

# ZEPHYR

MAY 1973 MAI

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**Published Under Authority of the Assistant Deputy Minister  
Atmospheric Environment Service**

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## ARCTIC CANADA IN EIGHT DAYS

By G.H. Legg

During the last eight days of April, 1973, I travelled through Arctic Canada via Twin Otter aircraft. I was invited as an AES participant on a trip which was sponsored by EPS and included representatives from the Government of the Northwest Territories, Department of Indian and Northern Affairs, DOE Fisheries Service and Fisheries Research Board. The EPS party included officials from Ottawa, Whitehorse, Yellowknife, Winnipeg and Edmonton.

The objective of the trip was to obtain first hand information on DOE facilities and environmental concerns in the Arctic including water supply and waste disposal systems, drilling techniques, control of fuel dumps etc., and for familiarization with Arctic conditions, community industries and activities of natives. The Twin Otter was an excellent aircraft for a trip of this nature, the high wing design permitting excellent visibility from the cabin windows. The relatively short range of the aircraft was not a handicap in as much as the group wished to visit most settlements and facilities enroute, and these visits provided ample opportunity for refueling the aircraft.

The Northbound trip from Yellowknife to Inuvik included visits to Fort Simpson and Norman Wells, views of the Mackenzie Highway and a flight diversion for about 2 hours over the new Nahanni National Park. This National Park covering 1840 square miles, includes much of the South Nahanni River, often described as Canada's most spectacular wild river and Virginia Falls, twice as high as Niagara. The flight offered an excellent view of Deadmen Valley, the name originating from legends of rich placer gold deposits which lured prospectors to the area early in this century and the later discovery of the headless bodies of some of these adventurers. Views of some of the major canyons were spectacular resulting in the expenditure of large quantities of colour film by all members aboard.

The third day of the expedition was devoted to the Mackenzie Delta and Beaufort Sea area. Highlights were visits to an Imperial Oil drill site on the Delta, a view of Herschel Island and a visit to Tuktoyaktuk. The pace of exploration activity in this area is phenomenal. The Beaufort Sea ice cover was criss-crossed with tracks from seismic crews and several seismic work camps were noted on the ice during the flight from Herschel Island to Tuk. Imerick, Imperial Oil's man made island, used as a drilling platform, was visible but appeared unimpressive from the air. The drill site which we visited on the Delta is only a couple of feet above sea level and has been dyked to about eight or ten feet for protection from wave and ice hazards. It was also interesting to note the use which is made of the Mackenzie River where the ice cover provides a natural highway. Numerous heavy transports and cat trains were observed along this artery between Inuvik and Tuk.

On Day 4 the party visited Elf Oil's staging area at Johnson's Pt., Banks Island; Panarctic's staging area at Rae Pt., Melville Island; and Panarctic's Eldridge drill site, Melville Island. We arrived at Resolute in daylight just prior to midnight. A short flight diversion was arranged in order to circle a herd of Muskox on Melville Island and the visits to Johnson's Pt. and Rae Pt. permitted discussions concerning AES Western Region contract weather observing programs at both locations.

The Northernmost portion of the tour was on Day 5 when the party visited the AES facility at Eureka on Northern Ellesmere Island and the picturesque eskimo community at Grise Fiord on the north side of Jones Sound. This quaint village appeared

practically deserted when we landed about 11 a.m. We were met by the nurse who operates the community nursing station. She stated she was the only one in the village who didn't speak 'eskimo' but she was learning. However, quite a few of the younger inhabitants could speak English. During our conversation we learned that the natives were all in bed. Normally they do not retire until 4 or 5 a.m. and with the long hours of daylight she too had lost the sense of the importance of time and no longer uses a watch.

Additional information concerning activities of the natives at Grise Fiord was volunteered by the nurse. They had visitors from Greenland who had travelled with dog teams for 18 days across the ice to reach the village in search of wives. She didn't think the visitors would be very successful in reaching their objective since the village had only 3 teenage girls. Further, these girls had studied home economics and hygiene, etc., at school and did not want to become hunters' wives and assume the traditional responsibilities of seal skinning, etc. Instead they wished to marry skilled or professional men. This shift in philosophy may well work to the advantage of AES in the future since perhaps we can encourage a few of the boys to become weather observers instead of hunters.

Day 5 included a view of drill sites in the Eureka area, a recent oil spill at Eureka, a visit to a Dome drill site on Christian Island, a Sun Oil drill site on Linchen Island (about 15 miles south of Amund Ringnes Island) and a visit to the Cominco lead and zinc mine on Little Cornwallis Island. The Linchen Island operation was particularly interesting in that the shoal is only about 1 foot above sea level and the company must abandon the site prior to any Spring ice movement. In this connection they have placed a number of transponders in the ice surrounding the island in order to identify any perceptible motion that would warrant evacuation procedures. The Cominco mine operation was a further highlight, the company having expended about \$6 million so far on development work. Some tens of millions of tons of lead and zinc ore grading 20% combined lead and zinc have been identified.

Because of weather over Southern Baffin Island on Day 6 the flight diverted to a Southbound route with visits to Spence Bay, Pelly Bay, Baker Lake and Rankin Inlet. Visits were made to the local cooperatives in each community through which the natives market their carvings and wares. A fish processing and canning factory at Rankin Inlet provided samples of processed Char, Arctic Lake Trout, etc., for all the visitors.

After an overnight stop at Rankin Inlet the tour continued to Eskimo Pt., thence on to Churchill with a view of polar bear and seals on the ice cover of Hudson Bay. On Day 8 the party returned to Yellowknife via Uranium City.

Throughout the tour AES's presence in the Arctic was very much in evidence. Weather information and forecasts provided by our offices at Yellowknife, Inuvik and Resolute were used extensively in routing the tour to maximum advantage. In all cases the information obtained proved extremely accurate and was well presented by our presentation technicians and meteorologists. The group toured the Upper Air Station at Inuvik where our personnel answered many questions concerning the AES upper air program. AES Stevenson Screens housing instruments were apparent at many of the stops and the group noted the upper air radomes at Eureka, Resolute, Baker Lake and Churchill. The Officer-in-Charge at Eureka very capably fielded questions from the group concerning water shortage and waste disposal facilities and accommodation.

One cannot help being impressed with the extent of activity in the north. The Arctic, which very recently was a vast wilderness, is now bursting with activity. Many

of the Arctic Islands are dotted with work camps all offering comfortable accommodation and supplied mainly with electric heat. Offices within these camps cannot be described as spacious but they are certainly modern and are equipped with comfortable furniture and sophisticated scientific equipment. Mess halls are regularly supplied with fresh vegetables, milk and bread, etc. by Hercules flights from Southern Canada.

Having travelled North of the Arctic Circle all participants were awarded certificates of membership in the exclusive Polar Bear Chapter, Order of Arctic Adventurers. I am having mine framed as a reminder of a memorable 8 days of Arctic exploration with congenial and interesting companions.

### PARTICIPANTS IN DOE ARCTIC TRIP

1. Mr. Maurice Thomas      Regional Oil & Gas Engineer, DINA, Yellowknife
2. Mr. Colin Wykes          District Manager – Yukon Territory EPS, Whitehorse
3. Mr. C.A. (Sandy) Lewis   District Manager    N.W.T EPS. Yellowknife
4. Mr. John Milne            Head, Resource Impact Division Fisheries Service, Winnipeg
5. Mr. Doug Johnston        Regional Director, N.W Region EPS, Edmonton
6. Mr. Joe Bergasse         Asst. Director, Dept. of Industry & Development, Gov't of the NWT, Yellowknife
7. Mr. Walter K Sharpe      Director, Water Control Programs Water Pollution Control Directorate EPS, Ottawa
8. Mr. Jack Parkinson       Director, Ecological Protection Branch. EPS, Ottawa
9. Mr. Bob Pettigrew        Chief, Environmental Emergency Branch EPS, Edmonton
10. Dr. Gerry Hunter         Deputy Director, Arctic Biological Station FRB, Ste. Anne de Bellevue, Quebec
11. Mr. George Legg         Regional Director AES    Edmonton
12. Mr. Bob Dawson         Chief, Technical Branch EPS, Edmonton
13. Mr. Harry Hill            Ecological Protection Branch EPS, Ottawa

## IMPLANTATION D'UN BUREAU METEOROLOGIQUE A MATAGAMI

Le nord ouest Québécois est présentement en pleine effervescence. L'Hydro Québec est à arnacher les diverses rivières situées dans ce vaste territoire, délimité au nord par le 55e parallèle, au sud par le 49e parallèle, à l'ouest par la frontière de l'Ontario, à l'est par une ligne située au nord de Senneterre et Chibougamau rejoignant la longitude 70° et auquel l'on a donné le nom de Municipalité de la Baie James.

Notre service ne pouvait laisser passer un tel développement sans s'impliquer directement. C'est pourquoi la Région du Québec, du Service de l'environnement atmosphérique ouvrira le 15 juin 1973 un bureau météorologique à l'Aéroport de Matagami, pour aider au transport aérien. Une enquête récente révèle que le nombre de mouvements d'avions est supérieur à celui que connaît présentement l'Aéroport international d'Ottawa.

Ce bureau ne servira pas uniquement l'aviation, mais aussi l'organisme parallèle à l'Hydro Québec, la Société de Développement de la Baie James (SDBJ) qui fut formée pour développer toutes les ressources de cette vaste partie de la Province de Québec. Les derniers rapports indiquent que d'ici quinze (15) ans, des villes seront créées, les ressources exploitées et le bureau de Matagami devra répondre autant aux demandes de prévisions ordinaires et spéciales, de données climatologiques, que de servir de trait d'union à notre service scientifique, qui aura sans doute à s'impliquer devant les nombreuses requêtes possibles.

La ville de Matagami présentement bourdonne d'activités. Elle sert d'étape au transport aérien, terrestre et ferroviaire et demeurera le pôle d'attraction de la partie sud de la Municipalité de la Baie James. La partie nord verra l'an prochain l'ouverture de ce que l'on prévoit la future capitale du projet, soit le Poste de la Rivière Grande (LG-2), située à 60 milles de Fort-Georges à l'intérieur des terres, le long de la Rivière Grande.

M. Philippe Sigouin présentement technicien en présentation au bureau de Québec, vient d'accepter la charge de Chef de Service au bureau de Matagami et d'ici peu, nous prévoyons lui adjoindre deux (2) subordonnés pour lui permettre de mener à bien ce défi.

Ce nouveau poste comporte de nombreuses responsabilités dont une des plus importantes sera de développer un réseau secondaire d'observateurs bénévoles. Nous espérons que les observations provenant de ces stations seront assez nombreuses pour aider les prévisionnistes du bureau de Montréal à préparer des prévisions détaillées pour le secteur.

L'absence de locaux nous oblige à loger notre personnel et leur famille dans des roulottes, qui seront installées au parc prévu à cet effet, dans le centre ville. A l'Aéroport de Matagami, là aussi les espaces sont très limités et nous devons installer une roulotte adjacente au bureau des télécommunications, avec qui nous partagerons le programme d'observations.

L'an prochain à la même date, nous comptons ouvrir un bureau similaire au Poste LG-2, dans des locaux permanents qui seront construits à l'aéroport. Notre personnel, nous l'espérons, pourra loger dans des immeubles qui seront érigés dans la future ville de LG-2 située à peu de distance d'un des barrages principaux de tout le complexe.

## WEATHER OBSERVERS

More than three thousand students have received meteorological training since the Air Services Training School in Ottawa opened its door in 1960. Approximately one-quarter of these were french-speaking trainees destined for bilingual weather offices. To meet the increasing requirement for providing weather services to the francophone population, the bilingual capability of the meteorological faculty has been expanded so that bilingual courses can now be given.

The first weather observer training course to be conducted entirely in the French language graduated from the school on April 13.

Regular training courses at this central school in Ottawa turn out an average of one hundred new weather observers each year as well as an equal number of trainees on advanced courses who are selected to staff the larger weather offices.

The meteorological faculty consists of twenty instructors including five who are bilingual, assigned by the Atmospheric Environment Service to the school to conduct meteorological courses for the Department of Environment as well as for Air Traffic Controllers and Radio Operators.

The A.E.S. employs more than twelve hundred meteorological technicians at two hundred and forty-five weather stations stretching from Ocean Weather Ship Papa in the Pacific to St. John's, Newfoundland, in the east and from Alert and Eureka in the Arctic to Windsor, Ontario, in the south.

The recent graduating class of francophone students arrived in Ottawa on January 5, from their homes in Nova Scotia and Quebec. After fourteen weeks of intensive training, the seven graduates were ready to assume their roles as weather observers at widely scattered meteorological stations in Eastern Canada.

The top-ranking student, Nicole Raymond, a young lady from St. Bruno, Quebec, has been assigned to the Weather Office in Ottawa. The lone Nova Scotia graduate, Gary Saulnier, will report to the Forecast Office in Goose Bay, Labrador.

Graduation certificates were presented to the successful students by the keynote speaker, H. Kruger, Chief, Observational Systems, of the Atmospheric Environment Service Headquarters in Toronto. Meanwhile, preparations are under way for the next Meteorological Technician Course due to begin in a few weeks and for other unilingual French courses at present under development.

The April graduates are Joseph Yves Marcel Brosseau, Ste-Dorothee, Laval, Quebec; Yves Landry, Laval, Quebec; Jacques Lavigne, Montreal, Quebec; J.A. Renald Lirette, Laval, Quebec; Marie Nicole Irene Raymond, St-Bruno, Quebec; Gary Vincent Saulnier, Liverpool, Nova Scotia; Marcel J Saumure, Verdun, Quebec.

## LA METEO DANS LA LANGUE DE MOLIERE

L'Ecole des Services de l'Air, ouverte depuis 1960, compte actuellement plus de trois mille anciens étudiants. De ce nombre, 25 pour cent sont des Canadiens francophones appelés à travailler dans un bureau météorologique bilingue. Comme la demande pour un service de météo dans les deux langues officielles du pays se fait de plus en plus grande, il devenait nécessaire aux autorités de poser un geste qui favoriserait la formation de météorologues bilingues. Et c'est ainsi qu'un premier cours fut donné uniquement en français!

Le 13 avril dernier devenait, à cet égard, un moment historique pour l'Ecole des Services de l'Air. Ce jour-là, les premiers étudiants à suivre un cours en techniques de météorologie unilingue français recevaient leur diplôme.

Chaque année, environ cent nouveaux techniciens en météorologie terminent leur formation; un nombre identique de météorologues destinés à travailler dans des bureaux plus importants, suivent des cours de perfectionnement.

La section de l'Ecole spécialisée en météorologie compte 20 instructeurs dont cinq bilingues, venant du Service de l'environnement atmosphérique, afin de donner des cours de formation météorologique pour le compte du ministère de l'Environnement, du contrôle de la circulation aérienne et des opérations radio.

Le Service de l'environnement atmosphérique emploie plus de 1,200 techniciens en météorologie qui font leur travail dans 245 stations échelonnées du navire météorologique PAPA dans le Pacifique à Saint-Jean (Terre-Neuve) en passant par Alert dans l'Arctique et Windsor (Ontario) dans le Sud.

Ces nouveaux diplômés de langue française arrivèrent à Ottawa le 5 janvier. Après un stage de formation de 14 semaines à l'Ecole, les sept nouveaux techniciens en météorologie sont en mesure d'entreprendre une carrière de météorologue dans différentes stations de l'Est du Canada.

Nicole Raymond, une jeune citoyenne de St-Bruno (Qué.) qui a obtenu les meilleurs résultats dans le groupe, travaillera au Bureau météorologique à Ottawa. Pour sa part, le seul diplômé de la Nouvelle-Ecosse, sera à l'emploi de la station de Goose Bay, au Labrador.

Monsieur H. Kruger, chef de la Section des systèmes d'observation au quartier général du Service de l'environnement atmosphérique à Toronto, a remis les diplômés aux sept heureux étudiants. Entre temp on prépare une nouvelle session de formation de technicien en météorologie qui devrait commencer dans quelques semaines et on fait des plans pour un nouveau cours en français.

Les diplômés du 13 avril sont: Yves-Marcel Brousseau (Sainte-Dorothée, Qué.), Yves Landry (Laval, Qué.), Jacques Lavigne (Montréal, Qué.), Reynald Lirette (Laval, Qué.), Nicole Raymond (Saint-Bruno, Qué.), Gary Vincent Saulnier (Liverpool, N.-E.) et Marcel Saumure (Verdun, Qué.).



## IMO/WMO CENTENARY EXHIBIT

To commemorate the IMO/WMO Centenary this year the CMS Winnipeg Centre and the Weather Office combined to organize a weather exhibit in the concourse of the Polo Park Shopping Centre. The exhibit was assembled early Thursday morning, April 12th and continued for three days, closing Saturday evening April 14th. During this interval it is estimated that nearly 3,000 people visited the exhibit while it was manned.

A six and a half foot backdrop, approximately twenty feet in length was used as the main structure for the booth. A twelve foot banner advertising the World Meteorological Centenary was placed on the front of the backdrop. Other display material used in this area was in keeping with the theme "One Hundred Years of International Cooperation in Meteorology." This included a large poster explaining the World Meteorological Weather Code along with several Hemisphere weather charts. A blackboard was used to show the current Foreign observations. To illustrate World standardization of observations, a Stevensen Screen equipped with ordinary dry and wet thermometers, along with maximum and minimum thermometers, was displayed. This section of the exhibit also included a reverse screen projector showing 30 slides of "Weathermen at Work." In addition, the two Garrett Corporation Standard Atmosphere Charts were displayed in this part of the exhibit.

A glass showcase was used for various weather instruments including rain gauges, a thermograph, a hygrograph, a barograph, a sunshine recorder, a radiosonde and a radiosonde balloon.

On the other side of the backdrop, coloured photographs, WMO posters, air masses and fronts illustrations and locally improvised posters were displayed.

WMO pamphlets and instruction sheets on how to measure rainfall, air pressure, wind speed and direction were made available to the public. Around 2,000 copies of the hand-out material was taken, usually by teenagers, with around 300 copies of the pamphlets being more popular with the adults.

During working hours the booth was staffed by two members of the Weather Office. During the evening hours and Saturday afternoon volunteers from the CMS Winnipeg Centre donated their time. In addition, staff from both the Weather Central and Weather Office, along with Regional Headquarters, assisted in setting up the exhibit. Regional Headquarters also looked after the photos taken of the booth.

Most of the employees who worked in the booth found that the display material was generally self-explanatory so that a great deal of discussion with the public was not required. Enquiries dealt mostly with purchasing weather instruments and ways and means of getting various types of services from the Weather Office.

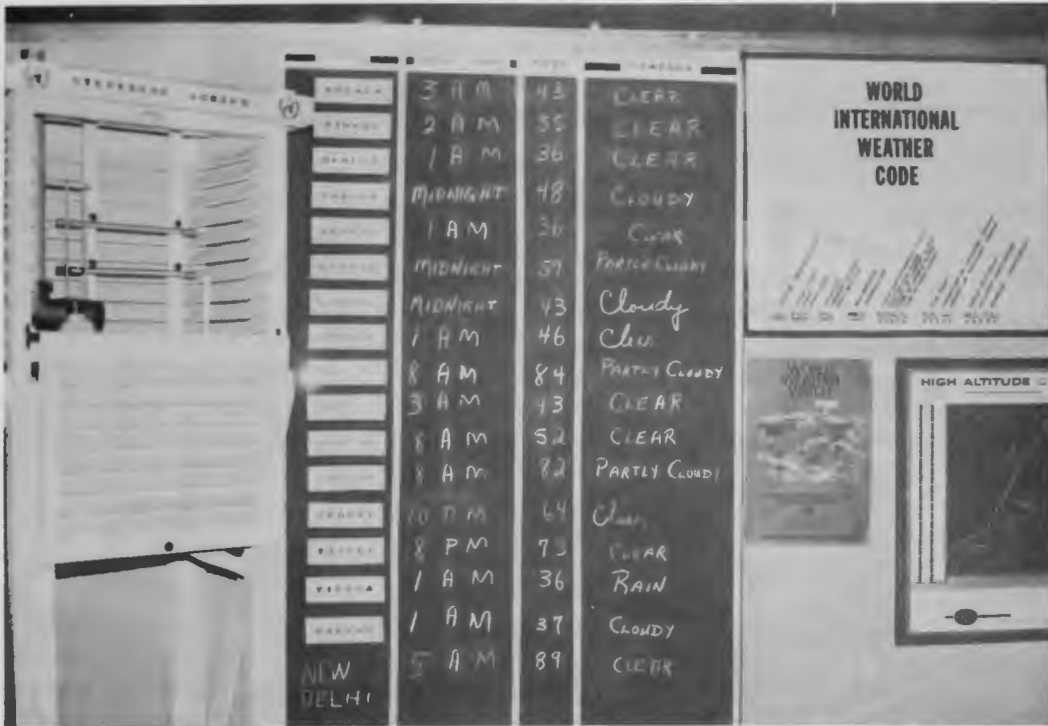
The exhibit was achieved at a minimum of cost through the splendid cooperation of everyone who was approached to help. Since it took place about the same time as the Manitoba Aviation Council's Aviation Week, it is recommended that in future an effort be made to combine our exhibit with the Council's. From all reports, their week has proved to be the most popular with the public of any of the displays put in the concourse throughout the entire year.



*Polo Park, Winnipeg, 1973.*



*Back Side of Display Polo Park, Winnipeg April, 1973.*



Polo Park, Winnipeg, 1973



Polo Park, Winnipeg, 1973

"It's his new 'every rain cloud has a silver lining' approach to the weather, dear".



The Chronicle-Herald, Halifax.

## AUTOMOBILE EMISSION CONTROL

Ontario Section, Air Pollution Control Association  
1973 Spring Meeting, Hamilton, April 16

### Introduction

The purpose of this session was "to define the current status of Federal emission standards now in effect and proposed for future automobiles, the basis for these standards, the effects they will have on air quality in Ontario, the costs and the benefits of these standards to the citizens of Ontario and Canada" Representatives from the Federal and Ontario governments, university, and the automobile and petroleum industries presented their respective points of view highlighting the particular areas where controversy exists between governments and industry.

### Federal Viewpoint:

The Federal policy of paralleling the U.S. Auto Emission Standards (referred to as me-too-ism) was defended by Jan Chrystman from the Environmental Protection Service.

His main points were

- (1) It makes good economic sense to have the same standards in Canada as the U.S. because of the integrated technology and automotive market on the North American Continent.
- (2) Transportation (mostly automobiles) is responsible for over 50% by weight of total air pollutants in Canada in the form of carbon monoxide, hydrocarbons, nitrogen oxides, lead compounds, and indirectly oxidants.
- (3) Ambient air quality objectives for both carbon monoxide and total oxidants are currently exceeded on many occasions in several Canadian cities.
- (4) The present (1973) standards are adequate to maintain desirable air quality only for this decade, while the 1975/76 proposed standards are necessary to maintain desirable air quality in the next decade
- (5) Pollution control devices may cause an average 8% increase in fuel consumption - a small increase compared to such factors as *weight* (an addition of 1500 lbs. results in 30% fuel penalty), *automatic transmission* (6%), and *air conditioning* (9% yearly average or 20% in-use).
- (6) Annual maintenance cost of the 1975 catalyst unit is estimated to be about \$50.10. However, other maintenance costs should be lower because of the use of unleaded gasoline - the net difference being about \$23.80 This is only \$8.30 more than the cost of maintaining the pollution control devices on the 1973 vehicles.
- (7) The conclusion is that the 1975/76 standards are necessary to ensure the maintenance of desirable air quality, and that the cost to the vehicle owner will be relatively low, and certainly worth the benefit to be derived from a cleaner environment.

### **Ontario Viewpoint:**

John Jeffries of the Ontario Air Management Branch summarized the improvement in air quality which resulted from Ontario's 1968 auto emission legislation and discussed the improvement that is likely to be achieved as a result of existing and proposed Federal legislation.

His main conclusions were:

- (1) Control measures have produced considerable reductions in the level of carbon monoxide, and the proposed Federal "acceptable" standards will probably be achieved at all locations in 1973 and certainly by 1975 with existing pollution controls.
- (2) Introduction of automotive controls has not altered the total hydrocarbon pollution. However, it is important to note that present monitoring techniques do not differentiate between the numerous varieties of hydrocarbons including methane which is also produced in large amounts from natural sources.
- (3) No conclusions are possible about nitrogen oxides because controls for these pollutants have only just been introduced and also because stationary sources are also major contributors.

### **Energy Demand:**

Professor Philip G. Hill of Queen's University discussed the economic relationship of the proposed standards and the energy crisis.

His main conclusions were:

- (1) The proposed 1976 control devices could increase fuel consumption by 150 trillion BTU per year in Ontario by 1984. The total cost to Ontario could be over 1 billion dollars per year.
- (2) A shift to mass transit systems in urban areas should be considered as an additional "control device" in establishing the optimum strategy for preserving satisfactory air quality in Ontario in the future.
- (3) Alternate fuels such as hydrogen and electric systems linked with nuclear power generators should be considered.

### **Industry Viewpoint:**

C.M. Heinen of Chrysler Corporation summarized the automotive industry viewpoint:

His main points were

- (1) Air Quality in the U.S. is improving.
- (2) Natural sources produce 15 times as many oxides of nitrogen, 10 times as much carbon monoxide and 6 times as many hydrocarbons as man.

- (3) Although the automobile may be the source of 40% by weight of the total air pollutants, weight is not a valid measure of harmfulness. Concentrations and toxicity are the important factors and on this basis motor vehicles account for only about 10% of the total potentially harmful emissions
- (4) There is no evidence that ambient levels of auto emissions have an adverse effect on health
- (5) The 1975/76 standards for auto emissions are far more stringent than required to achieve a desirable air quality.
- (6) The cost of implementing the 1975/76 standards will be about \$8 billion while the benefit to "material and vegetation" will be less than \$1 billion (the benefit to health cannot be assessed). (This is, in the United States)
- (7) No technology is yet available that will meet all of the requirements.
- (8) The fuel cost penalty will amount to about 30% or \$10 billion per year. This includes costs of producing unleaded gasoline, increased fuel consumption, expensive catalytic mufflers, etc
- (9) The 1975/76 standards should be suspended while the present (1973) standards are maintained.
- (10) All four auto manufacturers have indicated that they could produce a separate vehicle without the catalytic reactors for the Canadian market with substantial savings.

**Summary:**

The main point of controversy between government and industry seem to be as follows:

- (1) Do automobiles contribute as large a fraction of the total air pollutants as indicated by the Federal Governments' Nationwide emissions inventory suggests?
- (2) Are auto emissions as harmful as has previously been considered?
- (3) Is present technology adequate to meet the proposed 1975/76 standards?
- (4) Is the cost of implementing the standards justified by the benefits produced?
- (5) Can automobiles with different emission control specifications be produced for Canadian and U.S. markets?



### SUGGESTION AWARD

On May 8, 1973 Mr. Norman R. Lloyd, meteorological technician on the staff of observers at Ft. McMurray airport, was presented with a 'Suggestion Award' cheque and citation by Mr. C.G. Milgate, Western Regional Supervisor of Surface Inspection.

Mr. Lloyd suggested that the station alidade be moved to a position in the shadow of the terminal buildings where it would not be adversely affected by the lights of the vehicle parking area.



*Presentation of Award to N.R. Lloyd (Left) by C.G. Milgate.*



### GYMNASTIQUE ARTICULATOIRE

Pour ceux qui veulent améliorer leur diction française, les phrases suivantes pourront peut-être vous aider. Essayez-les!

D'indestructibles vestiges.  
Une inéluctable destruction.  
Attention à la lunule  
Les sous tintaient et tintinnabulaient dans sa tirelire.  
Ce luxe absurde offusque les frustrés.  
Doute-il du goût de tous?  
La reine enchaînée entra en scène.  
Le spectre de la lèpre affecte des formes funèbres.  
Nous ne nous doutions nullement de leur inanité.  
Si ceci se sait, ses soins sont sans succès.  
Je cherche un jeune chirurgien attaché au chirurgien en chef.

### METSTAT LADY RETIRES

Miss Elsie Morgan, the Headquarters person with all the answers, met for luncheon with a large group of friends on May 10 to mark the occasion of her retirement. No longer will her perky voice and rapid footsteps be heard ringing through the otherwise sedate surroundings in the northerly section of the third floor at 4905 Dufferin Street. As it must to us all, the time has come for her to call it a day.



*Presentation to "Metstat Lady" Left to Right.  
D.C. Archibald, Elsie Morgan F.T. Upton.*

Led by her former boss, Mr. Don Archibald, the retired Chief of the old Basic Weather Division, Elsie's well-wishers offered her as gifts such obvious meteorological tokens as a barometer, and a thermometer especially prepared for the purpose by Instruments Branch. But the more imaginative among them had made up a METSTAT map of all the weather stations she knew so well, upon which were added groups of signatures collected from the Directors and staffs of each of the AES Regions and Met. Oc. DND. The photograph shows her with her familiar cheery laugh admiring it while Don Archibald looks on after making the presentation.

### FORECAST RESEARCH SYMPOSIUM

Approximately 140 people attended the Forecast Research Symposium on Thursday, May 3rd, 1973 in the auditorium of the AES Headquarters. Some of these were from the Toronto and Montreal components of the Meteorological Services Research Branch since the Symposium was a culmination of the Annual Branch Conference. There were, in addition, a considerable number of scientists from the AES Headquarters and Regions and also from Universities, Industry and the Provincial government.

Dr. J. Clodman, Director of the Meteorological Services Research Branch was Chairman for the Symposium and Mr. C.B. Adamson was Program Chairman. The Symposium was the first for the Branch and unusual in nature in that it dealt essentially with research on forecast procedures and methods of particular interest to a national weather service. Seventeen papers were presented, although owing to the limits of time, only 2 were given fairly lengthy presentations. Pre-prints of the papers had been made available for study so that much of the meeting was given over to discussions rather than presentations. Discussions which highlighted the Symposium centred on modelling, air quality prediction and systems development, and these discussions were much enhanced by the participation of Dr. William Klein, Director of the Techniques Development Laboratory of the U.S. National Weather Service, who himself gave one of the major papers of the Symposium, a review of related work being undertaken at their Lab

The Symposium was considered a success, having fulfilled the dual function of providing a forum for the presentation of ongoing research and the testing of ideas among associates involved in related work areas, as well as informing attendees from other parts of the Atmospheric Environment Service and from universities and other levels of government, on these programs

Because of Symposium of this nature serves a useful purpose in providing an arena for the exchange of information and ideas plans are to make it an annual event for the Meteorological Services Research Branch. It is planned that next year's Symposium will be expanded to two days to allow more time for both presentations and discussions and to include more speakers and attendees from outside the Service.

## NEWS FROM THE K.T. McLEODS' IN IRAN

Salam (Hello)

It is now over a year since we caravanned to Iran (by way of Switzerland, Italy, Yugoslavia, Bulgaria and Turkey), to commence a UN/WMO assignment starting a marine weather service for the Persian Gulf and the Caspian Sea. This followed a previous 5 month F A O project at Lake Nasser, Asswan, Egypt, an 8 month sojourn in Geneva, and 3 months 'At Home' with family and nearby friends. Our son, Bruce, accompanied us, sharing the driving and other responsibilities. He provided added assurance for the sometimes unexpected and surprising encounters during our 12 day journey through strange lands.

Living in Iran has been challenging and very rewarding. The attempt to blend two cultures, east and west, requires a healthy attitude coupled with a willingness to observe and learn for deeper understanding, appreciation, and ease of adaptation in the practice of a new art of living. In the beginning there is the tendency to feel that 'we' are the keen and critical observers and researchers of people in another country. But after a time, the tables turn, and one realises that a good portion of the perceiving, analyzing, comparing and questioning becomes directed towards one's own familiar and automatically accepted culture. Indeed, it is possible to reach a stage when one launches a serious search for the real core, or essence of 'Self', and for the intrinsic values to be found in the Spirit, the Science and the Art or practice of one's own mode of living.

Learning the country's language brings us closer to its people. It is helpful in a practical way too, and we enjoy exercising our limited Farsi vocabulary and to some extent the artistic Farsi writing.

There are numerous museums where one can visually assemble Iran's rich past. Some present, in live drama, ancient art and customs; one shows the fabulous crown jewels. Archaeological displays are plentiful. Diggers are at work everywhere, it seems. Frequently we read of recent findings revealing even greater antiquity.

During the winter we can travel on excellent highways northward about 35 miles to the Alborz Mtns. where winter sports, skiing, tobogganing or just relaxation, are enjoyed.

Keith has been to the Persian Gulf a few times for inspection of the weather facilities there. This area is not only famous for its pearls, fishing, minerals, and the largest flow and reserves of oil in the world, but now there is serious thought directed towards making this coastal area a sort of tropical resort.

During the summer, in the intense and persistent heat, with temperatures hovering around 100 each afternoon but thankfully with low humidities, we can find some respite by motoring to the Caspian. Many Iranians have summer homes at this resort area and as in Canada, a long stream of cars winds its way northward on each weekend.

We hope soon to visit around historic Hamadan, to the west, and in April we plan, as a group, to explore the Mashad area, then on into Afghanistan and Pakistan.

Our 3-week trip to Japan in October, where Keith participated in an international marine conference in Tokyo, is a most vivid and pleasant memory now. Here one

can appreciate magnificent and modern architecture along with the ancient pagoda style of homes, temples and shrines. Besides our many interesting adventures, we were captivated by the oriental classical drama presented by the famous Kabuki theatre. Also, our 200-mile chartered bus trip through the beautiful countryside to the famed marine research institute and museum at Tokai, afforded an ideal opportunity to see picturesque Mt. Fuji close-up and the surrounding mountainous and rolling terrain with its forests and lush green growth. After the conference we visited Osaka and Kyoto, the former capital of Japan. Again we visited temples and shrines, even more ancient. We especially remember the fabulous Golden Pavilion. We were in Kyoto on the day of its annual, historic 'Festival of Ages' — the longest, most varied and colorful parade we have seen.

The Japanese people and their clean and tidy country radiate a vitality and alertness that explains, in part, their precise thinking and concern for the finest detail. Graciousness was shown to us at all times and felt most pleasant. Their's is a unique culture and well worth one's attention. Enroute home we had two enjoyable days in Bangkok, Thailand, visiting old friends and touring about. Again we viewed ornate temples, but here they were different in form and more jewel-like. Our slides and movies will show you some Thai customs like the floating market, the charm of its classical dancing girls and . . .

Now we are again tucked into our small apartment in the heart of Tehran. Besides daily responsibilities, our visits with friends and pre-Christmas gatherings have been in full swing. We appreciate the privilege of visiting Iranian homes from time to time, where we see and learn about many of their lovely customs. They are a very home-loving people. Their family structure is held so preciously together. Here age is elegant. Grandma and grandpa hold not only a very educational and useful but a highly honored niche in the tightly knit family group. Iranian food is especially tasty and very satisfying. The best rice in the world is here, beyond doubt. It is grown in the Caspian rice fields, where also, nearby, vegetables and fruit grow plentiful and the tea is grown that seems to be sipped continuously during the day. A special method cooks the rice to a remarkable fluffiness. Then there is the famous, fresh caviar, known the world over. And Oh yes, the yummy Bread and all make for happy, friendly pastimes, but can raise havoc with the waistline.

Our Teheran Philharmonic membership brings us an excellent variety of recital and chamber music from all parts of the world. Nearby is the new Roudaki Hall, its artistic outline occupying a city square. It is a picture both inside and out. The interior with soft decor generously chandeliered and carpeted; the exterior landscaped in true Persian style, which means rose and flower gardens, graceful trees including, of course, the stately cypress so close to the hearts and minds of the people through its literature and poetry. Also the many pools with their fountains rising to differing heights — some dancing up and down in seemingly 3/4 or 4/4 musical rhythm. All lends itself to creativeness and a receptive feeling to appreciate the presentation of perhaps an opera, symphony, ballet, classical or folk song, or dance groups, poetry readings and other related arts. A few nights ago we attended a colorful and vivacious presentation by the Iranian National Folklore Group which returned recently from a well deserved success at Sadlers' Wells, London.

In June we motored about 600 miles southward, stopping halfway at Isfahan, the first, and historic capital of Persia. In the 17th century it is probable that Isfahan was the most elegant city in the world. On our visit there we encountered many proofs of this probability. And so today there are great restoration plans underway to rebuild, with designs copied from the imposing principles forgotten since antiquity. Besides its blue-domed mosques and its historic sights we enjoyed browsing through the famous old covered Bazaar,

with its seven miles of winding alleys and hundreds of little shops. Some of the more beautiful works of art come from Isfahan. Watching the many artisans at work is an absorbing pastime and they, too, enjoy our presence and interest.

Then another 300 miles to the south is Shiraz called the city of roses and nightingales. We think of it as the poetic city of Iran, since it has been the birthplace of so many of its poets - including Sasaki and Hafez - two great masters of poetry. The imposing tombs commemorating them are indeed worthy of national and worldly reflection. It was in this area that we encountered some of the tribes that compose about 10% of the population. They were spending their summer in the valley, where their flocks of sheep and goats could graze. They spend their winters in the warmer Gulf areas. Twice a year they can be seen on their nomadic move from one area to another - a whole community on the march - and in a style and on a scale that suggests some journey of antiquity. Sheep and goats go first in nibbling progress, chivied along the way by small boys, while behind them labour the camels and donkeys, laden with mounds of baggage and crowned by women and small children. All about swagger the tribesmen in their confused clothing. Through the air comes a concert of shouts, bleats, bells and woolly rustle of sheep, the jangle of copper pans and clip-clop of hooves. All these sights and noises are made miniature by the size of the surrounding desert setting. But twice a year they obey what seems less an economic impulse than an ineradicable instinct.

Nearby is Pasargade where the tomb of the true founder of the Persian empire, and so the father of Persia, Cyrus the Great, has stood for 2500 years. To Cyrus is also credited a unique document - the first charter of the liberty of nations. This same concept has been carried forward into our present United Nations charter. It was probably here that these ancestors of world civilizations first developed their culture. So it is not just a sight to see but an emblem of civilization and the cradle of the Aryan race. Approximately 10 miles away is Persepolis, the site of the 2500th birthday celebration of the Persian Empire. On our route to Iran last autumn every hamlet, village, town and city had joined in this anniversary. The accompanying garnishment of lights, flags, and related artistry gave these places the appearance of a fairyland. The tomb of Darius, a great and just king, rests in this valley also. Under him gold and silver coins were introduced, as was a system of communications via a great network of stone-paved roads and thus the first postal service began with couriers so swift they could cover a 2100 kilometers distance in 11 days, an unheard of speed then. His successor Xerxes, his grandson, and great-grandson lie here also. Just being present in this majestic environment of the ages, with the desert and mountains surrounding this ancient structure of carved stone walls, buildings, monuments, and great pillars thrust into the sky, gives one the awesome feeling and realization that here was created the first of world empires and that actually western civilization is the direct outcome of the knowledge and culture accumulated here in the form of thousands of books which were destroyed by Alexander the Great after they had been translated into Greek. Thus Hebrew, Greek and Roman civilizations were absorbed from here. The Acropolis, pride of Greek architecture, is of somewhat later date than the Persian architecture at Persepolis.

Probably the name "Persia" for you as for us, is more familiar than 'Iran'. About 1935 it was decreed that the country should no longer be called Persia because Persia was the name of a particular region, one among many provinces. It was announced that the Kingdom would be called Iran from the same root as Aryan; which embraced all its shifting and varied people. The name Iran was welcomed by nationalists, but like its beautiful blue-domed minarets rising skyward - "Persia" too, rose above it all, and has remained in the hearts of its people. It was a name that meant much to the world - its poetry, its turquoise, rose gardens, ornamental pools, turbaned sportsmen, polo grounds, archery and

tournament fields, familiar great leaders and kings, the wines of Shiraz, open markets, famous bazaars, Persian carpets (and, yes, Persian cats, tho' we haven't seen one yet). So the present Shah or Shahinshah, (King of Kings), probably having nostalgic feelings for it himself restored the old name to favour. 'Iran' is the official title of the country and is used for affairs of state, but 'Persia' is back again as well to express or reexpress the delights, echoes, and memories of a country all have read about and some have experienced.

This is a land of physical differences, extreme in scope from the green fertile lands of the Caspian Area to the sharp contrast of the brown sun-scorched desert, the barren hills, the plateaus and the jagged mountain ranges. It is not a country like North America that stands distinct and complete. It is a sort of bridge-country having frontiers with the Arabs, Afghans, Turks, Pakistanis and Russians. It has ancient connections with the Greeks, Romans, Siamese, Indians, Egyptians and Mongols, as well as with Britain and America. So we can understand its link between the civilizations of the East and the West, and therefore that it is in itself a country rich with a mixture of culture strains from all quarters of the world. Even some of its rulers have been foreign. It was Alexander's (the Great) most dazzling conquest. Tho' the world passes through, over and around Iran and it has absorbed many an alien way, yet the Iranians remain remarkably themselves, insisting, and sometimes testily, on their individual rights and ways.

To be continued.

**PERSONNEL**

**May, 1973**

**The following transfers took place:**

K.R. Johnstone	From: AES HQ, Downsview To: Weather Office, Regina
H.E. Wahl	From: AES HQ, Downsview To: Weather Office, Whitehorse
A.J. Russell	From: Maritimes Weather Office To: Weather Office, Toronto
R.G. Dickey	From: Weather Office, Toronto To: Maritimes Weather Office
S.J. Lambert	From: University of Alberta, M.Sc. To: Arctic Weather Centre

**The following are on temporary duty or project assignment:**

V.R. Swail	From: Inventory B To: CFB Trenton
S.R. Hollett	From: Inventory B To: Weather Office, Gander
R.L. Raddatz	From: Weather Office, Regina To: Weather Office, Resolute
G.D. Machnee	From: Weather Office, Winnipeg To: Weather Office, Churchill
L.B. Swansburg	From: Maritimes Weather Office To: Atlantic Weather Central
M.A. McLeod	From: Maritimes Weather Office To: Weather Office, Goose

**The following have accepted positions as a result of recent competitions:**

72-DOE-ONT-CC-4	Data Processing DA6 CMC, Montreal J.R.D. Bruneau
72-DOE-ONT-CC-4	Data Processing DA4 CMC Montreal R. Aubin



72-AES-CC-338	Meteorology MT5 Supervising Forecaster Weather Office, Edmonton M.N. Parker
72-AES-CC-251	Meteorology MT7 Supervising Program Analyst Arctic Weather Central Mrs. P.M. Dutchak
72-DOE-ONT-CC-29	Meteorology MT3 Duty Forecaster METOC Centre, Halifax W.G. Lumsden
72-DOE-ONT-CC-29	Meteorology MT3 Duty Forecaster METOC Centre, Halifax B.D. Brodie
72-AES-CC-283	Bilingual Electronics Instructor EL5 Instrument Branch AES HQ, Downsview R.V. Quick
72-AES-CC-297	Meteorology MT6 Airport Instrumentation Systems Meteorologist Instrument Branch AES HQ, Downsview J.J. Moakler

**The assignments of Course 29 graduates are as follows:**

D.W. Anaka	CFB Comox
Miss L.C. Chow	WO/WC Vancouver
F.J. Conway	WO Toronto
Miss L.J.A. Cumming	CFB Cold Lake
J.R.R. D'Amours	WO or WC Edmonton
Miss B.C. Dawson	WO or WC Edmonton
P. Dubreuil	Project for CSD at Ottawa
R.R. Dunkley	WO Vancouver
B.C. Green	CFB Moose Jaw
D.F. Green	CFB Winnipeg
D.E. Greig	Project for FSD at AES HQ, Downsview
J.N.J. Halle	WO Montreal
W.H. Hartman	WO Goose
R.A. Howell	CFB Moose Jaw
D.J. Kernaghan	CFB Summerside
L.A. Ketch	CFB Greenwood
E.J. Kirkwood	WO Montreal
J.F.L. Knight	CFB Trenton



R. Laurence	CFB Bagotville
J.P. Melvin	METOC Centre Esquimalt
R.W.C. Miller	WO Malton
B.A. Misanchuk	CFB Winnipeg
R.J. Morris	CFB Shearwater
A.W. Morrison	CFB Cold Lake
T.R. Nichols	CFB Cold Lake
J.W. Ogletree	CFB North Bay
T.G. Ostry	WO Regina
R.D. Paterson	Project for ARD at AES HQ Downsview
B.F. Power	WO Gander
I. Savdie	Project for CSD at AES HQ Downsview
D.L. Sortland	Project for ARD at AES HQ Downsview
B.V. Tryggvason	Project for ARD at AES HQ Downsview
Miss E.A. Vale	CFB Summerside
R. Verret	WO Montreal
Miss B.L. Webber	Project for CSD at AES HQ Downsview
Miss D.M. Whitehill	CFB Moose Jaw
B.K. Wong	CFB Winnipeg

**Resignations:** J. Felix  
AES HQ, Downsview

**Retirements:** H.P. Wilson  
Officer-in-Charge  
Arctic Weather Central  
Edmonton

H.C. Christensen  
Regional Supervisor,  
Surface Inspection  
AES Pacific Region

Mr. H.M. Humber, recently of Goose Weather Office, has now taken up his new duties as Administrative Officer, Atlantic Region, AES.

TRIVIA

DOWN COMES THE RED TAPE

By Barry Mather, MP

Ottawa — When Noah was building the ark he had one thing going for him. There were no municipal, provincial, federal governments or their agencies to cope with.

Not like now.

Noah: "Gentlemen, I have here, in both official languages, the brief of the Ark Building Society (ABS), which we are submitting today to you members of the Civ-Pro-Fed-Inter-Consultative-Authority, (CPFICA), in support of our project. the construction of a vessel essential for animal life preservation "

Federal Representative: "Is this not actually a provincial responsibility? "

Provincial Representative "If the vessel proposed is for utilization in offshore or inter-provincial waters then Ottawa is clearly involved."

Civic Representative. "This application should first be brought to the attention of the Regional Environmental Authority (REA) "

Noah "Gentlemen, independent research has established that peak-flood precipitation will occur in the next 14 days. Action is therefore . . . "

Federal Representative: "If approved or utilized, this, what do you call it . . . this ark will attempt to save animal life for future world benefit, boundaries notwithstanding? In my view the project application should go to an appropriate arm of the United Nations, probably United Nations Animal Life Preservation (UNALP)."

Noah. "Gentlemen, it looks like rain."

Civic Representative: "In the event you build will the approved construction area be eligible for Regional Economic Expansion Funding under DREE? "

Noah: "We will build. After us the deluge."

Provincial Representative "What kind of vessel are we talking about I mean size-wise? "

Noah. "On the order, using gopher-wood functional. of 300 cubits by 30 cubits . . . "

Civic Representative: "Too small, Noah! This is a big place Think big. Noah! "

Federal Representative: "How about maintenance cost responsibility? "

Provincial Representative "Who will own this thing? Also, what does the SPCA say? "

Civic Representative: "We can't touch this unless there is a 45-45 senior government cost-sharing commitment.

Noah: "Gentlemen, it's raining."

### AH! CES ABREVIATIONS

Un jeune couple ayant décidé d'acquérir une maison, en visite une. Cette maison appartient à un prêtre. Après la visite, le jeune couple s'aperçoit qu'il n'a pas demandé où se trouvaient les W.C. (water-closet). Le jeune couple décide donc d'écrire au prêtre pour lui demander ce renseignement. Le prêtre, ignorant la signification de l'abréviation w.c., crut que les visiteurs étaient de religion protestante et qu'il s'agissait de la "Wesleyan Chapel". Aussi, imaginez la surprise du jeune couple lorsqu'il reçut la lettre suivante:

Cher monsieur,

Veillez excuser le retard apporté à cette lettre. J'ai dû m'informer . . . et . . . le plus proche w.c. dans la région est à 5 milles; ceci est évidemment une circonstance fâcheuse, surtout si vous avez l'habitude de vous y rendre régulièrement. Cependant, j'ai la joie de vous informer que beaucoup de gens en font une partie de plaisir et y prennent le petit déjeuner.

Le w.c. peut contenir facilement 300 personnes et le comité a décidé de faire recouvrir les sièges de peluche pour leur donner plus de confort.

Ceux qui habitent loin peuvent s'y rendre en chemin de fer: les autres y vont à pied et arrivent à temps là-bas. Il y a facilité pour les dames sous la bienveillance du Pasteur qui leur donne toute l'attention voulue tandis que les enfants sont assis tous ensemble et chantent pendant la cérémonie.

Votre tout dévoué serviteur,

Père Brown

N.B. Des feuilles de cantiques sont fournies: vous les trouverez toujours pendues à la porte.

Un vent pour écorner les boeufs

The following was culled from the Glossary of Meteorology A.M.S. 1959.

*Cow Storm.* A gale of Ellesmere Island so strong that it "blows the horns off the cows".  
Editor's Note: What Cows?

\* \* \*

Why is a wrong number on the phone never busy?

\* \* \*