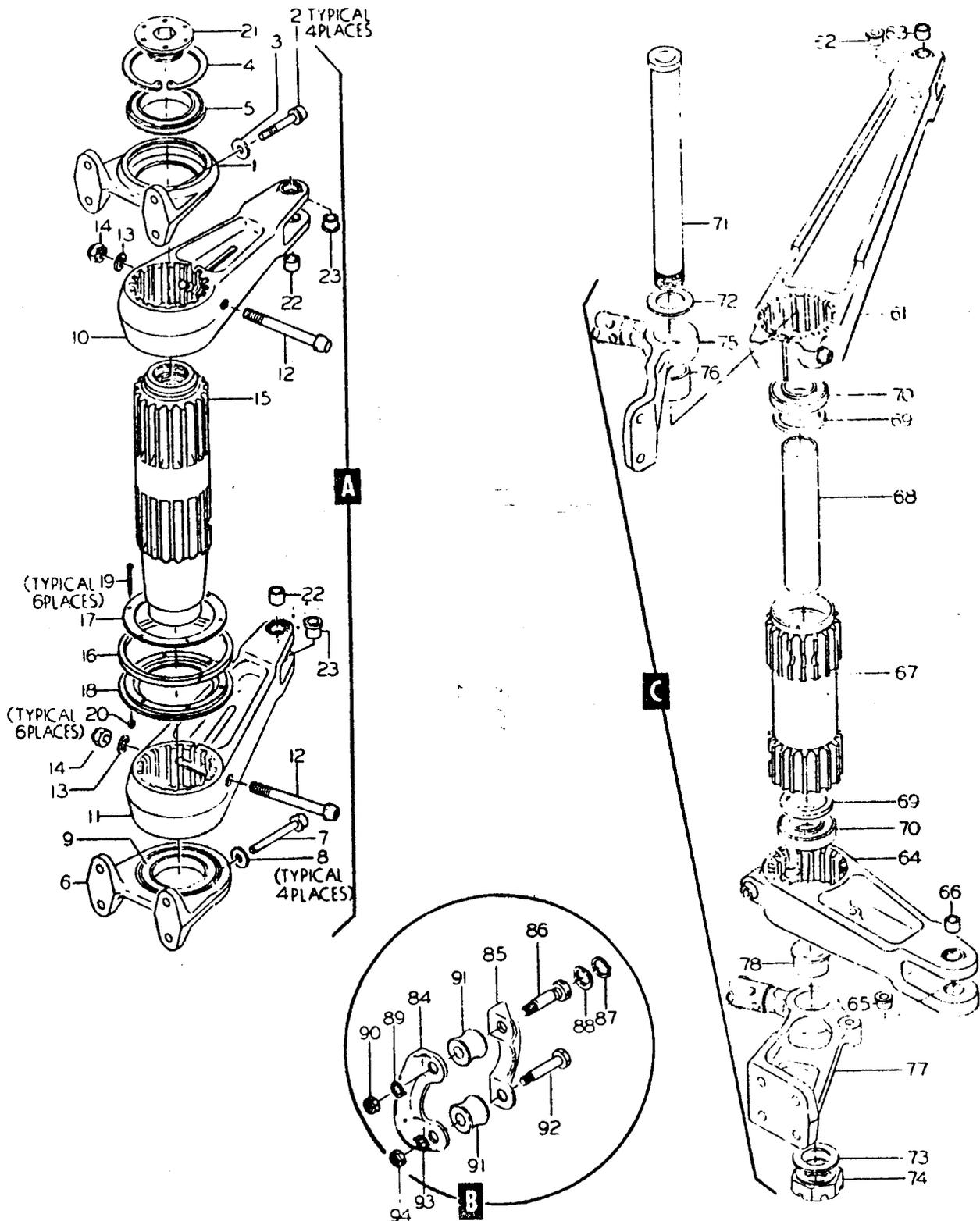
ELECTRA PARTS CATALOG



Flaps, Wing

Figure 1

ELECTRA PARTS CATALOG

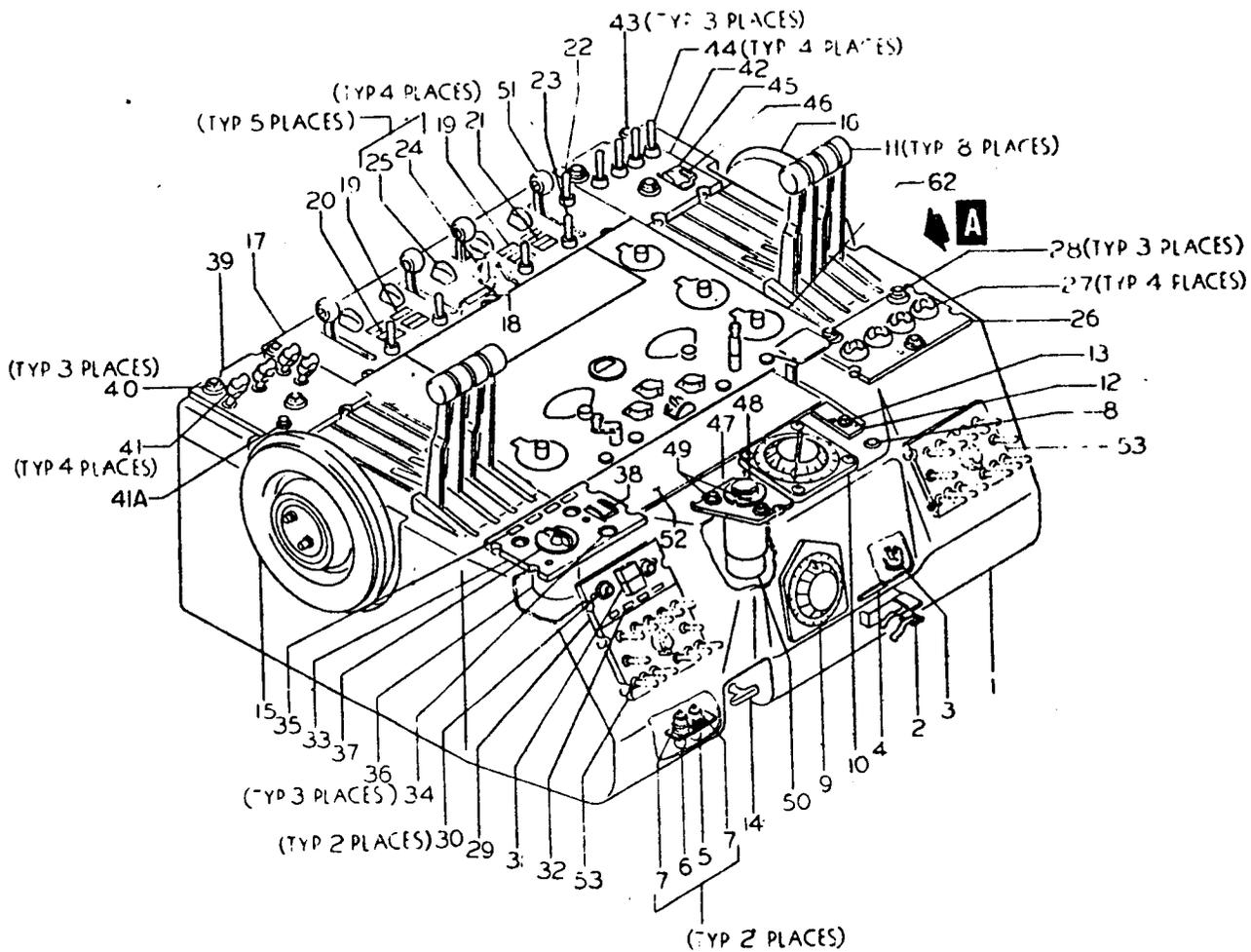
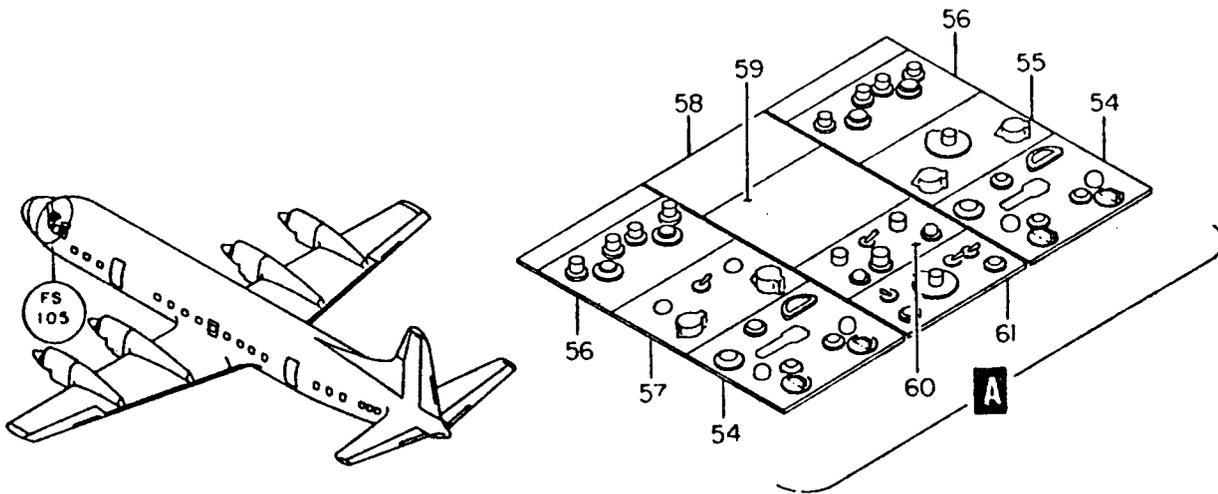


Aleron Controls, Wing

Figure 1. (Sheet 2)

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CALIFORNIA DIVISION • BURBANK, CALIFORNIA

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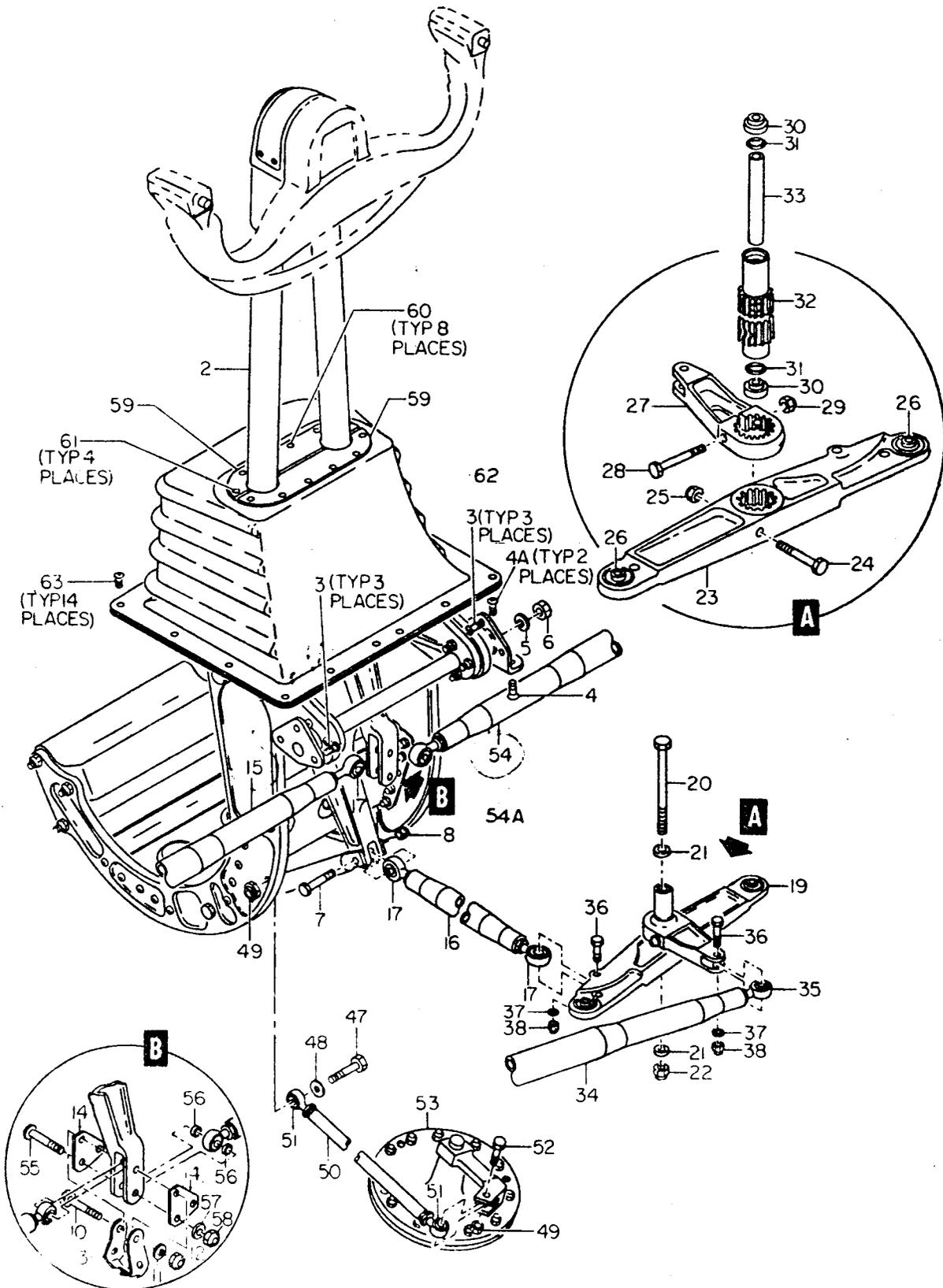


Pedestal, Pilot's Center Control

Figure 2

Feb. 10/59

ELECTRA PARTS CATALOG



Column Complete, Flight Control

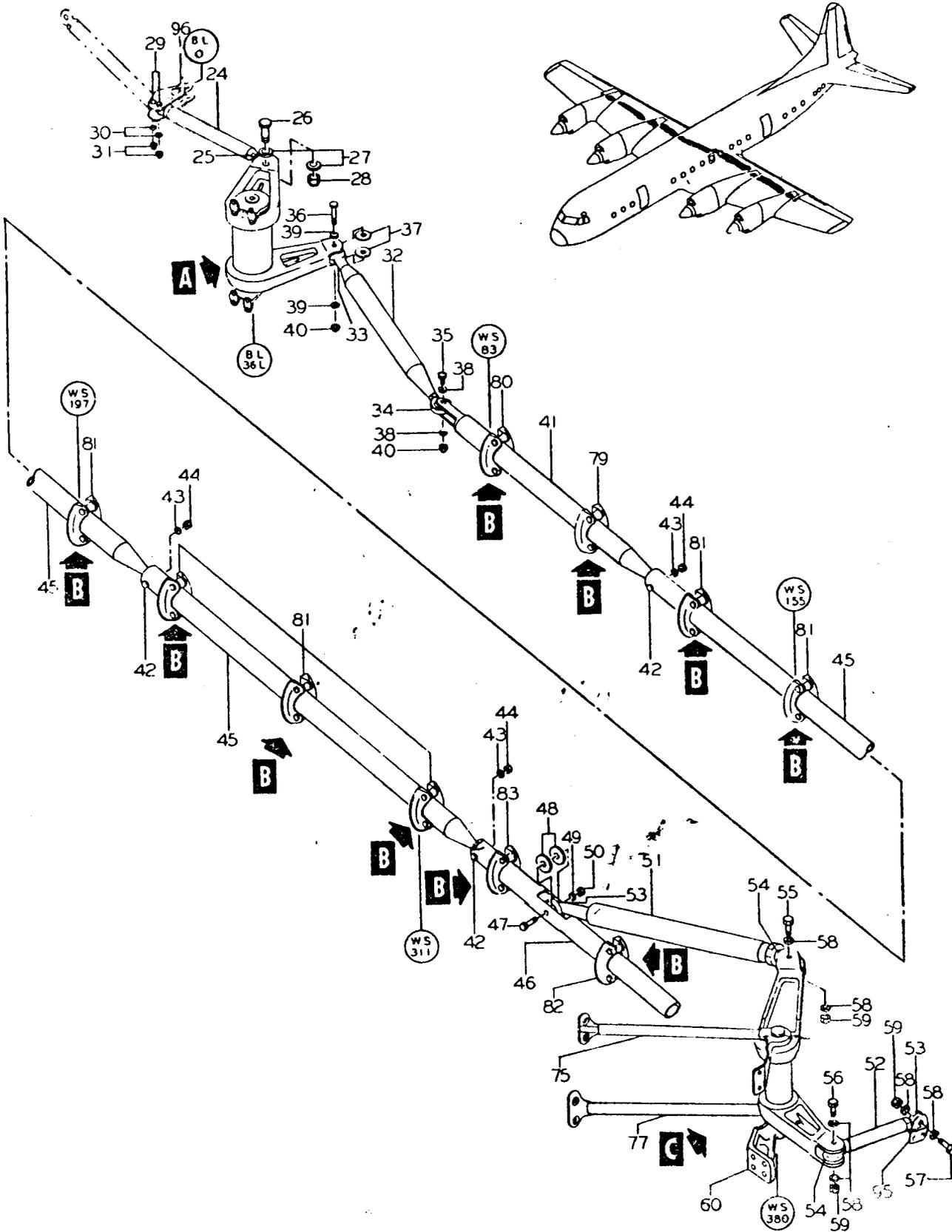
JULY 24/61

Figure 1 (Sheet 2)

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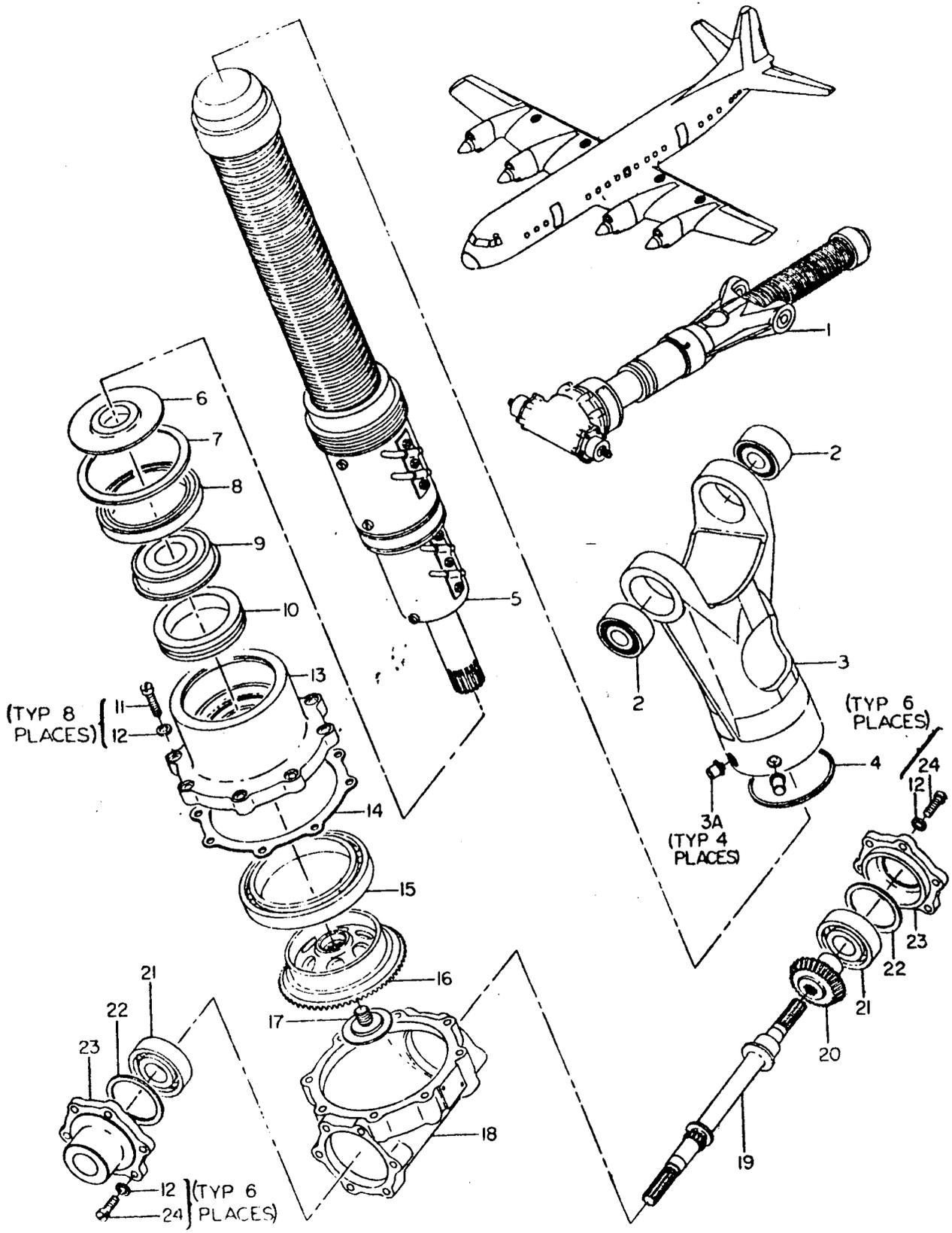


Alleron Controls, Wing

Figure 1 (Sheet 1)

JAN. 25/60

ELECTRA PARTS CATALOG



Actuator, Wing Flap

Figure 10

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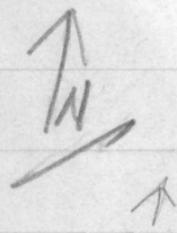
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engine wing wreckage

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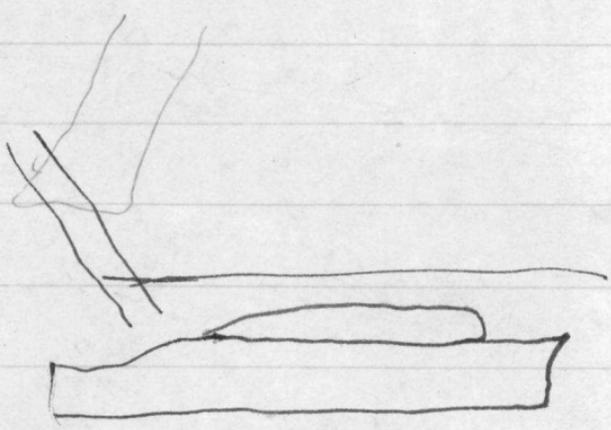
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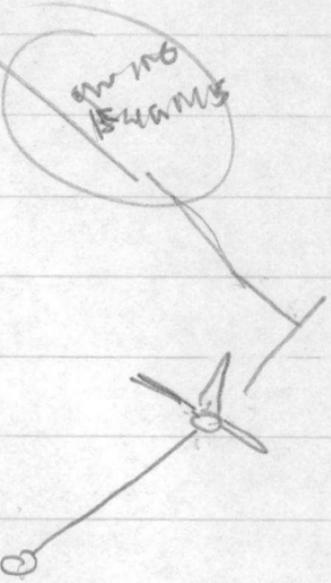
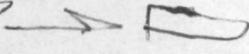
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wing trailing edge flap track



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ENGINE

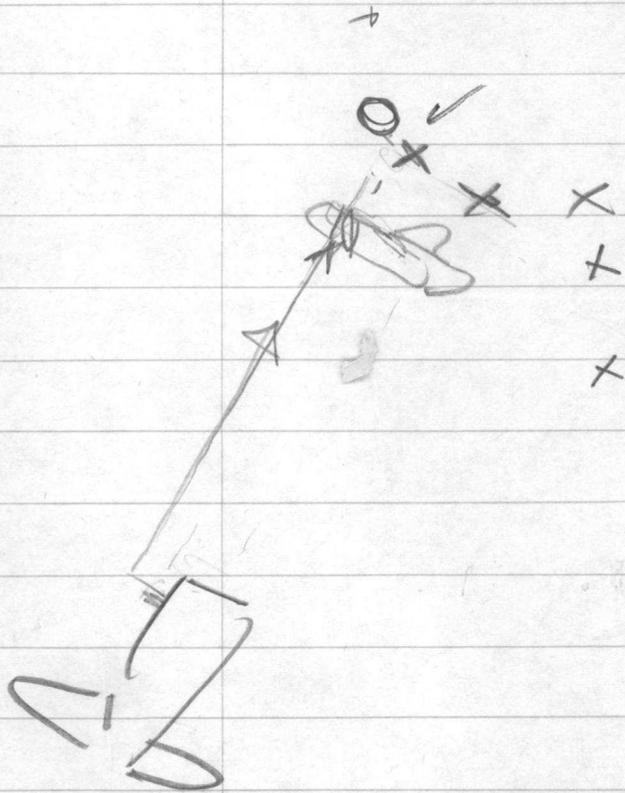


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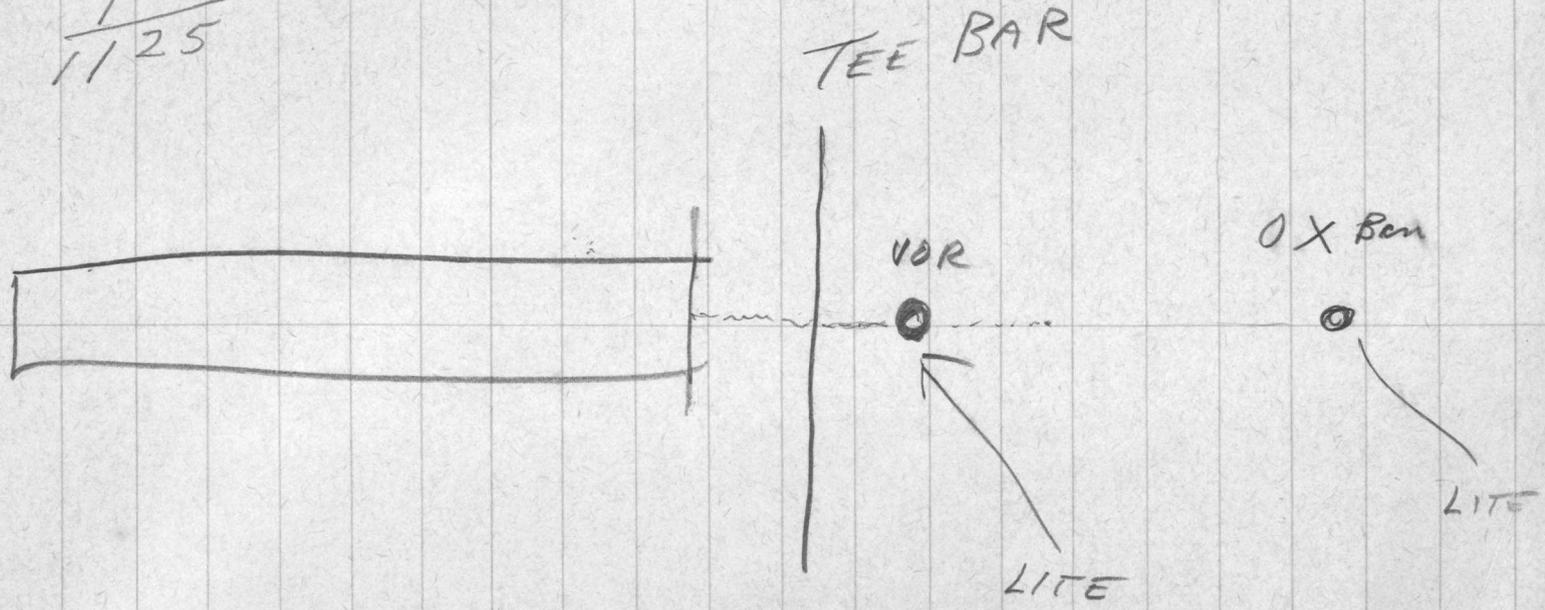
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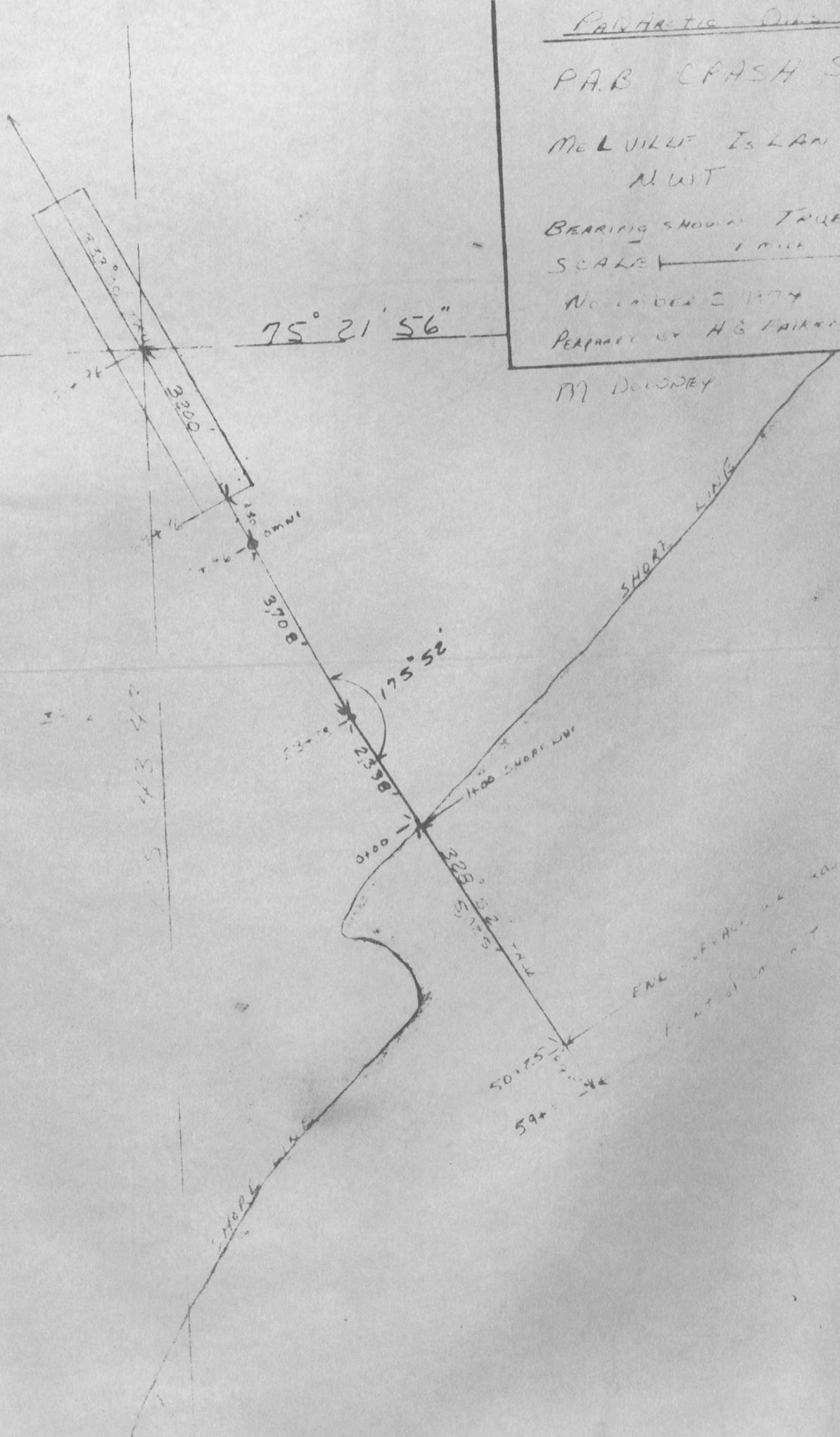
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