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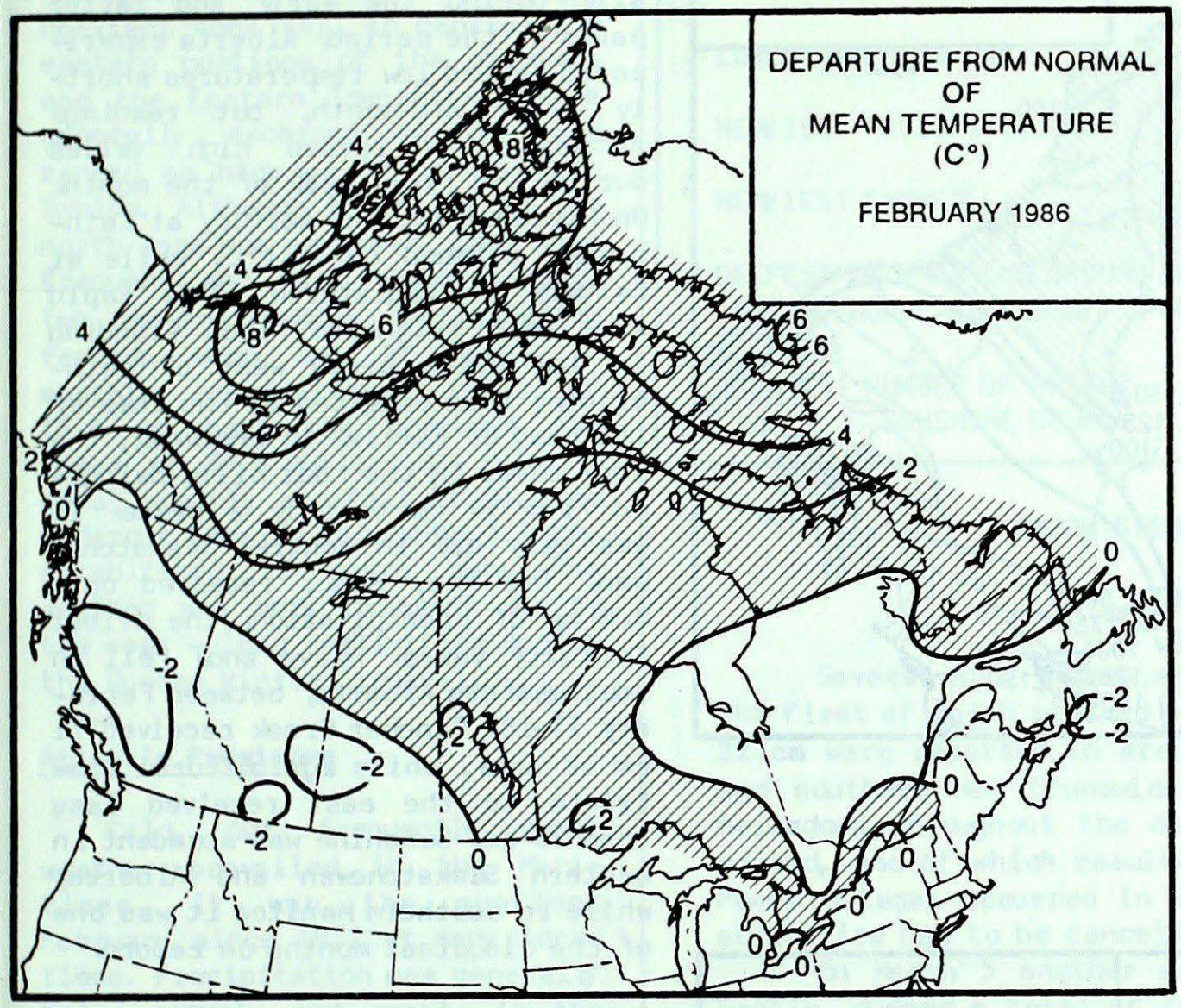
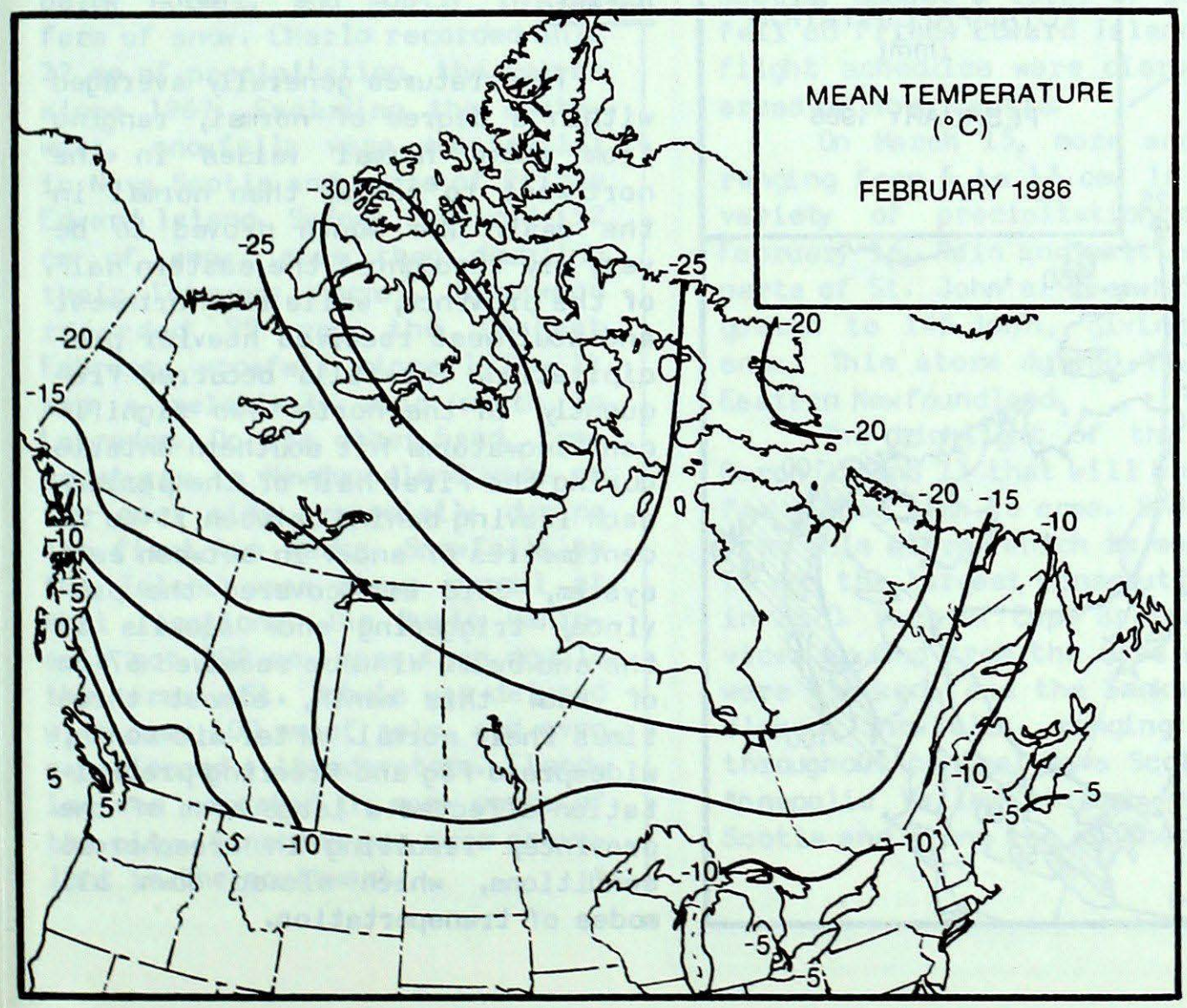




ACROSS THE COUNTRY

Yukon and Northwest Territories

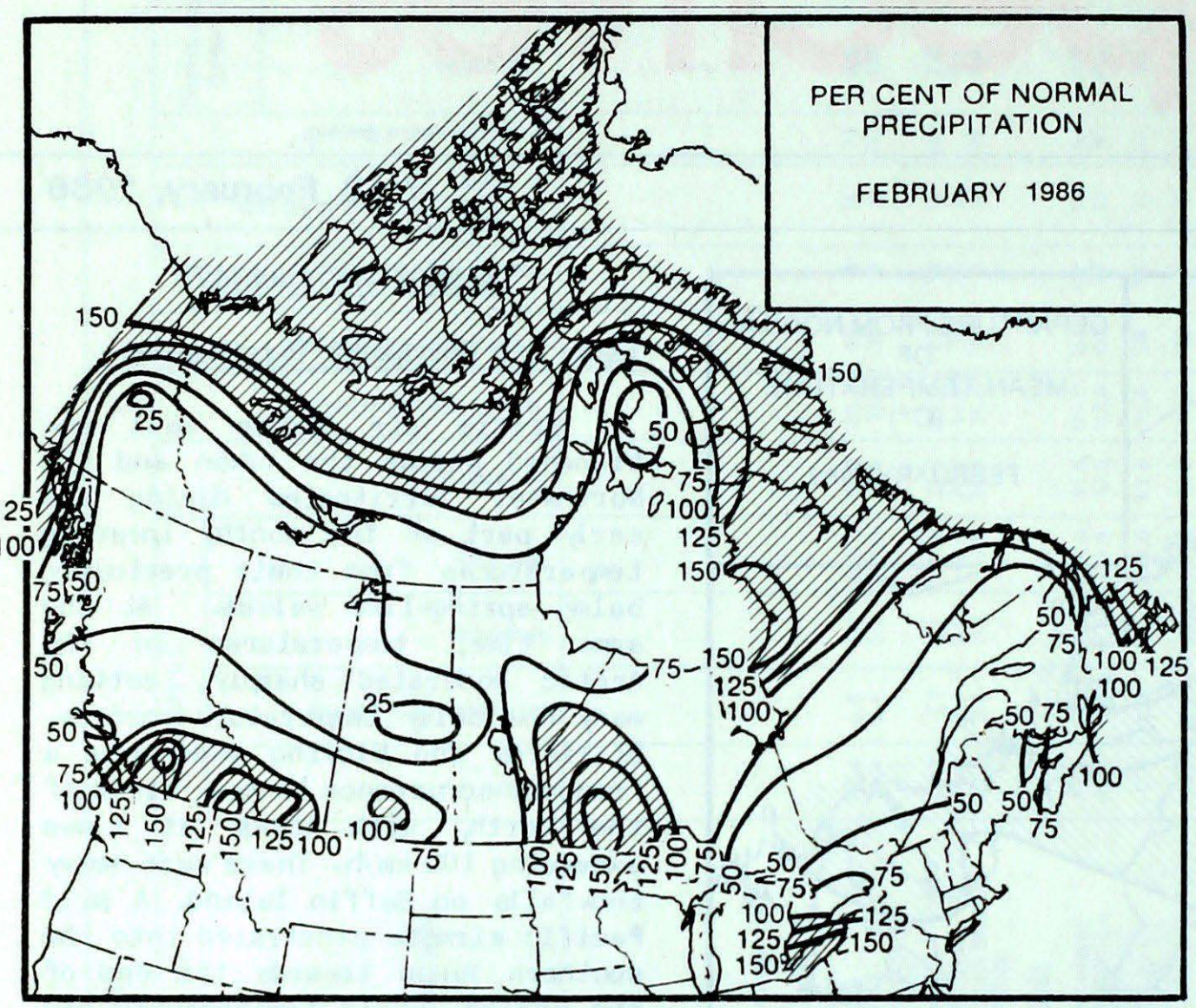
Arctic air became well entrenched across the Yukon and the Northwest Territories during the early part of the month, lowering temperatures from their previously balmy spring-like values. At the same time, temperatures in the Arctic moderated sharply, setting many new daily temperature records. Blizzards and blowing snow were a frequent occurrence in many areas of the north, with winds at times exceeding 100 km/h. There were heavy snowfalls on Baffin Island. A mild Pacific airmass penetrated into the southern Yukon towards the end of the period, while temperatures remained very cold in the north. The temperature at Watson Lake on February 23, under mainly sunny skies, climbed to an all-time high monthly maximum of 9.4°C. Melting snow produced hazardous road conditions after sundown.

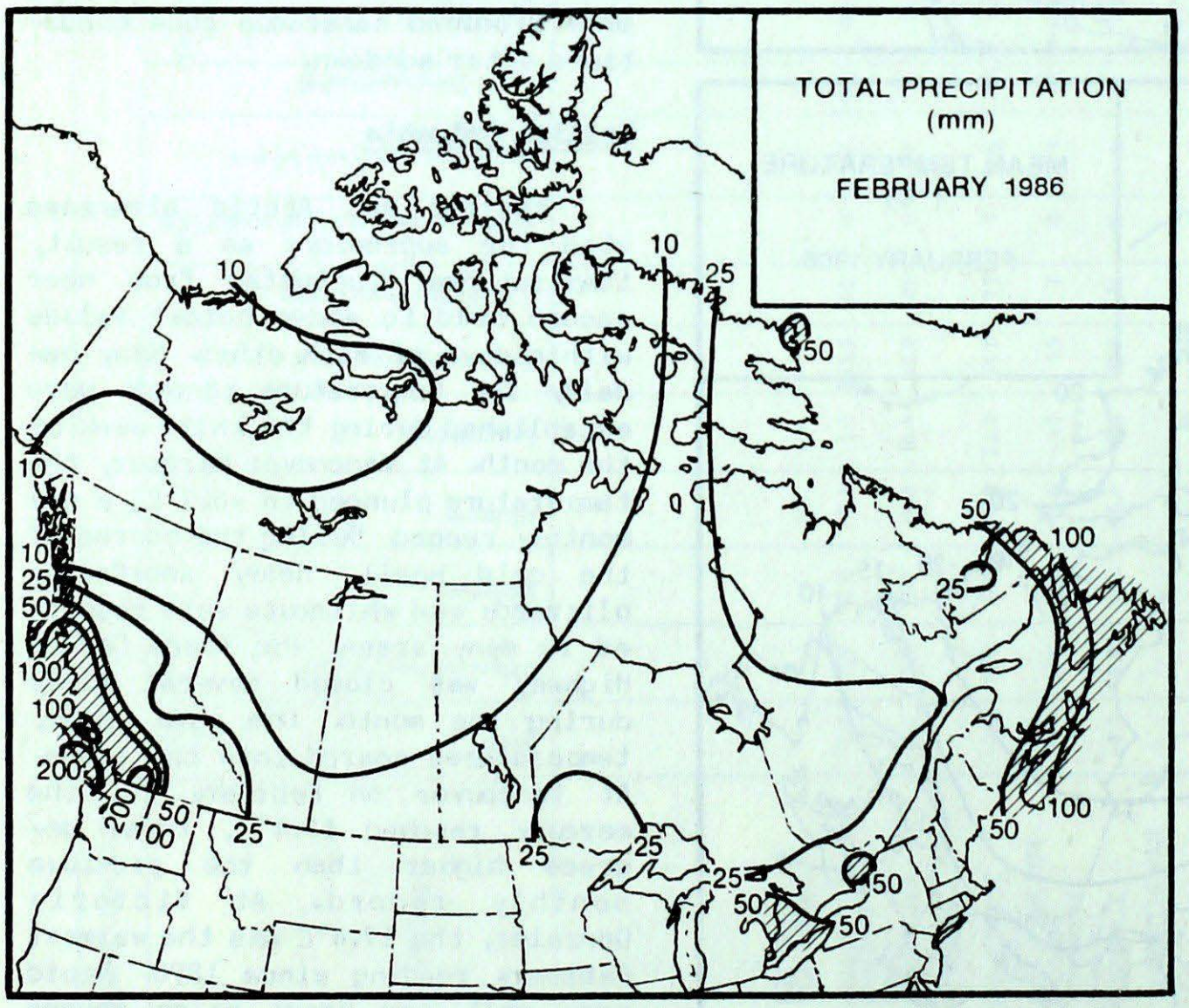
British Columbia

Pacific and Arctic airmasses vied for supremacy; as a result, temperatures fluctuated from near record cold to above normal values within days of each other. Many new daily low temperature records were established during the third week of the month. At Vancouver Harbour, the temperature plunged to -6.7°C, a new monthly record. During the course of the cold spell, heavy snowfalls, blizzards and whiteouts were reported in many areas. The Trans Canada Highway was closed several times during the month. One week later, temperatures soared into the teens. At Vancouver on February 27, the mercury reached 18.4°C, three degrees higher than the previous monthly record. At Victoria Gonzales, the 17.4°C was the warmest February reading since 1898. Rapid snow melt and heavy rains caused

Canada

PRECIPITATION





considerable flooding in the lower Frazer Valley. Mud and snow slides were a common occurrence. Many passes were closed because of avalanches.

The Prairies

Manitoba and eastern Saskatchewan were warmer than normal, especially during the early and latter parts of the period. Alberta experienced record low temperatures shortly after mid-month, but readings rebounded to record high values during the final week of the month. On February 28, the mercury at Lethbridge climbed to 18.1°C, while at Calgary it registered 17°C. Rapid snow melt triggered flash flooding in low lying areas west of Lethbridge; this resulted in the loss of 150 head of cattle. In one week, the snow cover in the foot hills dwindled from 54 cm to only a trace. It was very dry in central Saskatchewan. The Pas, Man., received only 2.8 mm of precipitation, the driest in forty years. Heavy snow fell in southwestern Alberta, between February 15-18. Pincher Creek received 71 cm of snow, while agricultural districts to the east received less than 20 cm. Sunshine was abundant in western Saskatchewan and Alberta, while in southern Manitoa it was one of the cloudiest months on record.

Ontario

Temperatures generally averaged within a degree of normal, ranging from above normal values in the northwest to cooler than normal in the east. The month proved to be very dry throughout the eastern half of the province, while the northwest and southwest received heavier precipitation. Snowfalls occurred frequently in the north. Two significant snowstorms hit southern Ontario during the first half of the period, each leaving behind between 15 to 20 centimetres of snow. In between each system, cold air covered the province, triggering snow squalls in the snowbelt. Windsor received 67 cm of snow this month, almost three times their normal. After mid-month, widespread fog and freezing precipitation affected a large area of the province, resulting in treacherous conditions, which slowed down all modes of transportation.

Québec

It was a sunny month throughout the lower St. Lawrence Valley and along the north coast. Only the southwest was significantly cloudier than usual. For the most part, temperatures averaged close to normal, but northern locations had milder than usual readings. Heaviest snow fell in central and eastern portions of the province and the Eastern Townships. Falls generally exceeded 40 cm, and ranged as high as 72 cm at Blanc Sablon. Although snowfalls in the north were not as great, they were frequent and well above normal. Two new low monthly precipitation records were set at Gaspé. A monthly precipitation total of 15.4 mm beat the previous low value of 35.6 mm set in 1974. A total monthly snowfall of 21.6 cm undercut the old record by 3.1 cm, established 12 years ago. The weather was very pleasant during the week - long festivities during the Quebec Winter Carnival.

Atlantic Provinces

Cold, but frequently sunny weather prevailed in the Maritimes. It was the sunniest February since 1972 at many locations. Precipitation was generally below normal, and mostly in the form of snow. Charlo recorded only 22 mm of precipitation, the lowest since 1967. Excluding the southwest, snowfalls were substantial in Nova Scotia and parts of Prince Edward Island. Sydney received 152 cm of snow, more than doubling their February normal. Greenwood recorded 99 cm, the largest February snowfall since 1972. It was a relatively mild month in Labrador. On the other hand, temperatures in Newfoundland were on the cool side, especially during the first two weeks. Snowfalls on the Island were above normal at most locations. The Burin Peninsula got 108 cm, more than double the normal. St. John's was deluged with over 100 mm of rain, and even experienced a thunderstorm. Flooding was reported in some parts of the city. Sunshine was more prevalent in the southwest.

CLIMATIC EXTREMES IN CANADA - FEBRUARY 1986

MEAN TEMPERATURE:		
WARMEST	Amphitrite Point, BC Victoria Gonzales, BC	5.3°C
COLDEST	Mould Bay, NWT	-33.4°C
HIGHEST TEMPERATURE:	Vancouver, BC	18.4°C
LOWEST TEMPERATURE:	Fort Reliance, NWT	-47.1°C
HEAVIEST PRECIPITATION:	Hope, BC	283.0 mm
HEAVIEST SNOWFALL:	Sydney, NS	151.5 cm
DEEPEST SNOW ON THE GROUND ON FEBRUARY 28, 1986:	Moosonee, ONT	129.0 cm
GREATEST NUMBER OF BRIGHT SUNSHINE HOURS:	Fort Nelson, BC	203 hrs

MAJOR STORMS IN ATLANTIC CANADA

by

C.F. MacNeil and C.J. Power

Several snow storms struck Atlantic Canada during the month, the first of which arrived on March 2. Snowfalls ranging from 10 to 22 cm were reported in areas of Nova Scotia, Prince Edward Island and southern New Brunswick. Road conditions in some areas were hazardous throughout the day, and a number of accidents were reported, one of which resulted in the death of a New Brunswick man. Power outages occurred in several areas of Nova Scotia, and many activities had to be cancelled.

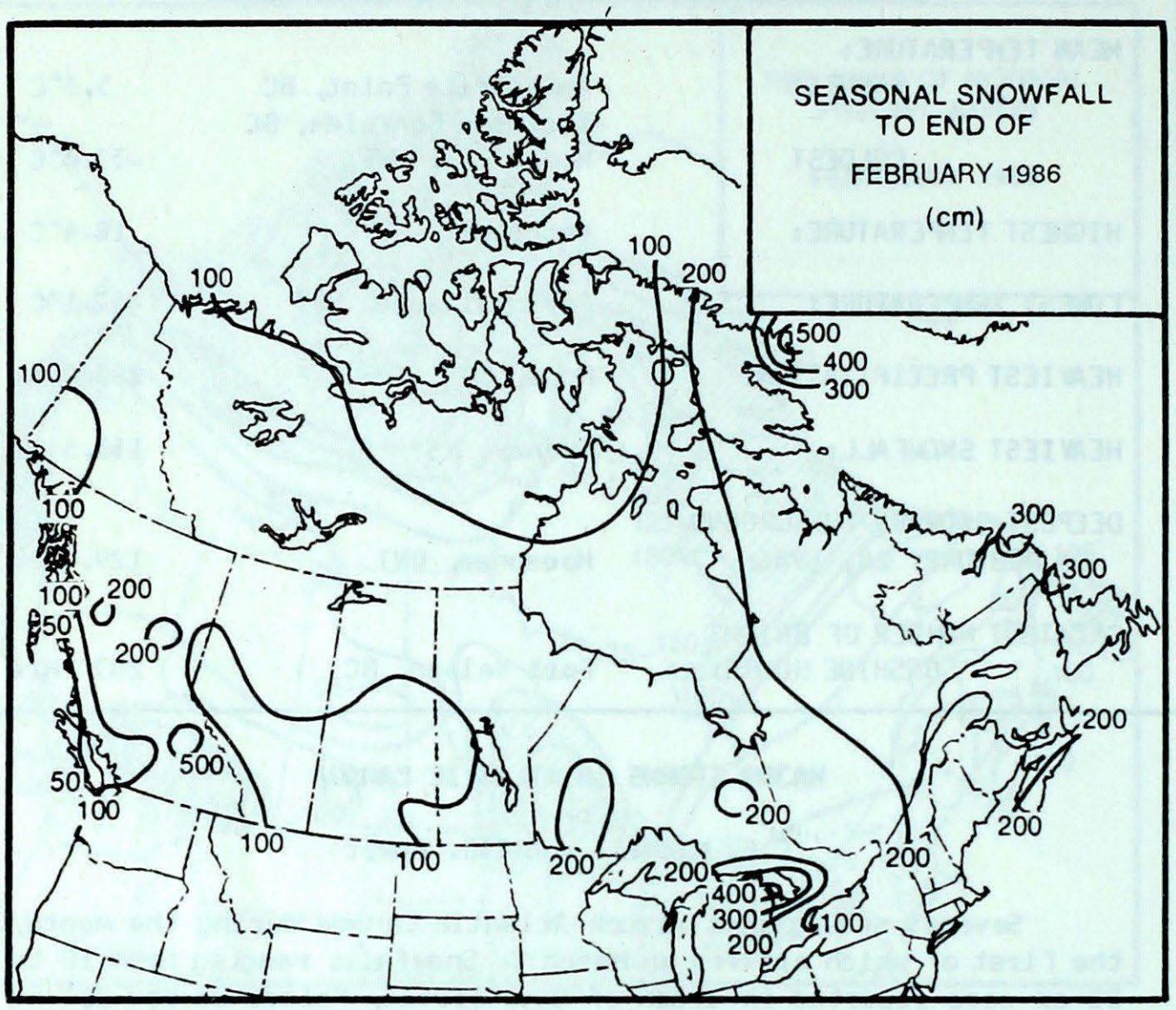
On March 5 another snow storm, which tracked south of Nova Scotia, dumped a total of 16.5 cm on Sydney, while less than 10 cm fell on Prince Edward Island and New Brunswick. Transportation and flight schedules were disrupted and schools were closed in rural areas of Nova Scotia.

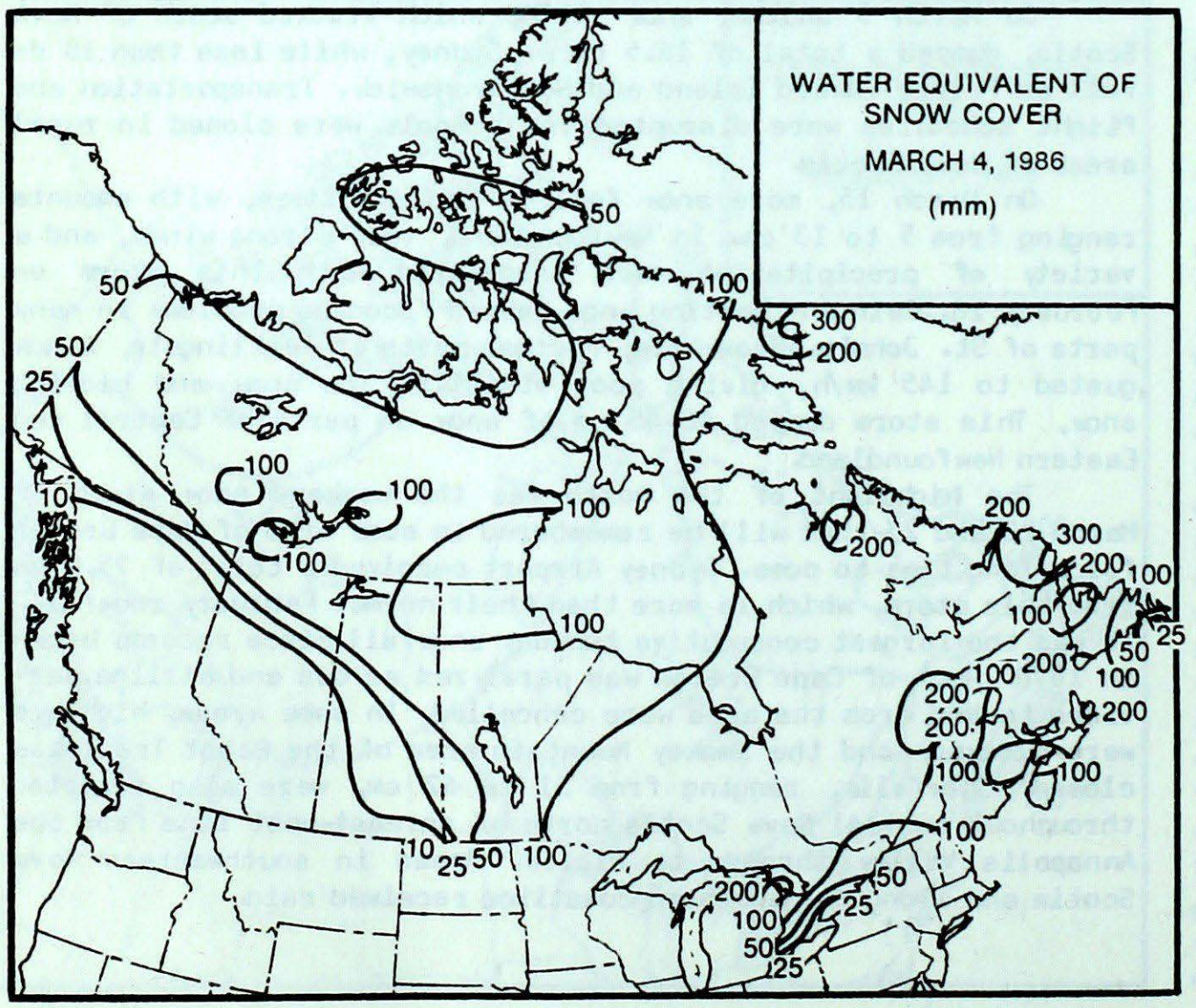
On March 15, more snow fell on the Maritimes, with amounts ranging from 5 to 13 cm. In Newfoundland, very strong winds, and a variety of precipitation were associated with this storm on February 16. Rain and melting snow caused flooding problems in many parts of St. John's. Meanwhile, further north at Twillingate, winds gusted to 145 km/h, giving poor visibility in snow and blowing snow. This storm dumped 40-45 cm of snow on parts of Central and Eastern Newfoundland.

The highlight of the month was the weekend snow storm of March 22 and 23 that will be remembered in some ares of Cape Breton for a long time to come. Sydney Airport received a total of 75.0 cm from this storm, which is more than their normal February snowfall. It was the largest consecutive two-day snowfall since records began in 1870. Much of Cape Breton was paralyzed as bus and airline services to and from the area were cancelled. In some areas, highways were blocked, and the Smokey Mountain area of the Cabot Trail was closed. Snowfalls, ranging from 31 to 62 cm, were also reported throughout central Nova Scotia north of an east-west line from the Annapolis Valley through to Pictou. Areas in southwestern Nova Scotia and along the southern coastline received rain.

SNOWFALL

S N O W F A L L





SEASONAL SNOWFALL TOTALS (CM)

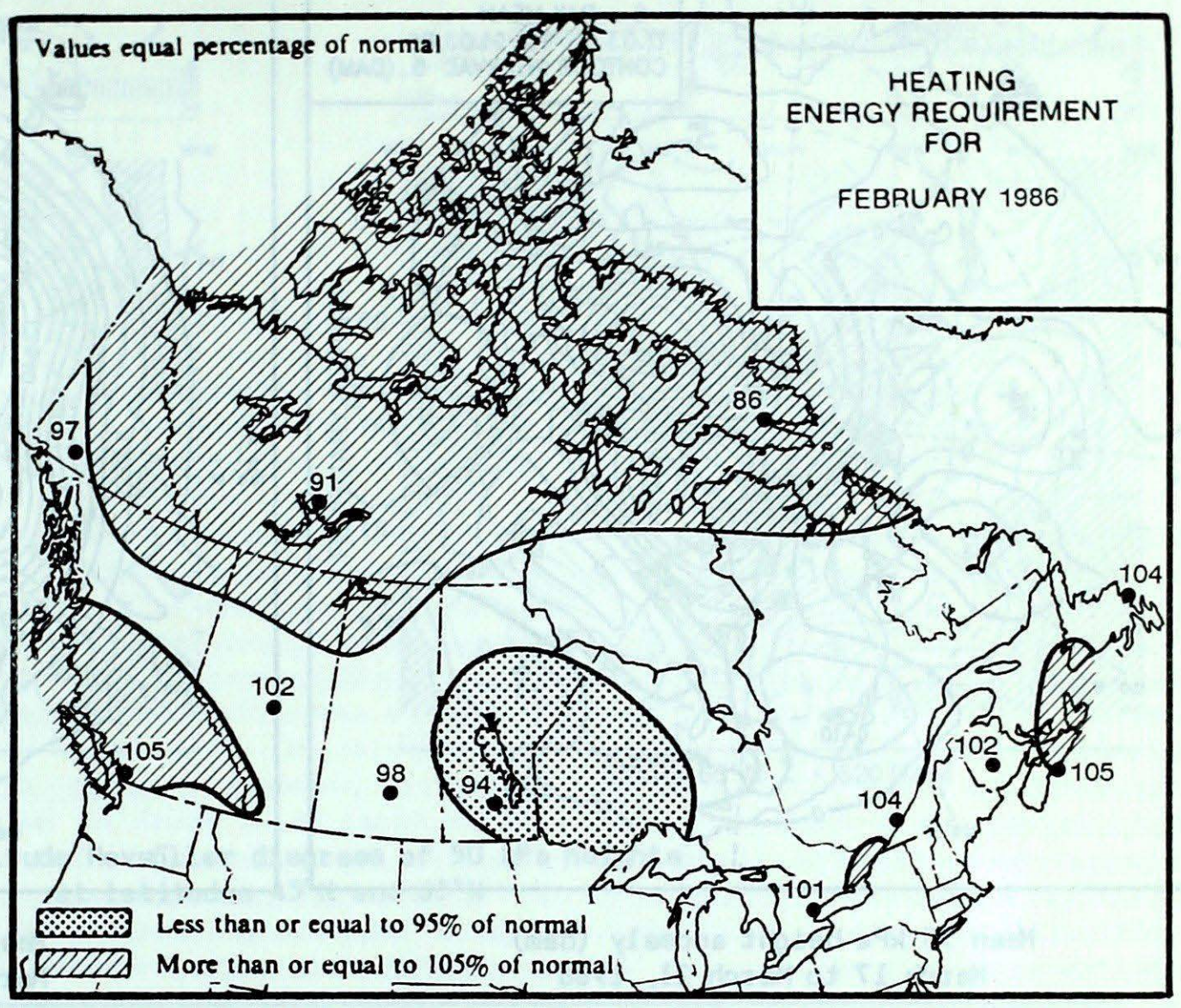
TO END OF FEBRUARY

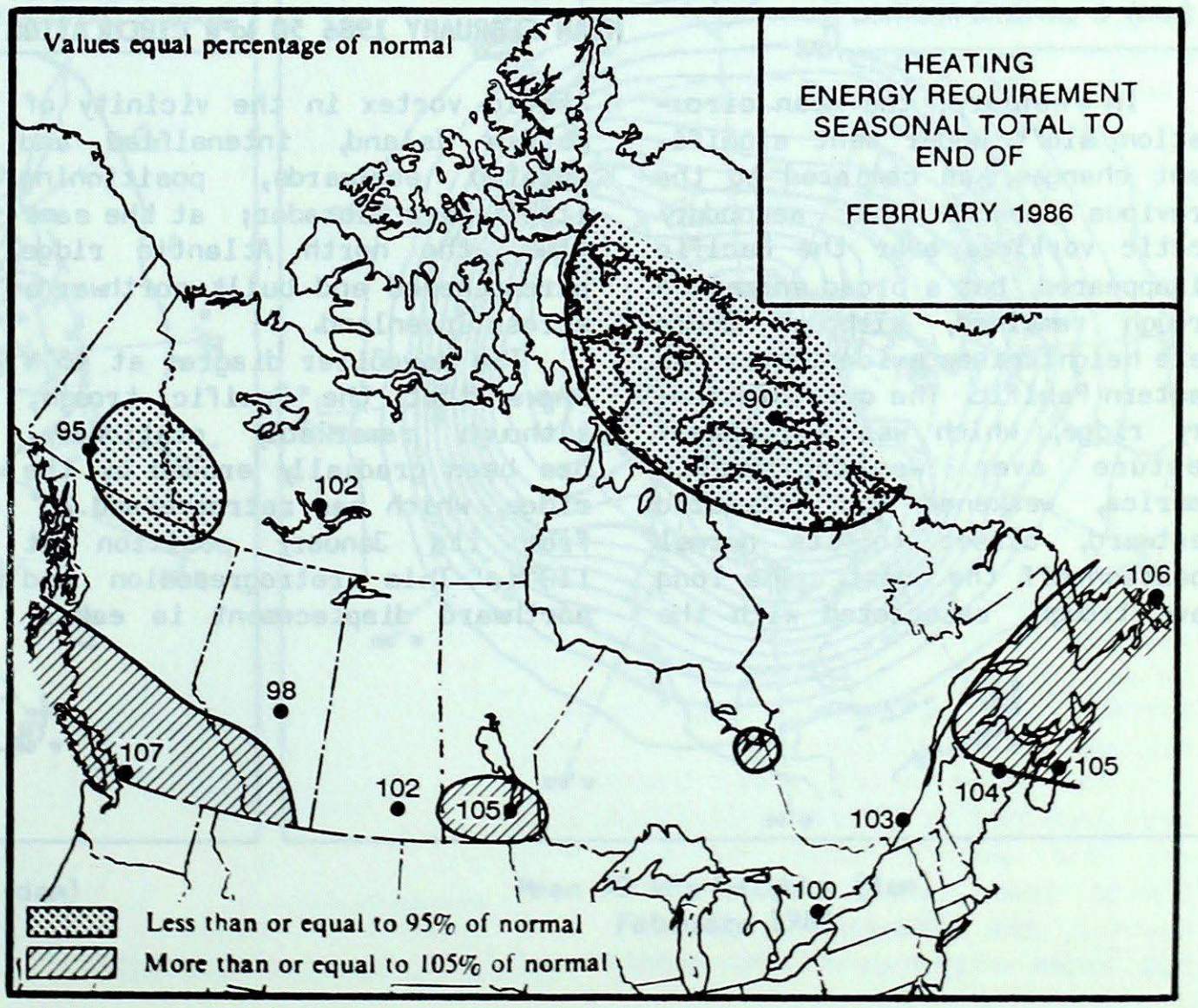
	1986	1985	NORMAL
YUKON TERRITORY			
Whitehorse	99.0	162.7	105.9
NORTHWEST TERRITORIES			
Cape Dyer	541.2	370.2	442.0
Inuvik	101.2	100.6	129.9
Yellowknife	142.6	137.2	107.3
BRITISH COLUMBIA			
Kamloops	85.3	113.5	86.7
Port Hardy	27.6	47.3	59.8
Prince George	144.4	180.1	199.7
Vancouver	43.8	63.3	53.5
Victoria	100.9	73.8	43.5
ALBERTA			
Calgary	70.4	86.3	96.4
Edmonton Namao	88.2	112.6	99.6
Grande Prairie	94.8	130.3	141.2
SASKATCHEWAN			
Estevan	84.8	110.2	80.7
Regina	85.7	121.8	83.3
Saskatoon	72.2	114.9	83.1
MANITOBA			
Brandon	124.1	79.7	83.7
Churchill	154.1	140.8	131.6
The Pas	99.0	139.9	116.3
Winnipeg	99.5	86.2	90.6
ONTARIO			
Kapuskasing	208.7	254.0	237.3
London	195.3	*	171.5
Ottawa	134.2	174.1	182.2
Sudbury	175.7	224.7	194.4
Thunder Bay	195.7	148.6	158.4
Toronto	75.2	105.4	101.4
Windsor	146.6	141.0	93.2
QUEBEC			
Baie Comeau	303.4	239.4	276.5
Montréal	164.6	160.8	188.0
Quebec	238.4	221.5	272.1
Sept-Iles	265.7	207.2	317.9
Sherbrooke	203.7	190.9	236.1
Val-d'Or	193.2	234.7	237.4
NEW BRUNSWICK			
Charlo	192.2	188.1	292.8
Fredericton	208.4	117.7	219.1
Moncton	251.0	164.6	243.0
NOVA SCOTIA			
Shearwater	169.7	139.5	144.9
Sydney	252.8	190.1	223.3
Yarmouth	160.7	*	168.2
PRINCE EDWARD ISLAND			
Charlottetown	219.7	176.4	239.6
NEWFOUNDLAND			
Gander	258.2	291.4	269.9
St. John's	240.7	203.8	246.7

SEASONAL TOTAL OF HEATING ENERGY REQUIREMENTS

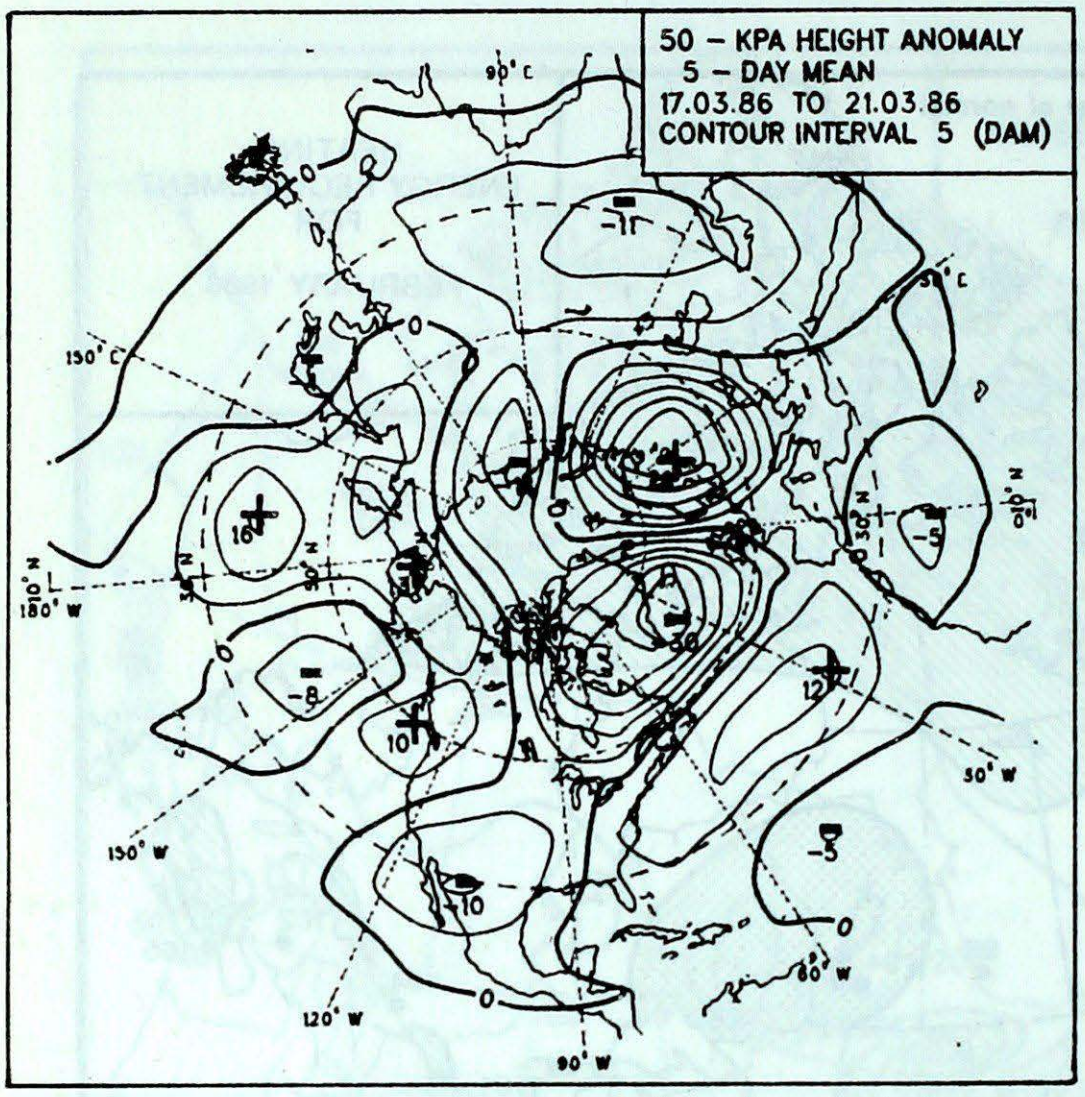
DEGREE-DAYS TO END OF FEBRUARY

	1986	1985	NORMAL
BRITISH COLUMBIA			
Kamloops	3113	3523	2858
Penticton	2958	3295	2593
Prince George	4126	4609	3948
Vancouver	2257	2561	2112
Victoria	2256	2590	2123
YUKON TERRITORY			
Whitehorse	4832	5485	5061
NORTHWEST TERRITORIES			
Frobisher Bay	5924	7009	6605
Inuvik	6959	7753	7111
Yellowknife	6181	7132	6086
ALBERTA			
Calgary	3816	4523	3827
Edmonton Mun	4037	4850	4132
Grande Prairie	4455	5477	4524
SASKATCHEWAN			
Estevan	4139	4845	4075
Regina	4848	5256	4340
Saskatoon	4503	5400	4481
MANITOBA			
Brandon	4762	5357	4427
Churchill	6269	6858	6216
The Pas	4975	5767	4950
Winnipeg	4572	5071	4342
ONTARIO			
Kapuskasing	4719	5136	4540
London	2881	3283	2908
Ottawa	3405	3780	3418
Sudbury	3930	4297	3904
Thunder Bay	4269	4620	4096
Toronto	2911	3288	2907
Windsor	2633	2989	2606
QUÉBEC			
Baie Comeau	4280	4663	4141
Montréal	3330	3749	3248
Quebec	3706	4076	3643
Sept-Iles	4352	4739	4248
Sherbrooke	3671	4156	3766
Val-d'Or	4539	4937	4387
NEW BRUNSWICK			
Charlo	3835	4190	3620
Fredericton	3473	3802	3341
Moncton	3405	3741	3250
NOVA SCOTIA			
Halifax	2847	3235	2712
Sydney	3063	3496	2873
Yarmouth	2718	3011	2663
PRINCE EDWARD ISLAND			
Charlottetown	3240	3680	3082
NEWFOUNDLAND			
Gander	3501	3920	3301
St. John's	3237	3525	3052

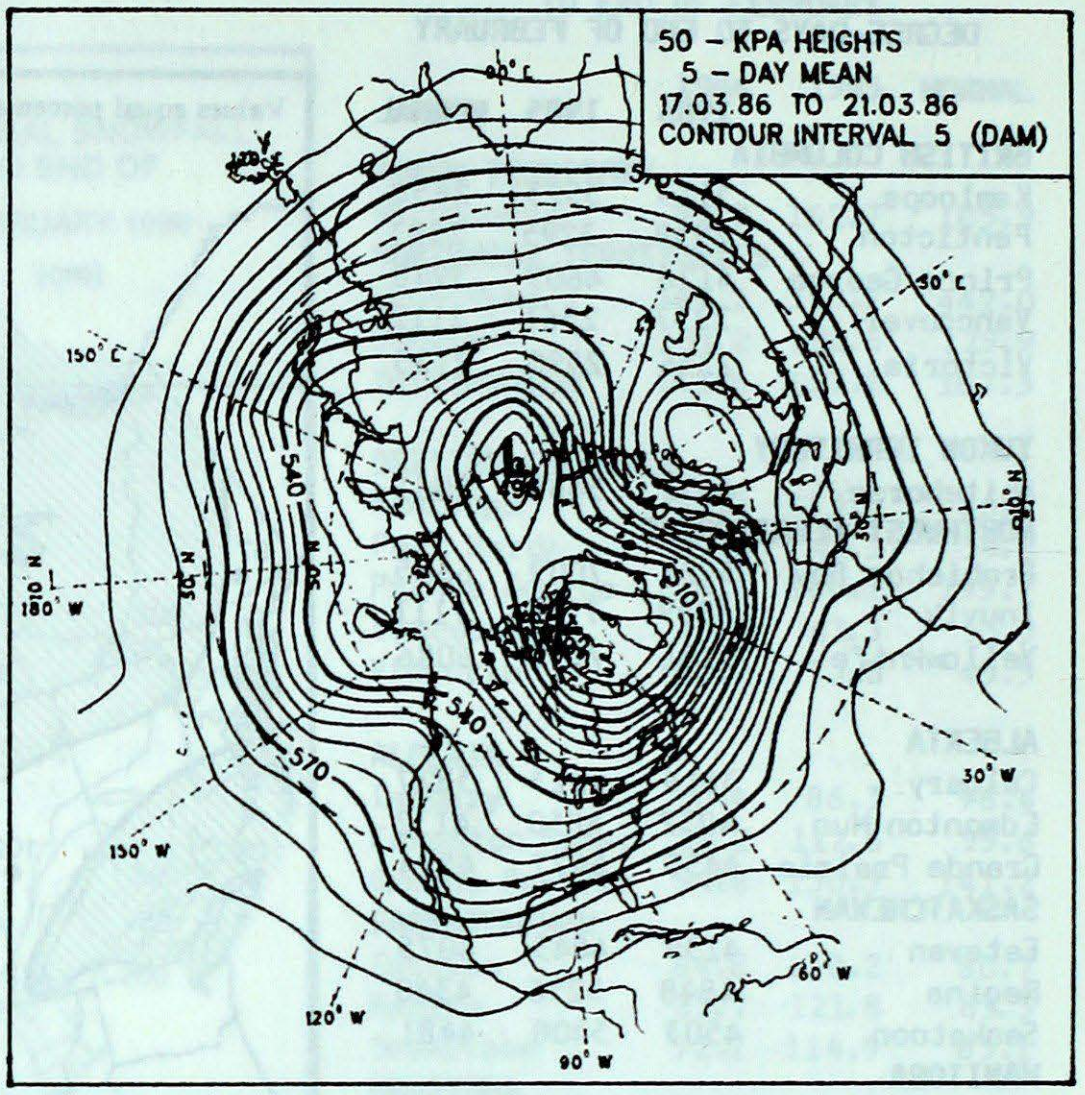




ATMOSPHERIC CIRCULATION



Mean 50 kPa height anomaly (dam)
March 17 to March 21, 1986



Mean 50 kPa heights (dam)
March 17 to March 21, 1986

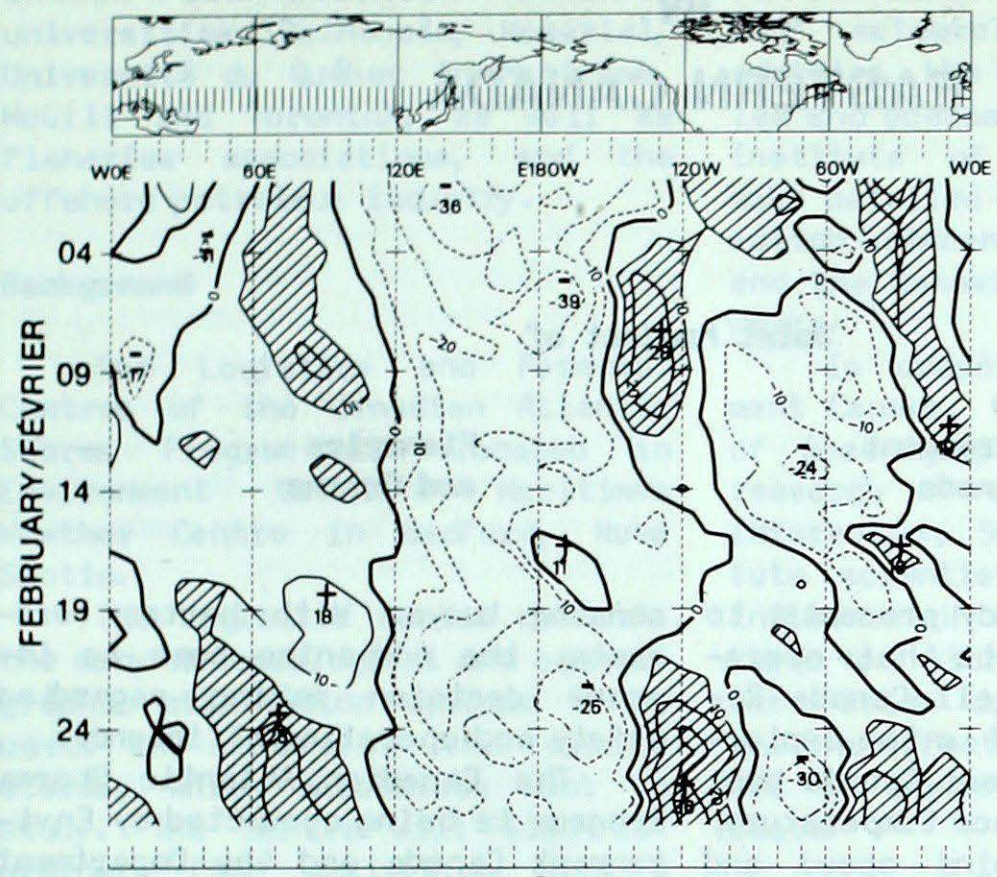
MEAN FEBRUARY 1986 50 kPa CIRCULATION

In February, the mean circulation aloft under went significant changes, as compared to the previous month. The secondary Arctic vortices over the Pacific disappeared, but a broad anomalous trough remained, although there were height rises evident over the eastern Pacific. The quasistationary ridge, which was a dominant feature over western North America, weakened and retreated westward, closer to its normal position off the coast. The long wave trough, associated with the Arctic vortex in the vicinity of Baffin Island, intensified and rotated eastwards, positioning itself over Labrador; at the same time, the north Atlantic ridge strengthened and built northwards across Greenland.

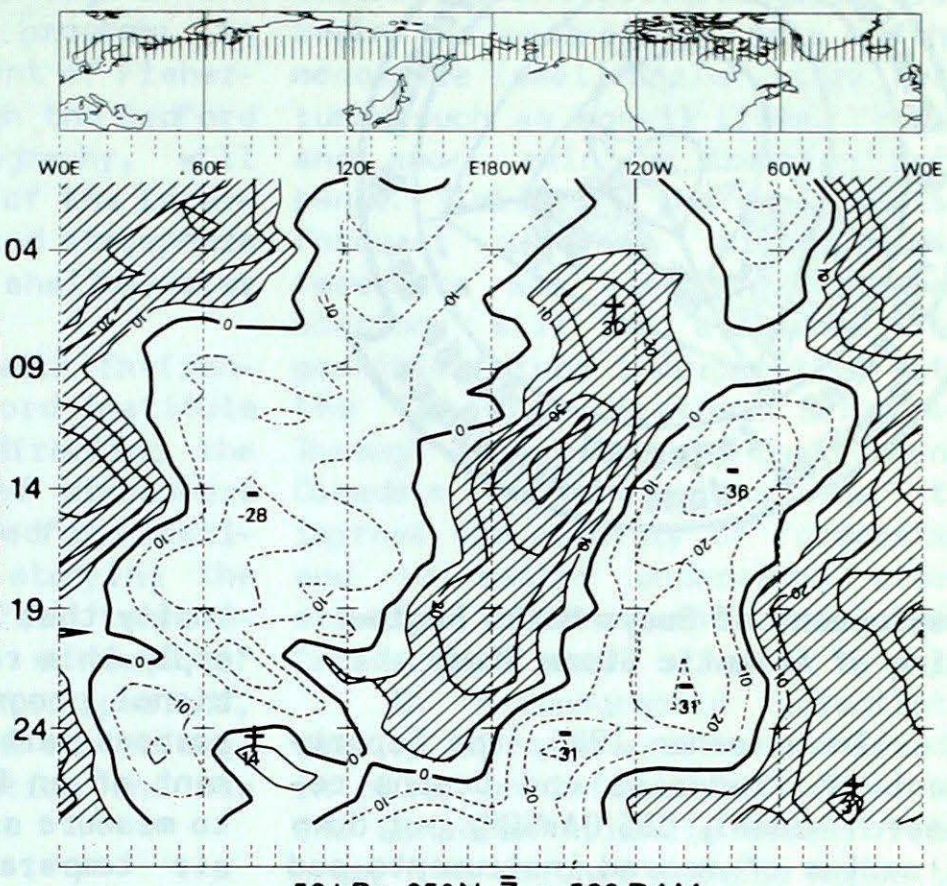
The Hovmöller diagram at 45°N shows that the Pacific trough, although remarkably stationary, has been gradually eroded by the ridge, which has retrogressed 25° from its January position at 110°W. This retrogresssion and northward displacement is easily visible at 65°N, as are the height increases over northeastern Canada associated with the strengthening Atlantic Ridge.

Overall geopotential heights increased in the north and the central areas of the country, and subsided in the west and east. Although this resulted in a near normal height anomaly field, the mean temperature anomalies resembled more the height change field, with the negative areas in the southwest and east, and positive areas elsewhere.

ATMOSPHERIC CIRCULATION

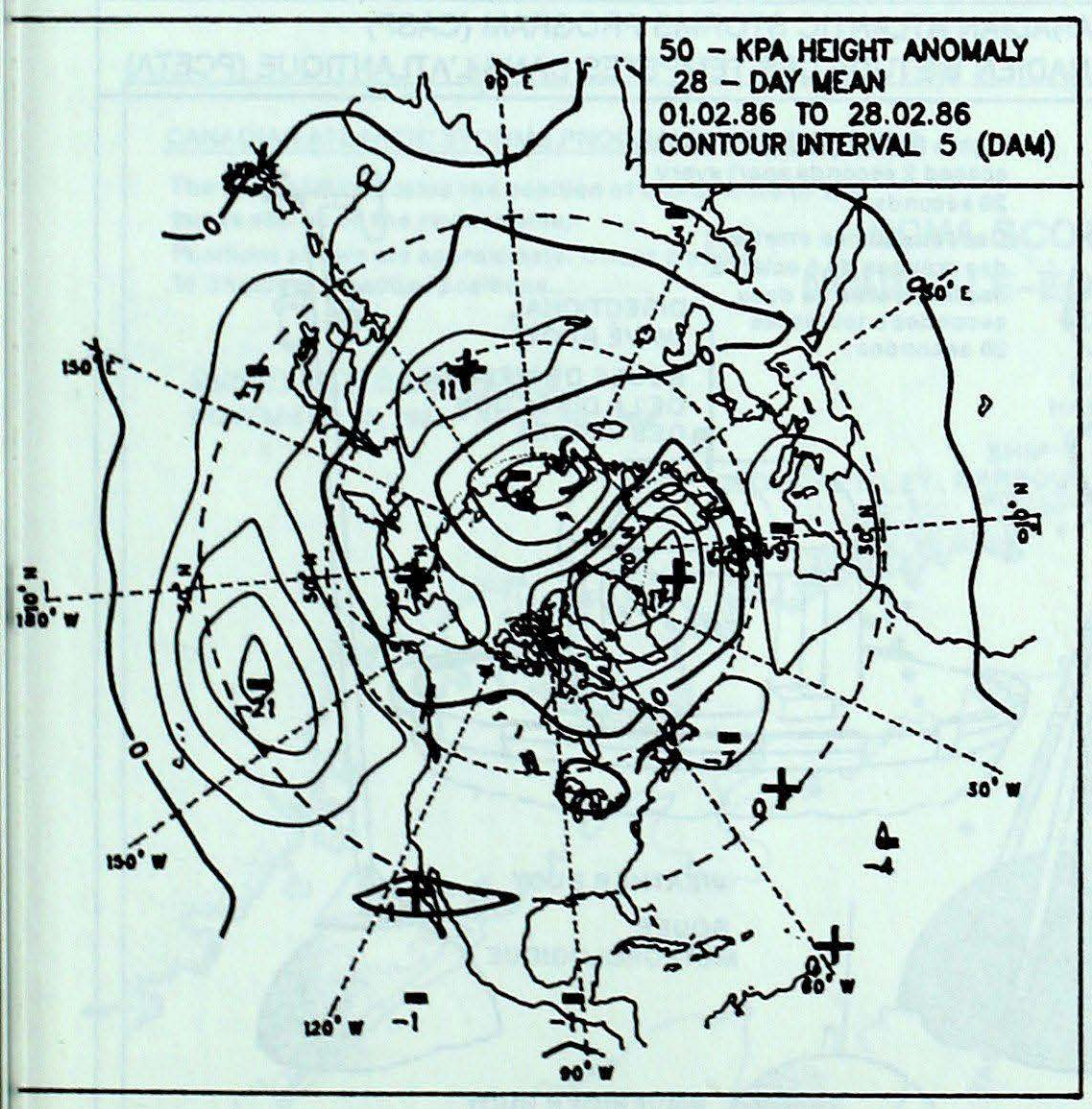


50 kPa 45° $\bar{Z}$ = 540 DAM

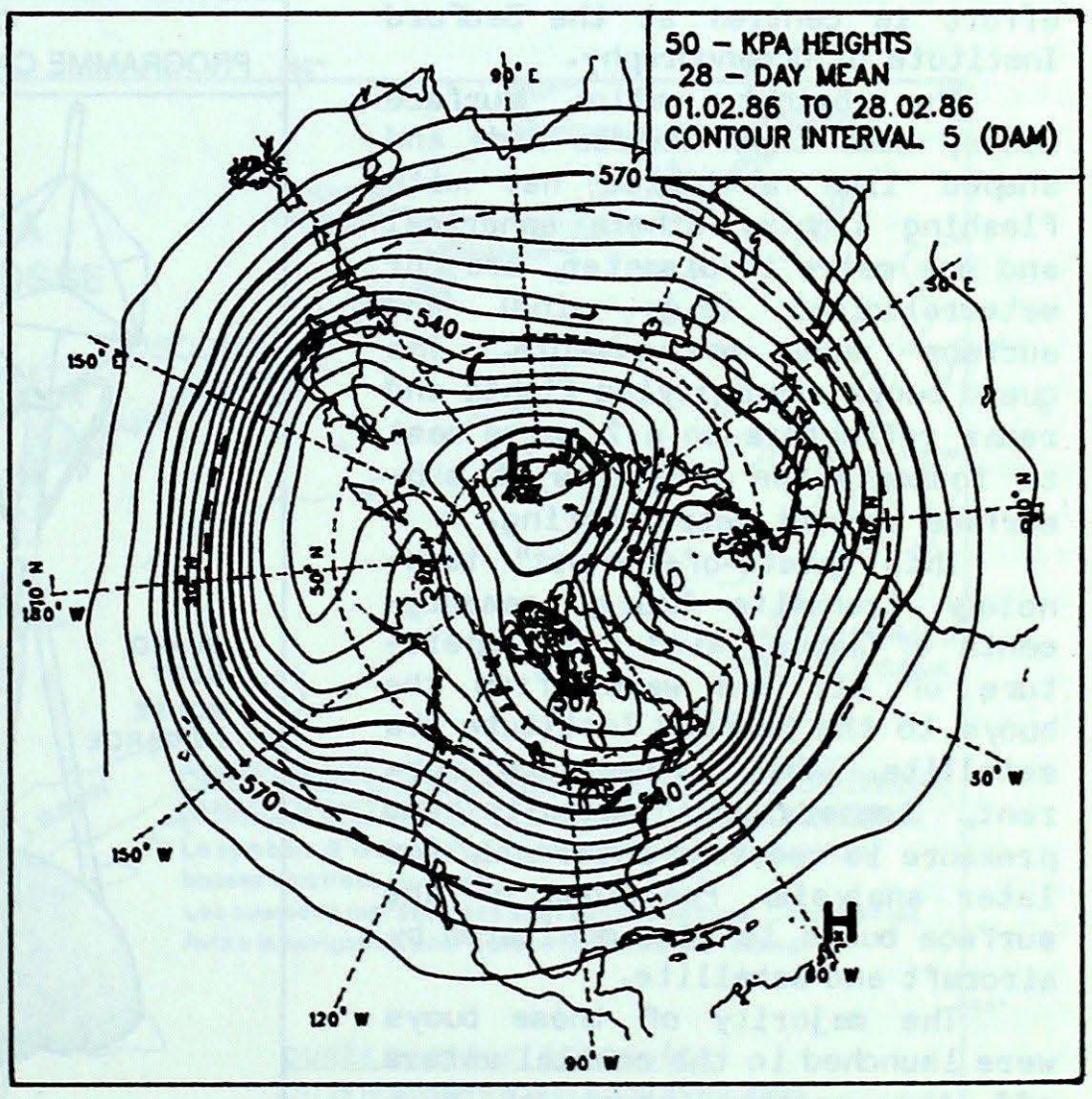


50 kPa 65°N $\bar{Z}$ = 520 DAM

Time-longitude Hovmöller diagrams of 50 kPa heights
at latitudes 45°N and 65°N



Mean 50 kPa height anomaly (dam)
February 1986



Mean 50 kPa heights (dam)
February 1986

FEATURE

THE CANADIAN ATLANTIC STORMS PROGRAM IN EASTERN CANADA

Joint Project of

Environment Canada

Fisheries and Oceans

Deployment of Buoys Marks Beginning of Atlantic Storm Study

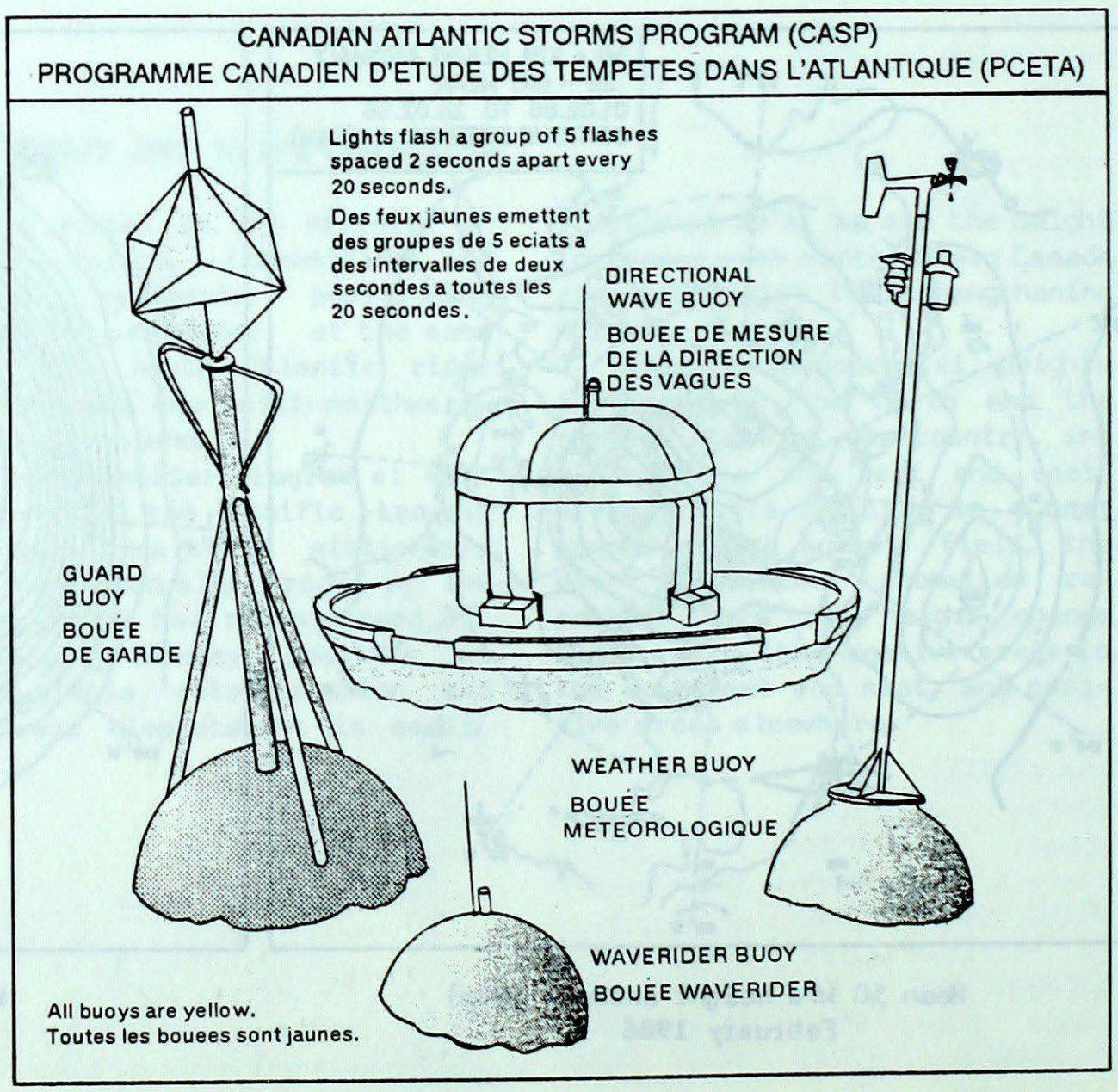
In November 1985, the Department of Fisheries and Oceans research vessel, CSS DAWSON, put down a series of moored instruments and buoys off the coast of Nova Scotia. This marked the beginning of field operations for the Canadian Atlantic Storm Program (CASP) - a multi-million dollar, multi-disciplinary experiment designed to study the structure and behaviour of east coast storms at sea this past winter. The oceanographic effort is centred at the Bedford Institute of Oceanography.

The bright yellow surface buoys, some three metres wide and shaped like a bowler hat with flashing lights; others spherical and one metre in diameter, are for meteorological (e.g. wind) and surface wave measurements. The guard buoys are carrying lights and radar reflectors on a 2 metre mast to indicate the locations of subsurface current metre mooring.

This "state-of-the-art" technology transmits hourly measurements of waves, wind and temperature of air and water from the buoys to the Bedford Institute via satellite, while subsurface current, temperature, salinity and pressure is recorded internally for later analysis. Positions of the surface buoys is also monitored by aircraft and satellite.

The majority of these buoys were launched in the coastal waters off the eastern shore of Nova Scotia from Halifax to Liscomb. However, the offshore oil industry has taken advantage of the opportunity that this study presents, to apply this research to their operational programs. Shell Canada Resources participated in the deployment of an Environment Canada buoy to measure sea surface temperature, air temperature, wind speed and barometric pressure in deep water 250 nautical miles south of Halifax. Data from this buoy is intended to help the company's meteorological consultants forecast storm intensification and movement. On the Grand Banks, Petro Canada deployed three atmospheric pressure sensing buoys. With better forecasts, the companies hope to improve decision making regarding safety and operating efficiency.

The Canadian Atlantic Storms Program is being conducted by Environment Canada and the Department of Fisheries and Oceans. The major funding of this project, $1.4 million, is contributed by the Energy Research and Development Program of Energy, Mines and Resources, which wants to ensure safety and environmental security of offshore drilling programs.



Other active program participants include the departments of National Defence, Transport, and Indian and Northern Affairs, universities (Dalhousie, Memorial, Université du Québec in Montréal, McGill and Toronto), as well as fisheries associations, and the offshore petroleum industry.

Background

The Logistics and Forecast Centres of the Canadian Atlantic Storms Program are located in Environment Canada's Maritimes Weather Centre in Bedford, Nova Scotia.

The Logistics Centre controls the many meteorological and oceanographic observation systems to be used in observing the winter storms, which scientists want to study. The Centre will also coordinate CASP activities with a U.S. program, Genesis of Atlantic Lows Experiment (GALE), which is studying the formation of winter storms off the coast of North Carolina.

The CASP Forecast Centre provides information to the Logistics Centre to support operational decisions. It also uses experimental techniques and will test prototypes of meteorological equipment.

The weather service of Environment Canada is in charge of the CASP meteorological program; in addition, the Department of Fisheries and Oceans, through the Bedford Institute of Oceanography, will make detailed studies of the interaction between ocean and atmosphere and the behaviour of shallow-water waves.

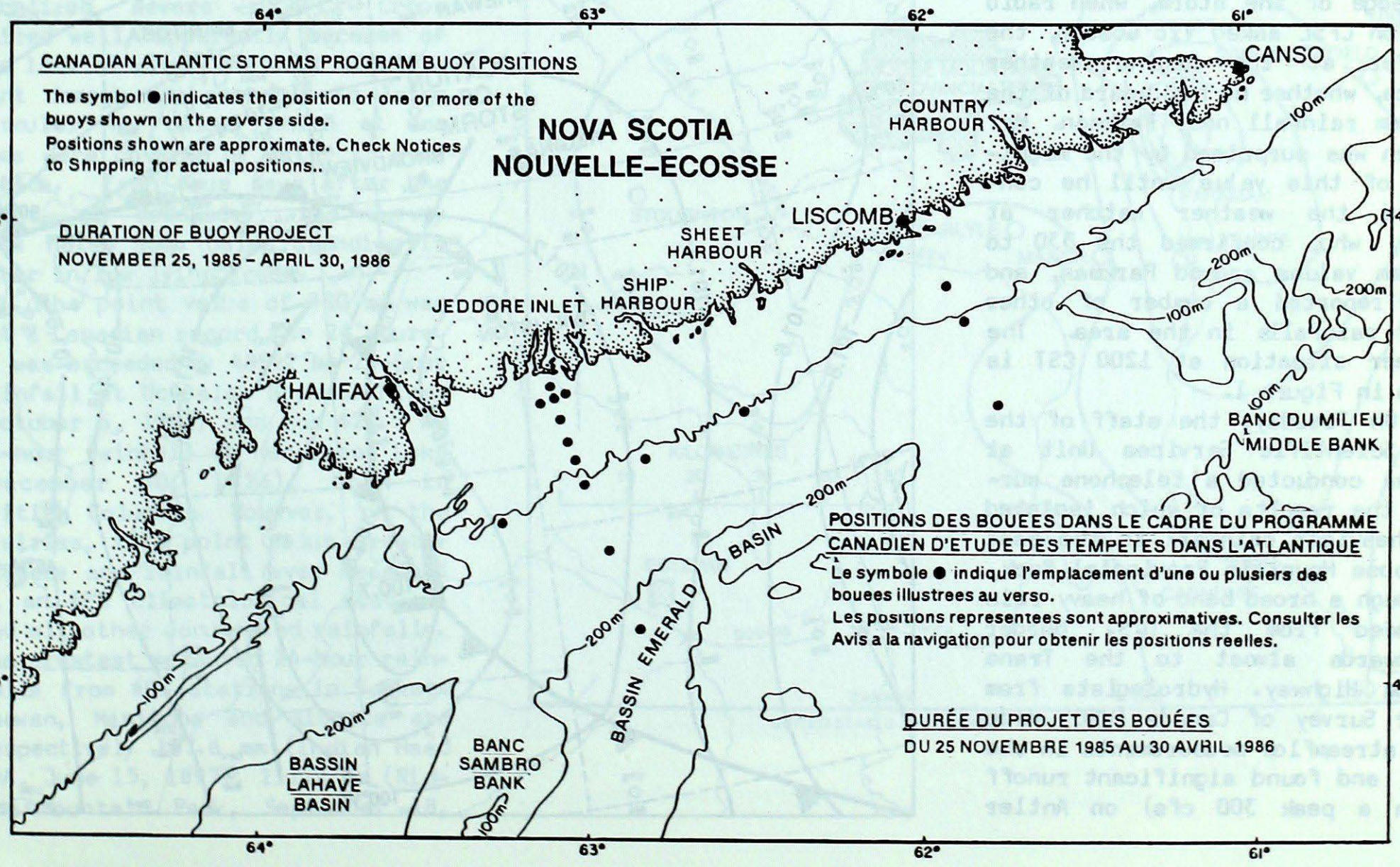
In cooperation with Environment Canada, the Bedford Institute of Oceanography is directing the research on ocean and atmosphere interaction. Several Bedford Institute scientists are studying the influence of sea surface temperatures on storms; the movement of ice fields during storm periods, and the effects a storm's structure has on ocean circulation and sea state.

CONCLUSION

The third and final stage of the Canadian Atlantic Storms Program is currently underway after an eight week intensive field program.

After weeks of intensive observation using a network of volunteer observers, two aircraft, three radars, meteorological balloon observations, and state-of-the-art satellite technology, project scientists and meteorologists will begin the analysis of data on the mesoscale (small-scale) storm features such as squall lines, fronts and snow, rain or freezing rain bands. Similarly, the experimental forecast guidance, site-specific forecasts and electronic display stations will be evaluated for possible future incorporation into the Canadian Weather Service. Through this research, Environment Canada's meteorologists aim to improve the accuracy of forecasts, and to better understand storm structure and movement in Atlantic Canada.

As oceanographic scientists develop improved wave models based, in part, on information gained by the Canadian Atlantic Storms Program, the weather service hopes to be able to improve long-term wave forecasts. CASP is a major Canadian effort to improve meteorologist's understanding of severe mid-latitude winter storms, and ultimately, to make better forecasts of the weather generated by such storms not only on the east coast, but elsewhere across Canada.



FEATURE

THE PARKMAN RAIN STORM OF AUGUST 3-4, 1985

by
R.F. Hopkinson

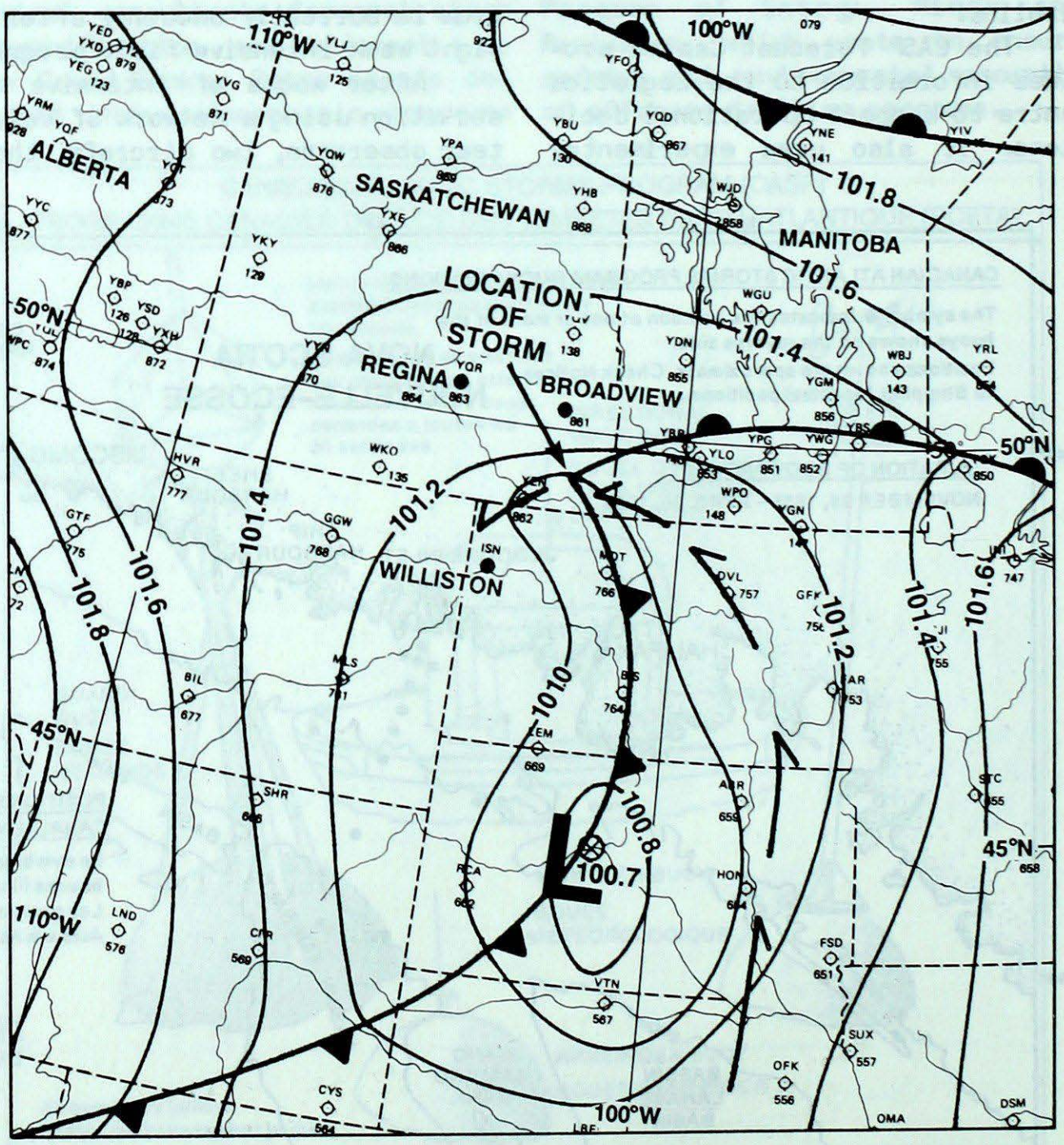
This brief report is intended to provide some preliminary information on a rainstorm, which affected southeastern Saskatchewan from the early afternoon of August 3, 1985, to the early morning of August 4, 1985. What appeared to be a super cell thunderstorm, or more probably a Mesoscale Convective Cluster of thunderstorms (MCC) moved northward over southeastern Saskatchewan during the afternoon of Saturday, August 3, 1985. The intensity of the storm was sufficient to prompt the weather radar operator at Williston, North Dakota to call Estevan, but when he couldn't get through, he then called Regina. The Broadview weather radar also showed intense echoes during this event.

The Atmospheric Environment Service's (AES) climatological station at Maryfield reported 122.2 mm between 5:30 p.m. Saturday and 8:30 a.m. Sunday, but on Monday, August 5 this was revealed as only the edge of the storm, when radio station CFSL asked Vic Gossen, the briefer at the Regina Weather Office, whether he had heard of the 355 mm rainfall near Parkman. Mr. Gossen was surprised by the magnitude of this value until he contacted the weather watcher at Manor, who, confirmed the 330 to 355 mm values around Parkman, and also reported a number of other heavy rainfalls in the area. The weather situation at 1200 CST is shown in Figure 1.

On Tuesday, the staff of the AES Scientific Services Unit at Regina conducted a telephone survey, the results of which isolated the heaviest rainfall to the east of Moose Mountain Provincial Park, although a broad band of heavy rain extended from the U.S. border northwards almost to the Trans Canada Highway. Hydrologists from Water Survey of Canada (WSC) made some streamflow measurements in the area, and found significant runoff (with a peak 300 cfs) on Antler Creek at Wauchope (south of Parkman), but nothing too exceptional, considering the magnitude of the rainfall. This value was considered typical of spring runoff by WSC staff.

On Wednesday, August 7, staff from the Scientific Services Unit at Regina conducted a bucket survey (an estimate of the amount of rain accumulated in backyard containers such as buckets, cans, swimming pools, etc.) of the most severely affected area. The heaviest rainfall was located at the farm of Mr. J.A. Wilson (SW 30 9 33 W1). He had a conical rain gauge, which had and was nearly full again at the end of the storm. The gauge was graduated to 140 mm and the farmer had estimated the gauge capacity at 150 mm. However, the survey crew measured the capacity of the gauge as 197 mm, which would imply this site received at least 380 mm even if it is assumed that the overflow was minimal. The gauge was well located on a fence post about 1.5 m above ground, and well removed from obstructions. There was virtually no wind with the storm so this measurement is accepted as valid. An analysis of the survey results (concentrated on the area east of Moose Mountain Provincial Park) are shown in Figure 2.

Figure 1



One of the interesting aspects of this exceptional storm was the lack of other severe weather phenomena. Certainly there was considerable lightning, but there were no observations of severe winds, tornadoes or hail. The lack of wind was noted by many persons interviewed during the storm survey.

The rain began during the early afternoon of Saturday, August 3, and ceased early Sunday morning. The storm duration was about 18 hours at any location, with later start and end times further north. The heaviest rainfall fell Saturday afternoon and early evening, with less significant amounts overnight. There were no official recording rain gauges within the area of heaviest rain, and the observations recorded by the tipping bucket rain gauge at Broadview could be misleading because it was distant from the heavy rainfall area.

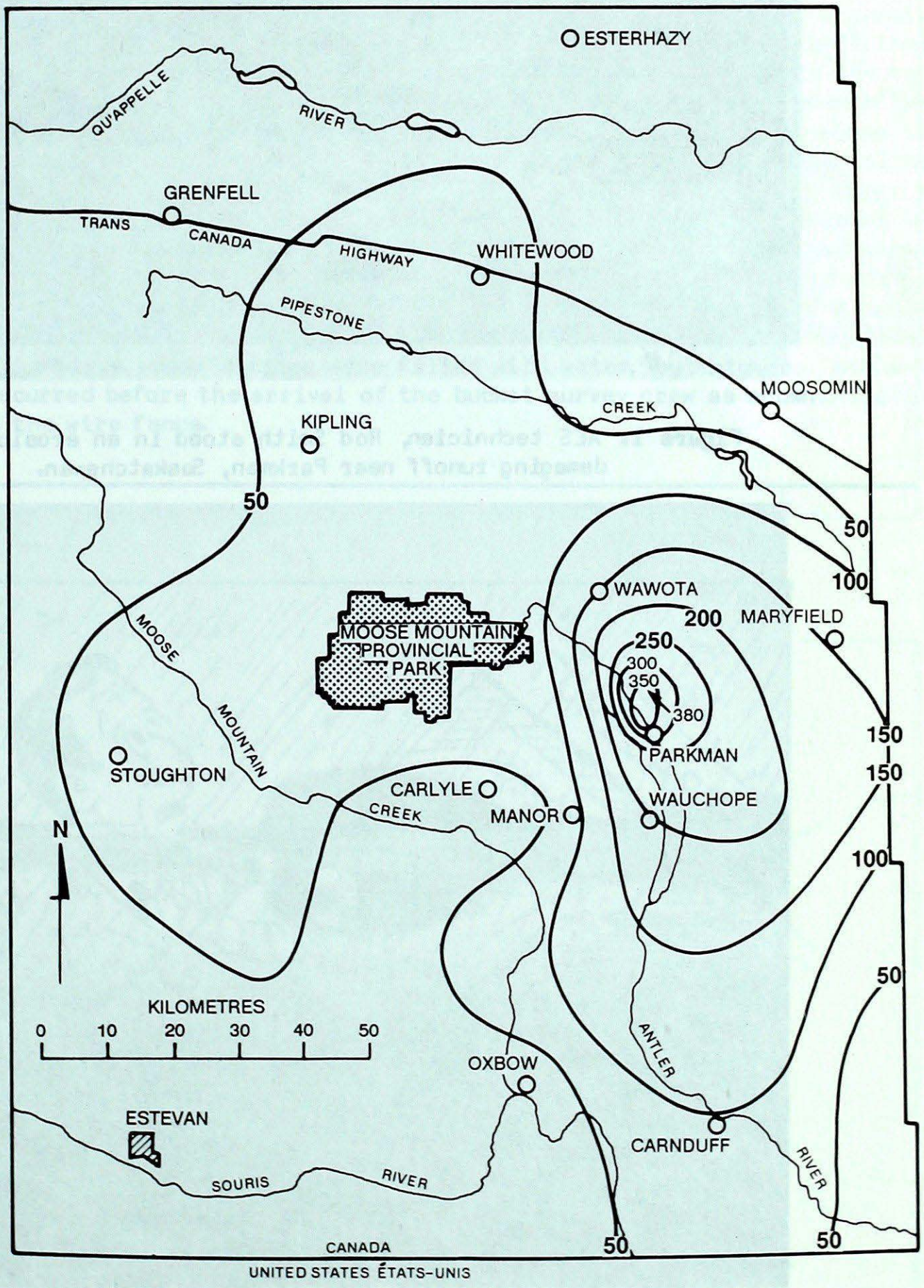
The damage caused by the storm was minimal. The approaches to a bridge on the Antler River west of Parkman were eroded. The storm survey crew observed severe erosion in some summerfallow fields, where gullies a metre or so deep had been formed by the runoff. At the outlet of a small ravine, a fan of fist-size rocks provided evidence of localized severe runoff. Crops faired well, apparently because of the lack of wind. The most significant damage was probably to large circular hay bales, which at one time were covered by water in some fields. Even four days after the event, on Wednesday, the survey crew noted some bales standing in water in low lying areas.

The point value of 380 mm was not a Canadian record for 24 hours. It was exceeded by 489.2 mm 24-hour rainfall at Ucluelet Brynnor Mines (October 6, 1967) and the 421.9 mm 24-hour rainfall at Henderson Lake (December 30, 1926), both in British Columbia. However, on the Prairies, this point value greatly exceeds any rainfall ever measured at an AES climatological station, and all other documented rainfalls. The greatest measured 24-hour rainfalls from AES stations in Saskatchewan, Manitoba and Alberta are respectively 167.6 mm (Indian Head CDA, June 15, 1897), 217.2 mm (Riding Mountain Park, September 18, 1975) and 213.1 mm (Eckville South, June 30, 1970). Other documented rainfalls are 267 mm in 2 hours 15 minutes at Buffalo Gap (May 30, 1961), and 305 mm in 12 hours.

The Parkman rainstorm was significant over several hundred square kilometres. However, except for the few square kilometres that received more than 350 mm of rain, other storms (such as the Saskatchewan storm of July 8-10, 1946 covering 55,000 square kilometres) have had more important effects.

The soil of southeastern Saskatchewan was very dry during the spring and summer of 1985 due to drought, and instead of running off, much of the rain from the Parkman storm was absorbed. This, and also the small area of the storm, are the main reasons for the lack of a more significant impact from what is probably the greatest 24-hour rainfall at any point in Canada east of the Rockies.

Figure 2



FEATURE

THE PARKMAN RAIN STORM ... Cont'd

Figure 1: AES technician, Rod Smith stood in an erosion gully created by locally damaging runoff near Parkman, Saskatchewan.

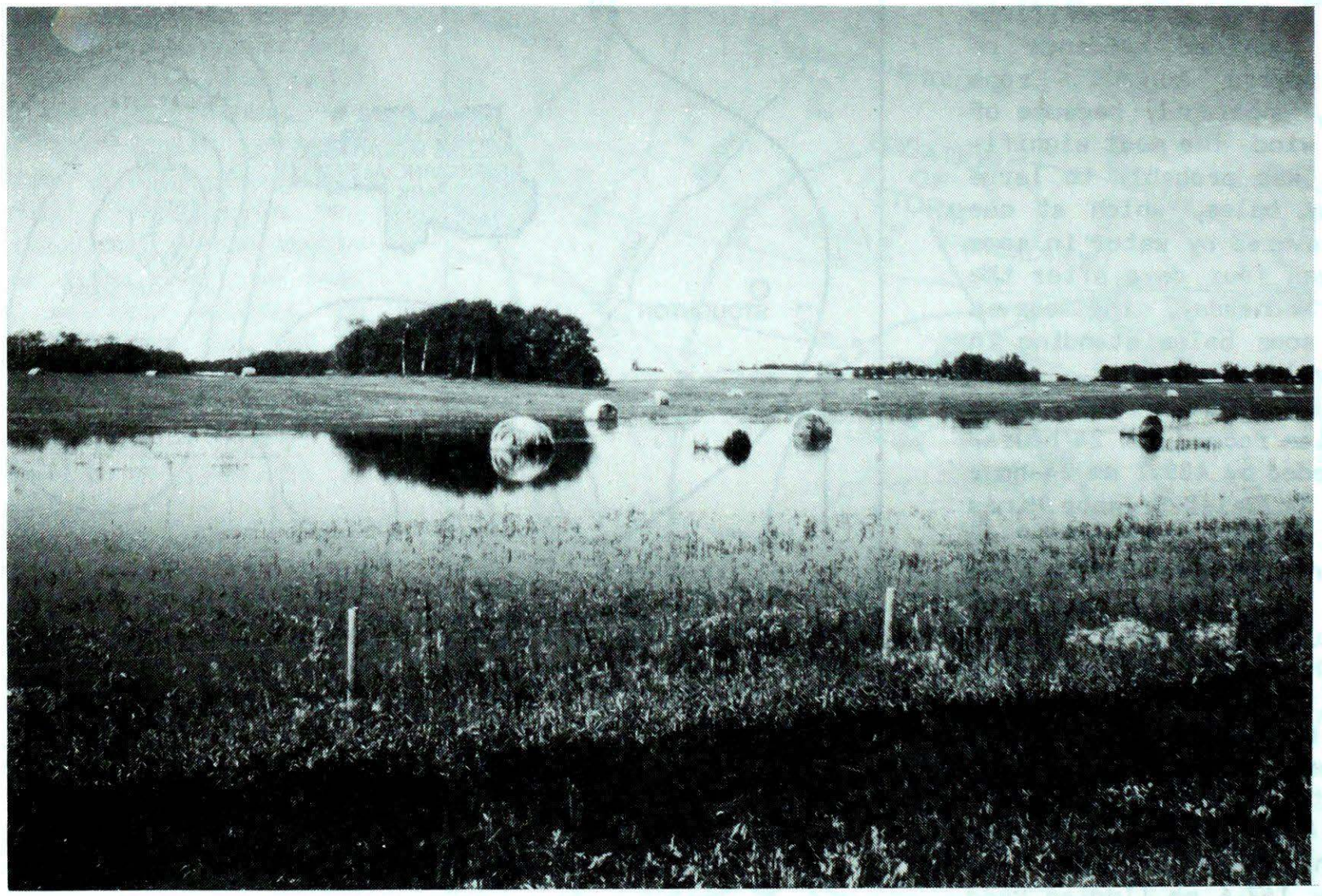


Figure 2: Large cylindrical hay bales standing in water provided one of the few examples of direct damage from the Parkman storm

THE PARKMAN RAIN STORM ... Cont'd

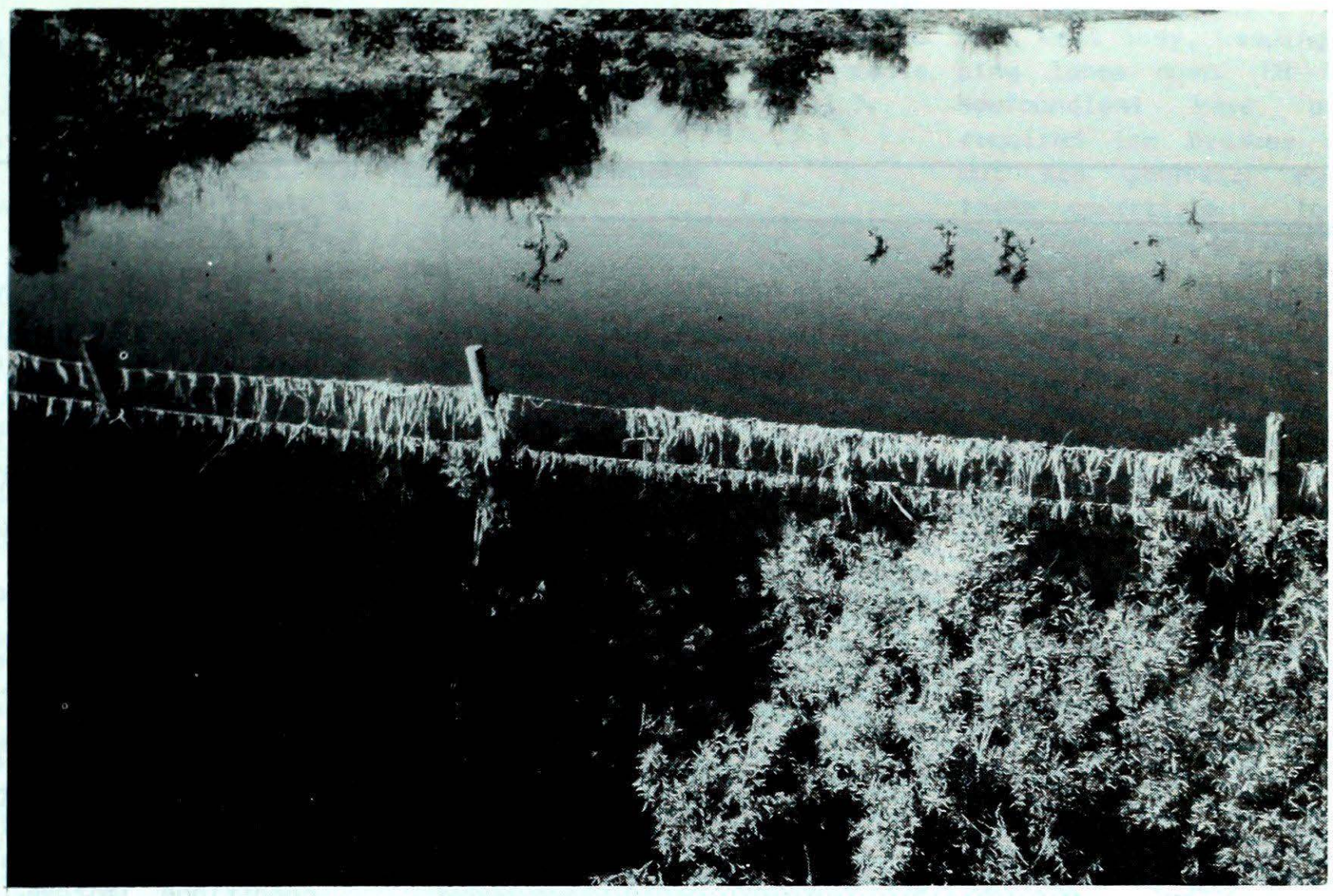
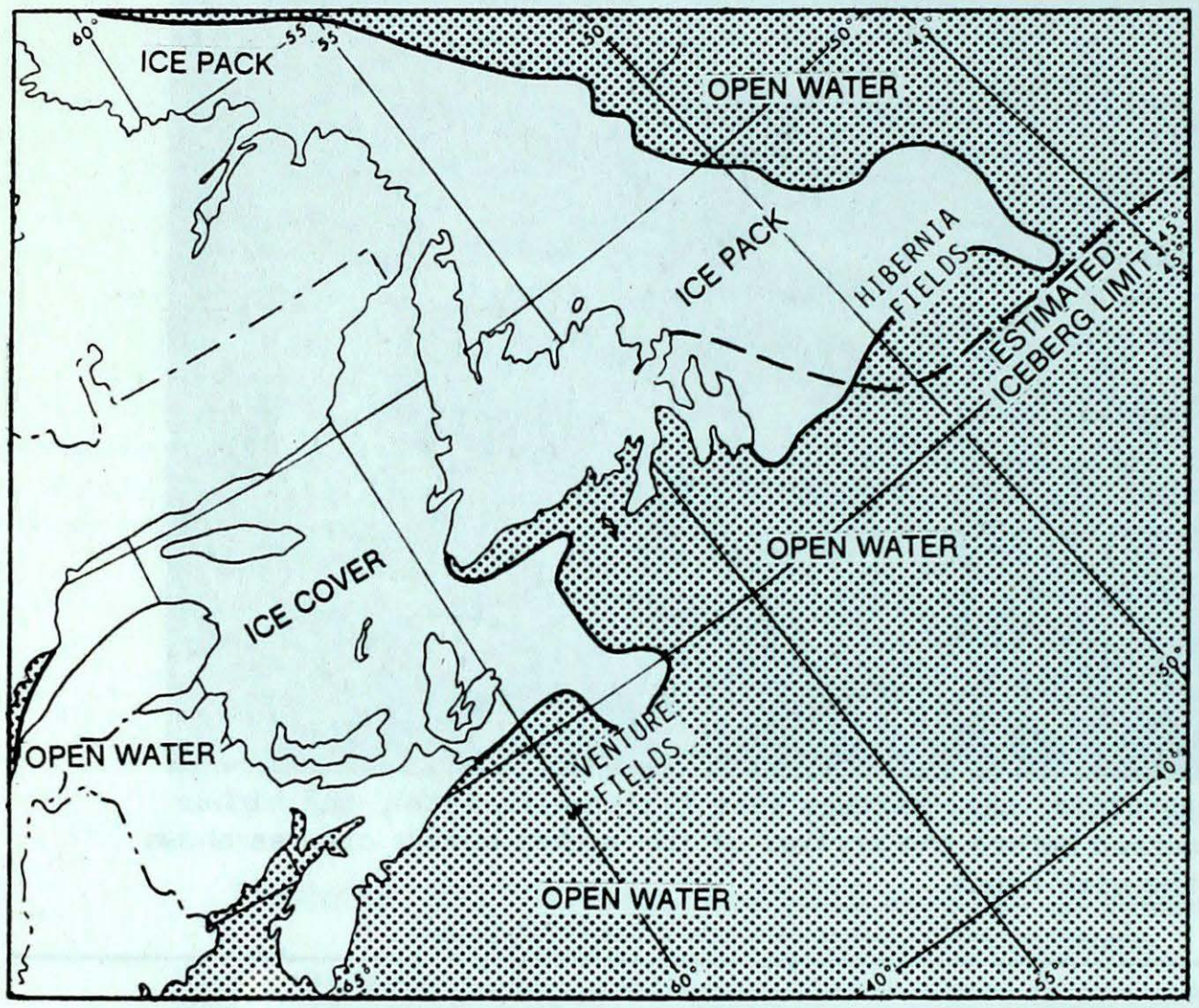


Figure 3: Three days after the storm, many ditches were filled with water, but higher water levels had occurred before the arrival of the bucket survey crew as shown by straw caught in the wire fence.

FEATURE

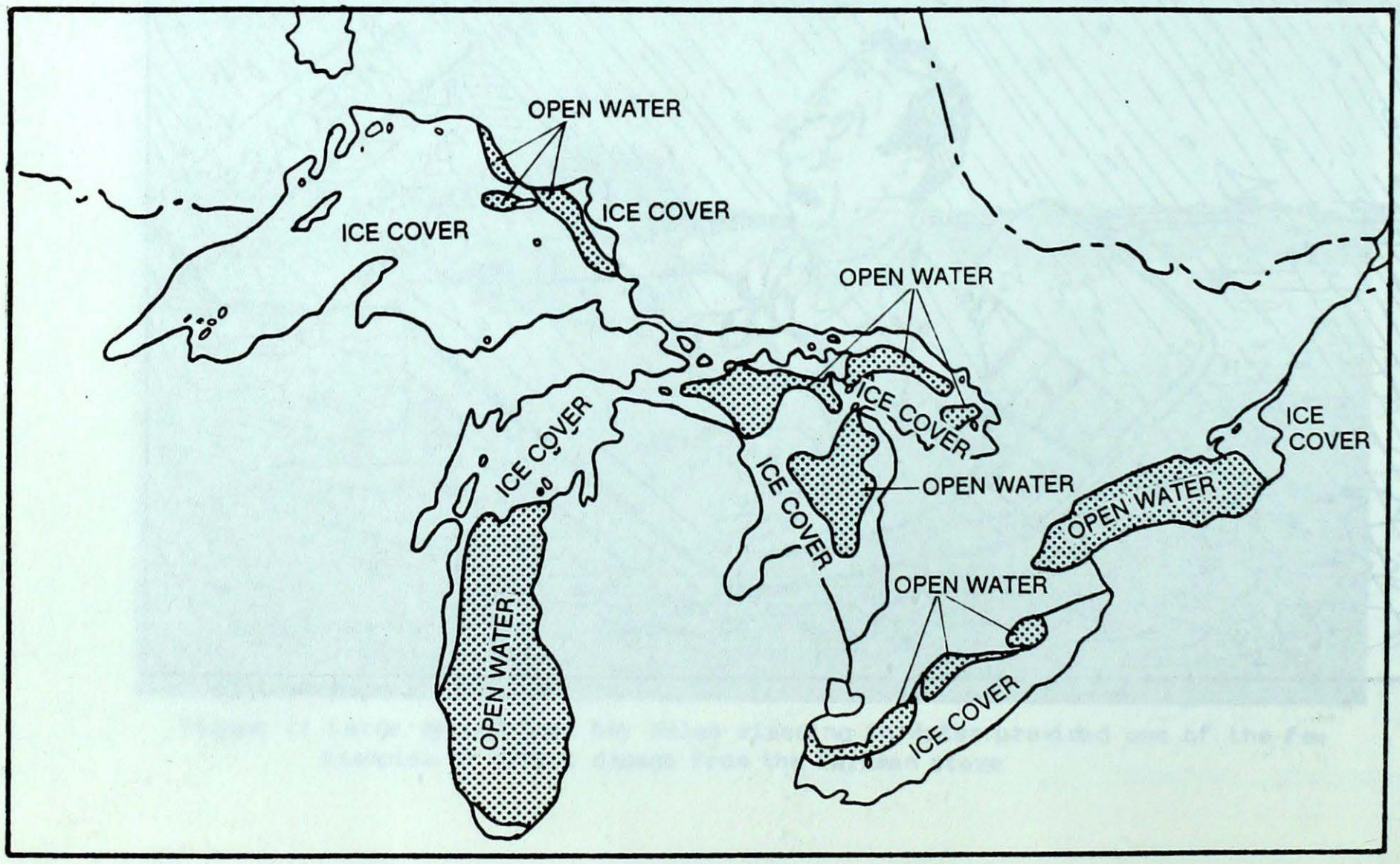
ICE CONDITIONS IN CANADIAN WATERS

by
A.K. Radomski



Great Lakes

The ice cover has been gradually decreasing since the beginning of the month, and conditions are considered to be close to normal. The Canadian Coast Guard is in the process of breaking up the ice in harbours, and placing navigational aids in the water. The CCGS Griffin has already broken up the ice in Midland harbour, and other Georgian Bay ports are next. The Samuel Risley stationed in Thunder Bay will start to break-up the ice in the harbour as soon as wind conditions become favourable. The ice breaker Montmorency will be placing navigational aids in the St. Marys River as soon as ice conditions improve. Most navigational aids have already been put down in Lake Ontario by the CCGS Simcoe, which also has the duty of breaking up the ice in Lake Ontario ports. The locks at Sault Ste. Marie are schedule to open April 1, while the Welland canal will be reopened April 3. **... continued**



ICE CONDITIONS ... cont'd

St. Lawrence River

It has not been a difficult season this year. Ice conditions along the shipping channel to Montreal have been very light. A fair amount of fast ice still remains along the shoreline, approximately 20 percent more than last year. Because of high water levels and a strong current, there have been few, if any problems with ice jams. Two ice breakers have been stationed in the river to break-up any large floes that moved downstream, and look for potential bottlenecks. A hovercraft is in the process of breaking up the solid ice cover on Lac St-Pierre, so as not to have all the big flows move down stream all at once during spring break-up. A coast guard cutter has just finished breaking up the Saguenay River after a slight delay, because of unfavourable wind conditions; commercial shipping is now able to navigate the route without ice breaker assistance. The Pierre Radisson has been dispatched to the Seaway to clear the ice so the shipping route will be ready beginning April 3.

Gulf of St. Lawrence

Ice conditions in the gulf are the worst they have been for several years, mainly because of persistant northwesterlies, which pushed ice towards Newfoundland's west coast and into Cabot Strait. At times, there was an unbroken stretch of ice from Cape North on Cape Breton Island across the Strait to Cape Ray on southwestern tip of Newfoundland. Large floes made up a large portion of the congested ice pack, and as a result, there was very little sea movement capable of breaking up the ice. Main problem areas for shipping have been along the west coast of Newfoundland, especially vessels trying to reach Corner Brook and Stephenville. In addition, under powered and low ballast ships have had difficulty navigating through the heavy ice the in Cabot Strait, and four Canadian ice breakers have been kept busy, keeping the shipping lanes open. CN ferries to Newfoundland have occasionally required ice breaker assistance, but are generally equipped for these conditions. Ice has not hampered ferry service to Prince Edward Island.

East Coast

The seaward extent of the Labrador ice pack is greater than normal, and now encompasses the Hibernia oil fields. As a result, all drilling rigs have left their sites, and are waiting for the conditions to improve. A workable lead of water still extends along the east coast of Newfoundland, allowing ships to sail as far north as Cape Bonavista. The icebreaker Sir John Franklin remains in Notra Dame Bay, supporting shipping in and out of Botwood and Lewisporte. A smaller icebreaker has been assisting ferries near the coast, and deep sea fishing trawlers navigating through the ice pack.

FEBRUARY 1986

STATION	Temperature C Mean	Difference from Normal	Maximum	Minimum	Snowfall (cm)	% of Normal Snowfall	Total Precipitation (mm)	% of Normal Precipitation	Snow on ground at end of month (cm)	No. of days with Precip 1.0 mm or more	Bright Sunshine (hours)	% of Normal Bright Sunshine	Degree Days below 18 C
BRITISH COLUMBIA													
ABBOTSFORD	3.5	-1.5	17.8	-15.1	30.5	256	197.5	123	0	14	95	124	405.9
ALERT BAY	3.3	-1.3	6.0	0.6	32.5	335	53.0	39	0	7	X		413.0
AMPHITRITE POINT	5.3	-0.8	15.1	-5.8	4.0	129	247.9	71	0	17	X		MSG
BLUE RIVER	-2.7	1.8	11.3	-25.5	45.0	73	43.1	80	65	9	86	148	MSG
BULL HARBOUR	2.9	-1.7	13.2	-11.0	22.2	213	120.9	66	0	12	X		MSG
CAPE SCOTT	4.0	-1.3	16.1	-7.2	7.6	79	147.3	58	0	12	X		391.7
CAPE ST.JAMES	4.1	-0.7	9.6	-8.9	16.2	216	80.8	59	0	10	101	*	396.7
CASTLEGAR	-1.7	-0.9	14.1	-18.3	42.0	96	43.1	67	6	8	82	119	552.3
COMOX	2.9	-1.1	16.3	-9.9	20.2	139	87.6	70	0	10	X		423.5
CRANBROOK	-5.3	-1.8	12.0	-30.0	59.4	226	47.9	223	0	10	110	*	650.9
DEASE LAKE	-14.8	-1.9	9.8	-42.2	10.4	33	9.1	36	49	2	180	169	919.9
ETHELDA BAY	1.4	-2.5	12.4	-11.3	26.2	106	166.0	55	0	12	X		463.6
FORT NELSON	-13.9	3.0	12.8	-34.7	9.4	40	4.9	25	36	2	203	*	891.9
FORT ST.JOHN	-13.2	-1.8	9.6	-37.2	10.5	34	8.2	30		4	X		835.9
HOPE	1.6	-1.8	14.6	-14.2	98.3	314	283.0	144	3	12	53	110	460.7
KAMLOOPS	-3.1	-1.8	15.8	-23.7	34.1	268	28.4	177	0	7	109	116	590.4
KELOWNA	-3.4	-1.8	12.4	-25.2	37.4	254	26.8	127	7	6	100	144	599.3
LANGARA	2.4	-1.2	10.1	-9.6	0.2	1	64.9	45	0	10	X		433.5
LYTTON	-1.4	-2.9	16.4	-21.7	30.9	111	75.2	190	0	4	79	90	541.7
MACKENZIE	-11.3	-2.2	10.2	-43.8	22.2	43	25.6	43	40	6	81	112	844.9
MCINNES ISLAND	3.1	-1.3	11.6	-10.7	23.0	122	166.9	74	0	14	X		418.1
PENTICTON	-0.8	-1.4	14.7	-18.0	27.8	243	33.0	166	0	8	98	130	526.3
PORT ALBERNI	2.1	*	15.1	-15.1	49.4	*	214.0	*	0	14	57	*	445.0
PORT HARDY	2.6	-1.3	14.4	-10.7	19.4	184	102.1	64	0	10	100	134	430.8
PRINCE GEORGE	-8.6	-2.5	12.8	-34.8	19.4	54	21.7	55	4	5	100	114	744.2
PRINCE RUPERT	0.2	-2.1	15.0	-18.1	6.4	27	106.0	47	0	11	122	192	498.6
PRINCETON	-4.3	-1.3	15.2	-27.5	48.4	197	46.0	155	28	10	102	*	MSG
QUESNEL	-7.0	-2.1	15.1	-29.6	11.3	38	12.0	37		4	X		700.5
REVELSTOKE	-5.1	-2.8	6.4	-19.4	107.6	140	93.4	104	80	8	87	156	645.4
SANDSPIT	1.9	-1.6	11.8	-11.4	39.2	252	91.6	80	0	12	97	117	451.1
SMITHERS	-9.2	-3.9	10.5	-34.0	25.1	81	24.0	75	7	8	99	118	750.5
TERRACE	-4.1	-2.7	7.0	-20.2	28.0	39	67.4	54	4	11	130	180	617.7
VANCOUVER HARBOUR	4.6	-0.6	15.1	-6.7	16.0	168	165.0	105	0	11	X		376.9
VANCOUVER INT'L	3.6	-1.0	18.4	-10.4	17.6	234	124.9	108	6	7	99	113	401.4
VICTORIA GONZ. HTS	5.3	-0.5	17.4	-5.1	18.0	439	128.7	174	0	10	105	109	355.6
VICTORIA INT'L	3.9	-0.9	16.4	-9.2	38.9	480	158.8	160	0	11	100	116	395.0
VICTORIA MARINE	4.7	-0.7	15.2	-5.5	8.1	207	261.6	168	0	13	X		372.7
WILLIAMS LAKE	-7.5	-3.3	11.9	-30.9	25.1	98	18.1	75	3	8	104	96	772.5

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YUKON TERRITORY													
BURWASH	-15.0	3.0	5.0	-39.3	16.4	215	11.9	154	10	3	X		924.5
DAWSON	-22.3	2.3	-5.8	-43.5	14.3	53	6.4	25	46	3	X		1127.8
MAYO	-17.9	2.0	7.5	-41.6	4.7	26	2.6	15	26	1	X		1006.0
WATSON LAKE	-19.1	-0.4	9.4	-44.3	11.4	35	9.1	35	34	2	128	150	1038.5
WHITEHORSE	-12.8	0.4	5.1	-33.1	5.4	35	4.6	34	19	2	163	179	861.1
NORTHWEST TERRITORIES													
ALERT	-28.2	5.4	-2.9	-39.6	6.8	121	5.6	107	20	1	0		1293.4
BAKER LAKE	-30.6	2.0	-9.5	-45.0	8.0	148	6.2	126	32	3			1362.6
CAMBRIDGE BAY	-30.5	3.9	-10.8	-44.9	11.2	243	10.8	270	15	6	72	139	1356.6
CAPE DYER	-15.4	7.3	-0.1	-41.7	122.6	210	79.6	153	149	13	X		935.2
CAPE PARRY	-21.3	8.4	-11.0	-43.2	14.8	180	5.4	101	13	3	X		1199.2
CLYDE	-23.4	4.3	0.0	-38.3	18.6	295	12.0	193	35	4	27	67	1158.9
COPPERMINE	-26.3	4.8	-12.4	-42.0	26.2	409	19.6	316	40	8	46	60	1239.1
CORAL HARBOUR	-27.6	1.8	-5.1	-38.8	3.3	35	3.3	37	29	1	121	106	1277.4
EUREKA	-28.6	9.4	-15.4	-42.4	10.5	403	9.2	383	19	4	0		1425.6
FORT RELIANCE	-23.9	3.2	4.8	-47.1	11.4	86	7.3	69	57	3	X		1174.0
FORT SIMPSON	-18.7	4.1	6.2	-38.0	9.3	49	6.9	36	48	3	88	91	1026.1
FORT SMITH	-19.9	1.9	12.2	-41.4	7.1	38	4.2	26	57	2	111	97	1061.7
FROBISHER BAY	-20.1	5.8	2.4	-45.6	36.8	150	35.2	151	30	8	55	57	1068.4
HALL BEACH	-28.6	3.5	-9.3	-39.9	3.2	37	3.3	39	27	0	X		1304.0
HAY RIVER	-18.4	3.3	13.2	-36.8	13.8	71	6.8	37	47	2	X		1017.4
INUVIK	-24.3	4.6	-3.4	-45.7	23.6	187	18.5	176	39	6	13	19	1183.2
MOULD BAY	-33.4	1.8	-20.8	-46.7	4.4	133	2.0	66	33	0	18	391	1439.8
NORMAN WELLS	-20.9	5.3	-1.8	-36.0	18.2	105	11.8	73	20	3	51	66	1089.1
POND INLET	-26.2	7.8	-3.3	38.0	13.6	149	11.8	222	15	4	X		1236.8
RESOLUTE	-27.2	6.0	-8.2	-39.2	8.6	277	7.6	253	30	2	12	67	1266.2
SACHS HARBOUR	-27.3	3.6	-14.8	-39.4	6.4	156	6.4	172	11	2	37	86	1268.8
YELLOWKNIFE	-22.2	2.9	6.2	-43.2	16.4	125	10.8	96	46	5	99	96	1128.8
ALBERTA													
BANFF	-8.2	-1.9	12.5	-30.0	39.0	118	48.4	174	16	7	X		
BROOKS	-10.6	-1.1	14.0	-36.0	26.0	175	25.7	173	0		89	*	
CALGARY INT'L	-8.6	-1.3	17.3	-37.5	20.2	105	11.3	72	0	3	140	109	746.4
COLD LAKE	-15.4	-1.8	14.1	-40.8	5.6	30	3.9	24	8	3	120	95	933.8
CORONATION	-14.3	-2.6	8.9	-37.3	19.0	95	15.4	90	4	3	105	78	903.0
EDMONTON INT'L	-13.2	-1.8	11.2	-37.1	5.4	25	6.2	35	6	3	118	99	873.7
EDMONTON MUNI.	-11.3	-1.7	13.0	-29.4	6.6	30	7.8	41	5	4	126	108	821.3
EDMONTON NAMAO	-12.8	-1.9	12.9	-32.7	13.9	64	4.6	22	5	4	X		861.2
EDSON	-10.4	-0.5	13.0	-33.8	16.6	55	9.8	50		3	110	94	795.0
FORT CHIPEWYAN	-18.9	1.8	11.0	-43.5	8.4	46	8.4	56	60		X		

X = Not observed * = normal missing MSG = data missing

FEBRUARY 1986

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FORT MCMURRAY	-14.6	0.8	13.1	-39.8	6.4	29	5.0	26	16	3	139	107	919.5
GRANDE PRAIRIE	-13.5	-1.4	8.9	-41.2	27.7	104	16.6	70	9	5	112	*	882.1
HIGH LEVEL	-17.5	1.0	11.8	-43.7	7.4	35	6.6	41	38	1	89	70	995.3
JASPER	-8.3	-1.8	12.7	-31.2	14.6	67	20.1	97	10	5	108	*	737.4
LETHBRIDGE	-9.0	-3.6	18.1	-37.2	21.3	99	20.5	108	0	5			755.3
MEDICINE HAT	-9.1	-1.4	15.5	-34.6	9.7	53	8.9	53	0	2	105	86	760.6
PEACE RIVER	-14.7	-1.2	7.9	-40.5	7.8	30	7.4	35	10	2	X		875.9
RED DEER	-11.8	-1.1	13.6	-38.4	17.3	88	18.3	103		3	X		832.7
ROCKY MTN HOUSE	-11.8	-4.4	15.4	-40.7	16.0	68	16.0	81	4	5	X		833.5
SLAVE LAKE	-13.8	-1.5	10.8	-38.4	15.8	72	5.9	29		2	133	117	890.6
SUFFIELD	-9.7	-0.9	14.0	-32.5	17.4	102	11.6	72		3	109	86	774.8
WHITECOURT	-11.3	-1.1	12.8	-34.2	18.9	71	15.8	65	10	5	X		817.4
SASKATCHEWAN													
BROADVIEW	-14.5	0.1	4.6	-38.5	17.2	114	13.0	103	5	4	111	81	909.5
COLLINS BAY	-20.8	*	-5.9	-38.9	33.3	*	20.2	*	39	5	128	*	1085.0
CREE LAKE	-20.1	-0.4	9.8	-46.5	7.8	43	7.1	52	35	3	141	105	1067.0
ESTEVAN	-11.4	0.6	7.0	-33.7	17.8	101	12.0	70	1	6	87	64	823.0
HUDSON BAY	-15.1	0.9	4.7	-35.0	8.6	42	4.4	27	18	1	126	*	926.5
KINDERSLEY	-15.0	-2.5	6.4	-36.6	17.2	110	12.0	74	10	3	X		914.0
LA RONGE	-17.1	0.2	10.8	-40.9	5.0	21	5.6	36	15	1	X		983.4
MEADOW LAKE	-17.8	-3.0	7.0	-42.7	4.6	29	3.6	22	4	2	161	*	1004.0
MOOSE JAW	-11.9	-0.4	9.0	-33.1	21.8	115	20.4	132		5	111	88	836.7
NIPAWIN	-16.6	*	5.0	-35.0	5.5	*	3.5	*	9	1	126	91	967.8
NORTH BATTLEFORD	-16.6	-2.5	9.5	-37.7	6.9	44	5.7	39	12	1	X		966.2
PRINCE ALBERT	-16.4	0.1	11.0	-38.2	3.4	20	3.4	22	9	1	152	124	953.0
REGINA	-13.9	-0.3	5.3	-36.3	19.6	107	13.9	86	6	4	109	89	883.0
SASKATOON	-15.5	-0.9	5.3	-36.2	11.2	60	9.4	57	4	1	X		937.7
SWIFT CURRENT	-11.7	-1.4	9.9	-34.7	14.6	81	14.4	83		5	114	99	831.0
URANIUM CITY	-21.9	0.6	5.9	-46.1	16.0	64	6.0	33	55	2	X		1116.9
WYNYARD	-15.5	-1.0	5.1	-38.3	16.6	93	12.4	81	6	4	127	93	939.2
YORKTON	-15.9	-0.4	6.5	-41.8	18.9	98	14.4	80	19	5	101	78	950.2
MANITOBA													
BRANDON	-16.0	-0.3	2.2	-38.0	11.5	58	10.3	55	17	5	X		951.7
CHURCHILL	-25.8	0.1	-6.7	-39.4	9.7	66	7.6	58	17	2	121	91	1225.6
DAUPHIN	-14.4	1.2	8.2	-32.8	15.0	80	14.0	80	13	4	120	88	906.7
GILLAM	-22.3	1.6	-3.4	-38.9	13.0	58	6.2	33	51	2	X		1126.2
GIMLI	-15.1	1.9	-0.4	-31.8	21.2	104	16.0	89	22	5	94	61	925.2
ISLAND LAKE	-18.3	2.0	-1.6	-37.4	20.2	95	18.7	130	50	7	X		1015.5
LYNN LAKE	-21.4	0.8	5.6	-44.4	9.8	64	8.4	56	36	4	117	88	1102.4
NORWAY HOUSE	-18.0	*	0.4	-38.4	32.0	*	30.2	*	78	7	0	*	1016.8
PILOT MOUND	-14.8	0.3	4.1	-34.7	13.4	65	13.4	65	25	5	X		917.9
PORTAGE LA PRAIRIE	-14.5	0.1	3.4	-28.4	23.1	167	13.1	61	14	5	X		910.3
THE PAS	-15.8	2.2	5.0	-36.3	3.6	17	2.8	18	16	1	122	92	945.8
THOMPSON	-20.2	2.1	-2.1	-44.5	10.9	97	9.7	100	31	3	105	73	1069.0
WINNIPEG INT'L	-15.0	0.6	0.0	-31.5	14.5	76	12.9	73	15	6	94	65	923.0
ONTARIO													
ATIKOKAN	-13.7	1.7	1.6	-34.8	46.9	146	36.4	166	69	8	96	71	888.7
BIG TROUT LAKE	-20.8	0.6	-1.7	-37.2	19.0	*	16.3	85	47	5	125	*	1085.5
EARLTON	-14.3	-0.2	1.7	-32.8	12.2	25	11.1	23	33	4	X		903.9
GERALDTON	-16.9	1.0	-1.4	-38.0	47.4	143	34.2	102	68	6	X		967.7
GORE BAY	-9.6	0.1	3.2	-23.5	35.4	94	16.0	37	17	3	X		773.8
HAMILTON RBG	-6.1	-1.8	2.5	-16.9	20.2	72	32.0	59	7	6	77	*	675.2
HAMILTON	-5.8	0.5	3.5	-17.3	61.2	203	73.6	139	17	10	X		666.1
KAPUSKASING	-15.6	0.6	-8.5	-22.6	22.6	51	17.4	40	76	3	X		940.3
KENORA	-13.2	1.2	0.5	-28.2	30.4	119	27.0	117	54	9	X		872.3
KINGSTON	-8.8	-1.8	3.0	-21.6	42.4	118	59.0	100	17	13	92	71	751.0
LANSDOWNE HOUSE	-19.7	0.2	-1.6	-35.9	28.6	107	22.8	95	48	4	X		1053.6
LONDON	-6.1	0.0	3.8	-18.2	54.9	141	71.5	118	14	12	71	73	673.8
MOOSONEE	-18.9	-0.4	-1.3	-36.8	27.7	92	22.9	76	129	7	105	86	1033.2
MOUNT FOREST	-8.1	0.1	2.6	-19.8	49.6	104	47.2	74	14	9			730.7
MUSKOKA	-10.1	-0.5	2.1	-29.8	39.9	77	35.8	57	42	10	X		787.7
NORTH BAY	-11.6	-0.3	1.1	-26.2	28.0	55	23.2	41	37	4	124	99	828.0
OTTAWA INT'L	-9.7	-0.2	1.5	-20.8	27.4	54	37.6	62	15	9	125	*	775.4
PETAWAWA	-11.6	-0.4	0.7	-28.6	25.6	56	26.3	51	23	7	X		828.8
PETERBOROUGH	-8.7	-0.2	1.8	-23.8	25.4	80	36.7	75	25	7	X		748.8
PICKLE LAKE											X		
RED LAKE	-15.1	1.7	1.1	-33.2	29.6	128	21.8	105	51	6	102	*	925.8
ST. CATHARINES	-4.8	-1.1	4.5	14.5	49.1	217	77.7	172	7	10	X		638.8
SARNIA	-5.4	-0.9	2.7	-18.8	36.6	154	52.1	115	9	10	69	65	651.7
SAULT STE. MARIE	-10.3	-0.3	2.5	-27.2	28.8	45	22.7	33	42	6	109	96	794.0
SIMCOE	-5.8	-0.8	5.0	-17.0	58.6	246	89.5	160	33	11	X		665.4
SIOUX LOOKOUT	-14.4	1.3	-2.7	-32.2	42.3	150	42.5	153	73	11	X		
SUDBURY	-11.6	0.9	0.8	-25.2	17.0	37	16.2	34	31	3	125	94	827.6
THUNDER BAY	-11.2	1.8	1.5	-31.9	41.6	135	39.6	139	68	8	103	70	817.2
TIMMINS	-14.5	1.1	0.5	-34.9	15.6	29	14.9	32	55	4	X		909.1
TORONTO	-4.4	-0.5	4.3	-14.1	31.2	109	51.4	99	5	6			626.2
TORONTO INT'L	-6.1	0.0	2.5	-16.9	20.2	75	32.0	69	7	6	X		675.2
TORONTO ISLAND	-4.1	0.7	4.5	-14.0	32.0	128	57.8	121	1	6			617.5
TRENTON	-7.8	-1.3	4.0	-20.4	33.2	93	39.9	70	6	10	X		721.7
WATERLOO-WELL	-7.1	-0.3	4.2	-20.4	44.6	143	61.6	113	11	8	X		703.9
WAWA	-12.7	*	0.8	-30.8	37.1	*	27.2	*	69	5		*	860.0
WIARTON	-7.1	0.4	2.4	-20.9	62.9	103	59.9	93	30	10	67	65	701.4
WINDSOR	-4.2	-0.4	6.7	-15.4	66.8	292	98.1	195	7	11	X		622.4

X = Not observed * = normal missing MSG = data missing

FEBRUARY 1986

STATION	Temperature C Mean	Difference from Normal	Maximum	Minimum	Snowfall (cm)	% of Normal Snowfall	Total Precipitation (mm)	% of Normal Precipitation	Snow on ground at end of month (cm)	No. of days with Precip 1.0 mm or more	Bright Sunshine (hours)	% of Normal Bright Sunshine	Degree Days below 18 C
QUEBEC													
BAGOTVILLE	-14.0	-0.2	2.6	-27.8	29.4	48	26.1	46	27	6	X		896.2
BAIE COMEAU	-13.7	-1.2	0.2	-28.3	36.6	50	23.8	38	54	4	171	*	888.1
BLANC SABLON	-10.4	-0.4	4.3	-28.6	72.2	71	72.2	66	19	11	84	*	737.3
CHIBOUGAMAU	-18.2	-0.7	1.7	-34.3	30.6	58	27.8	54	79	9	110	88	1014.1
GASPE	-9.8	0.3	5.4	-24.7	21.6	32	15.4	17	4	5	172	*	776.9
INUKJUAK	-23.7	1.3	-1.7	-37.1	18.4	211	17.4	202	29	6	132	123	1168.3
KUUJJUAQ	-21.4	1.0	0.0	-40.6	48.3	142	43.9	131	82	9	114	105	1091.9
KUUJJUARAPIK	-23.2	-0.6	-2.6	-40.6	43.3	178	43.3	184	44	8	94	75	1154.1
LA GRANDE RIVIERE	-22.0	*	-3.3	-37.8	21.8	*	18.9	*	58	7	82	*	1120.1
MANIWAKI	-11.7	0.5		-30.0	28.0	61	19.6	38	33	6	121	95	831.6
MATAGAMI	-17.6	0.2	1.0	-33.1	24.4	60	13.8	33	50	7	100	77	1006.3
MONT JOLI	-11.3	-0.8	2.2	-22.3	35.8	47	31.6	42	38	7	119	104	830.4
MONTREAL INT'L	-10.1	-1.1	3.9	-24.7	30.6	57	38.9	59	15	9	112	87	787.9
MONTREAL M INT'L	-12.2	*	1.5	-26.5	19.8	*	28.6	*	30	6	157	*	811.4
NATASHQUAN	-10.8	0.5	3.7	-27.4	42.4	75	36.8	46	28	12	142	108	804.4
QUEBEC	-11.3	-0.5	1.6	-25.9	23.8	33	25.8	33	74	5	154	135	821.1
ROBERVAL	-14.5	0.2	2.1	-29.0	15.9	26	15.7	26	48	5	128	*	909.0
SCHEFFERVILLE	-21.3	-0.1	-3.2	-34.6	35.4	78	35.0	81	57	9	105	*	1100.4
SEPT-ILES	-12.8	-0.3	3.2	-30.4	39.8	53	31.8	40	32	7	183	132	862.3
SHERBROOKE	-11.1	-0.2	6.4	-31.4	43.2	76	45.6	73	48	9	101	*	816.1
STE AGATHE DES MONTS	-11.9	0.2	0.5	-27.3	28.0	33	26.4	30	71	8	119	94	837.5
ST-HUBERT	-10.8	-1.8	3.9	-27.3	35.4	63	43.4	60	29	9	MSG		801.4
VAL D'OR	-15.5	-0.6	1.1	-32.8	17.4	34	17.2	33	64	5	137	101	937.5
NEW BRUNSWICK													
CHARLO	-10.2	-0.4	1.7	-22.4	24.2	32	21.9	28	25	5	177	130	789.4
CHATHAM	-9.2	-0.4	3.9	-20.8	44.0	67	33.4	38	29	6	160	122	761.4
FREDERICTON	-8.7	-0.3	5.0	-22.0	46.1	71	36.6	40	21	7	149	*	748.9
MONCTON	-8.8	-1.1	5.0	-23.5	57.5	84	53.2	53	24	7	158	128	751.0
SAINT JOHN	-8.3	-0.8	4.1	-21.6	80.2	126	61.0	52	37	9	145	116	735.7

STATION	Temperature C Mean	Difference from Normal	Maximum	Minimum	Snowfall (cm)	% of Normal Snowfall	Total Precipitation (mm)	% of Normal Precipitation	Snow on ground at end of month (cm)	No. of days with Precip 1.0 mm or more	Bright Sunshine (hours)	% of Normal Bright Sunshine	Degree Days below 18 C
NOVA SCOTIA													
GREENWOOD	-6.3	-0.9	5.5	-20.9	98.6	157	76.5	84	54	9	X		681.2
HALIFAX INT'L	-6.6	-0.5	2.8	-18.1	83.4	127	88.6	66	45	8	MSG		688.2
SABLE ISLAND	-1.7	-0.7	6.2	-8.8	21.2	66	127.6	107	1	8	96	131	550.0
SHEARWATER	-5.5	-1.0	3.1	-17.8	70.6	135	111.4	90	29	6	139	107	656.5
SYDNEY	-7.9	-2.0	2.9	-20.5	151.5	220	158.2	127	93	10	139	126	725.8
TRURO	-7.8	-0.2	5.1	-21.9	90.0	167	83.6	93	57	7	133	123	724.0
YARMOUTH	-3.8	-0.6	4.8	-12.4	45.4	84	93.6	81	10	10	113	121	610.9
PRINCE EDWARD ISLAND													
CHARLOTTETOWN	-8.6	-1.1	2.2	-18.9	68.9	104	67.1	68	30	9	X		743.3
SUMMERSIDE	-7.9	-0.7	2.1	-17.8	58.2	104	41.8	50	36	9	147	117	726.0
NEWFOUNDLAND													
ARGENTIA	-3.8	-1.9	9.0	-13.3	48.5	119	112.8	106	5	12	X		610.3
BATTLE HARBOUR	-9.7	0.0	3.1	-30.1	56.9	68	75.8	106	99	13	X		774.5
BONAVISTA	-5.4	-0.2	6.8	-16.6	56.4	125	108.2	124	31	10	X		658.8
BURGEO	-6.5	-1.3	6.0	-18.7	58.4	114	81.6	62	26	12	115	115	685.2
CARTWRIGHT	-11.6	1.0	1.5	-30.2	82.2	125	72.0	106	109	13	65	61	829.6
CHURCHILL FALLS	-19.2	-0.3	0.4	-33.2	41.8	70	38.0	65	85	10	120	96	1041.7
COMFORT COVE	-7.7	-0.7	5.2	-21.6	100.7	137	104.9	110	41	11	X		720.4
DANIEL'S HARBOUR	-9.2	-1.5	5.5	-23.9	77.8	104	40.2	49	87	9	61	81	762.8
DEER LAKE	-8.6	0.4	7.2	-28.2	99.1	151	66.6	91	60	11	X		745.1
GANDER INT'L	-7.5	-0.7	5.0	-20.3	105.8	138	124.8	125	24	11	96	97	712.4
GOOSE	-14.0	0.5	1.6	-28.7	28.7	47	21.9	36	33	8	104	88	897.3
PORT-AUX-BASQUES	-7.1	-1.4	4.4	-23.0	77.3	111	96.6	82	27	19	89	*	701.7
ST ANTHONY	-9.3	0.3	1.6	24.8	108.2	104	116.4	158	78	14	X		766.6
ST JOHN'S	-5.5	-1.0	6.3	-16.3	65.6	87	184.9	131	4	11	109	130	657.6
ST LAWRENCE	-5.0	-1.0	6.6	-15.4	108.2	223	131.7	113	30	13	X		
STEPHENVILLE	-8.1	-1.9	6.7	-20.8	74.6	98	67.4	74	51	21	67	93	722.3
WABUSH LAKE	-20.0	0.8	-2.7	-35.0	42.2	80	34.8	72	70	8	119	108	1063.5

X = Not observed * = normal missing MSG = data missing

AGROCLIMATOLOGICAL STATIONS — FEBRUARY 1986

STATION	Temperature C				Snowfall (cm)	Total Precipitation (mm)	% of Normal Precipitation	Snow on ground at end of month (cm)	No. of days with Precip 1.0 mm or more	Bright Sunshine (hours)	Degree days above 5 C	
	Mean	Difference from Normal	Maximum	Minimum							This month	Since jan. 1st
BRITISH COLUMBIA												
AGASSIZ	2.9	-1.6	17.0	-15.0	50.7	226.8	130	0	15	95	29.0	73.0
KAMLOOPS												
SIDNEY												
SUMMERLAND	-3.0	-3.1	14.5	-17.5	26.5	21.0	111	0	7	116	8.8	8.8
ALBERTA												
BEAVERLODGE	-11.0	-0.8	9.0	-42.0	36.0	21.0	83	5	7	110	0.5	0.5
ELLERSLIE												
FORT VERMILLION												
LACOMBE	-11.6	-1.1	12.0	-42.0	15.0	13.9	77	0	5	105	1.2	1.2
LETHBRIDGE	-9.2	-3.6	17.5	-39.0	24.5	21.2	113	0	6	113	16.9	35.7
VAUXHALL												
VEGREVILLE	-15.8	-2.4	10.5	-43.0	6.9	6.9	50	15	6		0.0	0.0
SASKATCHEWAN												
INDIAN HEAD	-13.7	-0.1	7.5	-36.0	26.6	19.6	109	T	5		0.0	0.0
MELFORT	-16.0	-0.3	6.0	-37.5	5.8	5.8	36	11	2	120	0.0	0.0
REGINA	-14.7	-0.9	5.5	-32.0	7.7	11.5	78	3	3		0.0	0.0
SASKATOON	-15.8	-1.3	6.5	-38.5	11.6	11.6	53	3	1	125	0.0	0.0
SCOTT	-17.1	-2.7	6.0	-40.0	20.5	13.6	105	22	4	104	0.0	0.0
SWIFT CURRENT SOUTH	-11.5	-1.1	10.5	-33.0	10.6	9.1	61	0	2	109	2.6	2.6
MANITOBA												
BRANDON	-15.6	-0.4	3.5	-38.5	10.4	10.4	52	23	4		0.0	0.0
GLENLEA	-15.0	-1.4	0.0	-37.5	15.8	15.8	58	55	7	70	0.0	0.0
MORDEN	-13.4	0.0	3.5	-31.0	11.0	11.0	58	16	3	93	0.0	0.0
ONTARIO												
DELHI	-6.3	-0.9	5.0	-20.0	50.8	79.0	139	20	12	60	0.0	0.0
ELORA	-8.6	-1.3	3.6	-20.3	13.0	20.0	41	9			0.0	0.0
GUELPH	-7.1	-0.7	4.6	-23.0	15.8	59.7	118	10	10	81	0.0	0.0
HARROW	-4.3	-0.5	5.5	-16.5	57.9	92.7	174	18	12	66	0.0	2.8
KAPUSKASING												
MERIVALE												
OTTAWA	-9.2	-0.3	1.8	-22.6	17.6	27.7	50	11	6	125	0.0	0.0
SMITHFIELD	-7.1	-0.5	3.5	-19.5	28.3	57.2	80	15	13		0.0	0.5
VINELAND STATION	-4.5	-0.9	3.4	-14.4	48.2	87.8	157	6	8	70	0.0	2.6
WOODSLEE												
QUEBEC												
LA POCATIERE	-10.9	-0.7	1.5	-23.0	18.4	18.0	25	30	5	170	0.0	0.0
L'ASSUMPTION	-11.7	-1.1	3.0	-31.0	22.6	29.0	47	47	6	118	0.0	0.0
LENNOXVILLE												
NORMANDIN	-16.4	-0.3	0.5	-34.0	13.2	12.6	23	48	3	128	0.0	0.0
ST. AUGUSTIN												
STE CLOTHILDE	-9.5	-0.4	4.5	-27.0	39.2	53.3	83	29	11	112	0.0	0.0
NEW BRUNSWICK												
FREDERICTON												
NOVA SCOTIA												
KENTVILLE	-6.0	-0.8	4.5	-19.0	96.0	81.6	76	64	7	125	0.0	11.1
NAPPAN	-7.9	-1.0	3.0	-23.5	84.3	64.4	72	33	9	144	0.0	16.5
PRINCE EDWARD ISLAND												
CHARLOTTETOWN												
NEWFOUNDLAND												
ST. JOHN'S WEST												

x = Not observed * = Normal missing MSG = Data missing